



# Ocean Water Desalination Project

Fact Sheet

## Who is the West Basin Municipal Water District?

West Basin Municipal Water District (West Basin or the District) is a wholesale water agency, formed by voters in 1947, to make local water supplies more reliable through new water sources and reduced groundwater pumping. The mission of West Basin is to provide a safe and reliable supply of high-quality water to the communities it serves, which represents nearly one million people in 17 cities and unincorporated areas in Los Angeles County.

West Basin is an industry leader in producing recycled water, implementing effective water conservation programs, desalting groundwater, exploring ocean water desalination and providing community education programs throughout its 185-square mile service area.



## Commitment to Water Reliability

Water reliability is critically important to our region's growth, economic health and quality of life. West Basin has made water reliability not only its responsibility, but its mission. The District has goals to achieve a diverse water supply portfolio, as detailed in the West Basin 2015 Urban Water Management Plan.

For West Basin, water reliability can be achieved by: reducing dependence on imported water; increasing conservation; and developing locally-controlled, drought-resilient water supplies including recycled water and, potentially, ocean water desalination.



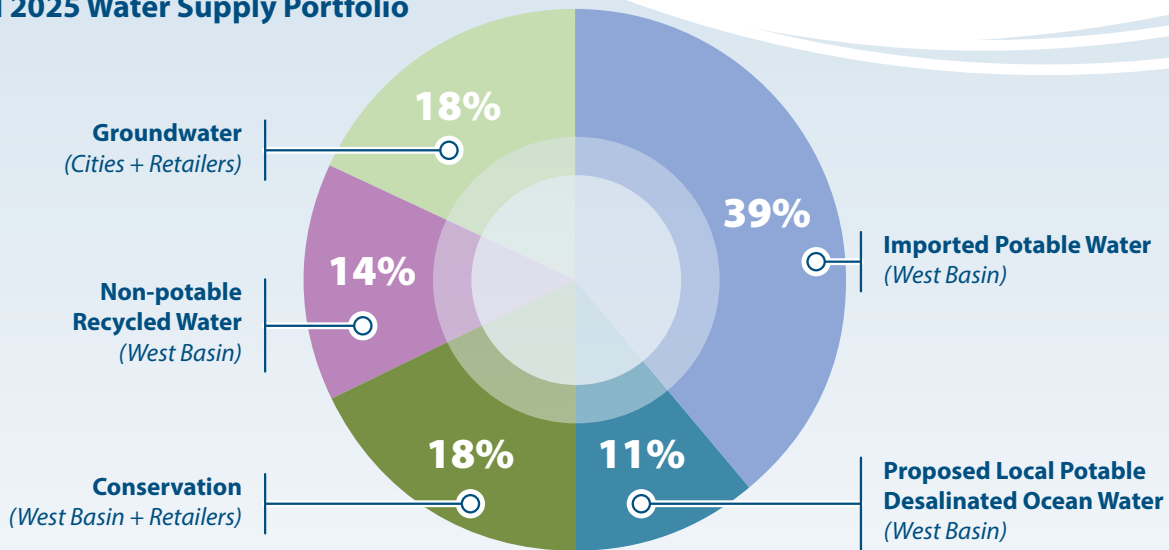
## The West Basin Ocean Water Desalination Project

The proposed Ocean Water Desalination Project (Project) would produce between 20 to 60 million gallons per day (MGD) of drinking water from the ocean. The 20 MGD capacity facility (Local Project) would generate approximately 21,500 acre-feet per year of high-quality, drinking water to meet the demands locally. The project also considers a potential expansion of the facility to produce up to 60 MGD of drinking water (Regional Project), to account

for future needs in the region. A 20 MGD ocean water desalination facility could add approximately 11% of reliable water to the service area, further diversifying the District’s water supply portfolio.

The proposed Project site would be at an existing 33-acre industrially zoned location within the El Segundo Generating Station (ESGS) at 301 Vista Del Mar in the City of El Segundo, California. The key project components consist of a desalination facility, ocean water intake system, brine discharge system and a drinking water delivery system.

