



Desalination Services



Leading Provider of Desalination Consulting, Engineering, and EPC Services

CH2M HILL has the experienced staff, tools, and state-of-the-art technologies to meet the escalating global need for clean drinking water. We've been researching, engineering, pilot testing, and installing energy efficient desalination systems for more than 25 years. Our staff has extensive experience applying membrane desalination technologies for seawater, brackish water, membrane softening, and water reuse applications.

Our comprehensive resume of desalination projects includes conducting feasibility and pilot studies, providing engineering, design, and construction management services for demonstration and full scale projects, and executing design/build or engineer-procure-construct (EPC) services using reverse osmosis (RO), and other membrane-based processes.



Technology Solutions

Coastal areas experiencing rapid population growth can rely on seawater reverse osmosis desalination to meet fresh water demands. Some of the technology's benefits include:

- Drought-proof supply
- Unlimited production capacity
- Easy expansion

World Leader in Desalination Innovation

CH2M HILL leads developing and integrating innovative technologies in the water and wastewater sector. We are particularly proud of our leadership in desalination innovations such as membrane pretreatment, large-diameter RO technology, dissolved air flotation (DAF) pretreatment, and low-energy and green technology innovations. The following projects profile these pioneering activities:



SEWA Seawater Reverse Osmosis Plants on Arabian Gulf and Indian Ocean Coastlines—Sharjah, United Arab Emirates

CH2M HILL is serving as the single source of responsibility for EPC services to deliver multiple seawater RO plants for the Sharjah Electricity and Water Authority (SEWA) on both the Arabian Gulf and Indian Ocean coastlines of the United Arab Emirates (UAE). Advanced technology innovations such as DAF pretreatment for media filtration are being applied for treating seawater prone to oil and algae content, while ultrafiltration is being applied for open ocean pretreatment.

MASDAR City—Abu Dhabi, United Arab Emirates

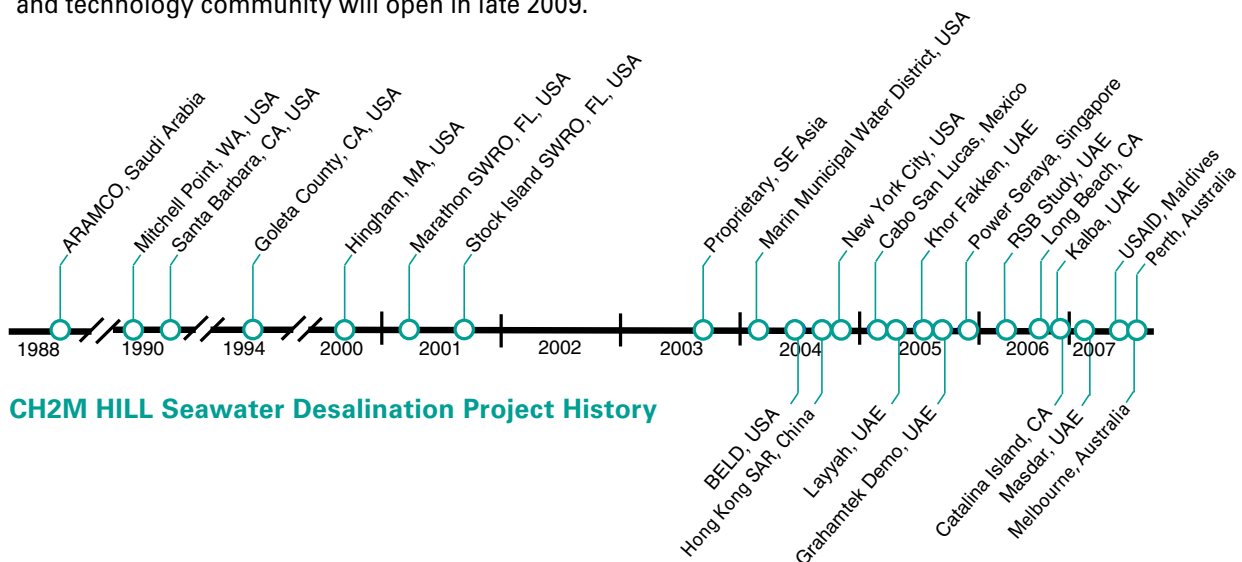
CH2M HILL is the program manager for the first phase of the Masdar development, a zero-carbon and zero-waste sustainable city nestled in the heart of Abu Dhabi—the first major hydrocarbon producing nation. Masdar is a comprehensive Abu Dhabi government program to address the issues of sustainable energy sources and environmental practices. The program is focused on developing and commercializing advanced and innovative technologies in renewable, alternative, and sustainable energies. The 6-km² energy, science, and technology community will open in late 2009.

Power Seraya Seawater Desalination Plant—Jurong Island, Singapore

In 2007, CH2M HILL completed the EPC and commissioning of the 10,000 m³/day (2.6 mgd) seawater desalination plant for Power Seraya, located on Jurong Island in Singapore. The plant is the world's first commercial-scale seawater RO plant using large-diameter RO technology. The plant produces two customized grades of product water for the power plant facility to minimize overall cost. Large-diameter technology provides significant footprint and capital cost savings, and the proprietary GrahamTek RO system operates at an elevated 1st pass flux.

GrahamTek Seawater Reverse Osmosis Demonstration Plant—Sharjah, United Arab Emirates

CH2M HILL is responsible for comparing GrahamTek 16-inch large-diameter RO technology to conventional 8-inch RO technology in this 1,000 m³/day demonstration facility treating challenging Arabian Gulf seawater.





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