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Via E-mail

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SUBJECT: DEIR FOR CAL-AM MONTEREY PENINSULA WATER SUPPLY PROJECT

Dear Mr. Barnsdale:

I write on behalf of LandWatch Monterey County ("LandWatch') regarding the Draft Environmental Impact Report ("DEIR") for the Cal-Am Monterey Peninsula Water Supply Project. LandWatch is dedicated to preserving our community's economic vitality, high agricultural productivity, and the health of our environment by encouraging greater public participation in planning.

The DEIR provides the following project description:

> "The MPWSP would include construction of up to ten subsurface slant wells and a desalination plant to produce approximately 10,627 afy of desalinated water, including 9,752 afy to meet service area demand and approximately 875 afy to return to the Salinas Valley Groundwater Basin. Under the proposed project, the MPWSP Desalination Plant would have a rated capacity of 9.6-mgd. The proposed project would also include improvements to the existing Seaside Groundwater Basin Aquifer Storage and Recovery (ASR) system facilities, which would enable CalAm to inject desalinated product water into the groundwater basin for subsequent extraction and distribution to customers. The proposed improvements to the ASR system would also increase the efficiency and long-term reliability of the ASR system for injecting Carmel River water into the groundwater basin. The proposed project also includes over 30 miles of pipelines, two pump stations, and water storage tanks." DEIR, p. ES-5.

LandWatch has the following comments.

A. The DEIR does not provide adequate analysis and mitigation of the project's effects on the Salinas Valley Groundwater Basin ("SVGB") water supply because it does not first evaluate impacts without a mitigation feature and then separately propose and evaluate mitigation for SVGB aquifer depletion.

In section 4.4.3.5, the DEIR purports to evaluate impacts to groundwater supplies from project operations. The DEIR identifies and evaluates two types of impacts to groundwater supplies: "depletion of groundwater supply to neighboring production wells or the CEMEX pond" (DEIR pp. 4.5-58 to 4.5-66) and "depletion of groundwater supply from the SVGB" (DEIR, pp. 4.5-67 to 4.5-71). The first form of impact is a lowering of the groundwater level in the immediate "Radius of Influence." The second form of impact is the depletion of the regional groundwater supply from the hydraulically interconnected SVGB as a whole.

The evaluation of the depletion of groundwater supply from the SVGB as a whole is defective because the DEIR simply assumes that there will be no significant impact from SVGB depletion because the project will return the pumped freshwater through the Castroville Seawater Intrusion Project ("CSIP"), a project that furnishes irrigation water from surface and recycled water sources in exchange for a reduction in existing groundwater pumping. DEIR, p. 4.4-67 (project proposes to return the pumped inland water to the SVGB via CSIP). The DEIR concludes that "since the proposed project would return what small percentage of groundwater that is extracted from the SVGB through in-lieu groundwater recharge, pumping at the slant wells would not deplete groundwater resources in the SVGB and therefore, this impact would be less than significant." DEIR, p. 4.4-68.

The DEIR's approach violates CEQA because 1) it fails to identify a threshold of significance for the impact at issue (depletion of SVGB water supply); 2) it relies on a project feature rather than an enforceable mitigation measure as the basis of a significance conclusion. In *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645, 653-658, the court held that an agency may not simply rely on a project feature to conflate the distinct steps of first making a significance determination and then separately considering any needed mitigation, including alternative forms of mitigation. The court held that the EIR was defective in that it "fails to identify any standard of significance, much less apply one to an analysis of predictable impacts from the project." *Id.*at 655. The court held that analysis of significance and discussion of mitigation must be undertaken separately: "by compressing the analysis of impact and mitigation measures into a single issue, the EIR disregards the requirements of CEQA." *Id.*at 656. The compression of the analysis is a "structural deficiency" in the EIR that makes it "impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered." *Id.*at 657, 656, emphasis added. Thus, the court held:

> "The failure of the EIR to separately identify and analyze the significance of the impacts to the root zones of old growth redwood trees before proposing mitigation measures is not merely a harmless procedural failing. Contrary to the trial court's conclusion, this short-cutting of CEQA requirements subverts the purposes of CEQA by omitting material necessary to informed decision-making and informed public participation. It precludes both identification of potential environmental consequences arising from the project and also thoughtful analysis of the sufficiency of measures to mitigate those consequences." *Id.*at 658, emphasis added.

As discussed below, the EIR here suffers from precisely the same defects.

1. **The DEIR fails to identify a threshold of significance for depletion of SVGB water supply**.

The DEIR recites the CEQA Guidelines Appendix G threshold of significance for groundwater resources impacts, which includes the following:

> "Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production ate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)." DEIR 4.4-39.

Although the DEIR purports to elaborate some of the Appendix G significance criteria for groundwater impacts, it does not provide any elaboration of the criteria for what counts as a "substantial depletion" of groundwater supplies, either in the project-level analysis in section 4.4 or in the cumulative analysis in section 5.0.

In the discussion of whether the slant wells would "substantially deplete the groundwater supply from inland sources within the SVGB," the DEIR acknowledges that the project would take from 1,889 afy to 1,080 afy from the SVGB under 2012 and 2060 land use conditions respectively. DEIR, p. 4.4-67. However, the analysis simply concludes that this impact would be less than significant under CEQA because "[a]s part of the proposed project, the inland water drawn from the SVGB would not be depleted, but would be returned to the SVGB as in-lieu groundwater recharge to the CSIP pond." DEIR, p. 4.4-68. Thus, the public is not informed what level of depletion of groundwater supplies would count as a significant impact, or as a considerable contribution to a significant cumulative impact.

Please identify a project-level threshold of significance for the amount of inland pumping that would be considered a significant impact if there were no mitigation or project features to reduce this harm such as the proposed return of water through CSIP.

Please also identify a threshold of significance of what would count as a considerable contribution to a significant cumulative impact. In this regard, please see the comments below regarding cumulative analysis.

