MARIN MUNICIPAL
WATER DISTRICT

6/26/07 Scoping Mtg.
CA Ocean Plan Amend.
Deadline: 7/27/07 Noon

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July 25, 2007


Ms. Song Her, Clerk of the Board, Executive Office
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Re: **Support for Item 10, Alternative 1, No Action, California Ocean Plan Amendment**

Dear Ms. Her:

On behalf of the Marin Municipal Water District, I am writing you regarding the Ocean Plan Amendment, "Issue 10. Desalination Facilities and Brine Disposal." After reviewing the proposed amendment, I request that you select, Alternative 1, No Action, in determining the future of the existing Ocean Plan.

Currently, the residents of California are enduring severe drought conditions, long-term climate change, recent court rulings threatening water supplies, and over-appropriated rivers and coastal streams. In search of answers, Governor Arnold Schwarzenegger, along with experts in the water industry and technical community, has come out in support of ocean water desalination as a means to address these critical issues.

Further, ocean water desalination is a recognized part of California's future water portfolio. Our ability to utilize new water supplies for urban use through desalination will provide much needed security for our drinking water supply, protection for agricultural needs and will safeguard our natural resources. For these reasons, the development of a new source of water is an urgent necessity.

In order to provide the water community an opportunity to research and review the potential of ocean water desalination, we ask that Alternative 1. No Action, be selected by the Board, so as to prevent any artificial standard (percentage of natural background) from impeding the continued design of desalination plants where feasible and appropriate to meet the needs of our current and future generations.

The scoping document, Amendment of The Water Quality Control Plan, Ocean Water of California, June 2007, Issue 10 states that, "Currently, there is no Ocean Plan objective that applies specifically to brine water discharges from desalination plants or groundwater desalination facilities." This conclusion is without merit, as the current Ocean Plan is protective of marine resources with respect to brine discharges without additional limits set at this time.

The Ocean Plan, as drafted, provides safeguards to ensure the protection of marine species and plants through toxicity testing on sensitive life stages of marine species through the inclusion of the following practices:

Water quality objectives are set for bacteriological, physical, chemical and biological characteristics of receiving water for discharge;
Such objectives include limits on concentrations of metals and other chemical constitutes of a discharge for the protection of marine species as well as human health;
The standards apply to the naturally occurring chemical constituents found in ocean water that is concentrated as part of the reverse osmosis process and discharged back into the ocean as brine; and
The continued protection of the marine environment through regular testing with the sensitive life stages of species most likely to be impacted by any discharge.

A one size fits all water quality objective for the entire state based on a fixed change in natural background salinity as embodied by Alternative 2 is not practical or scientifically defensible when one considers the natural and seasonal variations in salinity that occur in different coastal areas through out the state. In the Scoping Document discussion, it appears that staff has already concluded that it would be appropriate to use a value of 33.5 parts per thousand (ppt) "as an approximate ocean salinity for California near coastal marine waters." This is a premature supposition and that this value cannot be supported based on the variability in salinity levels around the state and in different seasons. For example, as part of the NPDES permit issued for the Carlsbad desalination plant (Order No. R9-2006-0065), it was recognized that background salinity concentrations within the receiving waters varied naturally by approximately 10 percent based on looking at over 20 years of data, and that salinity may be affected by freshwater storm runoff during winter months (lower salinity) and by El Nino periods (higher salinity due to the influx of high salinity water mass from Southern Baja California). The natural salinity variations are even higher in Northern California. Certainly a thorough review of the scientific literature or input from experts would indicate that California coastal waters have variable conditions and cannot be uniformly characterized by a single background value.

The SWRCB should pursue alternative 1 for the following reasons:

The current COP has sufficient provisions in place to provide the Regional Boards with the flexibility to establish effluent limitations for brine discharges using the acute and chronic toxicity standards, the objectives in Table B, narrative objectives and monitoring and reporting requirements that can include special studies needed to establish limits. This situation is analogous to the current approach for discharges of non-saline treated wastewater to the ocean – there is no salinity standard in those cases, and effluent limitations are based on species tolerance.

With specific regard to marine toxicity, the discussion in the Scoping Document is insufficient to justify the course of action recommended (e.g., a simple review of the literature) given the range in site specific conditions that must be considered.

While the issue as described in the Scoping Document specifically mentions brine waste from "desalination plants or groundwater desalination facilities," the derivation and application of a narrative water quality objective for salinity would also presumably apply to any brine discharge and thus would impact recycled water projects. As such,

it is critical to remember that each recycling or desalination project will have site specific marine organisms; site specific sources of water that are treated to remove salts and thus different salt levels in the brine; different discharge configurations; different ocean conditions; different levels of blending and dilution; etc. Given this variability it is not clear how the SWRCB could "firmly" determine a percentage that would be applied statewide to natural background salinity that is protective of beneficial uses simply based on a review of the literature.

If the SWRCB wishes to pursue a brine discharge objective, then a simple literature review would not suffice. It would be necessary to follow the requirements set forth in Water Code Sections 13170, 13241 and 13242 taking into consideration all the relevant factors such as beneficial uses of the water, water quality conditions that could reasonably be achieved, economic considerations, and the need to develop and use recycled water. Of particularly relevance in this process would be the need to determine the impacts the objective would have on the implementation of water recycling and desalination projects (both ocean and groundwater desalination), and the environmental consequences and costs that would result from new projects not being allowed to proceed or existing projects being curtailed.

In summary, since the completion of the Triennial Review, the urgency to amend the COP to facilitate permitting of desalination facilities has dissipated and recent permits issued by Regions 4, 8 and Region 9 have illustrated that the COP currently has sufficient provisions that can be effectively used to establish permits requirements that are protective of the marine environment. **Thus, the SWRCB should not pursue Alternative 2, but Alternative 1 for Issue 10.**

Sincerely,

Paul Selkirk P.E. RC,

Robert S. Castle, P.E.
Water Quality Manager

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