### Targeted 2025 Water Supply Portfolio



Note: Parenthesis indicates the entity/entities that control the specified water supply.

(Reference: 2015 Urban Water Management Plan)

## Project Objectives

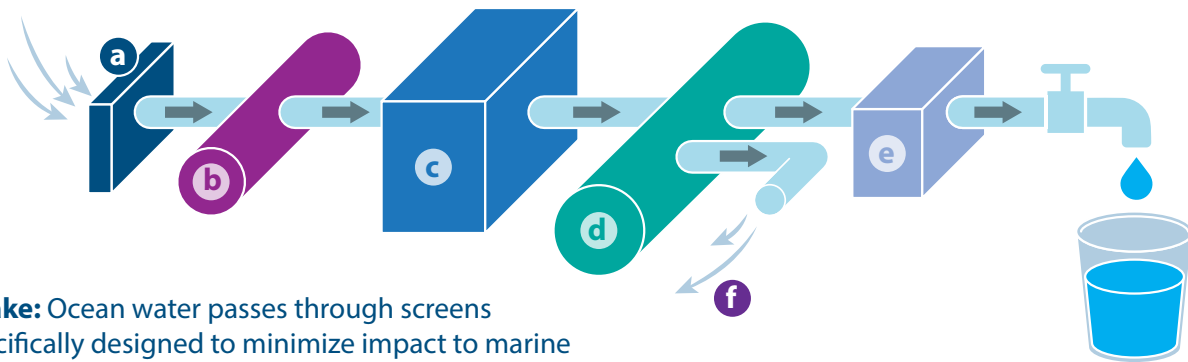
Ocean water desalination, with over 18,000 facilities in 150 countries, is one component of a water supply reliability solution used around the world. This added drinking or potable supply would enhance regional water reliability, especially during periods of drought and water scarcity (e.g., loss of snowpack in the Sierra Nevada Mountains, catastrophic interruptions of water supply and uncertain impacts of climate change).

The Project is being explored as one component of the District's mission to provide safe and reliable water to the communities it serves through the following objectives:

- Diversify the District's water supply portfolio to **increase reliability** in the near and intermediate term (5-15 years) and long term (15-30 years), while **reducing reliance** on imported water;
- **Improve ability to adapt** by developing a water supply that is less vulnerable to climate variations;
- **Improve water security** by increasing local control of water supplies and infrastructure;
- Improve the District's **ability to control water costs** and provide **long term price stability**; and
- Develop a potable water supply that is **cost effective** and **environmentally responsible**.

## How Does the Ocean Water Desalination Process Work?

The main ocean water desalination process involves removal of dissolved salts and impurities to produce high-quality clean drinking water. The process involves the following steps:



- a Intake:** Ocean water passes through screens specifically designed to minimize impact to marine life. The screens will be designed in accordance with the 2015 California Ocean Plan Amendment for desalination.
- b Media Filtration:** Filters remove coarse materials from the water, such as sand and sea shell pieces.
- c Membrane Filtration:** Fine membranes remove the microscopic material in the ocean water, such as bacteria.
- d Reverse Osmosis:** The filtered water is pumped under high pressure through reverse osmosis (RO) membranes to purify it, removing salt, minerals and any remaining viruses. This results in water that meets or surpasses state and federal drinking water requirements. The discarded salt water is referred to as brine.
- e Post-Treatment:** Due to the pure water quality that results from the RO process, the water is remineralized to stabilize it and prevent water pipes from corroding. The water is then disinfected so it is safe for drinking.
- f Brine Disposal:** The brine from the RO process is returned to the ocean where it reaches ambient salinity levels within a 100-meter radius to minimize impacts on marine life. The brine discharge system will be designed in accordance with the 2015 California Ocean Plan Amendment for desalination.

## Commitment to Environmental Stewardship

Since 2002, West Basin has taken a responsible, science-based approach to its Ocean Water Desalination Program to protect marine life, maximize energy efficiency and minimize cost. West Basin has conducted numerous, methodical, ocean protection and operational efficiency research studies to meet California’s environmentally protective regulations and District commitments. The District’s commitments include water reliability, water quality, financial and resource management, environmental stewardship and customer service.

