

CASE STUDY

PRE-TREATMENT SOLUTION PRIOR TO DESALINATION

With worldwide water consumption doubling every 20 years, the need to increase sustainable supplies from non-traditional sources is pressing.

Desalination is a technology that converts sea or brackish water into water suitable for human consumption, industrial use or irrigation. Worldwide capacity is projected to reach 160 million cubic meters per day by 2030.


For this to happen, it's vital that desalination plants work at optimum efficiency. Sibelco contributes to this as a partner for filtration solutions.

As an example, Sibelco has supplied filter sand and gravel to Mitsubishi's Shuqaiq 2 Independent Water and Power Project for the Assir region of Saudi

Arabia. Saudi Arabia is the country with the largest production of desalinated water in the world, generating 7.6 million cubic meters a day.

At Shuqaiq, Sibelco's sand and gravel are used in rapid multimedia filters to remove silts, solids, bacteria and parasites before the water is passed through micron cartridge filters prior to membrane treatment. This reduces fouling and clogging of the membrane which, in turn, allows for less frequent backwashing, higher water throughput, lower energy and backwash water consumption, plus a longer working life for the membranes and a


reduction in maintenance and operational costs. Using Sibelco's sand and gravel, Shuqaiq produces over 200,000 cubic meters of clean water each day and can deal with the frequent severe sand storms during summer, which create high seawater turbidity. Sibelco is proud of this contribution to the supply of the world's most precious, and under pressure, commodity – water.



300 m
More than 300 million people globally **rely on desalinated water**



56%
By 2050 demand for water is expected to **exceed supply** by 56%



2x
Water consumption grows at **twice the rate** of population growth



1.2 bn
About 1.2 billion people live in **water scarce areas**