2. The DEIR fails to clarify its criterion for injury to water rights holders and the relation of that criterion to the CEQA significance threshold

The question of what level of depletion of SVGB water supplies would count as a significant impact under CEQA is complicated by the DEIR's discussion of the issue of potential injury to water rights in Chapter 2. The DEIR ostensibly sets a lower threshold for what might count as injury to water rights than what may be a significant impact under CEQA:

> "Also based upon the groundwater modeling and particle tracking conducted for this EIR, approximately 4 to 7 percent of the MPWSP feedwater would come from within the Basin. The question presented is thus whether Basin water rights holders would be injured or harmed by virtue of such Basin withdrawal. The concept of significant effect under CEQA is not necessarily synonymous with harm or injury to water users. In other words, physical change caused by the project might not rise to the level of a significant environmental impact under CEQA, but could still cause some harm or injury to a Basin water user." DEIR, p. 2-39, emphasis added.

However, the DEIR's equivocal discussion of its basis for concluding that there is no water rights injury from the pumping of inland water implies that its threshold for water rights injury is higher or the same as its threshold for CEQA significance. The discussion of potential injury to Basin water users is equivocal because it is unclear as to whether its no-injury conclusion is based on (1) the conclusion that the "geographic area of the Basin that would be affected by the project contains brackish water rather than fresh water" (DEIR, p. 2-41), or, alternatively, (2) its conclusion that the CSIP water "return option would essentially put the Basin in a 'no net loss' position in terms of water quantity and would benefit legal water users by providing fresh water for beneficial use in lieu of Basin pumping" (DEIR, p. 2-42). If the DEIR is concluding that there is no water rights injury simply because the inland water pumped by the project is brackish but that the depletion of SVGB water supplies would be significant under CEQA without the CSIP return, then it appears that the water rights injury threshold is higher, not lower – because no mitigation feature is required to avoid the water rights injury but the CSIP return is required to avoid the significant impact under CEQA. Alternatively, if the DEIR is concluding that water rights are not injured because of the CSIP return, and also concluding that there is no significant CEQA impact for the same reason, then there appears to be no difference in the water rights injury threshold and the CEQA significance threshold.

Please identify what specific criterion or criteria the DEIR employs to conclude that the project would not injure groundwater rights holders. In particular, please explain whether the DEIR's conclusion that there would be no injury to water rights holders is based on (1) the conclusion that the "geographic area of the Basin that would be affected by the project contains brackish water rather than fresh water" (DEIR, p. 2-41), or, (2) its conclusion that the CSIP water "return option would essentially put the Basin in a 'no net loss' position in terms of water quantity and would benefit legal water users by providing fresh water for beneficial use in lieu of Basin pumping" (DEIR, p. 2-42). Is the return of the freshwater component of the inland groundwater pumped essential to a conclusion that there would be no injury to water rights holders?

Please identify the circumstances in which there could be a conclusion that there is no significant CEQA impact, but the project pumping nonetheless causes injury to groundwater rights. If there are no such circumstances, please explain the DEIR's statement that "physical change caused by the project might not rise to the level of a significant environmental impact under CEQA, but could still cause some harm or injury to a Basin water user." DEIR, p. 2-39.

3. The DEIR fails to provide separate analyses of the depletion of the water supply from the SVGB with and without a project feature that purports to avoid a significant impact; thus, it is impossible to determine the actual depletion of SVGB water supply caused by the project.

The DEIR reports modeling results for scenarios that include various project feature intended to reduce or avoid the depletion of the SVGB water supply for the 24.1 MGD project and the Ground Water Replenishment Variant project ("GWR Variant"). These include injection of freshwater at the Charles Benson Road or CEMEX site (model runs 3nc, 3ncb, 5ncb, 5nc) or provision of freshwater to the CSIP program (e.g., model runs 3n, 5n. 4f, 5f). DEIR, App. E-2, Table 1. The DEIR does not provide an analysis of the effect of the project if the inland pumped groundwater is <u>not</u> returned to the SVGB by one of these three mechanisms.[1] Thus, the DEIR does not disclose information necessary to determine the severity of the impact <u>without</u> a feature intended to avoid or reduce the impact. The public cannot determine the severity of the depletion of the groundwater supply from the SVGB from the unmitigated operation of the project. Nor can the public determine how effective the proposed project features – either injection or return of water via CSIP – would be at mitigating the impact.

Please provide modeling that evaluates depletion of the SVGB water supply with and without the project features for return of the freshwater component of inland groundwater

[1] More generally, the DEIR fails to provide an analysis <u>with and without</u> the CSIP or injection well return feature for <u>any</u> of the three species of groundwater harms to the SVGB that it discusses, which include "depletion of groundwater supply to neighboring production wells or the CEMEX pond" (DEIR, pp. 4.4-58 to 4.4-66), "depletion of groundwater supply from the SVGB" (DEIR, pp. 4.4-67 to 4.4-68), and "impact of the project on seawater intrusion" (DEIR, p. 4.4-80).

pumped by the project, including return via CSIP, return via injection at the CEMEX site, and return via injection at the Charles Benson Road site. Please provide at least the same water balance statistics as are provided in Appendix E2, Tables 2-19 and the Total Dissolved Solids ("TDS") data that is provided in Figures 145 and 146. Please provide this analysis for both the 24.1 MGD project and the GWR Variant.

Furthermore, it appears that the DEIR assumed return of freshwater via CSIP in the modeling to determine the salinity of slant well feedwater and to derive the amount of inland pumping the project would cause. Appendix E-2, pp. 40-41, Figures 145, 146. Please determine the salinity of the slant well feedwater and the amount of inland pumping the project would cause without the presence of a project feature that returns inland groundwater.

Please also explain whether and how returning freshwater via alternative methods other than via CSIP (e.g., via injection wells or via provision of water supply in-lieu of pumping at another facility than CSIP) would affect the analysis of the amount of inland water pumped.

4. The DEIR should identify the project impact on the SVGB water supply as a significant impact and require mitigation.

It appears that the DEIR projects a depletion of from 1,080 to 1,889 afy of inland groundwater supplies from the SVGB even with project features intended to return the freshwater component of that water to the SVGB.[2] Any depletion of the SVGB groundwater supply should be deemed a significant impact and a considerable contribution to a significant cumulative impact for two reasons. First, the SVGB is in overdraft. Second, that overdraft is causing seawater intrusion.

