



# Temporary Water During Plant Maintenance and Outage Intervals

## Mobile Water Service

Ecolutia Services operates the world's newest and most efficient fleet of mobile water and wastewater treatment systems. Industrial and municipal customers trust our 24-hour, 365 days per year service for emergency, short-term or long-term use.

As your outsourced water treatment partner, we provide a rapid response service that ensures you benefit from the latest technologies and operating techniques. This critical service is available for worldwide deployment, incorporating customised solutions to match your requirements.

## Typical On-site Challenges

- Failure of pre-treatment system
- Malfunction of ion exchange regeneration process
- Reverse osmosis membrane fouling/scaling
- Failed chemical dosing
- Planned or unexpected maintenance or shutdown
- Difficulty with effluent handling
- Urgent replacement or enhancement upgrade
- Returning to operation from an outage

## Impact

A planned or unplanned shutdown of your water treatment plant can cause much anxiety at any operations facility. Where the shutdown is planned an alternative water treatment method is required to allow other site operations to continue. During these shutdowns, a full-scale temporary water treatment service can bypass the permanent water treatment plant, to allow complete operations to continue.

When a shutdown is unexpected, decreased treated water availability can compromise site operations and have disastrous consequences downstream. The urgency here is to protect the production facility, shutdown the failing water treatment plant and find an alternative source of treated water, all while trying to prevent loss of production. Following this, analysis and repairs can take place.

Direct impact of water treatment plant failures has been known to result in entire production runs suffering damage and requiring complete disposal, leaving large unrecoverable costs. The indirect impact of a shutdown can be reduced production capacity or even a total site operational shutdown. This hampers the revenue generation and profitability of the site as investigating the causes and solutions can be time intensive.

## Service Solution

The mobile water treatment service from Ecolutia Services is available at short-notice to help continue site production capabilities. The temporary solution ensures you retain access to treated water at all times. As no civil works or permanent structures are required, the systems are easily installed and easily removable upon project completion.

We can recreate the exact output of your permanent plant by combining various technologies from our broad fleet. The matrix of solutions available can accommodate any difficulties you are encountering.

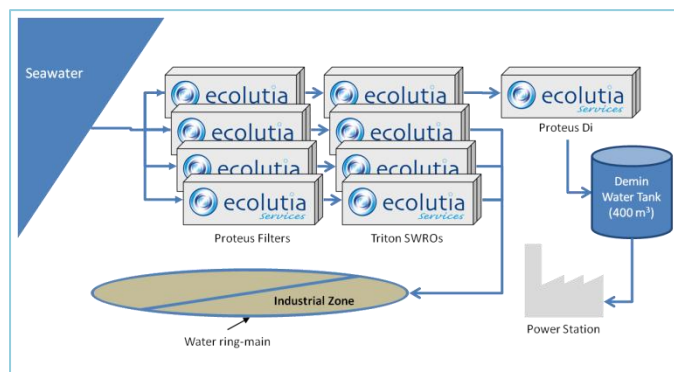
The critical requirement of treated water means avoiding any break in supply is vital. Therefore, the availability of a reliable solution offers numerous advantages. The benefits include allowing operations to continue unhindered, preventing further equipment damage, limiting local and wider environmental impact.

## Example: Project A

**Challenge:** An industrial zone's seawater treatment plant unexpectedly experiences problems. Repairs to its entire water treatment process plant may take a number of months. Maintaining a supply to treated water to the local power station and for the water ring-main for local factories in the industrial zone is critical. Any interruption to the supply could result in mass plant closures and major penalties.

**Response:** With a large volume requirement, a short-term service using multiple trains of treatment systems working in parallel offers a viable solution. The setup of Proteus Series Triton Series seawater reverse osmosis system allows the bypasses of the permanent water treatment. The product water is setup to feed a ring-main and a demineralised water storage tank. This allows repairs at the permanent plant to get underway while the industrial zone water ring-main maintains sufficient water supply to downstream customers and off-takers.

**Benefit:** The solution avoids a large-scale industrial zone shutdown and allows repairs to the permanent water treatment without hampering other on-going activity. Continued revenue generation means there is no negative commercial impact and the service proves to be a reliable and useful for urgent short-term requirements.



## Typical Capacity of Systems\*

### Proteus Series Media Loadings:

Softening	300 m <sup>3</sup> /h (1320 GPM)
Filtration	150 m <sup>3</sup> /h (660 GPM)
Demineralsation	300 m <sup>3</sup> /h (1320 GPM)
Condensate Polishing	250 m <sup>3</sup> /h (1100 GPM)
De-oxygenation	200 m <sup>3</sup> /h (880 GPM)

Atlas Series Micro-filtration	150 m <sup>3</sup> /h (660 GPM)
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### Triton Series Reverse Osmosis:

Seawater RO	60 m <sup>3</sup> /h (265 GPM)
Brackish Water RO	65 m <sup>3</sup> /h (286 GPM)

Volturnus Series Electro-deionisation:	60 m <sup>3</sup> /h (265 GPM)
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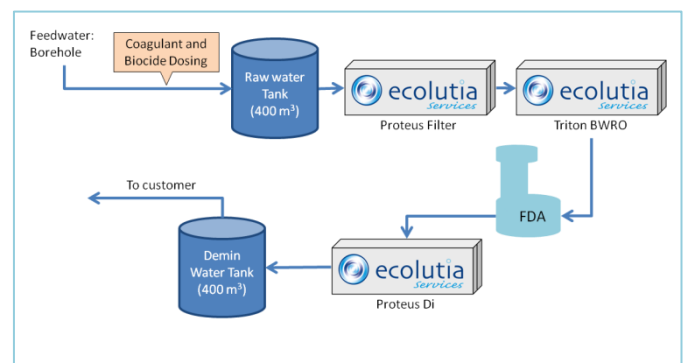
\* Total product water flow is subject to feedwater quality

## Example: Project B

**Challenge:** An accidental mass overdosing of chemicals into the filtration system causes severe fouling to the reverse osmosis membranes, leading to shutdown of the main part of the water treatment plant. The customer is heading into a peak season so an alternative and urgent solution is required.

**Response:** Deployment of rapid response Proteus Series and Triton Series systems emulates the production of treated water at the facility. The first Proteus unit provides filtration pre-treatment to the Triton Series reverse osmosis system. Following this, the product water passes to an ion exchange loaded Proteus Series system for final polishing. Later, as the peak production period commences a second train is installed to run in parallel for the increased volume of water required.

**Benefit:** The facility remains operational with access to treated water. The temporary water treatment service allows easy replacement of the damaged reverse osmosis membranes and installation of additional safety features. The second train easily slots in to match the increased demand for treated water. As no civil works are required, once the peak period ends the systems are removed within a few hours.



For a secure treated water supply contact Ecolutia Services