



General Facts - Water Treatment

Wannon Water supplies treated water to customers through 31 different Water Treatment Plants. Depending on the system of supply, the water will have undergone varying degrees of treatment such as:

- **Clarification** (Sedimentation and Dissolved Air Flotation).
- **Filtration** (pressure filters and gravity filters).
- **Disinfection**

Raw Water Treatment

To aid the removal of contaminants, such as dirt and organic material from raw water, the processes of coagulation and flocculation are used. During coagulation, the chemical alum (aluminium sulphate) is added to remove finely suspended particles that will not settle naturally in the water (colloids). Alum encourages colloids to join together forming bigger particles, known as 'flocs'. During flocculation, polymers are added to increase the size of 'flocs', making it easier to remove them from the water.

Clarification & Dissolved Air Flotation (DAF) Treatment

Clarification is a process that helps heavy particles formed by flocculation sink to the bottom of a treatment tank to form sludge, leaving clear water at

the surface. The Dissolved Air Flotation (DAF) process works in the opposite way, encouraging colloids to join together and float to the top of a tank. Flotation occurs by injecting saturated air to create small air bubbles which collect and float the colloids to the surface, forming a surface sludge. The sludge from both processes is filtered out of the clean water and pumped to the sewer.

Filtration & Disinfection

The filtration process consists of a filter bed, including anthracite, gravel and sand. As the water flows through, the filter bed cleans and polishes the water. Chlorine and/or ammonia are added to the water as a disinfectant, ensuring treated water remains safe to drink.

pH Adjustment

Adding alum early in the treatment process alters the pH of the water, which is then rebalanced by dosing it with the chemical lime. After this final pH adjustment, the water is stored in clear water storage tanks before being distributed to customers.



Test tubes used in the treatment monitoring process

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AT A GLANCE

Water Treatment

Total Customers:	41,550
Annual Volume Supplied To Customers:	11,620ML
Number of Treatment Plants:	31

IML = One Million Litres