

# Birkenhead Lake Estates, BC

August, 2011



*A 33.5M (110 ft) Stanco reservoir provides storage and pressure to the distribution system.*

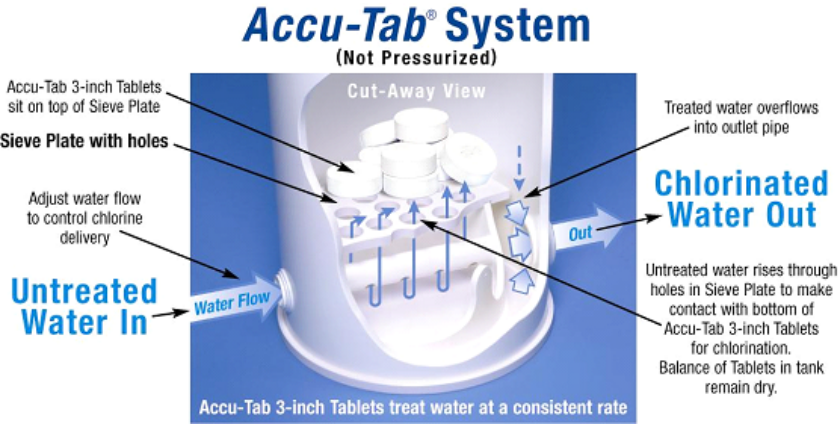
BI Pure Water (Canada) Inc. has completed the supply and commissioning of a water treatment system to provide safe drinking water for the Birkenhead Lake Estates resort community. The resort is off the BC Hydro power grid, and was interested in a green energy alternative. The system supplies a 100 lot subdivision on the eastern side of the lake.

Owner rep Judy Hillaby commented, "We have worked with BI Pure Water for several years to design, budget, finance and install a water treatment system that will meet the Vancouver Coastal Health standards".

The water supply is good quality ground water. Well pump operation is controlled from a level transmitter in the 33.5 meter (110 foot) high, 473,000 L treated water storage reservoir, which supplies pressure to the gravity flow distribution system. This allows flows to end users 24/7 without the generator having to start. The generator only starts when the reservoir drops below the setpoint level of 3 meters. Summer treatment maximum is 265 L/min on an 8 hour duty cycle.

Two 25 kW generators with silencers provide power during daytime hours, with an inverter and battery bank to operate some items overnight. The primary genset unit will start in the morning, providing power to the well pump, dosing pumps, recirculation pumps, electric lights and a battery charger. In the late evening the generators will come on to top up the water reservoir. During the night, the batteries supply power to the inverter which keeps the control panel operating. Operating costs and carbon footprint are reduced by having this optimized power system.

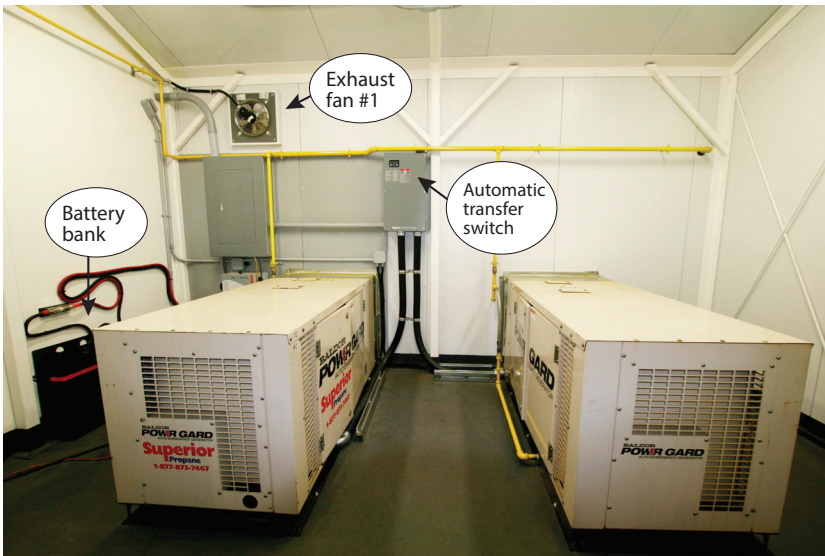
A BI Pure Water PPG Accu-Tab® Calcium Hypochlorite residual chlorination system is used to disinfect pathogens and provide a chlorine residual in the distribution system. The Accu-Tab tablet process is safer and more environmentally sound than the sodium hypochlorite (bleach) process. The chlorinator is mounted on an aluminum frame. Included in the system is an integrated, level controlled solution tank and VFD controlled dosing pumps. Using a manually adjustable rotameter, the amount of water through the tablet holder is controlled, resulting in a constant and predictable chlorine solution strength in the solution storage tank. When activated by the main water flow transmitter, the chlorinator injects chlorine into the water main.



