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**Central Coast Regional Water Quality Control Board**

October 20, 2015

Mr. Joshua Haggmark  
[JHaggmark@SantaBarbaraCA.gov](mailto:JHaggmark@SantaBarbaraCA.gov)  
Water Resources Manager  
City of Santa Barbara

**SENT VIA ELECTRONIC MAIL ONLY**

Dear Mr. Haggmark:

**WASTE DISCHARGE REQUIREMENTS ORDER NO. R3-2010-0011, NPDES PERMIT NO. CA0048143, EL ESTERO WASTEWATER TREATMENT FACILITY AND CHARLES E. MEYER DESALINATION FACILITY, CITY OF SANTA BARBARA - RESPONSE TO SUBSURFACE DESALINATION INTAKE AND POTABLE REUSE FEASIBILITY STUDY WORK PLANS**

At a public meeting held on January 29-30, 2015, the Central Coast Regional Water Quality Control Board (Central Coast Water Board) adopted amendments to the subject order for the City of Santa Barbara's Charles E. Meyer Desalination Facility (Facility). The amendments clarified that the Facility is considered to be an existing facility under federal and State regulations. During the process of getting the Facility once again operational, the City agreed to several environmental improvements, including installing new intake screens, funding a restoration project, and conducting feasibility studies for subsurface intakes and potable wastewater reuse.

Related to the subsurface intake and potable reuse studies that are the subject of this letter, page G-7 of Order No. R3-2010-0011 states, "Intake Design Analysis: The City Council has directed City staff to return to the City Council after the contract decision is made in April 2015 to begin exploring a range of alternatives, including subsurface intake and potable reuse options. The City will share the results of its analysis, and any intended long-term updates and/or potable reuse options, with the Regional Water Board at a Regional Water Board meeting within three months of the City Council's review of the finalized analysis or June 30, 2017, whichever is earlier."

The Central Coast Water Board included in the amendments of the subject order a requirement that the City must submit a Feasibility Study Work Plan to the Central Coast Water Board by August 31, 2015, analyzing the feasibility of a range of alternatives, including subsurface intake and potable reuse options. On August 31, 2015 the City submitted two work plans: Subsurface Desalination Intake Work Plan and Potable Reuse Work Plan. The City stated in its letter that the objective of the work plans is to present the methodologies and procedures that will be used to perform the subsurface desalination intake and potable reuse feasibility studies. The Central Coast Water Board accepts the work plans and has the following comments.

### Work Plan Development and Comments

During the development of the work plans, Central Coast Water Board staff met with City staff and agreed with the City's plan to have a public process in Santa Barbara mediated by the National Water Research Institute (NWRI). NWRI set up an independent advisory panel to hold public meetings and gather and respond to public comments on the work plans and subsequent studies. Central Coast Water Board staff reviewed the record of the August 5, 2015 NWRI public meeting in Santa Barbara, the work plans, the NWRI Technical Advisory Panel (TAP) report, as well as the City's response to comments from the public and TAP as part of our overall review of the subsurface intake and potable reuse alternatives work plans.

The Central Coast Water Board appreciates the public process by the City and that the City made changes to the draft work plans based on comments by the TAP and public. The Central Coast Water Board, however, still has some concerns with thresholds identified in the work plans. Specifically, we agree with comments from stake holders, including Heal the Ocean and Santa Barbara Channelkeeper, that the 10,000 acre-feet per year (AFY) screening threshold in these work plans may not allow for the full development of subsurface intake and potable reuse options as part of this study. The 10,000 AFY threshold is based on the permitted production capacity in the California Coastal Commission permit and is approximately equivalent to the brine discharge limit of 12.5 Million Gallons per day (MGD) in NPDES Order No. CA0048143. Specific comments regarding the work plans are as follows:

#### *-Subsurface Desalination Intake Work Plan*

The Water Board understands that information regarding the maximum amount of water that can be obtained by various subsurface intake technologies, as well as further information for those technologies that meet the initial screening threshold, will be included in this study. This work plan initial screening for subsurface intake technologies that could provide the desired permitted intake volume follows procedures and protocols of a recent independent subsurface intake study for a proposed desalination facility at Huntington Beach<sup>1</sup>. As described in the Santa Barbara Subsurface Desalination Intake Work Plan, subsurface intake technologies that could replace the permitted 10,000 acre-feet per year (AFY) would move on to further analysis of social, economic, and environmental feasibility studies. Interested parties (Santa Barbara Channelkeeper) have noted that the City plans to initially only operate the facility at a capacity of 3,125 AFY, much lower than the 10,000 AFY work plan threshold.

The Central Coast Water Board agrees that a lower screening threshold would allow for more technologies to proceed to further analysis (i.e., social, economic, and environmental feasibility studies). However, we acknowledge that the City's approach would gather needed technical information to help guide further decisions regarding the feasibility of subsurface intakes without expensive and time-consuming additional studies for technologies that may not provide enough water for the City's future water needs. We understand that this stepwise approach in the work plan will allow for initial work to focus on intake capacities of various subsurface intake technologies and later work would provide further information on potentially feasible options that pass this initial screening.

