San Diego County Water Authority

Seawater Desalination

The Proposed Carlsbad Desalination Project Water Purchase Agreement

DIVERSIFICATION
Enhancing Water Supply Reliability

Improving INFRASTRUCTURE

Proposed Agreement and Appendices Available Online

The Water Purchase Agreement and its 18 technical appendices are available at: **www.sdcwa.org/issue-desal**

On September 27, 2012, the San Diego County Water Authority released for public review a proposed Water Purchase Agreement with Poseidon Resources for the purchase of between 48,000 acre-feet and 56,000 acre-feet of desalinated seawater per year for 30 years. The Water Authority Board of Directors has not decided whether or not to approve the agreement. The Board will set a timetable for deciding whether or not to approve the agreement after it has had the opportunity to receive public comment and had the opportunity to review and deliberate the proposed agreement's terms.

Public Review and Comment

The Water Authority has scheduled two public meetings at which public comment on the proposed agreement will be solicited. The meetings are:

- Tuesday, Oct. 2, 2012, at 6:30 p.m., at the San Diego County Water Authority headquarters, 4677 Overland Avenue, Kearny Mesa;
- Wednesday, Oct. 10, 2012, at 6:30 p.m. at the city of Carlsbad's Faraday Center, 1635 Faraday Ave., Carlsbad.

Member Agency Local Supply Option

The proposed Water Purchase Agreement contemplates that the Water Authority will purchase between 48,000 and 56,000 acre-feet of water per year from the project, meld those new supplies and their cost with other Water Authority water sources, and then sell the water as a Water Authority supply to its 24 member agencies – local water agencies and cities that retail water to customers. Member agencies will have up to 60 days to express interest in purchasing water from the project as a "local supply" at the same cost the Water Authority pays for the water.

Project Background

The Carlsbad Desalination Project is a seawater desalination plant and conveyance pipeline being developed by Poseidon Resources, a private, investor-owned company that develops water and wastewater infrastructure. In development since 1998, the project was incorporated into the Water Authority's 2003 Water Facilities Master Plan and into the 2005 and 2010 updates to the Urban Water Management Plan.

Rendering of Carlsbad Desalination Project site outlined in yellow.

The project site is on industrially zoned land adjacent to the Encina Power Station in Carlsbad. The project has obtained all required environmental permits and environmental clearances necessary for the construction of the facilities. Prior to commercial operations, Poseidon is required to obtain a permit from the California Department of Public Health to deliver drinking water to the Water Authority's aqueduct system.

The planned project includes a 10-mile, large-diameter pipeline to the Water Authority's Second Aqueduct in San Marcos. The Water Authority would make a number of improvements to its pipeline system and the Twin Oaks Valley

The Water Authority is a public agency serving the San Diego region as a wholesale supplier of water. The Water Authority works through its 24 member agencies to provide a safe, reliable water supply to support the region's $186 billion economy and the quality of life of 3.1 million residents.

AF = acre-foot

One acre-foot is approximately 325,900 gallons, enough to supply two single-family households of four for a year.

Water Treatment Plant to integrate desalinated water into the Water Authority's aqueduct system. The Water Authority and Poseidon have completed planning and technical studies to determine exactly what improvements would be necessary and what those estimated costs would be.

The Water Authority estimates that, in 2020, water produced by the project would account for about one-third of all locally generated water in San Diego County.

Project and Financial Due Diligence

Prior to the release of the proposed Water Purchase Agreement, the Water Authority conducted comprehensive due diligence to protect the interests of the Water Authority, its 24 member agencies, and ratepayers. This included reviews of Poseidon's project agreements with its contractors who will build and operate the plant, and design and build the new conveyance pipeline. It also included a review of financial and other project documents. This process will help ensure the project's successful construction and operation, and confirm the project's costs are reasonable, appropriate and accurately reflected in the proposed Water Purchase Agreement. The Board has reviewed and discussed elements of this potential project or the proposed Water Purchase Agreement at 32 public meetings since 2010.

THE WATER PURCHASE AGREEMENT

The proposed agreement outlines the proposed commercial and financial terms for the production and delivery of desalinated ocean water from the planned desalination plant to the Water Authority's regional conveyance system. It also outlines the terms of the potential purchase of the plant by the Water Authority.

Purpose

The Water Authority's focus in negotiating the agreement has been to assign appropriate risks to the private developer, while keeping costs for water ratepayers as low as possible.

The agreement transfers to the private sector (Poseidon and its investors) the risks associated with design, construction and operation of the desalination plant. It also transfers risks associated with the design and construction of the pipeline to deliver the desalinated water from the plant to the Water Authority's Second Aqueduct in San Marcos.

