

Desalination Soquel Creek water officials convinced desalination plant is solution to overdraft

By Jim Johnson

For anyone who has ever looked out at the vast Pacific Ocean and wondered about harnessing a fraction of the briny seas' seemingly unending supply of water to slake an ever-growing thirst on dry land, it seems like a no-brainer. If saltwater can be transformed into the stuff you can drink, wouldn't that be a perfect solution to a dwindling water supply?

Soquel Creek Water District officials say yes, and have agreed in principle to join forces with the City of Santa Cruz to build a state-of-the-art \$35-\$40 million desalination plant that, despite its acknowledged expense, is being touted as the last water supply project that the district would ever need.

But critics charge that desalination is a danger to the environment, especially in the eco-sensitive Monterey Bay Marine Sanctuary, that it takes too much energy and would likely prompt growth because of the introduction of an essentially unlimited water supply. And, they say that more and better water conservation efforts can do the trick.

And, a few customers have already expressed concern about the potential increase in their already rising water bills that would be required to pay for the desalination plant.

It's an argument that will like-

ly echo along the California coast for years to come as communities consider turning to the relatively new and developing technology of desalination.

Already, communities like nearby Marina and Marin County in Northern California, and Santa Barbara and Long Beach in Southern California have desalination plants.

"(Desalination) has become the water source du jour," Soquel Creek Water District General Manager Laura Brown said.

And, Soquel Creek officials

say they have been considering the technology for years. That's because the district, which serves about 14,000 customers from Capitola to La Selva Beach, has been steadily pumping more water from its groundwater sources than is being replenished (overdraft) since about the early to mid 1980s, according to officials. They say that the district is already over-pumping water by a rate of about 600 acre feet per year and will require an estimated 2,000 acre feet per year by 2050.

According to Soquel Creek

water board president Bruce Daniels, the district is already seeing the salt levels rise in its coastal monitoring wells as saltwater moves inland toward its production wells further inland. Daniels said the district can no longer rely just on water conservation measures to head off the specter of saltwater intrusion, and that it's past time for a desalination plant to be considered.

"This (desalination plant) really should have been done 20 years ago when the water district went into deficit (drawing more

water out than is being recharged)," he said. "With all the development happening around here the deficit has actually increased. Now, throughout much of the district (in the coastal regions from Highway 1 to the ocean), the water levels are below sea level. It's a dangerous situation."

While Soquel Creek officials initially considered a pair of major new water supply options,

• See DROP on page 4



Soquel Creek Water District and the City of Santa Cruz plan to tap into the Pacific Ocean for water.

A Drop From the Ocean



Aptos Times is
direct mailed.

PSRAT STD
Postage Paid
Aptos, CA
Permit #31

including the desalination plant and an arrangement with the Pajaro Valley Water Management Agency to pump water from the Central Valley by the South County agency's pipeline, the decision to go with the desalination plant project partnership as the central component of the district's Integrated Resources Plan was approved by unanimous vote in January.

The vote followed on the heels of the City of Santa Cruz's decision to build the desalination plant late last year. Meanwhile, the PVWMA is still struggling with legal challenges to its proposed pipeline plan.

Currently, Soquel Creek officials are hoping to qualify for about \$1.3 million in state Prop. 50 funds to pay for the district's share of engineering and environmental studies related to the proposed desalination plant. The request is part of a multi-agency Integrated Regional Water Management Plan proposal.

Resource Conservation District Executive Director Karen Christensen hailed the partnership as a sign that local water districts are finally attempting to collaborate on meaningful regional solutions.

"What makes me feel good is that these water districts are working together to improve water quality and supply," Christensen said. "This is a huge shift from just 10 years ago."

If Soquel Creek does participate in the desalination plant project, Brown said the district would likely split the construction cost in half with the City of Santa Cruz, while operating and maintenance costs would be assessed based on total use. But Brown added that no specific agreement has been negotiated. The district would also need to build a pipeline to carry the water from the plant to the district's existing infrastructure.