## Environmental Impact Report Review and Public Comments

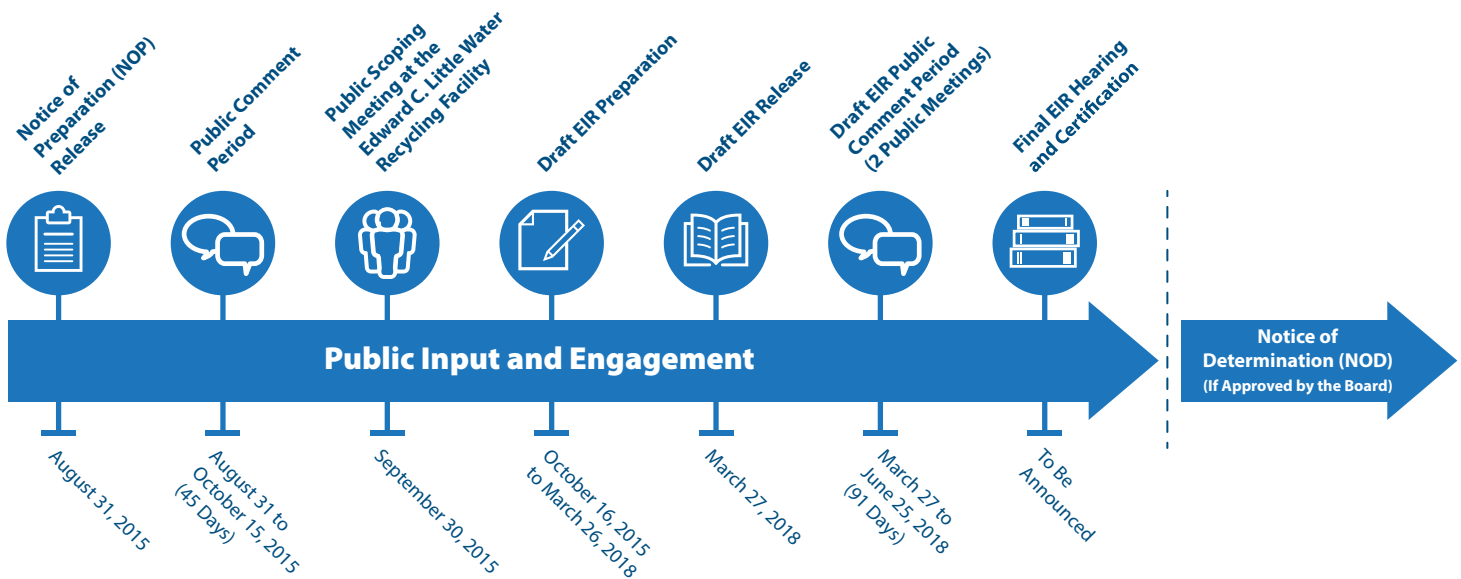
West Basin is currently conducting an environmental review to evaluate the possible impacts and mitigation measures of a potential ocean water desalination facility to produce drinking water, in accordance with the California Environmental Quality Act (CEQA).

CEQA is a statute that requires state and local agencies to identify adverse environmental impacts that projects may have, as well as identify ways to avoid or mitigate those impacts if possible. Through CEQA, an Environmental Impact Report (EIR) must be prepared by the lead agency when there is sufficient evidence that significant environmental impacts may occur from the project. The District, the lead agency on the

Project, determined that a full-scale ocean water desalination facility may have impacts that could be potentially significant and is preparing an EIR.

West Basin is committed to a thorough environmental review process. The District will share the report findings and provide opportunities for public input on the draft EIR during the public comment period. Input from the public is a critical part of the CEQA process, as it helps inform and refine the Project. The public comment period also provides opportunities for stakeholders to ask questions. Please visit the Project website for a listing of public meetings at [www.westbasin.org/desal](http://www.westbasin.org/desal).

## CEQA Review Process



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