

# SURFACE WATER PROCESS

## 1 Intake

Raw water is gravity-fed from Kempenfelt Bay to the low lift pumping station and directed through a screen to remove larger particles. Seasonal pre-chlorination is done for zebra mussel control.

## 2 Pumping

Water is pumped from the low lift pumping station to the Surface Water Treatment Plant (SWTP) where it is directed through a number of treatment processes as described in the following steps.

## 4 Mixing

A solution is added to the water. With gentle mixing, FLOCs are formed (large particles formed by smaller particles bonding together).

## 3 Screening

The water goes through screens to remove particles greater than 0.5 mm in size.

## 5 Membrane Filters

The membrane filtration process removes FLOCs as small as 0.02 microns. There are 5 primary membrane trains that house the membrane filters. Clean water is drawn into the fibre and all other particles are left behind, allowing only clean water to be drawn through the fibres.

## 6 Carbon Filters

The membrane-filtered water is sent to the Granular Activated Carbon Contactors. Any unpleasant taste and odours are removed by the carbon.

## 8 Storage

Water is stored in reservoirs and towers, ready for use in the community.

## 7 Chlorine

Chlorine is injected into the filtered water to ensure water is free of all harmful agents. It then travels through large chambers where it is provided time to disinfect the water.