Brown and Caldwell (2015) reports a long-term storage decline and imbalance in the Pressure Subarea, which is the SVGB subarea from which the project would draw freshwater:

> "[t]he average storage decline seen in the Pressure Subarea and the other subareas is the result of the long-term imbalance between groundwater pumping and aquifer replenishment . . .." Brown and Caldwell, State of the Salinas River Groundwater Basin, January 16, 2015, p. 4-15, available at http://www.mcwra.co.monterey.ca.us/hydrogeologic_reports/documents/State_of_the_SRGBasin_Jan16_2015.pdf.

A key conclusion of the Brown and Caldwell State of the Basin report is that groundwater levels do not protect the 180-foot aquifer from seawater intrusion:

[2] The depletion of the SVGB water supply may be higher without the return feature intended to avoid a significant impact from that depletion. However, as discussed, the DEIR fails to provide an analysis of depletion with and without that feature.

> "The fact that groundwater elevations are well below the documented protective elevations indicates that the P-180 Aquifer continues to be susceptible to seawater intrusion, and it is unlikely that his situation will be reversed in the coming years, particularly if the current drought condition continues." Brown and Caldwell, State of the Salinas River Groundwater Basin, January 16, 2015, p. 5-7.

Accordingly, the State of the Basin report recommends pumping decreases in the Pressure Subbasin to address declining groundwater levels. *Id.* at 6-3.

This conclusion is consistent with analysis done in 2013 by Geoscience that shows that groundwater elevations in the Pressure Subarea are insufficient to halt seawater intrusion without additional groundwater management projects. Modeling undertaken for the MCWRA in 2013 establishes that an additional 135,000 afy of surface water flows will be needed in order to supply the additional 60,000 afy of groundwater that is now projected to be required to maintain groundwater elevations and a protective gradient to prevent further seawater intrusion. Geoscience, Protective Elevations to Control Seawater Intrusion, Nov. 13, 2013, p. 11, available at http://www.mcwra.co.monterey.ca.us/salinas_valley_water_project_II/salinas_valley_water_project_II_overview.php (link to "Technical Memorandum.")

The conclusion in Geoscience 2013 that the availability of 135,000 afy of surface water to provide 60,000 afy of in-lieu recharge would halt seawater intrusion appears to be optimistic compared to the DEIR's analysis. As discussed below, an assumption that seawater intrusion would be halted by 2060 appears to be inconsistent with the DEIR's groundwater modeling, which projects that the percent of inland water pumped by the slant wells will decline from 2012 to 2060 from 7% to 4%, and which shows increased seawater intrusion from 2012 to 2060 in the non-project conditions. DEIR, p. 4.4-67; compare, e.g., Appendix E-2, Figure 139 to Figure 140 (particle tracking showing greater inland movement of seawater under 2060 no-project conditions than 2012 no-project conditions). CPUC staff explained at the groundwater modeling workshop that this change was due to the assumptions regarding land use changes.

Regardless of the reason for the decrease in the percent of inland water that would be pumped by the slant wells, it appears that the modeling assumes that inland groundwater levels would not be sufficient to prevent continued seawater intrusion. For this reason, too, the EIR should assume that any pumping of inland water is a significant impact. (In this regard, please see the requests for additional analysis of seawater intrusion effects below.)

In sum, the DEIR should identify any pumping of inland water as a significant impact and a considerable contribution to a significant cumulative impact and should therefore propose enforceable mitigation.

5. The DEIR must discuss alternative forms of mitigation for depletion of SVGB water supply.

CEQA requires that an EIR discuss feasible mitigation. CEQA Guidelines, § 15126.4(a). That mitigation may be identified as a project feature or a condition of approval, and the EIR must distinguish between these forms of mitigation.[3] *Id.*at § 15126.4(a)(1)(A). As noted, the DEIR discusses project features that it argues will avoid a significant impact to the SVGB water supply: return of the freshwater component of inland water pumped by the slant wells either via injection well or via CSIP as in-lieu recharge.

The EIR must discuss other alternatives for two reasons. First, the project features proposed by the DEIR are not adequately certain and may be infeasible. Second, other alternatives are in fact available and CEQA provides that "[w]here several measures are available to mitigate an impact, each should be discussed and the basis for selecting a particular measure should be identified." CEQA Guidelines, § 15126.4(a)(1)(B).

As the EIR acknowledges, injection or percolation at a location where the groundwater quality is already degraded would not be effective mitigation because the water would simply be wasted. DEIR 2-38, 2-41 to 2-42.

In order to provide effective mitigation, the return of the freshwater component of inland pumping must be effected so as to 1) directly replenish the aquifer via injection or percolation in an area in which water would be usable, or 2) reduce existing groundwater pumping, which is a form of "in-lieu" recharge (see DEIR, p. 3-3, fn. 3).

a. <u>Return of the freshwater component of inland pumping may not be feasible via CSIP for the 24.1 MGD project; and return via CSIP is admittedly infeasible for the GWR Variant</u>

The DEIR does not explain in any detail how the project would return the freshwater component of inland pumping via the CSIP project. The CSIP area is 12,000 acres just north of the project site. App E2, App. A, Figure 10. The project description states that product water would be conveyed to the CSIP storage pond for use during the April to October irrigation season. See DEIR 3-28, 3-37. The groundwater modeling assumptions state that the 24.1 MGD project would return 880 afy to the SVGB and the 15.5 MGD GWR Variant would return 550 afy. DEIR, Appendix E2, Appendix A, Table 5.

The DEIR provides no analysis to show that the existing CSIP program actually needs or can use the additional project water. Data in the GWR project EIR demonstrates that existing deliveries of surface water (from the Salinas River Diversion Facility) and

[3] Identifying mitigation as a project feature does not relieve the agency from the obligation separately to evaluate project impacts without and with that mitigation and then to discuss alternative forms of mitigation. *Lotus, supra*, 223 Cal.App.4th at 653-658.

reclaimed water (from the Salinas Valley Reclamation Plant) sufficiently satisfy water demand so that remaining CSIP area pumping in some months would be at levels that are less than the return water obligation from the desalination project. Pure Water Monterey, GWR DEIR, Appendix Q, Table B-3, available at http://purewatermonterey.org/wp/wp-content/uploads/DEIR-Appendix-Q.pdf. For example, the analysis shows that there are a number of months in which CSIP area wells pumped less than 73 af, which is 1/12 of the 880 afy proposed to be returned under the 24.1 MGD project proposal.