BI Pure Water (BIPW) specializes in reviewing water quality test results and prescribing the most cost-effective solution. BIPW engineers pilot, design, manufacture, install, start-up and commission package water treatment plants. The operators are then trained and the plants can be serviced on a regular basis. BIPW provides small and medium-sized water treatment plants for federal, provincial and municipal government, industry, remote camps, private water systems, resorts and First Nations communities.

Our engineered systems are cost effective:

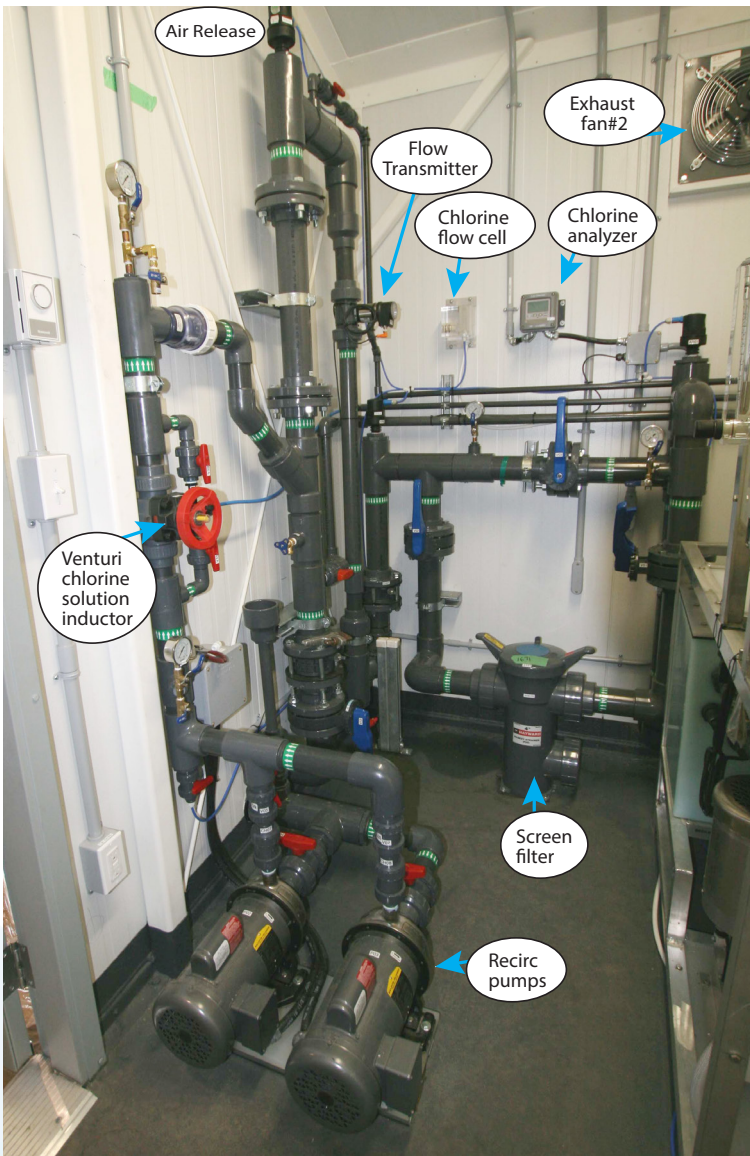
- Years of water engineering expertise: electrical, mechanical and civil engineers specializing in water treatment on staff
- Custom designed to a specific water analysis and budget
- Systems are leak and flow tested at the factory, the PLC is operated and debugged before shipping for faster installation and start-up on site, lower total cost
- We don't sub-contract
- Complete design, build, install, parts