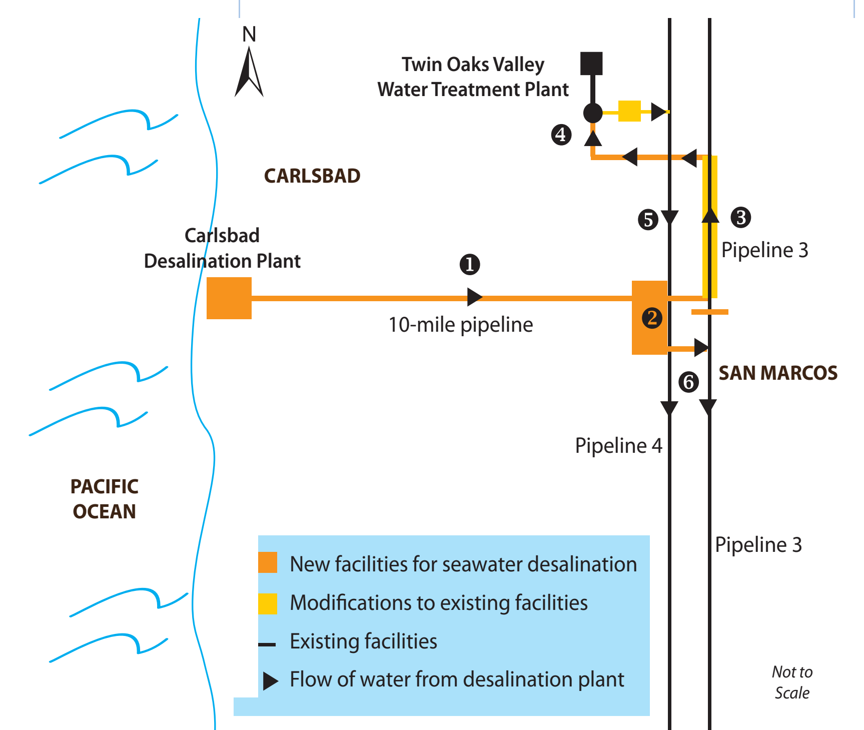
Agreement Terms

Under the agreement, the Water Authority will buy water from the project for 30 years. The Water Authority also has options to purchase the project (see Plant Purchase Options). The term can also be extended up to three years due to "force majeure" events (earthquake, other disasters, etc.).

General Risk Allocation

The Water Authority will buy water from the project at a pre-defined price and will have no responsibility or liability for the design, permitting, financing, construction, construction cost overruns, or operation of the desalination plant. If Poseidon fails to deliver water in the quantities and quality required,

Adding Seawater Desalination to Existing Water Authority System



❶ Desalinated seawater would flow to San Marcos in new pipeline. ❷ New pipeline control facilities send water north into Pipeline 3. ❸ Upgraded Pipeline 3 delivers water to regional hub at Twin Oaks. ❹ Improvements at Twin Oaks plant blend desalinated water and existing treated water supplies. ❺ Water flows south in Pipeline 4 to control facility ❷ and then continues southward into Pipelines 3 and 4. ❻ it will be subject to monetary penalties and other remedies for breach of contract. The Water Authority does not pay for water until the project passes the Water Authority's acceptance tests. Once operational, the Water Authority can reject water from the plant if it does not meet water quality requirements identified in the agreement.

Water Purchase Price

The agreement sets the purchase price at $1,876 - $2,097 per acre-foot in 2012 dollars, depending on how much is purchased annually. The first 48,000 acre-feet of water purchased each year will pay for the fixed costs of the project and the variable costs of water production. Water in excess of 48,000 acre-feet may be purchased at the Water Authority's discretion at a lower rate that reflects only the variable costs of incremental water production.

Total Cost for Seawater Desalination

Additional costs for improvements to the Water Authority's aqueduct system to integrate this new supply would bring the total cost to $2,042 to $2,290 per acre-foot, depending on how much water is purchased annually. While the impact on individual ratepayers will vary depending upon their local water agency, a typical household of four people can expect to pay approximately $5 to $7 per month more for water by 2016 if the Water Purchase Agreement is approved and the plant produces desalinated seawater as planned.

Underperformance

If Poseidon fails to satisfy its supply obligations (delivering a minimum of 48,000 acre-feet per year), it will fail to collect fixed charges from the Water Authority in an amount proportionate to the underperformance. For example, if Poseidon only delivers 95 percent of its supply obligation, it will recover only 95 percent of its annualized fixed charges for that year.

Desalination Pipeline Ownership

Poseidon will design and build the 10-mile pipeline that delivers water from the desalination plant to the Water Authority's distribution system. The Water Authority will own the pipeline. This arrangement will help the Water Authority save tens of millions of dollars in financing costs through lower interest rates. If Poseidon underperforms, it will make payments to the Water Authority in proportion to its underperformance to help cover pipeline financing costs.

Uncontrollable Circumstances

If an uncontrollable event affects Poseidon's ability to deliver water or the Water Authority's ability to accept water, both parties will be relieved of their respective delivery and payment obligations for the duration of that event.