Furthermore, the DEIR itself acknowledges that it would not be possible for the project to use CSIP to return the inland groundwater pumped by the slant wells under the GWR Variant because the GWR project itself proposes to meet the existing CSIP requirements. DEIR, p. 2-45, 6-4, 6-114.

Please provide an analysis of the ability of the CSIP to take and use as in-lieu recharge the freshwater component of the inland water pumped by the project under the 24.1 MGD project. Please separately consider dry, normal, and wet year needs and variations in need during the irrigation vs. non-irrigation season. Please provide an estimate of expected amounts of surface water and reclaimed water that are already expected to be available to the CSIP project under existing agreements using the existing infrastructure.

If the analysis finds that the CSIP project would have to forego existing sources of reclaimed water or surface water in order to take all of the freshwater return deliveries from the 24.1 MGD project, please explain how doing so would be consistent with the strategy of providing incremental in-lieu recharge.

Please evaluate both the 7% and the 4% return scenarios since the reduction of the inland pumping to 4% may not occur for a number of years (or at all if seawater intrusion management projects are successful).

Please address the need for additional storage facilities in light of the fact that the irrigation season occurs only from April through October. If the applicant proposes to size the desalination plant to deliver the freshwater return water only during the irrigation season, please discuss the incremental increase in plant size that would be required to do this compared to a return strategy that would allow the freshwater return to be undertaken at constant level throughout the year.

b. Return of the freshwater component of inland pumping via the proposed injection wells is not feasible or effective mitigation because use of the water in that fashion is waste.

Injection of the freshwater return at the CEMEX site would elevate groundwater levels in the immediate vicinity of the project, thereby reducing impacts to neighboring groundwater production wells in the immediate cone of depression or “Radius of Influence” of the slant wells (the other form of groundwater impact evaluated in the

DEIR). However, the DEIR provides no evidence that it could legally or physically mitigate the depletion of regional water supply in the SVGB outside this area.

As the DEIR acknowledges, the SWRCB Report on water rights concludes that a return mechanism that injects water in a location where the water is too degraded to use would be waste, contrary to the state constitution, and would not be considered an acceptable physical solution. DEIR, 2-42. Thus the DEIR states that this freshwater return option "would not be favored." *Id.* Elsewhere, the DIR acknowledges that injection of freshwater at the CEMEX or Charles Benson Road sites would conflict with statute, case law, and the State Constitution. DEIR, pp. 7-180 to 7-181. In short, injection of the return water at the project site is legally infeasible mitigation.

Furthermore, the DEIR does not explain whether or how injection would mitigate the impact from depletion of groundwater supply from the SVGB. The DEIR discusses injection only as a strategy to mitigate localized groundwater level declines for neighboring wells in the "Radius of Influence."

Despite its legal infeasibility, the DEIR models two versions of the injection return strategy for the 24.1 MGD project in areas where the existing groundwater is too degraded for use, the CEMEX site and the Charles Benson Road site. The modeling is pointless if the injection option is not legally feasible mitigation or if there is no evidence that it would physically mitigate the depletion of regional groundwater supply from the SVGB.

c. The DEIR does not explain the efficacy of in-lieu recharge of the 400-foot aquifer in mitigating impacts under CEQA or avoiding harm to water rights that is caused by depleting the Dune Sands aquifer and the 180-foot equivalent aquifer.

The Project would apparently pump inland water from the Dune Sands Aquifer and the 180-foot equivalent aquifer. There appears to be no plan to drill or screen the intake wells so that they would pump water from the 400-foot aquifer or the 900-foot aquifer.

The proposed project features to return the pumped inland water would either inject it into the 180-foot aquifer or provide it to the CSIP project as a form of in-lieu recharge. We are advised that all of the existing wells in the CSIP area that are still used for irrigation are screened in the 400-foot aquifer and not in the 180-foot aquifer. Please explain how the provision of in-lieu recharge to the 400-foot aquifer would avoid, mitigate, or compensate for a significant impact under CEQA or an injury to water rights holders if the impact or injury is to the 180-foot aquifer.

One possible justification for treating in-lieu recharge to the 400-foot aquifer as avoidance, mitigation, or compensation to impacts or harm to the 180-foot aquifer would be based on the conclusion that there is a hydrological connection between the aquifers

such that the recharge of the 400-foot aquifer benefits the 180-foot aquifer. Please discuss this possibility.

Another possible justification would be based on the conclusion that the in-lieu recharge of the 400-foot aquifer will help avoid seawater intrusion to that aquifer, thus making more water available to inland pumpers, and thereby indirectly reducing demand for pumping from the 180-foot aquifer. Many inland pumpers may choose to take water from either the 400-foot or the 180-foot aquifer. Maximizing the availability of the 400-foot aquifer may reduce demand on the 180-foot aquifer. Please discuss this possibility as well.

Please also discuss the opportunities for returning the freshwater component of inland pumping so as to reduce existing pumping of the 180-foot aquifer with certainty.

d. The DEIR must consider alternative forms of mitigation.

In light of the infeasibility of the injection well option and the potential infeasibility of the CSIP option, and in light of CEQA's mandate that an EIR consider alternative forms of mitigation 'where several measures are available," the EIR must discuss other options for the freshwater return.

Return of the freshwater pumped by the project is mandated by three independent requirements: the Agency Act's ban on transfer of groundwater out of the basin, the requirement that the applicant's pumping from the overdrafted basin cause no injury under California water law, and CEQA's substantive requirement that the project implement feasible mitigation to avoid or reduce significant impacts. The latter two requirements mandate that the freshwater return have the effect of reducing existing groundwater pumping "with certainty"; otherwise there is no assurance that the post-project conditions will be no more adverse than the baseline conditions. DEIR, p. 2-42. (In addition, the DEIR acknowledges that reduction of existing pumping with certainty is required to avoid growth-inducing impacts. DEIR, p. 7-181).

Alternative mitigation that would allow the project to return the freshwater component of inland groundwater so as to reduce existing pumping is in fact available. For example, the project could supply potable water to the Castroville Community Service District ("CCSD"), whose existing wells are in the path of the seawater intrusion front. An agreement with CCSD that it eliminate its existing pumping in exchange for potable water deliveries from the project would mitigate the depletion of SVGB groundwater supplies and could also have a beneficial effect on seawater intrusion.

