

City of Cape Town Municipality

SEA WATER DESALINATION PLANT ASSISTS CAPE TOWN WITH ITS DROUGHT EMERGENCY RESPONSE PLAN

OUR CLIENT



- A “once in a 400-year” drought meant the city had to consider alternative feedstocks for the production of potable water.



- The city identified seawater desalination technology as an appropriate solution.



THE CHALLENGE



- Innovation in design and construction to ensure rapid installation and minimal site works.



HOW PROXA ADDED VALUE

1



PROXA, in a joint venture with Water Solutions SA, designed and commissioned a 7.5 MLD sea water to potable water plant.

2



The desalination plant was built in a modular format to enable future expansion. The scope of work included the marine intake, onshore process plant, product injection and brine return.

3



Given the shallow intake in the sea bay, robust pretreatment was implemented using advanced filtration cleaning systems to protect the membranes and ensure plant availability.

FEED WATER



Sea water

PRODUCT WATER



Potable water compliant to SANS 241 injected directly into the city's reticulation network.

PROCESS

- Open water abstraction
- Screening
- Coagulation
- Advanced Media Filtration (MF)
- Disinfection
- Remineralisation

Uninterrupted production was critical. As such, PROXA included full standby equipment to ensure continuous production in the event of a breakdown or maintenance.

SUCCESS OUTCOMES

- ✓ PROXA provided off-balance sheet financing for the plant over a contractual period of 24-months with revenue collected from the supply of water into the city's grid.
- ✓ The stakeholders collaborated with the local community for input.
- ✓ Local skills were employed during the project construction phase.
- ✓ The building used to house the plant will serve as a community hall once the project is concluded.
- ✓ The balance of the plant will be demobilised from site and the area will be rehabilitated.
- ✓ The inclusion of an environmental officer from the onset of the project ensured minimal impact on the environment during construction.



Contact us to learn how we can find rapid cost-efficient solutions for your water challenges.

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