

AU TAU

TREATMENT WORKS



WATER SUPPLIES DEPARTMENT

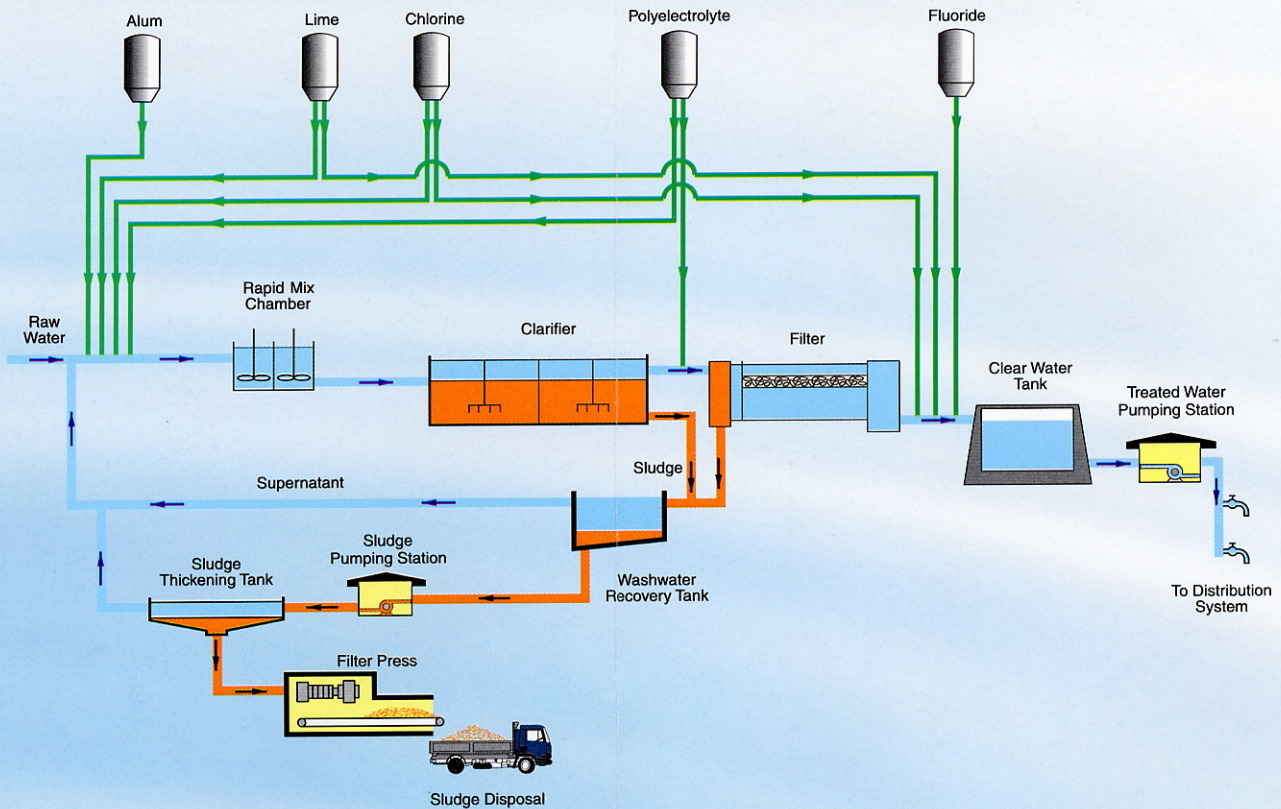
E - Mail : wsdinfo@wsd.gcn.gov.hk

Web Site Address : <http://www.info.gov.hk/wsd/>



Au Tau Treatment Works provides a treated water supply to Yuen Long, Tuen Mun and Tin Shui Wai areas. It was first commissioned in 1992 with a treated water output of 110,000 m³/day, and was extended in 1995 to the present output of 330,000 m³/day.

The Water Treatment Process



1. Raw Water

The raw water treated by the Au Tau Treatment Works comes from three different sources, including Plover Cove Reservoir and Tai Lam Chung Reservoir in the New Territories, and Dongjiang water of Guangdong.

2. Mixing

The raw water is dosed at the inlet of the mixing chamber with the following chemicals:-

HYDRATED LIME - to pre-condition the raw water prior to addition of alum

CHLORINE - to control algae

ALUM - to coagulate impurities

POLYELECTROLYTE - to improve the coagulation and flocculation of impurities

3. Flocculation and Sedimentation

After mixing, the water is passed to the clarifiers where coagulation and flocculation of the impurities in the water will occur. With the aid of the dissolved alum, the impurities in the water coagulate into large

particles which settle as sludge. The sludge is collected and conveyed to sludge thickening tanks for further treatment before disposal.

4. Rapid Gravity Filtration

Settled water from the clarifiers flows to the constant rate rapid gravity dual media (sand/anthracite) filters for removal of the more finely divided suspensions (floc particles) carried over from the clarifiers.

Periodically the filter beds are cleaned by backwashing with air and then water.



5. Clear Water Tanks

Chlorine, fluoride and lime are dosed into the filtered water in the contact tanks to disinfect, fluoridate, and control the alkalinity of the final treated water. The treated water is stored in the clear water tank before conveying to Au Tau Primary Service Reservoir and Wang Chau Service Reservoir for distribution to the people.

6. Pumping Facilities

The pumping station in the Au Tau Treatment Works has six pumps with an installed pumping capacity of 436,000 m³/day.



7. Environmental Friendly Facilities

Environmental protection measures are taken to reduce waste. The washwater is collected in the recovery tanks for repumping to the inlet for recycling. Sludge produced in the treatment works is thickened

by three circular sludge thickening tanks using polyelectrolyte as coagulant. Thickened sludge is compressed by membrane type filter presses into cakes for disposal at landfill sites.



8. Water Quality Control

The quality of water is closely monitored by means of chemical, bacteriological and biological examinations of water samples taken

to ensure compliance with the Guidelines for Drinking Water Quality recommended by the World Health Organisation, and to ensure a safe and wholesome potable supply.