The CCSD may require a delivery pipeline or storage infrastructure to accept and use the mitigation water. If so, the EIR should evaluate the impacts of providing this infrastructure, recognizing that an EIR need not evaluate the secondary impacts from mitigation measures at the same level of detail as the project as proposed. CEQA

Guidelines, § 15126.4(a)(1)(D). Note also that the EIR need not evaluate the secondary impacts from this mitigation if to do so would be speculative. CEQA Guidelines, § 15145.

If some of the specifics of mitigation must be deferred because it is not possible to specify the beneficial use for the returned freshwater component of inland pumping or to identify the location, the DEIR should identify performance specifications for a mitigation measure requiring that freshwater return. These performance specifications should include 1) reduction of existing pumping to the SVGB with certainty at a location that would assist in mitigation of seawater intrusion and 2) beneficial use of the freshwater return.

The requirement that the returned water actually reduce existing pumping with certainty requires that the returned water be made available only through an enforceable contractual or institutional arrangement. An institutional arrangement serving a defined and stable water demand large enough to reliably accept the return water would best enable a verifiable offset to existing pumping. An institution accepting the return water should commit itself to actual reduction of existing pumping.

The institution should also agree not to resume that pumping in the future to support new demand. Without such a condition, a water provider could represent that the returned water was offsetting existing pumping for current needs but continue to pump the same wells as a means of providing water for future demand. This would not result in an actual long-term offset to pumping in the SVGB.

Note that these performance specifications for return of SVGB water are consistent with, and in addition to, the requirement identified in the DEIR that the freshwater return "verifiably reduce an equal amount of pumping from the SVGB" in order that it "not result in growth-inducing effects." DEIR, 7-181.

B. The DEIR fails to provide an adequate analysis of cumulative water supply impacts.

1. CEQA requirements for cumulative impact analysis.

Cumulative impact analysis is a two-step process that requires an agency to make the following determinations: (1) whether the impacts of the project in combination with those from other projects are cumulatively significant, and (2) if so, whether the project's own effect is a considerable contribution. Guidelines, § 15130(a); see Kostka and Zischke, Practice Under the California Environmental Quality Act (2nd Ed., 2011 Update), §§ 13.39. 15.52; Remy, Thomas, et al, Guide to CEQA (11th Ed., 2007), pp. 474-475.

Thus, in step one of the two-step analysis, the agency must determine whether the combined effect of the project and other past, present and/or future projects "when considered together" is significant, because those impacts may be "individually minor but collectively significant." *Communities for a Better Environment v. California Resources Agency* ("*CBE*") (2002) 103 Cal.App.4th 98, 119-120. In step two, if there is a significant combined effect, the agency must then separately consider whether the project's contribution to that effect is itself considerable, i.e., "whether 'any additional amount' of effect should be considered significant in the context of the existing cumulative effect." *CBE* at 119. Thus, "the lead agency shall consider whether the cumulative impact is significant and whether the proposed project's incremental effects are cumulatively considerable." *CBE* at 120, emphasis added.

Importantly, the analysis must consider all sources of "related impacts," including past, present, and potential future projects. Guidelines, § 15130(a)(1), (b). An agency must "define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used." Guidelines, § 15130(b)(3), emphasis added. As the cases hold, a failure to explain that limitation renders an EIR inadequate. *Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421, 430; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1216.

The cases are also clear that an EIR may not conclude a cumulative impact is insignificant merely because the project's individual contribution to an unacceptable existing condition is, by itself, relatively small. *Los Angeles Unified School Dist. v. City of Los Angeles* ("*LAUSD*") (1997) 58 Cal.App.4th 1019, 1025-1026 (rejecting EIR's reasoning that because noise levels around schools already exceeded governing standards, new noise source would have insignificant impact); *CBE*, supra, 103 Cal.App.4th 98, 117-118, 121 (invalidating CEQA Guidelines provision that de minimis impacts are necessarily less than considerable); see also *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 718.

On the contrary: "the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." *CBE, supra*, 103 Cal.App.4th at 120. Thus, even if a given project has only an "individually minor" impact, its contribution to an existing environmental problem may nevertheless be "cumulatively considerable," hence significant, and hence requiring mitigation measures under CEQA. *CBE* at 120; see also Guidelines, §§ 15355(b), 15065(a)(3); *LAUSD, supra*, 58 Cal.App.4th at 1024-25 (individually insignificant noise increase may nonetheless be cumulatively considerable).

Finally, "[t]the requirement for cumulative impact analysis must be interpreted so as to afford the fullest possible protection of the environment . . ." because de-emphasizing cumulative impacts "impedes meaningful public discussion and skews the decision maker's perspective . . . ." *Citizens to Preserve the Ojai, supra*, 176 Cal.App.3d at 431-

432. Conclusory analysis is not sufficient; reasoned analysis is required. *Whitman v. Bd. of Supervisors* (1979) 88 Cal.App.3d 397, 411.

2. The DEIR does not provide an adequate cumulative analysis of the depletion of SVGB water supplies of seawater intrusion.

Here, the DEIR acknowledges that the geographic scope of analysis of groundwater impacts is the entire SVGB. DEIR, p. 5-22. The DEIR employs the list method of identifying cumulative projects. DEIR, pp. 5-4 to 5-13; see CEQA Guidelines, § 15130(b)(1)(A)(identifying the list method of identifying cumulative projects as one of two possible methods).

a. Identification of cumulative projects is incomplete.

However, the identification of cumulative projects that are actually evaluated with respect to groundwater impacts is not complete because the list does not, and probably cannot, include all projects that are pumping from the SVGB. Thus, the cumulative groundwater supply impact discussion only considers the effect of the project in combination with three other large projects: the SVWP Phase II, the RUWAP Desalination Element, and the Slant Well Test project. DEIR, pp. 5-23 to 5-24.

