



Monster Solutions

Olympians Live the Dream - Monsters Keep it Clean on Whistler Mountain

Whistler Resort, located in British Columbia, Canada is the alpine host for the Vancouver 2010 Winter Olympics and Paralympics. While athletes around the world have been training, long-planned upgrades to the Whistler Resort wastewater treatment plant had been underway to ensure completion in time for the Olympics where Whistler expects thousands of athletes, spectators, and media. Whistler will also be housing over 6,000 athletes, coaches, trainers, officials and media at their new Athletes Village which, post games, will be turned into a neighborhood, providing 250 residences, recreational facilities and retail services. Whistler knew it had to go for the gold standard when it came time to replace their outdated wastewater system.

Like other wastewater treatment plants, Whistler Resort Municipality reviewed the need for upgrades as the community grew. Currently, Whistler's permanent population is 10,000 with two million visitors annually. An additional seasonal workforce commutes into Whistler on a daily basis from neighboring communities. Old wastewater treatment equipment required more and more maintenance making upgrades inevitable. Combined with the anticipated influx of thousands of Olympic guests and the increase of permanent residents

Whistler Resort Municipality selected two Finescreen Monsters - part of JWC's Monster Separation System®

PROBLEM: Outdated system needed upgrades to handle increased population

SOLUTION: Finescreen Monster®

CONSULTANTS: Stantec; Lockerbie & Hole (Mechanical Contractors); Graham Construction

at the Athletes Village following the Games, a project to upgrade the waste management system was started well in advance to allow timely completion, testing and start-up in time for the 2010 Olympics.

"From an operational standpoint, we wanted a robust, serviceable system with good support behind it," explains Andrew Tucker, Whistler's WWTP Supervisor. "There's nothing worse than having something installed and not being able to troubleshoot problems. We looked at three manufacturers and visited wastewater treatment plants with different systems. People we talked to regarded JWC Environmental as offering good, solid equipment.

"Serviceability was a huge factor in our decision," Tucker adds. "Comments from other operators indicated how tough it was to get service from some manufacturers, especially on the west coast. With JWC in California and their BC distributor, Elaine Connors of Jelcon Equipment close-by, we felt JWC would be the best choice."

Whistler selected JWC's Monster Separation System®, which consists of two Finescreen Monsters® and two Screenings Washer Monsters® installed at the headworks. The first



The SWM's grinder and two spray wash zones produce cleaner, drier discharge.



system went online December 2008 with the second following in March 2009. The Monster Separation System provides a high capture rate of unwanted wastewater debris and efficient washing and compacting, resulting in a discharge that is clean and ready for disposal.

Prior to the upgrade, the separation technology included a coarse screen that removed not only debris, but also fecal matter and biosolids, resulting in more organic material going to the landfill, which in turn caused a highly unpleasant odor.

"The whole idea behind JWC's fine screen and the Screenings Washer Monsters is that it separates the rags and plastics out so that they can go to the landfill, but returns the soft organic materials to the process where it can be properly treated," explains Elaine Connors of Jelcon. "With the JWC system, Whistler gets a cleaner system by using the finer screen and a dryer, cleaner separation of what goes to the landfill."

The Finescreen Monster incorporates a continuous band of stainless steel perforated panels attached to heavy-duty stainless steel roller chains. Each panel has 1/4" (6 mm) circular openings. The perf plate design is superior to bar screens – the Finescreen will capture more small solids, such as cigarette butts, latex, plastics, and rags. Debris is lifted to deck level and dropped into the SWM. The stainless steel rollers track in UHMW guides at the bottom of the screen.

The Screenings Washer Monster (SWM) provides additional washing, dewatering and compacting. The SWM is a self-contained hopper-fed system that grinds, washes, compacts and dewateres screenings captured by the Finescreen. The discharged solids contain up to 50% dry solids and the volume of material is compacted down by 80-90%. The process of grinding prior to solids separation removes virtually all soft organics from the discharge, which reduces odors and landfill costs.

"The bigger pieces get caught and separated on the screen, and are discharged on the back into the chute," explains Tucker. "These pieces then go through the grinder and continue to the compactor. The compactor allows any organics to percolate back into the channel, and then the clean solids continue

through the compactor and are discharged to a bin which is removed for landfill disposal."

"The biggest advantage of the new system is the cleaner waste," says Tucker. "Odors are reduced because organics are being put back into the channel. And the way the system compacts, we put out less volume, and of course the organics are not present. The odor is definitely improved."

In addition to a cleaner system, Whistler operators gain a side benefit. With the old system, operators had to rake the screens down in order to keep the hopper clear. With the new system, they no longer have this unpleasant task.

The final part of the upgrade will be installation of JWC's Mini Monster® into the fermenter and a Muffin Monster® for septage receiving. Both grinders will provide added protection to prevent solids from causing damage to downstream pumps and systems.

About JWC Environmental

JWC Environmental's family of wastewater, stormwater and sewage treatment products are legendary for quality and reliability – including the Muffin Monster and Channel Monster® sewage grinders, and the Auger Monster®, Screenings Washer Monster and Monster Separation Systems, which incorporate a fine screen or band screen with superior screenings conditioning.

Whistler Resort Municipality

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As written by Cynthia Guardia



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