DESAL IN JORDAN

Jordan dips its toes into the sea

Firms are circling round the world's most prominent desalination scheme. The country's first ever seawater desalination plant will provide some technical insights.

Jordanian water project developer AquaTreat has signed a contract to build the first major seawater desalination plant in Jordan, in a project that is being treated as a test run for the massive Red Sea-Dead Sea desalination and water transfer scheme.

AquaTreat's 12,000m³/d SWRO plant at Aqaba will be built and operated under a seven-year BOT contract, and will supply water both to the municipal Aqaba Water Company and fertiliser/chemicals company Kemapco. When the project is commissioned – estimated in six months' time – it will be the first time seawater desalination has been deployed on such a scale in Jordan. This is largely due to the restricted access to the sea along the country's short coastline surrounding Aqaba.

Although AquaTreat will sell water to both Kemapco and AWC directly, the industrial company is the client, and the facility will be constructed at Kemapco's facility south of Aqaba city (*see map, bottom right*). There is already an intake facility in place which provides seawater for cooling purposes at the site.

The plant is expected to cost in the region of JOD4 million ($5.6 million) and will sell water to both its customers for around $1.10/m³.

Although the plant is small compared to many of the desalination facilities dotted around the region, it marks a serious step up for Jordan, which is planning to lean heavily on seawater desal as a major water supply source in the future, courtesy of the $10 billion Red Sea-Dead Sea project, for which the prequalification began at the end of last year.

In late February, the country's Ministry of Water and Irrigation (MWI) extended the deadline for submitting expressions of interest in the first stage of the project. More than a dozen major international companies have already shown an interest (*see Project Tracker, p45*).

AquaTreat has secured a number of smaller-scale privately financed 'micro-BOTs' in recent years as Jordan struggled with a lack of available capital funding for water facilities (*see GWI November 2015, p27*). Although this is its first domestic SWRO contract, it has installed an array of brackish surface and groundwater treatment plants featuring RO, and has also commissioned a small SWRO plant serving an industrial customer in Abu Dhabi.

AquaTreat spokeswoman Yara Shahrouri told GWI that the development of the plant is being followed closely by the MWI as a way of assessing the impact of desalination on the Gulf of Aqaba, ahead of the start of development on Red-Dead. The environmental impact of the larger project has frequently been a controversial point, both in terms of the abstraction of water from delicate ecosystems in the Gulf of Aqaba, and the disposal of mixed brine and seawater that is planned for the Dead Sea (*see map below*).

"When this project was issued as a tender [last year], some people were confused between this and the Red Sea-Dead Sea one," Shahrouri said. "This project is going to test out how the role of the Red Sea in Jordan's water will work – it's like a pilot plant.

"The ministry is really involved in this project. We have a committee involving us and them, and they are there because they want to see how things will work in the Gulf of Aqaba." ■

BETTER DEAD THAN RED

Seawater desalination in Jordan, and the proposed route of the Red Sea-Dead Sea brine disposal pipeline.