#### Lake Pump Station (1st Ave.)

Raw lake water is pumped from this station to the Treatment Plant. Online turbidity and ultraviolet transmittance meters monitor the incoming raw water guality.

#### Water Treatment Plant (McKay Rd.)

At the plant the raw water undergoes ultraviolet light (UV) treatment to neutralize waterborne pathogens including chlorine resistant organisms such as Cryptosporidium and Giardia. As a second level of disinfection and protection within the distribution system, the water is then chlorinated using sodium hypochlorite . Treated water is then pumped into the distribution system and to elevated storage reservoirs. There are three UV reactors each with a capacity to treat 15 Million Litres Per Day (MLD). Two reactors can operate simultaneously for a total plant capacity of 30 MLD.

#### Sodium Hypochlorite Generator

As a safe alternative to the gaseous form, chlorine is produced on-site in the form of sodium hypochlorite (bleach). This stable 0.8% solution is generated using water, salt and electricity.

#### **Juniper Booster Pump Station**

Booster pumps move water from the Juniper Balancing Tank to the Arawana and Stonebrook storage reservoirs at higher elevations.

#### Arawana Re-chlorination Station

As treated water moves through the distribution system the residual chlorine dissipates over time. The re-chlorination station adds sodium hypochlorite to maintain the residual chlorine level.

#### **Daily Treated Water Volumes:**

During the winter months the daily treated water volumes average:  $830 \text{ m}^3/\text{d} = 0.83 \text{ MLD} = 219,000 \text{ gpd} (US)$ gpd - gallons (US) per day During the irrigation season the daily treated water volumes peak during July and August averaging:  $13,300 \text{ m}^3/\text{d} = 13.3 \text{ MLD} = 3.5 \text{ Million gpd} (US)$ 

#### **Misc Facts:**

Okanagan Lake Intake Depth - 17m / 55ft Lake Water Pumps - (x3) 300HP Treated Water Pumps South - (x3) 250HP Treated Water Pumps North - (x2) 125 HP UV Reactors - (x3)

(x32) 350watt lamps per reactor Treatment Plant Heating/Cooling - Geothermal using raw lake water.

#### **Need More Information?**

Water Quality Call: 250.490.4106 Water System Connections Call: 250.490-4135 Email: info@rdos.bc.ca

#### **After Hours Water Emergencies**

Call: 250.490.2305

### **Public Works**

# Naramata Ultraviolet Water Treatment Plant



Ultraviolet Light Reactors at the Treatment Plant

## NARAMATA WATER TREATMENT AND DISTRIBUTION OVERVIEW

