



# Why Water Desalination Is Still Controversial For San Diego

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## GUESTS

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Heather Cooley, Co-director, [Pacific Institute](#)

## Transcript:

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MAUREEN CAVANAUGH: This is KPBS Midday Edition. I am Maureen Cavanaugh. Since one of San Diego's biggest needs is water and one of its biggest assets is its coast, it's been a dream for many to put those two facts together and find a way for our region to get its water supply from the ocean. The San Diego County water Authority recently made public a plan to start buying water from a proposed desalinization plant in Carlsbad. County water Authority polls show more than 80% of San Diego's support the project about concerns about cost and potential environmental consequences continue to fuel a debate. I'd like to welcome my guests. First Peter MACLAGGAN is the senior vice president of Poseidon resources, the private company that would build the desalinization plant and Peter welcome to the show.

PETER MACLAGGAN: Thank you Maureen.

MAUREEN CAVANAUGH: And Heather Cooley, codirector of the water program for the Pacific Institute, a research organization based in Oakland. Heather, welcome to Midday Edition.

HEATHER COOLEY: Thank you Maureen.

MAUREEN CAVANAUGH: Now, Peter, I'd like if you could start us out with some facts about the proposed plant in Carlsbad. When do you expect to start building this plant?

PETER MACLAGGAN: Actually Maureen, we've actually started building it. We started in 2009 working, we are located at the Encino powerstation so we've been clearing the site, this is a 50 or a power plant has been in service for quite some time and there's some old antiquated facilities that we've been taking off the site getting ready for the full construction that we hope to start early next year.

MAUREEN CAVANAUGH: How long will it take to produce water for San Diego?

PETER MACLAGGAN: It will be about three a process to complete construction of the plant make it ready to start delivering water to the regional supply system?

MAUREEN CAVANAUGH: A majority you expect it will provide?

PETER MACLAGGAN: It will produce 50,000,000 gallons per day of high quality drinking water. They'll be roughly 10% of San Diego County's water supply when the plant goes online in 2016

MAUREEN CAVANAUGH: What kind of experience does Poseidon have in maintaining and building this kind of a plant?

PETER MACLAGGAN: The site is an infrastructure investment company. We specialize in water infrastructure specifically desalinization. We've been in business since 1994 and what we do is we partner with public agencies that have water supply needs and we've been involved in recycling projects, desalinization products projects and so on and we implement the projects in partnership with contractors and engineers that specialize in this sort of thing and just to give you an example in the case of Carlsbad we are working with a team of the best and the brightest in infrastructure construction world and desalinization are contracting will be provided by a team of Kiewit shape infrastructure so that Peter Kiewit company has been around for over 100 years building roads, dams, highways, water treatment plants. Then you have JF Shea located in Southern California, this has been around since the late 1800s and they built the Golden gate Bridge, Hoover dam, for example. And rounding up this team is a group of experts out of Israel, IDE. They are truly the best and brightest in the seawater desalination world they have under their responsibility now operating in Israel three of the world's largest seawater desalinization plants producing let's see almost a total of 250,000,000 gallons a day or roughly half of the country of Israel's water supply. And so we have the benefit Carlsbad of this expertise and being the third-generation of this series of plans that they've been building and operating in Israel and the lessons learned there from.

MAUREEN CAVANAUGH: Great, is there a desalinization plant in the US that Poseidon has also been behind?

PETER MACLAGGAN: Poseidon was involved in the Tampa Bay water desalination plant in Florida. We were the original plan, the water was taken over by the local water utility as we enter the construction phase they completed it. We were the initial developer. We have another project in Huntington Beach, and Carlsbad we have two desalination plants in Lina Cruz Mexico that we were involved in.

MAUREEN CAVANAUGH: No Peter MACLAGGAN, how much will this cost?

PETER MACLAGGAN: The cost of water from about the desalinization plant will be 6/10 of a percent per gallon---

MAUREEN CAVANAUGH: How much will it cost to construct the plant?

PETER MACLAGGAN: The construction plan cost is just sort of took \$600 million and that is represents \$40 million for the desalinization plant and 200 million to build a 10 mile pipeline for have feet in diameter that will connect the desalinization plant the regional water distribution system that is located in San Marcus. It is the San Diego County water Authority's aqueduct pipelines bringing imported water into the region we will tie into that system and from there the water can flow to virtually all the San Diego County residents south of Highway 78.

MAUREEN CAVANAUGH: Now, the figure that's been in most news reports about this most recently is around 900 million.

