

Dec. 8, 2015

Clerk Santa Barbara Board of Supervisors
105 E Anapamu Street, Room 407
Santa Barbara, CA 93101

RE: COMMENTS CONCERNING WATER SHORTAGE

Dear Clerk of the Board:

I would appreciate you sending a copy of the attached commentary to each supervisor prior to the discussion set for Dec. 15, 2015 on **supplemental water sources**. In addition I would appreciate each supervisor taking the time to read and review this commentary which appeared in the Santa Barbara Newspress recently. Also I would appreciate you including this material in your records as my written comments concerning this item.

Thank you in advance for your anticipated help with this item.

Yours truly,



Kenneth McCalip

cc: Six copies of the Commentary

JUNE 14, 2015

South Pacific Sea View



Water is the Future

What do California, Texas, Australia and Israel have in common? They all have a large portion of semi-arid or desert land and

these areas are subject to periodic, severe droughts. In our fourth year of drought conditions, California and the Central Coast would be wise to look at these varied world localities for their expertise and guidance.

Historically, even before the effects of climate change, California has been subject to dry periods of even longer duration. God only knows the length of any event, but we must ask the question: "Do we really have a drought-proof water back-up source?" The State Water system relies on snow melt, both for this particular drought and for all future droughts. The system has proven to not be a fool-proof plan when struck by a lack of both snow and rain.

Texas has a major ongoing effort to diversify its water supply. Texas has a maze of massive

brackish saline aquifers beneath the state's surface as well as seawater available from the Gulf of Mexico and, since its drought of 2012, has been diligently working on a massive system of desalination plants to take water from both the brine waters of the aquifers and the sea waters of the gulf. With burgeoning populations, every small town in Texas wants more water to fuel growth and prosperity as surface water is fast depleting. Eventually, 44-plus desalination plants will be completed in Texas, partially funded by grants from the state and federal governments. Texas looked to both Australia and Israel for guidance, because Australia had just spent billions of dollars on its desalination plants after its prolonged drought.

Ken Mccalip
The author holds bachelor's and doctorate degrees in history, cultural geography and law. He lives in Santa Maria

However, the country and area of the world with the most expertise with drought conditions is Israel. It has been dealing with this issue even from its biblical past. Israel is 60 percent desert and necessity has made

Israel a leader for the rest of the world in technology for dealing with drought conditions. Its history has forced the country to lower consumption and raise supply. It has practiced these methods for over six decades. An Israeli company is now constructing the largest seawater desalination plant in the Western Hemisphere north of San Diego. Three plants now exist in California and 15 more are planned.

Much like California's State Water Project that directs snow melt water south to the dryer Central Coast, Central Valley and Southern California areas, Israel developed a national water system that transported water around the country in much the same way. But like California, the volume was not sufficient. Next they turned to the Mediterranean Sea with reverse osmosis desalination. They use drip irrigation that was developed by Netafin, an Israeli company, and plastic dew trays around trees for additional water savings. Sixty percent of farm irrigation water is recycled

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Invest in desalination before it's too late

■ MCCALIP

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wastewater. Today, through all these efforts, Israel is a surplus fresh water exporter.

New environmentally friendly systems have been developed by the EFD Corporation that builds on existing desalination technologies running on natural gas, using flash chambers resulting in a saleable salt product without any scale or brine contamination back into the ocean. Because natural gas is cheaper than electricity, a

plant powered by natural gas can produce water at a cost of \$844 per acre-foot as compared to \$2,000 per acre-foot using other methods.

It is important to diversify our water sources and reduce the risk to our supply in times of drought stress. In low stress periods, the supply can be used to increase our storage in our aquifers. We should all consider the fact that a prolonged severe drought could cause the complete collapse of our entire coastal economy. Let us hope for the best, but prepare for the worst-case scenario. In the 1980s, then Santa

Barbara County Supervisor Toru Miyoshi suggested a desalination plant close to Guadalupe as an alternative to the State Water Project for the Central Coast area, but the decision was made to go with the State Water Project. The question today still remains. With burgeoning populations in California, and in particular on the Central Coast: "Do we really have a drought-proof water back-up source in the case of a severe long-term drought?"

Perhaps it is time for Santa Barbara County and San Luis Obispo County, along with

each of their cities and all of their farming interests, to work together and pay their fair share toward a modern, environmentally friendly desalination plant on the coast next to Guadalupe to protect the Central Coast. This would diversify our water supply, and because the permitting is a long and arduous process, we should all encourage our elected officials to not dither and immediately move forward. The long-term health and well-being of our beautiful and productive Central Coast hangs in the balance.