The EIR must be revised to provide an adequate identification of cumulative projects. Clearly, the depletion of SVGB water supplies is a cumulative impact that is affected by pumping from many sources – likely too many to list. Thus, in order to identify the cumulative impact from depletion of SVGB water supplies, the EIR should instead have used a "summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact." CEQA Guidelines, § 15130(b)(1)(B); *see also Kings County Farm Bureau, supra,* 221 Cal.App.3d at 728-729 (cumulative groundwater impact analysis requires demand estimate for all cumulative projects); *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412,441 (to support the conclusion that there is a sufficient long-term cumulative water supply, an EIR must provide some "discussion of the total demand and supply" from these cumulative projects in order to show "an approximate long term sufficiency in water supply"). Here, the EIR should provide and clearly identify the summary of expected SVGB pumping and identify the planning document(s) from which it is taken. The EIR should also identify the long term water supply, i.e., the yield that can be sustained from the SVGB without overdraft or continued seawater intrusion.

b. The cumulative analysis fails to address depletion of SVGB water supply.

Furthermore, the cumulative groundwater supply impact discussion only evaluates one of the groundwater supply impacts that was evaluated at the project level – the localized depletion of groundwater supplies to neighboring wells. It does not provide any analysis of the other groundwater supply impact that was evaluated at the project level – the depletion of SVGB water supplies more generally.

The EIR must be revised to provide an adequate discussion of the cumulative effects of the depletion of SVGB water supply. As discussed above, the EIR fails to identify a threshold of significance for this impact in its project-level analysis. In an adequate cumulative analysis, the EIR must provide a threshold for what constitutes the step one determination that there is a significant cumulative impact and a step two threshold for what constitutes a considerable contribution to that impact, and it must determine if these thresholds are crossed.

Given the existing overdraft condition and seawater intrusion in the SVGB, and given the EIR's apparent projection that this condition will worsen by 2060, the EIR must conclude that there is already a significant existing and future cumulative impact to groundwater resources. This is not a controversial conclusion, but it should be based on an explicit threshold for what constitutes a significant cumulative impact, e.g., the level of groundwater pumping that can be sustained without overdraft or seawater intrusion. Furthermore, it does not require recirculation of the DEIR because it is implicit in the DEIR and because recirculation would only be required if the EIR fails to propose mitigation for the project's considerable contribution to this impact, if any.

In setting a step two threshold for what level of project impact would constitute a considerable contribution, the EIR must take into account the severity of the existing and projected conditions. The cumulative step two threshold and analysis as to whether the project crosses this threshold and makes a considerable contribution must be supported with substantial evidence. Please see the requests for additional analyses below in connection with the determination whether the project would make a considerable contribution to depletion of SVGB water supply or to seawater intrusion.

c. The discussion of cumulative seawater intrusion must be revised to consider regional impacts, not just the localized effect.

The discussion of cumulative seawater intrusion concludes that the project would have a beneficial effect by migrating the seawater/freshwater interface back toward the ocean, regardless of the nature of other cumulative projects. DEIR, p. 5-24. As discussed below, the DEIR's analysis, based on a qualitative assessment of particle tracking in a localized area, does not establish that the project will be on balance beneficial with respect to seawater intrusion. If further analysis, such as the analysis requested in the

comments below, reveals that the project will not have a net beneficial impact on a regional basis, then the EIR must determine if the impact is a considerable contribution to seawater intrusion and propose effective mitigation.

C. Additional analyses of groundwater impacts are required.

In addition to the explanations and additional analyses of groundwater impacts requested above, please provide the additional analyses discussed below.

1. Sensitivity analysis of inland water pumping amount.

Appendix E-2 explains that the percentage of inland water taken by the slant wells was determined by analysis of the TDS concentration in the slant well feedwater supply. App.E-2, pp. 3, 40-41. For the CEMEX site, Appendix E-2 states that the percent of inland water would range from 7% under 2012 conditions to 4% under 2060 conditions. *Id.*at 41, Figures 145 and 146. Based on that statistic, the DEIR estimates that the average amount of inland water pumped would be 1,485 afy. DEIR, p. 4.4-67.

As requested above, please determine baseline TDS levels and 2060 TDS levels without any project feature that returns inland groundwater.

Please explain what factors may or may not influence the reliability of this analysis of the percent of inland water pumped, i.e., please identify to which factors this analysis is sensitive. For example, how would changes in the assumed 2012 baseline TDS of inland water affect the analysis? How would changes in the assumed 2060 TDS of inland water affect the analysis? How was the 2012 baseline TDS of inland water determined? How was the TDS of inland water under 2060 conditions determined?

Please identify the factors that cause the predicted change in the percent of inland water pumped between 2012 and 2060. Please clarify whether this change is due to the project or to other factors such as changes in land use, climate effects, or sea-level rise. Does this change reflect an assumption that the project will somehow draw water from a different direction over time, e.g., an assumed change in the mechanics of the pumping or the aquifer? If so, how would this occur?

If in fact the modeling does assume that the slant wells would somehow mechanically draw less water from inland in 2060 than 2012, <u>rather than an equal amount of more saline water</u>, please explain whether and how this is reflected in the model boundary underflow statistics in Appendix E-2, Tables 2 through 20.

If there will be <u>no</u> change in the mechanics of pumping effects, does the predicted decline in the percent of inland water pumped actually reflect an assumption that the TDS concentration of inland water will increase? If so, would it be accurate, or even more

accurate, to state that the percentage of inland water physically pumped by the project will not vary over time but that the salinity of the inland water will increase?

Please explain whether the projected decrease in the percent inland water pumped assumes the implementation of the Salinas Valley Water Project ("SVWP") Phase II. If so, please reconcile the conclusion that the percent of freshwater pumped will decline, presumably due to increased salinity from continuing seawater intrusion, with the conclusion in Geoscience (2013) that protective groundwater elevations sufficient to prevent seawater intrusion under 2030 land use conditions could be attained with 12,000 afy from the SVWP Phase I and an additional 48,000 afy from the SVWP Phase II. Geoscience 2013, p. 11.

If the projected decrease in the percent inland water pumped does not assume the implementation of the SVWP Phase II, please explain how the implementation of that project would affect the percent of freshwater pumped.

Please discuss the implications of the available data from the test well, which have been reported to indicate a greater freshwater component to the slant-well source water than assumed in the modeling.

Please also discuss the relation of the test-well freshwater component to the modeling assumptions in light of the fact that the area has experienced a sustained drought. The reduction in recharge may have increased the levels of salinity in the coastal areas. If so, the drought conditions may further mask the actual average freshwater component pumped over the entire hydrologic cycle, including dry, average, and wet years. To what extent does the percent freshwater pumped reported in the DEIR reflect drought conditions that may not be representative of the entire cycle?

