

COMOX VALLEY CHLORINATION BUILDING

COMOX-STRATHCONA REGIONAL DISTRICT



Chlorine Feed and Storage

As a result of increasing population and water consumption in the Comox Valley, the Comox Strathcona Regional District required improvements to its existing water treatment facility.

The source of water for the Comox Valley Water System is the upper Puntledge River which has been diverted to a penstock for hydro electric power production. Two connections to this penstock extract a portion of this diverted water for day-to-day gravity supply to the Comox Valley Water Supply System. When the penstock is shut down for maintenance or repairs, water is pumped directly from the river using four 350 horsepower vertical turbine pumps located in the Puntledge Standby Pump Station just downstream of the penstock outflow.

The new Comox Valley Chlorination Building was constructed at the site of the existing chlorination plant. The project included expansion of the existing building to house new chlorine gas handling, safety, and gas scrubbing equipment, a new standby generator, new instruments and controls for chlorine, pressure, volume, and turbidity measurement, and the installation of new 750 and 1050 dia. water supply piping.

The water supply through the new building has been broken into two sub-systems forming a dual treatment facility for the East and West branches of the Comox Valley Water System. Each branch of the system functions independently so that chlorine levels may be set separately depending on flow demand. New piping has been installed such that either of the two penstock connections may supply both east and west branches if required. This enables the operator to provide an uninterrupted supply of chlorinated water. Critical components needing routine maintenance were duplicated so that they function as on-line spares.

The new Chlorination Building also functions as a master meter building. New magnetic flow meters were installed in the East and West branches and the sum of these meters is used to pay B.C. Hydro for the water consumed.



Building Compound