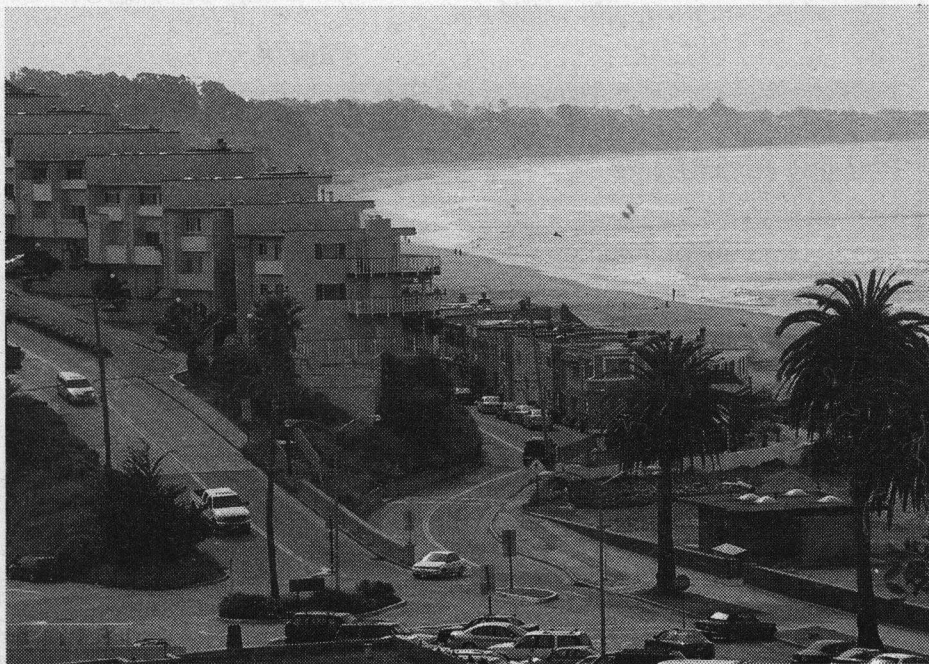
Theoretically, Soquel Creek would use the plant's water production at about half capacity during most normal water years, allowing its current groundwater sources to replenish themselves. And, the City of Santa Cruz, which relies on surface water for its supply, would use most or all of the plant's capacity during drought years, which occur on average about once every 7-10 years.

The desalination plant, which could produce about 2.5 million gallons per day, would likely be built somewhere in Westside Santa Cruz and be completed by about 2010.

However, Brown pointed out that the district is not yet bound to join the desalination plant project. First, the district will participate in a pilot plant project for a year, and will review the program's effectiveness afterward before beginning the environmental review and planning process.

But Daniels said he believes the

The desalination plant, which could produce about 2.5 million gallons per day, would likely be built somewhere in Westside Santa Cruz and be completed by about 2010.



desalination plant is simply the most effective way to resolve a difficult problem. However, he pointed out that the district is also pursuing other possibilities such as: its own desalination plant, using recycled water, pumping water from the Soquel Creek, and a reservoir site; as well as continuing its comprehensive water conservation program.

"(The desalination plant partnership) is the best option," he said. "But there are other options."

Daniels and Brown admitted that the cost of the desalination plant project would cause Soquel Creek water bills to rise considerably, though neither would speculate about how much.

"This will not be cheap water," Brown said.

While the current average Soquel Creek water bill is about \$40 per month, well above the \$30 statewide average, projections suggest that water bills could eventually rise by as much as 40 percent to pay for the district's share of the desalination plant and associated infrastructure improvements. The City of Santa Cruz has already instituted a rate hike that will reach about 40 percent by 2009 to help pay for the plant and other improvements.

Soquel Creek water customers have already absorbed a rate hike and rate restructuring this year that is associated with the district's overdraft situation, according to Brown.

But Brown and Daniels said only a few customers have expressed concern about the potential rate hikes and general public reaction has been in favor of the desalination plant.

Most of the opposition has been envi-

ronmentally based.

According to the Sierra Club's Santa Cruz chapter chairman Aldo Giacchino, there are serious issues to be considered in conjunction with desalination plants.

Giacchino said the plants produce an affluent consisting of high concentrations of salt from the desalinated seawater that can be dangerous to the bay's eco-system, and use a lot of costly energy during the salt removal process.

"Desal plants are really, really problematic in terms of the affluent," Giacchino said. "(And,) they're very intensive consumers of energy."

But water officials said the affluent would be combined with the City of Santa Cruz's wastewater treatment plant discharge before it's released back into the ocean to reduce the salt content to acceptable levels. And, they promised that conservation efforts would be maximized at the plant to keep energy usage to a minimum.

Giacchino said a new water supply would also create an opportunity for a lot of new development that was previously held back by limited access to water and said there has been little or no review of the potential impact such a growth inducement would have on the rest of the area's infrastructure. He added that area water officials haven't fully exhausted all potential water conservation measures.

But Giacchino said the desalination plant is anything but a done deal and pointed out that the water districts will revisit the issue after the pilot plant has been in operation for a year.

"There are plenty of public hearings and review still to come," he said.