

Excerpt from the 2011-2013 Triennial Review Workplan for the California Ocean Plan:

Issue 4: Desalination Facilities and Brine Disposal.

TR Workplan 2005-08 Issue 10

Raised By:

Association of California Water Agencies
Avista Technologies Inc.
CalDeseal
California Association of Sanitation Agencies (CASA, Tri-TAC)
California Coastkeeper Alliance
California WaterReuse
City of Santa Cruz Water Department
Dietrich Consulting Group, LLC
General Public/ Joseph Rizzi
Marina Coast Water District
Mesa Consolidated Water District
Municipal Water District of Orange County
Poseidon Resources
R.W. Beck, Inc.
San Diego County Water Authority
South Orange County Wastewater Authority South Coast Water District
Toray Membrane USA Inc.
West Basin Municipal Water District

Discussion:

Currently, there are no Ocean Plan Water Quality Objectives that apply specifically to brine waste discharges from desalination plants or groundwater desalting facilities. Untreated brine waste discharged into the ocean "behaves" differently than either waste water treatment plant freshwater effluent or the brine waste-freshwater mixture. The "brine waste" plume is denser than the receiving ocean water due to a much higher salinity and tends to settle on the ocean bottom. As a result, a brine waste plume can have an adverse effect on the bottom-dwelling marine organisms.

An amendment to the Ocean Plan is in progress, based on direction given by the State Water Board at the November 2, 2005 workshop, and was discussed at the 2007 Scoping Meeting. Delays with the amendment were associated with the unavailability of staff resources, due to the emphasis in 2008-2010 on the Once Through Cooling policy. However, this issue remains a very high priority. The amendment is currently planned by staff to have three components: 1) a narrative objective for salinity, 2) limits on impingement and entrainment from desalination intakes, and 3) an implementation policy. Specifically with regard to intake impacts, the Ocean Plan does not authorize flow augmentation for dilution purposes, and clarification of this existing constraint to the use of in-plant dilution will be included in the amendment.

Some commenters during the previous and current Triennial Review suggested that the Ocean Plan be modified to facilitate permitting of facilities that discharge brine waste. Many commenters feel that no action should be taken regarding this issue because they believe that water quality objectives for brine water are not necessary, as all brine discharges are already

regulated by NPDES permits that contain conditions protective of water quality. Commenters also express concern over setting a statewide objective due to the variability of salinity along the coast, the lack of knowledge regarding natural background, and because NPDES permits are already protective of water quality by utilizing site-specific objectives. Commenters are concerned that brine disposal regulations could hinder water recycling projects, if financial impacts are not carefully considered. West Basin, CASA and SOCWA also expressed their belief that the state should address brine discharges through a separate statewide policy initiative rather than through various planning documents, such as the Ocean Plan. However, West Basin and CASA suggested that in the absence of a statewide policy initiative, the State Water Board should amend the Ocean Plan to allow brine discharge through existing outfalls. CASA suggests that the “reasonable and representative” water quality testing of these outfalls be done at the end of the ocean outfall rather than at multiple input points along the outfall, and that facilities conducting brackish groundwater treatment, desalination, and recycled water projects be regulated as municipal water supply facilities rather than industrial facilities. Several commenters also suggest that the Ocean Plan simply recognize the importance of and encourage the use of desalination and water recycling.

Two parties (California CoastKeeper Alliance and the Center for Biological Diversity, in a joint letter) expressed interest in the pursuit of an amendment to address brine discharges and a salinity objective. The Coastal Commission submitted comments as part of the 2007 scoping process in favor of the amendment.

Recommendations for Staff Action:

Priority: **Very High**

Level of Effort: **Augmented**

Estimated Personnel Resources: **1.5 PY**

Projected year of completion: **2012**