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<sup>1</sup> See <http://documents.coastal.ca.gov/assets/press-releases/huntington-beach-desal/CCC-Poseidon ISTAP Draft Phase 2 Report for Public Review 8-14-15.pdf>

#### *-Potable Reuse Work Plan*

The available effluent flows at the City's El Estero Wastewater Treatment Plant (approximately 6 to 7 million gallons per day [MGD] or approximately 6,700-7,900 AFY) for a potential potable reuse project are less than the 10,000 AFY benchmark in the Potable Reuse Work Plan. Central Coast Water Board staff shares the concern with Heal the Ocean that within the confines of this study this 10,000 AFY threshold prevents potable reuse alternatives from progressing past initial screening feasibility analysis of technical factors into feasibility analysis of non-technical social, environmental, and economic factors. Having said this, we understand that information from this study will help with future decisions regarding direct and indirect potable reuse by the City that could reduce the need for desalination.

Central Coast Water Board staff understands from discussions with City staff that the City plans on significantly increasing wastewater reuse, with decisions partially dependent on future California potable reuse regulations. The State Board formed an advisory group<sup>2</sup> on the feasibility of developing criteria for direct potable reuse that will help develop these regulations. Central Coast Water Board staff supports the City's goal to study the feasibility of recycling treated wastewater for indirect and direct potable reuse and encourages expanding recycled water uses as is consistent with the State Water Resources Control Board's Recycled Water Policy<sup>3</sup>. The Water Board could potentially assist in future funding opportunities to help the City achieve these goals. The City has made great efforts in water conservation and the City's intent to recycle wastewater is evident by the recent expansion of the El Estero WWTP Recycled Water Facility.

#### *-Work Plans Provide Information for Longer-Term Studies*

Although these Work Plan thresholds limit evaluation of a full range of alternatives, the Central Coast Water Board understands the logic in the step-wise manner proposed. The City will not perform a combined alternative analysis at this time, but the City will pursue this when it knows how its water supply needs will be affected by pending environmental and operational decisions that could reduce the availability of water from the Cachuma Reservoir or new potable reuse regulations. We understand that the efforts proposed in the work plans will allow the City to meet the deadline to report to the Central Coast Water Board on its progress in looking at subsurface intake and potable reuse options.

#### Studies Update at Central Coast Water Board Meeting

Per amended Order No. R3-2010-0011, the City shall report the results of the studies and its intended implementation actions to the Central Coast Water Board at a public meeting no later than June 30, 2017. We understand that this short timeline may not be sufficient for full studies of each combination of alternatives to be fully addressed in the next approximately year and a half. We expect the City to report the technically feasible maximum yield from a variety of subsurface intake and potable reuse alternatives including a range of subsurface intake alternatives and potable water reuse alternatives with some options to be further explored depending on feasibility. The studies must evaluate the technical feasibility of the maximum capacity of potable reuse and subsurface intake options in order to provide information on

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<sup>2</sup> See [http://www.waterboards.ca.gov/drinking\\_water/certlic/drinkingwater/RW\\_DPR\\_advisorygroup.shtml](http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/RW_DPR_advisorygroup.shtml)

<sup>3</sup> See [http://www.waterboards.ca.gov/board\\_decisions/adopted\\_orders/resolutions/2013/rs2013\\_0003\\_a.pdf](http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2013/rs2013_0003_a.pdf)


whether the alternatives could independently or combined potentially replace the screened open-ocean intake desalination Facility.

The Central Coast Water Board encourages the City, perhaps in conjunction with other area wastewater agencies, to study the feasibility of injecting recycled wastewater into the Santa Barbara, Montecito, and Foothill groundwater basins to recharge these basins and prevent or reduce groundwater overdraft and seawater intrusion and reduce the need to desalinate as much seawater. In the study before the Central Coast Water Board, please provide a feasibility analysis of using treated wastewater to offset groundwater pumping and elevate groundwater levels to decrease seawater intrusion.

The Central Coast Water Board understands that the City and Montecito Water District are in discussions regarding sharing desalinated water produced at the Facility, which would likely require increased production of desalinated water. The City and water district should evaluate whether maximizing production and reuse of wastewater for use in Montecito may be more cost-effective than increasing the production of desalinated water. Also please provide further analysis regarding comparisons of the costs of the proposed desalination project with other projects proposed to reuse treated wastewater, such as increasing recycled water production at the El Estero WWTP Recycled Water Facility and an expanded purple pipe network, including an expansion to Montecito for landscape irrigation.

The City's initial studies will be instrumental in informing future studies, including future updates to the City's Long Term Water Supply Plan. Thank you for your time in developing the work plans. If you have questions please contact **Peter von Langen at (805) 549-3688** ([Peter.VonLangen@waterboards.ca.gov](mailto:Peter.VonLangen@waterboards.ca.gov)), or Sheila Soderberg at (805) 549-3592 ([Sheila.Soderberg@waterboards.ca.gov](mailto:Sheila.Soderberg@waterboards.ca.gov)).

Sincerely,



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Water Boards

Kenneth A. Harris Jr.  
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Attachment: City's Work Plan Submission Letter dated August 31, 2015

cc w/attachment:

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