

# West Basin Solves Potable Water Shortage with Wastewater Reclamation

## Challenge

The West Basin Municipal Water District in Carson, Calif., wholesales imported water to cities, mutual water companies, investor-owned utilities and private companies in the South Bay and unincorporated areas of Los Angeles County, serving a population of more than 900,000.

In 1995, West Basin constructed the West Basin Water Recycling Facility to meet the growing demand for a sustainable, reliable water supply in Southern California and to reduce the demand on scarce potable water sources. They became one of the first water agencies in the United States to implement wastewater reclamation using membrane technology. In 1997, the first MEMCOR® low-pressure membrane plant was installed at the facility followed by an additional three between 1998 and 2002.

After using the Memcor® Classic CMF pressurized membrane system for more than eight years, West Basin decided to install its fifth system that offered the same results and incurred less costs.

## Solution

West Basin chose the Memcor® CS submerged membrane system for its smaller footprint, lower operating costs, reduced waste production, greater flexibility and the ability to visually inspect the membrane modules. As with all Memcor low-pressure membranes, the CS system consistently produces a silt density index (SDI) of less than three, versus an SDI of five with conventional pretreatment technology. The

Snapshot - West Basin	
Location	USA
Source	Municipal wastewater
Application	Reuse
Technology	Memcor® CS
Capacity	14.4 MGD (54.5 MLD)
Commissioned	2006

reduced SDI results in less RO membrane fouling and longer durations between cleaning, which translates into lower operating costs and longer RO membrane life.



Memcor® Membrane Systems

Water Technologies

SIEMENS

Operational Data	West Basin
Number of skids	6
Modules per skid	384
Total capacity	14.4 MGD (54.5 MLD)

### Results

West Basin is treating more than 30 MGD of secondary effluent, which equals about eight-billion gallons of water annually for 210 users in the South Bay. The facility produces six customized “designer” classes of water for a variety of industrial and municipal applications, including irrigation for parks and golf courses, seawater barrier injection, make-up water for oil refineries, cooling towers and for high-quality boiler feed.



What began as a proactive measure to ease a potable water shortage has ultimately saved the region more than 65 billion gallons of drinking water. Today, West Basin is recognized as a leader in water conservation and water recycling and was recently named “Large-Size Recycled Water Agency of the Year” by the California section of the WaterReuse Association.

### Membrane Solutions

Memcor® membranes from Siemens Water Technologies represent the broadest range of low-pressure membrane filtration products -- submerged, pressurized, large capacity or small systems. They continue to be successfully employed in applications as diverse as wastewater reuse, potable water, RO pretreatment, high solids and sand filter retrofits.

Memcor® Products								
Product	Pres-surized	Sub-merged	Water Reuse	Potable Water	High Solids	Sand Filter Retrofits	Large Capacity	Small Systems
CP	■		■	■	■		■	
CS		■	■	■	■	■	■	
XP	■		■	■	■			■
XS		■	■	■	■			■

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