

## Public Water Supplies

### Representative installations



Minneapolis, Minnesota

#### City of Minneapolis, Minnesota

Under Construction  
70 mgd (265,000 m<sup>3</sup>/day)

The UF facility will upgrade the existing conventional water treatment plant to guarantee removal of waterborne microorganisms, including 4 log (99.99%) removal of viruses. The Columbia Heights water treatment facility will be the largest UF plant for surface water treatment in the U.S.

#### City of Eagle Pass, Texas

Under Construction  
15 mgd (58,000 m<sup>3</sup>/day)

This UF system will treat surface water from the Rio Grande to meet surface water treatment rules.

#### Foss Reservoir Master Conservancy District, Oklahoma

Operational 1973  
3 mgd (11,000 m<sup>3</sup>/day)  
Upgrade 2003  
4.5 mgd (17,000 m<sup>3</sup>/day)

Originally the largest water desalination plant in the US, this ED facility produces fresh drinking water from brackish water sources on a daily basis for up to 15,000 people in four western Oklahoma communities. The upgrade will expand the facility to 4.5 mgd, and will use the next-generation EDR technology for more efficient production and easy integration with the existing pretreatment system.

#### Water and Sewage Authority of Trinidad and Tobago (WASA), Point Lisas Industrial Estate, Trinidad

Operational 2002  
29 mgd (110,000 m<sup>3</sup>/day)

This seawater reverse osmosis (SWRO) plant, which is the largest in the Western Hemisphere, is desalting seawater using RO technology. This desalination facility, owned and operated in a joint venture between GE and a local Trinidad partner, is providing a reliable water supply to WASA for the industries at this large industrial estate. The salinity of the water being desalinated is 35,000 mg/l TDS; the finished water quality is less than 85 mg/l TDS.



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## Irvine Ranch Water District, California, United States

Operational 2001  
7.5 mgd (28,400 m<sup>3</sup>/day)

A design-build contract for this groundwater treatment plant was awarded to a consortium of Pascal & Ludwig, Tetra Tech and GE. In this plant, the well water had a high color (450 color units) residue deposited from the ancient California redwood trees. The consortium provided the entire treatment plant including the supply of three nanofiltration (NF) skids, each producing 2.5 mgd. The system operates at a high water recovery and uses NF membranes for reducing the groundwater's color residue to less than 15 color units.

## Town of Stonington, Maine

Operational 2001  
105 gpm (570 m<sup>3</sup>/day)

This system uses ozone to create a microfloc that feeds the UF for color removal and removal of suspended solids. The UF product is further treated by NF to ensure that the highly colored pond water meets drinking water standards.

## Town of Julesburg, Colorado, United States

Operational 2001  
1.63 mgd (6,170 m<sup>3</sup>/day)

GE supplied a skid-mounted brackish water RO system to treat groundwater for this small town located in the northeast corner of Colorado. Nitrate levels (11.5 mg/l as N) exceeded the federal drinking water requirements and the groundwater also had moderate total dissolved solids (1,510 mg/l) along with a high hardness concentration. The design consisted of a four train system so as to give the Town the flexibility to meet the water usage demands throughout the year. The new groundwater system provides for nitrate reduction to comply with the nitrate MCL as well as reduction in TDS, hardness and sulfate levels.

## Barbados Water Authority, Barbados, West Indies

Operational 2000  
8 mgd (30,000 m<sup>3</sup>/day)



Barbados Water Authority

Desalinated water from this brackish water RO facility is supplementing the island's existing groundwater supplies and providing up to 20% of the island's potable water needs. This facility, the largest BWRO desalination plant in the Caribbean, utilizes ultra-low-pressure brackish water RO membranes that optimize overall energy requirements.

## Cape May, New Jersey

Operational 1998  
2 mgd (7,600 m<sup>3</sup>/day)

Product from a brackish groundwater RO system supplements this historic seashore community's supply, which is suffering from a salt water intrusion. The brackish well water feed is 2,500 mg/l TDS and the product water is < 150 mg/l TDS.

## Milan, Italy

Operational 1996  
3.1 mgd (11,700 m<sup>3</sup>/day)

GE designed, built, owns and operates RO plants for eight municipal supplies to reduce nitrate levels to meet safe drinking water standards.

## City of Suffolk, Virginia

*Operational 1990*  
*3.8 mgd (14,400 m<sup>3</sup>/day)*

GE EDR was selected as the process of choice for the City due to its high water recovery, ability to address high fluoride content in the City's well water, and its low operating costs. The system produces high quality potable water with 94% recovery and a 73% reduction in fluoride levels.

## Maspalomas, Canary Islands, Spain

*Operational 1986*  
*EDR 5.3 mgd (20,000 m<sup>3</sup>/day)*  
*SWRO 6.4 mgd (24,000 m<sup>3</sup>/day)*

*Multiple expansions to date*

GE owns and operates two plants that sell fresh water to the local utility under 20 and 25 year contracts. EDR treats brackish well water while the RO plant desalinates seawater. The salinity of the seawater is 35,000 mg/l and product water quality is less than 500 mg/l.