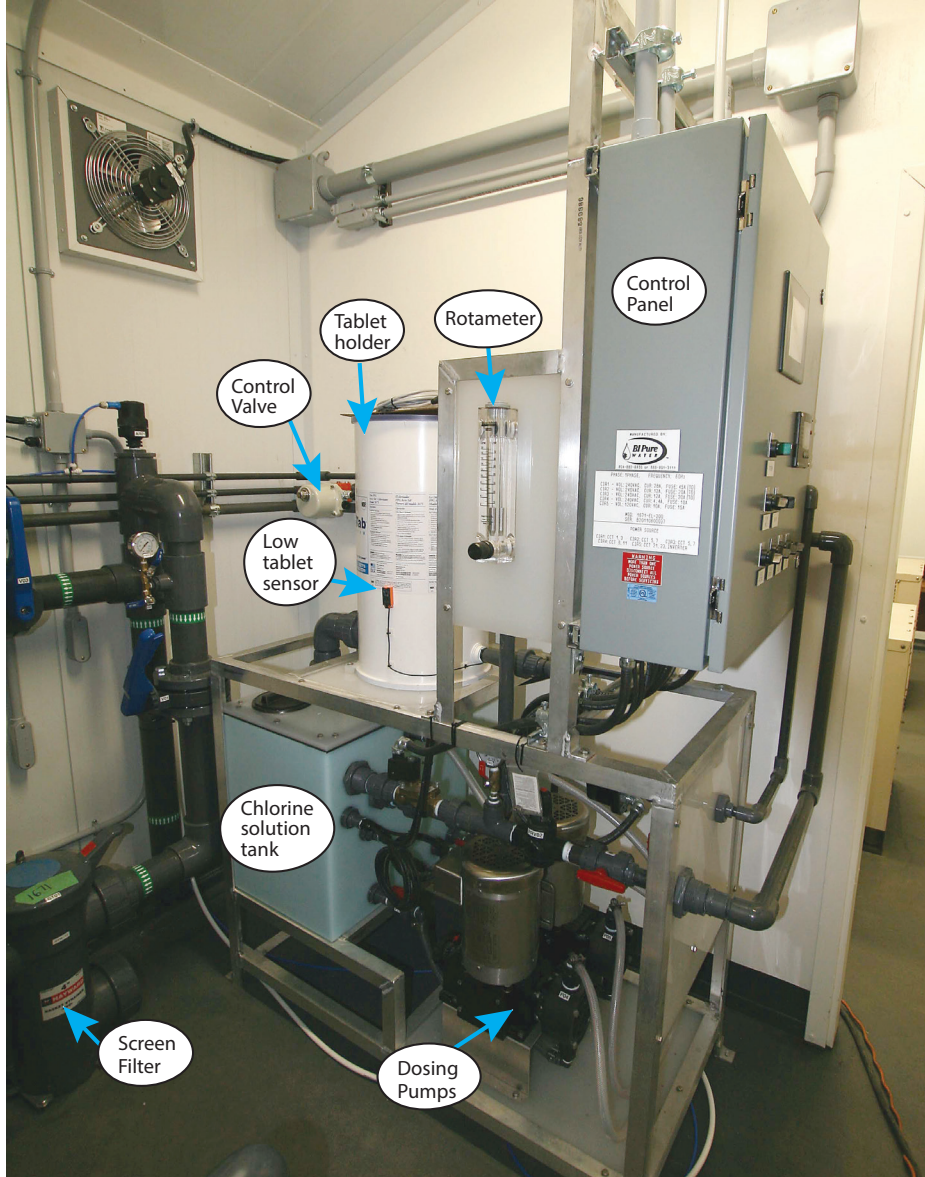
Dual Baldor 25 kW generators with one on standby



*The 10 x 22 foot insulated panel building muffles the sound of the operating generator*



*Water intake, outlet and recirculating system*



*BI Pure Water/Accu-Tab  
calcium hypochlorite  
tablet chlorinator*



BC & North American  
award winning design  
& manufacture



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