

Gaslan, Milasol@Waterboards

Subject: Additional Analysis for Desalination Permits
Attachments: Suggestions for Additional Analysis on Desalination Permits.pdf

From: Sean Bothwell
Sent: Monday, October 10, 2016 9:45 AM
To: Waggoner, Claire@Waterboards <Claire.Waggoner@waterboards.ca.gov>; Gaslan, Milasol@Waterboards <Milasol.Gaslan@waterboards.ca.gov>; 'Hope.Smythe@waterboards.ca.gov' <Hope.Smythe@waterboards.ca.gov>
Cc: Joe Geever (geeverjoe@gmail.com) <geeverjoe@gmail.com>
Subject: Additional Analysis for Desalination Permits

Good morning,

After reviewing the recently signed MOU we decided to share our thoughts on the flaws of existing desalination permit applications materials, and what additional analysis should be conducted before a new permit under the Desalination OPA is approved.

Thank you for considering our suggestions, and please feel free to call if you have any questions.

Best,
Sean

Sean Bothwell, Policy Director
California Coastkeeper Alliance
949-291-3401 • sbothwell@cacoastkeeper.org
cacoastkeeper.org • [facebook.com/cacoastkeeper](https://www.facebook.com/cacoastkeeper) • @CA_Waterkeepers

Requests for more information:

1. First, for the question of SSI feasibility: We have reviewed the Well Investigation Team report prepared by Geosyntec. Does Poseidon consider this the **final** determination of technical feasibility of wells?
2. For the question of “demand” – (if we consider an exception to the preference for SSI): We have reviewed the Orange County Water District’s (OCWD) “2014 Long Term Facility Plan” and their more recent “Groundwater Management Plan.”
 - a. Please provide the UWMPs for all the OCWD member agencies and the Metropolitan Water District of Orange County – including the demand forecast model employed in the MWDOC and the OCWD member agencies’ UWMPs.
 - b. Also, please provide any technical memos for, and/or drafts of, the “Orange County Reliability Study.”
 - c. Finally, please provide available information on the proposed Indirect Potable Reuse project planned by LA County Sanitation District and Metropolitan Water District, with a description of how the demand projections may change if some of the product water from the LA County project is used to replenish the Orange County groundwater basin.
3. For the question of technical and economic feasibility of SSI – (if we consider an exception to the preference for SSI): We have reviewed the ISTAP report and the technical and economic analyses. We request third-party reviews of the analyses.
 - a. First, the technical and economic analyses are directly affected by the exclusion of considering wells. We request a third-party review of the Well Investigation Team Report from GeoSciences¹, as that firm appears to have direct experience with slant well development for seawater desalination proposals in Monterey Bay and Doheny Beach.
 - b. Second, we will do an internal review of the legal adequacy of factoring in past performance of SSI alternatives as a measure of “feasibility”, given the definition and case law defining “Best Available Technology.”
 - c. Third, we request an independent third-party review of the economic analysis. We will work with the independent reviewer to outline questions to resolve, for example: alternatives to the “willingness to pay” analyses, economies of scale assumptions, assumption that wells are infeasible and the absence of cost estimates for wells, absence of cost estimates for fine-mesh screens construction and O&M.
4. We have reviewed the alternative sites analysis. We request several answers to additional questions:
 - a. Assuming the results of the additional review of the Well Investigation Team suggests improvements to the computer analysis would be valuable, how might those results affect the conclusions about alternative sites?
 - b. Assuming the results of the Well Investigation Team shows the feasibility of wells withdrawing smaller volumes, and the documented demand is determined to be less than presumed in the application for the WC 13142.5(b) analysis, what would be the effect on the conclusions in the alternative sites analysis?
 - c. We have heard that there exists a pipeline from the coast to the OCWD/OCSD site in Fountain Valley – constructed for the purpose of transporting seawater to

¹ We offer GeoSciences because they are the experts on subsurface feasibility in California.

- the site for desalination treatment. Why wasn't that site analyzed as an alternative to the power plant site?
- d. We request additional information on the potential benefits of co-locating with the OCSD Wastewater Treatment Plant #2 (close to the power plant) and whether this site may offer benefits of co-mingled brine discharge and even greater feasibility of slant wells in the area offshore of Plant #2.
 - e. Given the absence of a recent cumulative impacts analysis for the power plant site, what is the feasibility and complications of development of the project concurrent with development of the AES re-power project, the ASCON toxic dumpsite remediation project, and the recently proposed residential development – all in the same “block” of properties? For example, is it feasible to find parking available for all the simultaneous construction crews? ...will the simultaneous construction be feasible given cumulative adverse impacts on the surrounding wetlands?
5. The Brine Plume analysis by Dr. Jenkins seems to be conclusions from a brine plume modeling exercise. Please provide the computer model, the input data and the output results.
 6. Poseidon has submitted both the 2005 EIR and 2010 SEIR for the record. Please describe what portions of those past CEQA documents are still relevant to the application for a renewed permit application?

Premise for Questions:

Given this is the first permit under the new regulations, we are working under some assumptions that may help Poseidon complete the application:

1. The OPA states a clear preference for sub-surface intakes. Had the application included this strongly preferred option, it would be processed and completed relatively quickly. But applying for the “exception to the preference” takes additional proof – and the burden of proof is on Poseidon.
2. Our first task is to question whether sub-surface intakes are “not feasible.”
 - a. Best Technology Available embodies a “technology forcing” policy that encourages innovation to better meet the goal – in this case, minimizing intake and mortality of marine life. The Water Code section 13142.5(b) does not apply to existing facilities – so forcing new technology on existing facilities is not possible. Nonetheless, a new facility will need to meet the standard of using the most innovative technology available today. The lack of past performance of new innovative technologies does not necessarily exclude them as being “feasible.” That definition would preclude the use of galleries permanently (ie, galleries aren't proven in the past, they can't be “forced” today – so they will never be “proven” in the future.)
 - b. Technical feasibility of wells is, in large part, whether the volume of “source water” needed for the size of the proposed facility can be withdrawn from a sub-surface intake. The volume of freshwater drawdown does not, in and of itself, preclude use of wells. If that were the case, it would preclude wells in every case.
 - c. Economic feasibility is defined in the regulations – though it hasn't been applied before.

3. The first test for an exception to the rule is whether there is a proven demand for the volume of “source water” that is needed for the project, and whether reducing the intake volume would make sub-surface intakes “feasible.”
 - a. The proof of demand must be documented in an UWMP, unless there is no UWMP. If there is no UWMP, the application should include something equivalent to prove the demand.
 - b. This is somewhat of a hybrid case: OCWD doesn’t have an UWMP, but the member agencies do.
 - c. So we will be looking at whatever the “proxy” for an UWMP that OCWD provides, as well as the UWMPs of the member agencies, to ensure the proof is adequate to grant the exception to the rule. [Note: the Regional Board is NOT stepping into the shoes of the OCWD – we are simply enforcing the regulations to protect the environment]
 - d. If the demand for the water is not adequately proven, we would look for lower intake volumes to help determine whether SSI options are feasible.
4. The second test for an exception to the rule would be whether or not alternative sites would make sub-surface intakes feasible, and/or minimize adverse impacts from screened surface intakes.
5. As a final note, much of this information is similar to the requirements for informing the public of the adverse environmental impacts as defined in CEQA. However, CEQA documents are not determinative for enforcement actions by the Regional Board. So we will work with State Lands Commission to attempt to coordinate the information in the Subsequent EIR to ensure that it is, at least, consistent with enforcement of the Ocean Plan amendment for desalination.