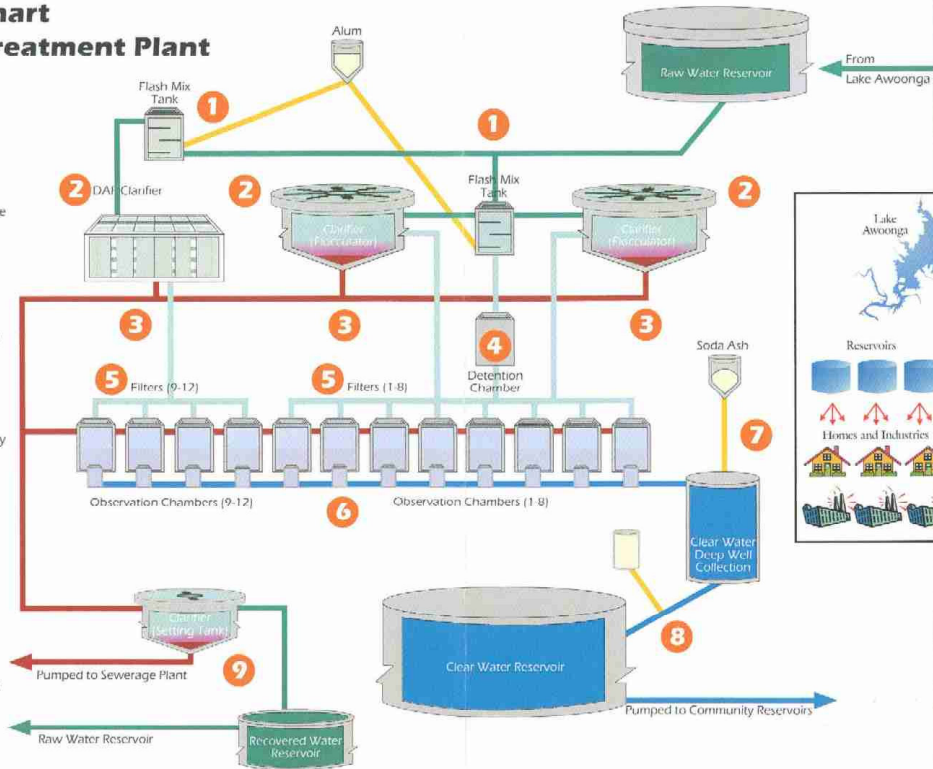


# Operational Flowchart Gladstone Water Treatment Plant

- Legend**
- Clear Water —
  - Raw Water —
  - Additives —
  - Sludge —

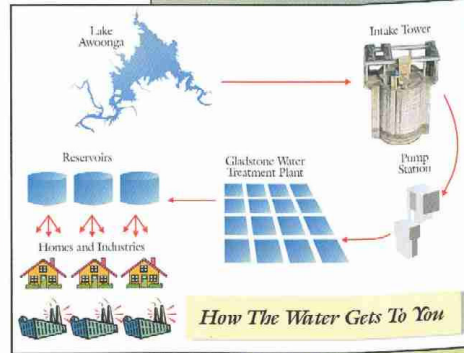
- 1** Raw water contains suspended matter & colour. To remove this turbidity & colour, a coagulant (aluminium sulphate) is injected into the raw water & thoroughly mixed in the Flash Mix Tank.
- 2** Alum loaded water then passes into the Clarifiers. If raw water is clean, it bypasses the Clarifiers and is sent directly to the detention chamber.
- 3** The alum reacts with the natural alkalinity of the water forming a 'floc' - being heavier than the water, the floc settles to the bottom taking with it suspended matter & colour. This forms a sludge.
- 4** Detention chamber is used to control water flow.
- 5** The clear water leaving the Clarifier still contains small amounts of 'floc'. This is removed by passing the water through sand filters. The filters are periodically backwashed to remove the floc, which is sent to the Settling Tank.
- 6** The filtered water then passes through an observation chamber where clarity can be checked.
- 7** Because the alum lowers the pH and makes the water slightly acidic, soda ash is added to raise the pH to 7.5. This neutralises the water, preventing corrosion of the water mains.
- 8** Chlorine is then added to disinfect the water, which may contain microorganisms and bacteria, making the water safe for human consumption. Water is then collected in the Clear Water Reservoir from where it is reticulated to consumers.
- 9** Sludge is collected in the Clarifier (Settling Tank) - sludge is sent to Sewerage Plant and recovered water is drained to the Recovered Water Reservoir, and pumped to the Raw Water Reservoir.



## Water Treatment Process

Good drinking water is safe to drink looks crystal clear, smells and tastes just great.

So that we can have safe drinking water, the raw water from Awoonga Dam is pumped or fed by gravity to the water treatment plant in McCann Street.



*How The Water Gets To You*

**For further information contact:**  
 Gladstone Area Water Board 2nd Floor, 147 Goondoon Street, Gladstone Qld 4680  
 PO Box 466, Gladstone Qld 4680

**Phone:** (07) 4976 3000  
**Facsimile:** (07) 4972 5632  
**Email:** [gawb@gawb.qld.gov.au](mailto:gawb@gawb.qld.gov.au)  
**Website:** [www.gawb.qld.gov.au](http://www.gawb.qld.gov.au)