SA Water

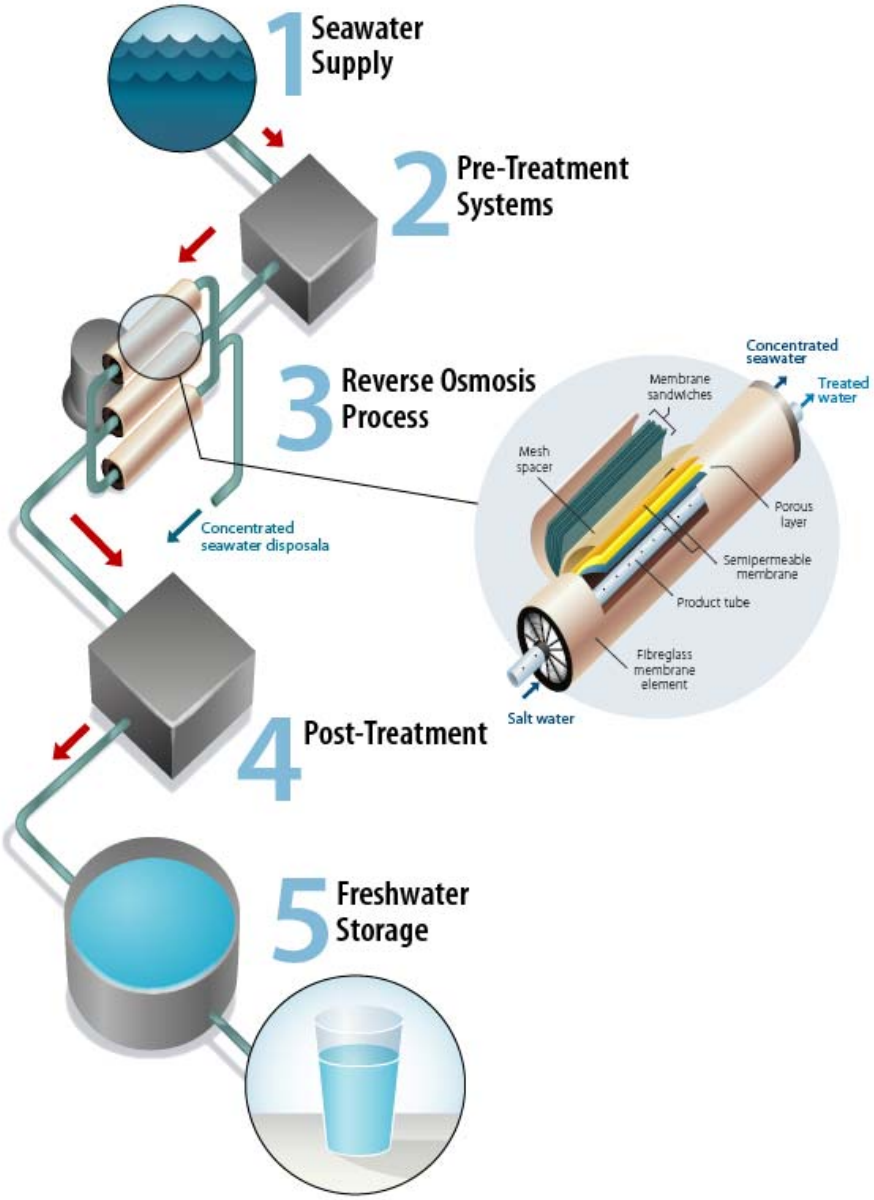
Adelaide Desalination Project Fact Sheet

What is desalination and how does it work?

The process of desalination removes dissolved salts and impurities from a water source such as seawater and turns it into fresh, drinking quality water.

The greatest benefit of desalination is that it does not depend on rainfall so it is climate independent and can continue to deliver water all year round.

The most common technology used for desalination is called Reverse Osmosis. This is where extremely high pressure is used to force seawater through a membrane which acts like a fine strainer to remove the salt and impurities.

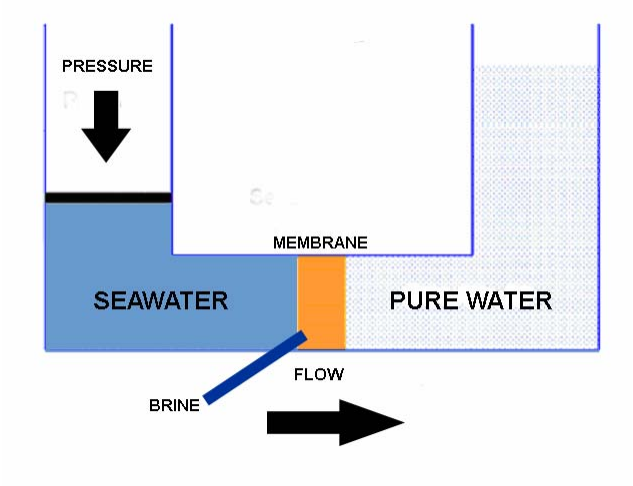


The process of Reverse Osmosis (RO)
Reverse Osmosis involves pushing seawater through super-fine membranes at extremely high pressure and can remove up to 99% of the salt and inorganic matter.

Used around the world, RO provides the finest level of filtration available and delivers clean, healthy water.

There are four key phases for RO:

- Pre-treatment removes organics and solids, adjusts the pH and controls the effect of scaling of the membranes
- Pressurisation raises the pressure of pre-treated seawater
- Membrane separation stops the passage of dissolved salts while allowing the water to pass through
- Post-treatment includes adjusting the pH, disinfection and the removal of dissolved gases before the water enters the distribution network.



What about the reject water or brine?
Desalination separates the feedwater (either seawater or brackish water) into drinking quality water and saline concentrate (known as brine).

The brine is disposed of well offshore where it is safely dispersed into the sea and dissolves back into the ocean. Brine is discharged at a location that allows it to be quickly dispersed and a specially designed diffuser also ensures adequate mixing occurs with the seawater.

Salt levels and dissolved oxygen levels in the surrounding seawater are regularly monitored.

More information about desalination
As the Adelaide Desalination Project progresses, we will keep the community informed through newsletters, information sessions, displays and other means of communication. We will also be engaging the local community and interested stakeholders through stakeholder forums, information days, site visits and briefings.

Visit the project website at www.sawater.com.au or call 1800 812 362.