

September 11, 2011

John Laird, Secretary for Natural Resources

Chair, California Ocean Protection Council

California Natural Resources Agency

1416 Ninth Street, Suite 1311

Sacramento, CA 95814

Dear Mr. Laird,

As a resident of Huntington Beach, I wish to thank you and others serving on the Ocean Protection Council.

Your heavy responsibilities- to ensure that California maintains healthy, resilient, and productive ocean and coastal ecosystems for the benefit of current and future generations- must require much discussion and considerations. My purpose in writing is to present one idea: that Issue #14 (Build Institutional Capacity to incorporate scientific information into management decisions) and Issue #9 - Desalination and Once Through Cooling) are closely aligned but not all water industry participants appreciate the big and long term picture required by your mission statement. I will expand on Issue #9 first, and then segue to Issue #14.

Your first priority, it appears, is the protection of the ocean. Making Peter MacLaggan of Poseidon Resources "comfortable" with rules and regulations they don't like should NOT be a priority. The current and future generations of Californians and tourists that depend on our coastal ecosystems should be paramount.

Co-location projects like Poseidon Resource's plans in Huntington Beach and Carlsbad are highly destructive projects with little foreseeable value. The assumptions that their costs per acre foot will become equal to other technologies has been soundly challenged by Staff of the California Coastal Commission and many others such as James Fryer(1) and Heather Cooley (2). Their ocean intake devices and their discharge of brine and solvents have proven deadly to sea life. The actual need for desalinated water in 200 years seems reasonable, but not in the next 35 years. Conservation programs, Ground Water Replenishment systems, and related water planning portfolio measures have proven capable of meeting the actual needs (See Australia's recent experience with conservation vs. Desalination factories).

Issue #14 - Build (and maintain) Institutional Capacity. An existing but fragmented knowledge base on Desalination technology has been around for decades, and dozens of policy studies have been published (3,4,5). They all conclude that the technology needs more study, especially in regard to environmental impacts and economic feasibility. I strongly recommend that the new information base capabilities that California Chief Information Officer and staff have achieved with their Strategic Plan (6) and processes be more fully utilized around Issue #14, especially for Desalination (Issue #9). The policy alternatives and the information needed for management decisions have been ignored. Opportunities for semantic integration of policy options and good business rules have been ignored as well.

In addition to changes in California's ability to deal with strategic information and decision support, California architects and contractors and their supply chains involved with capital construction technology have available vastly improved ways to help OPC and related agencies visualize large policy issues such as integrated water management, integrated energy management, integrated transportation management and integrated law enforcement structures. You can visualize structures in the built environment in three dimensions, as well as in four (Time phases) and five (Cost dimensions) with inexpensive planning tools (7). However, special interests favor narrow perspectives and fuzzy thinking in order to maximize their short term economic benefit at the expense of future generations.

In other words, capital construction technology has advanced significantly. An important question to be asked of any Desalination project advocate is if they are experienced in using Building Information Model (BIM) software. Revit or Bentley Systems are the most common applications for radically improving the design and construction certainty (8), and allows almost all of the concerns raised by AES -HB in their Implementation Plan submitted to the SACCWIS - (State Water Board's OTC Panel) on June 16th, 2011.

Thus, I respectfully request that the Ocean Protection Council adopts the earlier Strategic Plan with strong language and supporting metrics that reflects its commitment to protect our coast and ocean from desalination facilities (9).

Thank you for considering my comments.

Bob Smith, Ph.D.

Residents for Responsible Desalination

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REFERENCES

- 1) http://r4rd.org/wp-content/uploads/2009/07/Cost_of_Seawater_Desalination_Final_3-18-09.pdf
- 2) http://www.pacinst.org/reports/desalination/desalination_report.pdf
- 3) http://dl.dropbox.com/u/20433038/PIM_Guide.pdf 5 page introduction
- 4) http://dl.dropbox.com/u/20433038/Desal_PIM_Worksheets.xls Spreadsheet to analyze a specific project
- 5) http://www.water.ca.gov/desalination/pud_pdf/Desal_Handbook.pdf
- 6) <http://www.itsp.ca.gov/>
- 7) <http://www.gsa.gov/portal/content/105075>
- 8) <http://buildingsmart.com/standards> BIM standards and products available at no charge (Part of the National Institute of Building Sciences, a Federal Public-Private Partnership)
- 9) http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/powerplants/huntington_beach/docs/hb_revisedip2011.pdf