

# CASE STUDY

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|----------|---------------------------------------|
| PROJECT  | POTABLE WATER<br>FOR REMOTE COMMUNITY |
| PRODUCT  | Brackish Water Reverse Osmosis (BWRO) |
| INDUSTRY | Infrastructure                        |
| LOCATION | Eastern Goldfields, Western Australia |



## BACKGROUND

The Government of Western Australia (WA) Housing Authority manages essential services at Aboriginal communities in the remote outback of WA via the Remote Area Essential Services Program (RAESP). Local Regional Service Providers are engaged by Housing Authority for the delivery of essential services to these communities.

The Cosmo Newberry Aboriginal Community potable water supply had nitrate levels that exceeded the health limit, and with a number of MAK Water treatment plants at other aboriginal communities, MAK Water was asked to supply an additional water treatment plant. The client was looking for a fully automated, extremely reliable, low maintenance system, to achieve compliance with the Australian Drinking Water Guidelines (ADWG).

## SOLUTION

- Custom design and manufacture of a 128 m<sup>3</sup>/day Brackish Water Reverse Osmosis (BWRO) plant
- Two stage reverse osmosis (RO) configuration with  $\geq 80\%$  recovery rate
- Permeate blending with remote flow control
- Duty standby low pressure feed and dosing pumps for improved plant reliability
- Containerised (1 x 20') with steel floor, insulation, air conditioning, vandalism protection and safety shower
- Auto plant restart on power outages
- High level of instrumentation with online monitoring of nitrate, conductivity, pH, temperature, flow and pressure
- ClearAccess™ Remote Monitoring and Control
- Fast 12 week delivery time
- Onsite commissioning and training of regional service providers (RSP)



*The completed brackish water reverse osmosis plant*

## RESULTS AND BENEFITS

- **Plant Reliability.** The high quality equipment and robust design has provided reliable operation with minimal maintenance
- **Turnkey solution.** Custom “fit for purpose” design in a durable prefabricated containerised system.
- **Compliance.** Maintains compliance with ADWG and required nitrate level.



*The modular brackish water reverse osmosis plant ready for delivery to the Cosmo Newberry remote Aboriginal community*