Desalination Forum Questions Water Supply Solution

Opponents Spar with Santa Cruz Water Department Director

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by Jessica Lyons

As the Santa Cruz and Soquel Creek water districts move forward with plans to build a desalination plant, speakers at a Mar. 18 forum threw salt at the favored water supply project to solve local shortages and maybe even put an end to constant talks of drought.

Some 200 residents attended the event at Live Oak Elementary School to hear four panelists — the Pacific Institute's Heather Cooley, Santa Cruz Water Department Director Bill Kocher, former Huntington Beach Mayor Debbie Cook and Santa Cruz resident Rick Longinotti — discuss the pros and cons of taking salt and other elements out of seawater and turning it into drinking water. Or, in the case of Mid-County, water that could be used to take the pressure off underground aquifers.

Panelists largely fell into the anti-desalination camp, attacking the environmental risks of desalination, questioning its growth-inducing potential — and putting Kocher on the defensive.

Kocher said that after 75 meetings, city leaders developed a water use curtailment plan intended to max out conservation efforts before committing to a project that would produce a "modest supply of water, [and] a project that doesn't induce growth."

The community can't "conserve our way out of the problem," Kocher said, referring to local water shortages. Desalination, he added, is the most viable option.

The other speakers suggested alternatives, including conservation, treating brackish water, rain water harvesting and wastewater recycling for landscaping uses and agricultural fields (as is done in Monterey County and Scotts Valley).

Cooley pointed to parts of Australia that have survived consecutive years of drought: "It's the norm for them," she said.

In 2005, before the government imposed water restrictions, use was at about 70 gallons per person per day. As of 2008, it was down to 35 gallons per person per day.

Santa Cruz — one of the most water-efficient communities in California — uses 66 gallons per person per day. However, local public health rules are different in California where cisterns are banned and recycled water is limited to irrigation.

While Kocher said a final determination on desalination has not been made, the district has considered alternatives.

"We looked for 30 years at projects in the city of Santa Cruz, and at the end of the day, desalination was selected as the primary choice," Kocher told the audience, adding that the water districts have not made a final decision about constructing a full-scale desal plant. "Like any water supply project, there are issues with desalination. We're investigating all those things now. If it turns out there are some fatal flaws we don't see now, we're probably don't have a project — but we still have a problem."

Doing nothing is not an option, Kocher believes.

"From my 25 years of experience, the most dangerous position is the idea that we don't need to do anything."

Audience Uncertain

Attendees seemed to disagree with Kocher, and sided with other panelists who advocated more con-

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servation and alternative water supply projects.

More than half of the event's participants filled out an anonymous opinion poll at the end of the night, and organizers say 40 percent of respondents indicated that their opinions had changed as a result of the forum.

The survey asked each attendee to describe his opinion about a desalination plant before and after the panel. Options were proceed now, wait and try other measures first, do not consider desalination at all and undecided.

The survey indicated that 30 percent of those who before the forum selected "proceed now" with a desalination project had a different response after listening to the speakers. About 45 percent of those people who selected "wait and try other measures first" before the forum, had changed their vote to "don't pursue" after the forum.

Additionally, 64 percent who were "undecided" before the forum left with a specific opinion and for most it was not embracing desalination.

Only 4 percent chose "proceed now" compared to 36 percent who chose "wait and try other measures first" and 24 percent who selected "do not consider desalination at all." More than a third remained undecided.

The planned desalination plant is a joint project between the Santa Cruz Water Department and the Soquel Creek Water District intended to protect water customers from future droughts and seawater intrusion in groundwater aquifers. The planned $50 million project would be located in Santa Cruz and would produce 2.5 million gallons of water per day when operating at full capacity.

Santa Cruz Water Department customers (some 95,000 people from Davenport to Capitola) would only use the plant during dry years, typically one out of six. The Soquel Creek Water District, which provides water for 40,000 customers from Soquel to La Selva Beach, would operate the facility at all other times.

Desal: Reliable but Expensive

Desalinated water is a highly reliable supply, said Cooley, a senior research associate with the Pacific Institute's Water and Sustainability Program. Cooley presented the most even-handed assessment of desalination at the Mar. 18 event.

Ocean water supply doesn't fluctuate in dry years as streams and rivers do, which makes it largely independent of drought and other weather conditions, Cooley told audience members. This means if engineers build a 2.5 million gallon per day facility, it will generally be able to pump 2.5 million gallons per day.

However, desalted seawater doesn't come cheap. Costs run between $3,600 and $6,000 per million gallons produced, Cooley said, adding that about half the cost is electrical energy.

"That's typically among the most expensive water supply options," she said. "Typically your water rates are going to go up."

Its intensive energy use alone should derail desalination, said Cook, who served on the state's desalination task force and as president of the Post Carbon Institute think tank.

Catalina Island's desalination plant produces 25 percent of water on the island — and uses 75 percent of its electricity, Cook told forum attendees. She suggested residents become more self-sustainable, limiting their personal water and energy use and building cisterns and other storm water catchment systems.

"We really do need to apply an integrated approach," she said. "We need to look at everything through an energy lens."

Rick Longinotti, a panelist and member of Transition Santa Cruz, which organized the forum, promoted conservation-based alternatives to desalination such as year-around restrictions on landscape water, pumping limits on private wells and gray water rebates in which the water district would subsidize systems that recycle laundry water for landscaping, for example.

"We're not just talking about the amount of water, we're talking about changing behavior," he said. ■