PETER MACLAGGAN: That's correct. The difference between the two numbers is the cost of financing interest during instruction, there's reserve accounts for what's happening when things go wrong, so when you tally up the total cost of the project, you got \$600 million in capital construction costs and another 300 million and soft costs related to development engineering, financing, mitigation costs. We are building a rather large wetlands project in the southern of San Diego Bay to offset some of the impacts to the Agua Hedionda lagoon from the operation of the plant. So, that is the incidentals that go along with any construction project of this nature that to the total cost of producing the water and delivering it

MAUREEN CAVANAUGH: Originally the estimated cost of building would be 250 million. How did that increase?

PETER MACLAGGAN: You are talking about the 2002 figure to build just the plant and today the plant is just shy of \$400,000,000. 12 years later there have been improvements to the design that have been put in place to, for example expand the storage and things like that, so the difference between \$250 million and approaching \$400 million today is essentially inflation and design changes that have been integrated into the project to make it more robust that was contemplated in the year 2000.

MAUREEN CAVANAUGH: Heather Cooley let me bring you into the conversation. I was reading something written by the president of the Pacific Institute which you are a part of. He's been quite critical of this proposed plant in Carlsbad, is Pacific Institute opposed to desalinization in general?

HEATHER COOLEY: No, absolutely not. Seawater desalinization is a viable supply entity supporting communities in various parts of the world. However it is expensive as Peter McLaggen was just noting, but it also raises other sort of social and environmental concerns.

MAUREEN CAVANAUGH: What is the specific criticism about this plant? For one thing, is it today?

HEATHER COOLEY: I think that that is a great question. The cost as noted is quite expensive, the unit costs of water are about 2002 \$2300 an acre foot, which is considerably more expensive than many other supply options and more expensive than conservation and efficiency options. So

there is risk that this project is built in there won't be demand for the water, that there are other sort of water supply options that can meet demand that other costs

MAUREEN CAVANAUGH: Which brings us to the purchasing agreement that we talked about in depth on this program just a couple of weeks ago and I will get back to that. But when I was talking too big, this is the largest plant planned in North America, the largest desalinization plant, is that right?

HEATHER COOLEY: That is correct, the second-largest was the one that was built in Tampa Bay that one was on the order of 25,000,000 gallons per day. This plant is twice that amount it certainly would be the largest in North America and among the largest in the world.

MAUREEN CAVANAUGH: Recently a local think tank, the equinox center issued a report on water use in San Diego that report said by conservation alone, San Diego might be able to use my the 20% less water in the next 20 years. Is this the kind of information that is not taken into consideration a San Diego County desalinization deal?

HEATHER COOLEY: So that is something that has not been discussed comprehensively the board and committee that looked at the proposal has evaluated some of the water supply options in the area and the cost of those, but what has not really been brought into the conversation is the cost of conservation and how much water could be conserved. Generally studies indicate that conservation and efficiency is less expensive and has fewer social and environmental impacts on water supply options.

MAUREEN CAVANAUGH: I want to talk to about that the water purchase agreement and higher water costs for desalinization, is a big financial commitment for San Diego and we really haven't seen how much water we might be able to save or reclaimed by an aggressive conservation program. Why do you think that going towards this very large desalinization plant in Carlsbad is a good investment for San Diego?

PETER MACLAGGAN: Well I think first of all, Maureen, you need to look at the component of the desalinization supply in the context of the region's overall supply portfolio. And what the authority city go County water Authority is pursuing and has been doing so aggressively since 1990 is what is referred to as a diversified water supply portfolio and clearly water conservation is it key element of that portfolio. We now in San Diego County use less water in 2012 that we used in 1989 notwithstanding the fact that the population here has grown by 30+ percent, the water authorities planning in addition to the desalinization plant contemplates an excess of an additional 20% reduction through conservation by the year 2020. But you cannot provide a safe and secure water supply solely to conservation. In fact you lessen the reliability and security of your supply if you rely solely upon conservation because then when the drought comes along in the next curtailment of water whether it is drought or earthquake or what have you that means that your system has that much less flexibility in terms of where you can look for water that you don't have, so what the water authority has put forward as their strategy is to lessen the demand on imported water. Today we have enough water that we generate locally and Cindy go County to serve the needs of less than one in 10 residents. The other 90% of our supply comes from somewhere else and we all know that that somewhere else is the Colorado River and the state water project imported supplies that are the subject of intense competition. In the case of the state water project we have issues with endangered species that are curtailing supply and will continue to get more complex and more difficult to deal with as time goes forward in the case of

the Colorado River we have seven states fighting over a finite amount of water that's not enough for the combined needs of the seven states and of course California we've got pressures throughout our own state as to where the water is needed, so San Diego does have an option. With the largest reservoir in the world at our doorstep. It should be part of our portfolio. The technology certainly sound. The price of the letters competitive with any other local supply options. It's an investment that will go along with the continued expansion of recycling and conservation. But, keep in mind that there are 14,000 desalinization plants operate worldwide many of which are much larger than what we are talking about here in Carlsbad that are all served by technology providers they reside here in San Diego so it's not the case that we don't have the expertise. We are the world's leader in this technology and we've been exporting for many many decades. Now is the opportunity to put some of this opportunity to work here at home to provide just a partial solution to some of our water supply challenges.