Price Increases

Costs associated with future unanticipated changes in law or regulations are typically passed on to the purchaser of a commodity. Poseidon would be allowed to increase its price to accommodate changes in law or regulations that generally apply industry-wide to water treatment facilities or wastewater dischargers. These cumulative increases are capped at 30 percent over the 30 year term.

Who is Poseidon Resources?

Poseidon Resources is the developer and manager of the Carlsbad Desalination Project.

A private, investor-owned company, Poseidon specializes in seawater desalination and is currently developing other desalination projects in California and Florida. For more information about Poseidon, visit www.poseidonresources.com.

Summary of Costs

Total Project Capital and Financing Costs	
Project Capital Costs	$ 691 Million
Financing Costs	$ 213 Million
Water Authority Facility Improvements & Construction Oversight	$ 80 Million
Total	$ 984 Million
Total Operations & Maintenance Costs	
Poseidon Resources & Water Authority	$ 50 Million - $54 Million Annually*

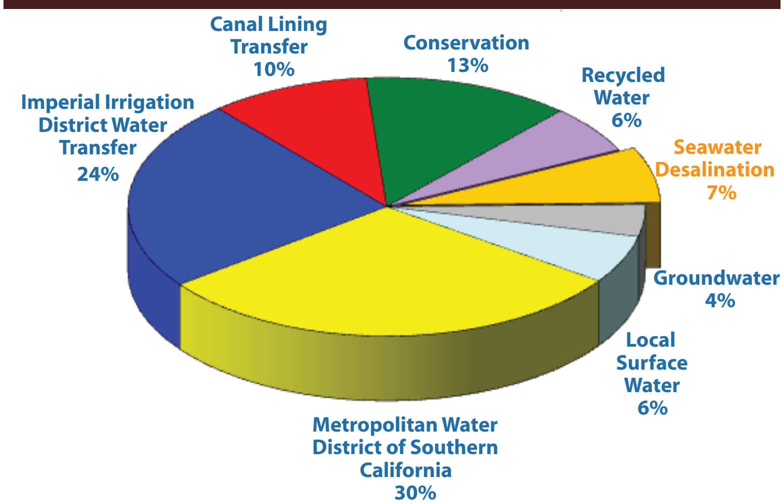
*O&M costs reflect a range of 48,000 AF/year - 56,000 AF/year

The agreement also allows for annual price increases for inflation estimated to average 2.5 percent per year. This compares to the average 7.9 percent increase per year in imported treated water rates from Metropolitan Water District in recent years.[1]

[1] *For the 10-year period 2005-2014, MWD approved treated water rate increases of 101 percent, for a compounded annual growth rate of 7.9 percent.*

When the Encina Power Station no longer uses seawater for cooling, Poseidon is required to upgrade the existing seawater intake and take over responsibility for dredging Agua Hedionda Lagoon. The Water Authority's financial obligation for intake improvements and additional operating costs is capped at $20 million in 2010 dollars for capital costs and $2.5 million for operating costs in 2010 dollars. These costs are already factored into the project budget. Any additional costs are Poseidon's responsibility.

Water Supply Diversification in 2020



Plant Purchase Options

The Water Authority has the option, but not an obligation, to buy the project beginning 10 years after the date of commercial operation. The price would be equal to the amount of outstanding bond debt, the remaining equity return, and any remaining contractor costs. If Poseidon defaults, the Water Authority has the option to purchase the project for outstanding bond debt only, with no payments to equity investors.

At the end of the agreement's term, the Water Authority has the right, but not the obligation, to purchase the desalination plant for $1. This would provide for public ownership of the plant, intake and discharge facilities, and rights to the long-term lease with NRG, the owner of the plant site.

Plant Operations, Management and Maintenance

The Water Authority will have rights to ensure that the plant is operated in a safe, efficient manner in accordance with industry standards. This includes setting employment standards for key personnel, establishing reporting and record-keeping requirements, reviewing security and emergency plans and conducting inspections. It also includes other measures to ensure effective day-to-day coordination between the plant's operations staff and the Water Authority's operations staff.

Default Events

Poseidon will be considered in default of its contractual obligations under specific conditions, including:

- The plant fails to pass acceptance tests by an agreed upon date.
- Poseidon declares bankruptcy or abandons the project.
- The project has repeated violations of primary drinking water standards.
- The project receives multiple notices of violation from regulators.
- The project delivers less than 75 percent of contract year water supplies.
- Poseidon fails to make any necessary shortfall payments for conveyance pipeline debt service.

If Poseidon defaults, the Water Authority has the option to terminate the agreement and seek monetary damages or other remedies. Also, the Water Authority could elect to purchase the plant by paying solely the outstanding bond indebtedness. Prior to the Water Authority's exercise of its rights under a Poseidon default, the bond holders will have the opportunity to remedy Poseidon's default. ■

San Diego County Water Authority

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