



# ITT

Water & Wastewater  
Case story | Dewatering

## ITT W&WW assist Whitewater West Industries in testing their new prototype water slide with an overall length of 250 feet and approx. flow rate of 8,000 usgpm.

In November 2008, Whitewater West Industries in Richmond, BC designed a prototype water slide for one of their customers. The prototype unit was one of its kind with an overall length of 250 feet and approximate flow rate of 8,000 usgpm where as generally, these slides operate with around 2,000 to 4,000 usgpm. The customer requested for a factory test and operation report. At this point, Whitewater West contacted Kamal Singh, (AScT.), Dewatering Specialist at ITT Water & Wastewater.

Mr. Singh soon visited the job site and reviewed the plans with Mark Alev (P.Eng) and Andy Tymiak at Whitewater West. He observed that the site was very tight and there was no room for diesel driven pumps. The customer requested VFD (Variable Frequency Drives) to control the speed of the pump and manage flow.

Mr. Singh proposed to use 2 X 88 hp (Flygt BS 2250) submersible pumps. These pumps had a combined capacity to deliver 8,000 usgpm @ 40 feet of head. The customer was concerned that the "starting kick" of these submersible pumps will rip the pool liner hence Mr. Singh designed an interlocking frame which would lock the two submersible pumps. To give these pumps a firm foundation, a 2" thick rubber pad was placed between the pool liner and pumps (see picture below). A combination



Aerial view of the test installation at Whitewater West Industries.

of 12" steel piping and flexible hose was proposed to deliver the required flow rate.

The customer requested another alternative to VFD and contacted Mr. Singh for further fine tuning. Mr. Singh proposed to use 2 X 12" knife gate valves to control the flow and measure it with a Doppler flow meter which the customer already owned. To power the pump, a 225 kW generator was installed on site.

The system was proposed to and rapidly accepted by the Whitewater West. Crews began to put steel piping together, installing the pumps and situating the reducers and increasers.

Once installed, the system operated flawlessly and at finest levels as forecasted. Whitewater West was able to test its prototype water slide and was highly thankful to ITT Water & Wastewater for their support.

**Kamal Singh**, ITT Water & Wastewater, Dewatering Specialist, Vancouver at (604) 941-6664

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12" knife gate valves to control the flow shown here.

#### **ITT Water & Wastewater - Dewatering division**

Created to meet the increasing demands for a full fledged solution driven company, the Dewatering division mandate is to engineer, manage and supply major temporary site dewatering and sewage bypass projects in the municipal, construction, industrial and mining sectors. On-site project supervision, technical expertise and equipment maintenance services are also offered.

Built on ITT's 50 years of Canadian water handling experience, the Dewatering division specializes in effective and environmentally secure water and wastewater transfer applications such as Sewage Bypass, Excavation Dewatering, Flood Drainage, Surface Irrigation and Mining Dewatering.

ITT W&WW also offers a full service rentals program. A complete line of submersible pumps, engine-driven suction pumps, generators, piping and complementary accessories are available for either long or short-term rental. With 14 coast to coast service locations, ITT W&WW is the only nation-wide company to offer complete turn-key water handling solutions, expertise and products.