MAUREEN CAVANAUGH: Now, Heather Cooley one of the concerts at Pacific Institute has raised is that the purchase agreement that was just proposed or actually made public by the city go County water Authority says that San Diego agrees to take or pay for a certain amount of water and is there the feeling that we might get into trouble here in San Diego if the demand is not as great as expected?

HEATHER COOLEY: You are absolutely correct. So with a take or pay contract San Diego agrees to take a certain amount of water and pay for that and if they don't need the water they are still obligated to pay for the water even if 0 gallons of water are delivered. That shifts this demand risk, the fact that the demand may not be as high as expected or demanded the other supply or conservation options available inside of shifts the demand risk from the site and the other private partners to San Diego County water Authority. And as we have seen in Australia, that could create major issues. Australia has made significant investment in seawater desalinization and in fact has built six major plants over the past 8 to 10 years. Currently, two of the four that were completed are being put into standby mode. The other two that are still under construction are going to be put into standby mode as soon as they are completed and it's due to the fact that the demand just isn't there and there are other supply and demand management options available. So this is a real risk and it is one that the San Diego County water Authority and its ratepayers are taking on.

MAUREEN CAVANAUGH: Peter I would like to ask you about on the subject of risk Poseidon of course is a private company and you hope to make a profit for your investors on the plant so at first you said your company would bear all financial risk but now you are asking for \$500 million in tax-free bonds and subsidies for the Metropolitan water District and my question is why should taxpayers print your company money when we would be paying higher costs for the water that comes from the desalinization plant?

PETER MACLAGGAN: Well, let me correct your understanding, Maureen we are not receiving any money from the Metropolitan water District nor any subsidies the business arrangement contemplated in the water purchase agreement is that the site will produce and deliver the water to the San Diego County water Authority's aqueduct and not until which time we do in the water meets quality and quantity specifications do we get paid, so it is truly, all of the risk is on a private sector, here.

MAUREEN CAVANAUGH: But you are asking for tax-free bonds to actually pay for it.

PETER MACLAGGAN: This is, what the bond financing of the private activity bonds which are allocated by the federal government, the tax-free status to the states for purposes just as this, projects surveyed public purchase. They are trying to encourage the development of alternative water infrastructure and building, housing and sewage facilities, things like that so this is a problem that has been set up precisely for this purpose to bring down the cost of water to the consumer by not charging the developer that is constructing the project the those bonds just as though it was built by the public Sector so it's just leveling the playing field and it courage and something that needs to get done and let me make one other point is I mean, with respect to the comment about Australia. The planes are in Eastern Australia where it rains 6-8 inches a year. We get 10 inches a year of rainfall in San Diego County, the County water Authority staff looks at 100 years of hydrology. I sized this plant in the take or pay contract based on worst-case wet weather in Sydney go County and the amount of storage that we've got here which is considerably less than that in Australia recently filled up and they have no expectations whatsoever that they're ever going to be put in a situation that they have to buy water they are not otherwise going to buy the Metropolitan water District of Southern California.

MAUREEN CAVANAUGH: I've lost my time. I'm out of time. Just one last question to you, Peter. Will the agreement need to be finalized before you begin work on the plant? Will this purchase price agreement need to be finalized before the work begins in January?

PETER MACLAGGAN: Yes it will, the water authorities been working on this agreement for two years, there's been 32 public hearings, there's another one scheduled this week. There will be more the month of November, but the next logical step in the development of the Carlsbad desalinization project is a water purchase agreement will be considered for approval by the water authority. If approved then we enter the bond market to secure the financing to erect the plant and then we go down the three your schedule I talked about to complete the construction and start delivering water.

MAUREEN CAVANAUGH: I know that we will be talking about this a great deal in the next years. Thank you so much Peter MACLAGGAN, senior vice president of Poseidon resources, Heather Cooley co-director of the water program for the Pacific Institute. Thank you both very much.

HEATHER COOLEY: Thank you, Maureen.

PETER MACLAGGAN: Thanks, Maureen.