



Committed to Providing Reliable Water Through Ocean-Water Desalination

Meeting the Region's Water Supply Needs

Southern California is facing increasing demands on a shrinking water supply. Imported water is becoming less reliable due to droughts, environmental restrictions and other factors. As a result, West Basin Municipal Water District (West Basin) has initiated a program called Water Reliability 2020 that will reduce the area's dependence on imported water from 66 percent today to 33 percent by 2020. Ocean-water desalination is a key part of that program.

Experience in Desalination

Ocean-water desalination is the process of removing salt, other minerals and impurities from ocean water so that it can be used as drinking water to supplement less reliable water supplies. Although ocean-water desalination has been around for centuries, technology has recently improved, making it both less energy intensive and more affordable to desalt ocean water.

From 2002 to 2008, West Basin operated a 10-gallon-a-minute ocean-water desalination pilot facility in El Segundo, California, using microfiltration and reverse osmosis membrane technologies. This pilot facility is used for extensive research and water quality testing purposes. The results of more than 500 monthly water quality tests indicate that the quality of our desalinated ocean-water meets or exceeds current state and federal drinking water standards.

West Basin has desalted more water than any other water agency in California. For years, West Basin has removed the salts from local groundwater with a high mineral content. Since 1992, West Basin has desalted municipal wastewater for irrigation and industrial use. Since that time, West Basin has planned, permitted, financed, designed, constructed and operated six water purification facilities. West Basin uses the same technologies for ocean-water desalination that are used in groundwater and recycled water treatment.

A National Effort

In 2003, West Basin collaborated with several national water agencies to bring greater attention to desalination efforts through the formation of the U. S. Desalination Coalition (The Coalition). The Coalition works to encourage federal support and funding for ocean-water desalination projects across the nation.

"If we could produce fresh water from salt water at a low cost, that would indeed be a great service to humanity, and would dwarf any other scientific accomplishments."

-President John F. Kennedy



75% of people in the coastal Los Angeles area support ocean-water desalination as a new source of reliable water.





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Desalination is a time-tested process that originated in the Middle East, dating back to Julius Caesar around 49 BCE.



Planning and Providing for Future Water Needs

West Basin is now taking the next step toward desalinating ocean-water for its customers through a Temporary Ocean-Water Desalination Demonstration Project (Demonstration Project) that will provide insight on how to protect marine life and reduce energy use. Alternative ocean-water intake methodologies, including a seabed infiltration subsurface intake pilot and passive wedgewire screen technologies (a special screen designed to keep marine life from entering intake pipes) will provide technical confirmation for the appropriate design for implementation of a full-scale, operational facility. The Demonstration Project will be located at the SEA Lab in Redondo Beach, California.

The benefits of ocean-water desalination include high quality drinking water, an emergency drought-proof supply that is locally-controlled, and a more diversified water portfolio for an arid region. Some scientists believe that desalination is a more environmentally sustainable option than other proposed water supply options that may lead to severe reductions in local fish populations.

By 2020 or earlier, the cost of ocean-water desalination will be competitive with the cost of importing water, and the energy requirements will be only 10 percent more than importing water from Northern California. West Basin plans to offset that energy difference with green energy sources, such as solar power. Ocean-water desalination could eventually provide 20 million gallons a day of the drinking water that West Basin supplies to its customers.

West Basin is committed to:
Water Reliability
Water Quality
Sound Financial and Resource Management
Customer Service
Environmental Stewardship

West Basin Municipal Water District

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