2. 2060 land use assumptions and SGMA

Several factors in the modeling suggest that the DEIR assumes that groundwater management efforts will not be successful in maintaining protective groundwater elevations to halt seawater intrusion. First, as noted, the analysis apparently assumes that the TDS concentration of inland water will increase from 2012 to 2060. Second, particle tracing under future no-project conditions shows much more inland movement of seawater than under 2012 no-project conditions. Compare, e.g., Appendix E-2, Figure 139 to Figure 140. Third, the groundwater budgets in Appendix E-2, Tables 2 through 20, show that factors other than the project will substantially affect movement of water inland across the model boundary. For example, the modeling for no-project conditions indicates that 949 afy will move from inland areas across the model boundary area toward the ocean in 2012, but that this flow would be reversed in 2060 and 5,583 afy would move inland. App. E-2, Table 14 (compare model runs 1n and 2f). (Even with the assumed implementation of the SVWP Phase II, the modeling shows 5,542 afy moving inland across the model boundary under 2060 conditions – see run 2af).

The Sustainable Groundwater Management Act ("SGMA") requires that the SVGB avoid "undesirable results" by 2040 through compliance with a plan that is adopted by 2020. Those undesirable results include chronic lowering of groundwater levels, significant and unreasonable reduction of groundwater storage, and significant and unreasonable seawater intrusion.

Is it accurate to assume that increased flows inland in the non-project model runs 1n, 2f, and 2af are generally associated with the expectation of increased seawater intrusion? If not, why not?

If in fact the modeling reflects the assumption that 2060 land use conditions will result in an increase in inland water salinity or an increase in flows from the ocean inland, then it appears that the DEIR assumes that the SGMA will not be effective in avoiding these undesirable results.

If in fact the modeling reflects the assumption that SGMA will not be effective in avoiding these undesirable results, please provide an analysis of the amount of inland water taken by the slant wells that assumes that SGMA will be successfully implemented by 2040. Please assume that successful implementation would mean that seawater intrusion would be halted by 2040. Will the amount remain at 7% if the SGMA is successfully implemented? What implications would this have for the ability of the project to comply with the Agency Act, to demonstrate no-injury to other groundwater pumpers, and to mitigate impacts associated with the depletion of SVGB water supplies?

If in fact the modeling reflects the assumption that SGMA will be effective in avoiding these undesirable results, please explain how this effectiveness has been incorporated into the 2060 land use assumptions. Please identify the groundwater management projects, plans for groundwater pumping reductions, or other mechanisms that the DEIR assumes would be in place to implement SGMA.

3. Analysis of project-level and cumulative harm from project pumping of inland water

Potential adverse effects of the project's pumping of inland groundwater may include reduction in inland groundwater levels and inducement of seawater intrusion. The EIR provides a bare statistic as to the amount of inland groundwater that would be pumped and some particle tracking analysis in the immediate vicinity of the project. Data provided in the June 12, 2015 Draft Technical Memorandum include some additional particle tracing data and some salinity modeling results, offered without discussion. However, the DEIR and post-DEIR information does not provide an adequate analysis of the harm from the project's pumping of inland water. CEQA requires than an EIR provide more than a projection of quantitative changes to environmental statistics; an EIR must identify and discuss the adverse effects on the environment from those changes.

Bakersfield Citizens for Local Control, supra, 124 Cal.App.4th at 1219-1221 (failure to correlate adverse air quality statistics with adverse health impacts).

a. Project-level and cumulative seawater intrusion impacts

The DEIR's analysis of the project's effect on seawater intrusion claims that the project would "facilitate the reduction of seawater intrusion" because removal of a portion of the intruded seawater will reduce "the pressure of seawater flowing landward at the coast . . . within the localized area affected by the project pumping." DEIR, p. 4.4-80, emphasis added. This statement is apparently based on the particle tracking analysis in the modeling. Appendix E-2, pp. 40, 48-49, Figures 137 through 144. The particle tracking analysis related to seawater intrusion effects in the DEIR focusses only on the coastal area in the localized vicinity of the slant wells. DEIR, Appendix E-2, Figures 137 through 144. The DEIR does not provide particle tracking analysis along the entire coastal front from which seawater may flow inward. Additional particle tracking graphic output was provided in the June 12, 2015 Draft Technical memorandum, but that tracking was limited to the areas within the North Marina Groundwater Model ("NMGWM"), which may not include the entire coastal area from which saltwater intrusion to the SVGB may flow.

Please explain whether seawater intrusion currently occurs to the SVGB from coastal areas not included in the NMGWM or not modeled in the June 12, 2015 Draft Technical memorandum. If so, please provide particle tracking along the entire coastal front from which seawater may flow inward. Please provide this with and without the CSIP return feature.

The particle tracking analysis provides no volumetric data related to the project's effects on seawater intrusion – even if the entire coastline was modeled with particle tracking, the particles cannot be summed so that a localized benefit can be quantitatively compared to any regional detriment. Thus, the DEIR itself provides no analysis of the possibility that, notwithstanding some localized retreat of the seawater intrusion front toward the coast, the project may nonetheless aggravate seawater intrusion from areas farther up or down the coast by taking 1,889 afy from inland areas, which will reduce the pressure gradient that might otherwise hold back seawater intrusion. In sum, the DEIR lacks any useful quantitative volumetric analysis of regional level effects of the project on seawater intrusion. The June 12, 2015 Draft Technical Memorandum provides some bare statistics on modeled TDS concentrations at simulated virtual wells, which may reflect some volumetric analysis of seawater intrusion. These statistics are apparently intended to demonstrate that the salinity at some locations decreases inland due to project pumping. However, it appears that salinity for some wells may increase, e.g., wells A2, A3, A4, A7, and B1 in the Dune Sands Aquifer and wells A2, A3, A8, and A9 in the 180-foot aquifer. Again, the analysis is confined to the NMGWM area and does not address regional effects outside that area.

Please explain why salinity as some wells increases with the project.

Please explain whether the project's pumping of inland groundwater would tend to reduce the cumulative regional inland groundwater levels and thereby cause at least some regional increase in seawater intrusion. The DEIR states that "[t]he entirety of the geographical area of the Basin that would be affected by the project contains brackish water rather than fresh water." DEIR, p. 2-41. However, the underflow statistics indicate that inland water will flow into the NMGWM area (or that less water will flow out of the NMGWM area), and that these flows will originate from areas that are not within the seawater intrusion front, as a result of project pumping. DEIR, Appendix E-2, pp. 44-45. Please explain whether these changes to underflow will tend to reduce protective groundwater elevations in the SVGB outside of the NMGWM area.

Please explain whether, in light of the history of seawater intrusion along the coastal area, is it the case that a portion of the groundwater that makes up the protective elevation that holds seawater intrusion in check is brackish. If a portion of the groundwater that makes up the protective elevation that holds seawater intrusion in check is brackish, please explain whether and how the project's pumping of that brackish water would affect seawater intrusion.

Please explain whether and how salinity at wells outside the NMGWM area would be affected by the project's removal of inland groundwater in light of cumulative pumping that reduces the protective groundwater elevations.

Neither the particle tracking nor the analysis of TDS concentrations were provided for a scenario without the return of freshwater component of inland groundwater pumped. All of the particle tracking and TDS analysis assumed that the project would provide additional freshwater to the CSIP project. Thus, it is impossible to isolate the effect of the slant well pumping on particle tracking, TDS concentrations, or changes to underflow into the NMGWM area, all of which may be relevant to seawater intrusion. Thus, it is impossible to determine whether the CSIP return feature acts to avoid or mitigate a potentially significant seawater intrusion impact or a harm to water rights.

Please provide analyses of particle tracking, TDS concentrations, and underflow into the NMGWM area to evaluate seawater intrusion effects with and without the CSIP return feature.

Neither the particle tracking nor the analysis of TDS concentrations were provided for the GWR Variant. Thus, it is impossible to determine whether and to what extent the GWR Variant would better avoid or mitigate seawater intrusion effects.

Please provide analyses of particle tracking and TDS concentrations to evaluate seawater intrusion effects of the GWR Variant.

We understand that the change in seawater intrusion and the salinity of the inland water pumped caused by changes from 2012 to 2060, including changes in land use, changes in climate, and changes in sea level, may be much larger than the effects of the project itself. If the modeling assumptions regarding 2012 and 2060 land use do in fact imply that there will be greater seawater intrusion in 2060 than in 2012, this difference in assumptions creates the opportunity to validate the modeling of seawater intrusion effects already provided, as well as the additional analyses requested above. Whatever modeling of seawater intrusion effects that is provided for the project itself should also be able to reflect the presumably grosser effects of the change from 2012 to 2060 modeled conditions.

If so, please validate the approach to modeling of seawater intrusion effects used by the DEIR and the June 12, 2015 Draft Technical Memorandum by modeling additional scenarios for particle tracking and TDS concentrations that compare 2012 conditions without the project to 2060 conditions without the project. Please explain whether the seawater intrusion effects of the change from 2012 to 2060 conditions are larger than the changes due to the project itself

b. Project-level and cumulative inland groundwater level impacts.

Another potential harm from the project's pumping of 1,889 afy of inland water may be a regional reduction in groundwater levels. Although lowering of groundwater levels induces seawater intrusion, it also causes additional distinct harms, including well failures and increased energy use for pumping.

The EIR's analysis of the effects of reduced groundwater levels is not regional. Instead, it is confined to neighboring production wells in the "Radius of Influence," effectively defined as the area in which project pumping would cause a one foot decline in water levels. DEIR, pp. 4.4-58 to 4.4-66. This area has at most a 7-mile radius. DEIR , p. 4.4-59. However, Appendix E-2 acknowledges that the slant wells operation for the 24.1 MGD facility will be reducing inland groundwater levels because it "will generally cause the amount of water flowing into the model area from inland areas to increase (or the amount of water flowing out of the model area inland to decrease)." DEIR, Appendix E-2, p. 4. The groundwater budgets in Appendix E-2, Tables 2 through 20, show that the project will substantially affect movement of water from inland areas across the model boundary.[4] The 24.1 MGD project will draw water from inland areas across the model boundary.

Please reconcile the evident fact that project pumping will draw water from inland areas across the model boundary with the DEIR's statement that "the influence of the

[4] Thus, it is simply not true that "the influence of the groundwater pumping at the slant wells would not reach beyond the modeled area of influence of the proposed slant well pumping." DEIR, p. 4.4-68.

groundwater pumping at the slant wells would not reach beyond the modeled area of influence of the proposed slant well pumping." DEIR, p. 4.4-68.

The DEIR must explain the consequences of the pumping of inland groundwater by the slant wells outside of the Radius of Influence. The adverse effect is fundamentally a cumulative impact. The DEIR must determine if the project makes a considerable contribution to the cumulative regional lowering of groundwater levels. This requires identification of a threshold for what constitutes a considerable contribution.

As discussed, the cumulative analysis of groundwater impacts fails to identify a threshold of significance for what counts as a considerable contribution to the depletion of SVGB supplies. A threshold for considerable contribution should be consistent with CEQA's recognition that individually less than significant impacts may nonetheless be a considerable contribution, particularly when the resource at issue is or will be severely degraded. *LAUSD, supra*, 58 Cal.App.4th at 1025-1026; *CBE, supra*, 103 Cal.App.4th at 117-118, 121; *Kings County Farm Bureau, supra*, 221 Cal.App.3d at 718. The threshold for cumulative contribution to the depletion of SVGB water supplies should also recognize that "the greater the existing environmental problems are, the lower the threshold should be for treating a project's contribution to cumulative impacts as significant." *CBE, supra*, 103 Cal.App.4th at 120.

c. Effects of actual amounts of inland groundwater pumping.

The DEIR acknowledges that the project would take from 1,889 afy to 1,080 afy from the SVGB under 2012 and 2060 land use conditions respectively. DEIR, p. 4.4-67. Modeling in DEIR assumed that 880 afy of desalinated product water would be returned to the SVGB from the 24.1 MGD facility or 550 afy from the GWR Variant. DEIR, Appendix E-2, Appendix A, Table 5.

Please explain whether the modeling in the DEIR and in the June 12, 2015 Draft Technical memorandum are based on these stated amounts of inland pumping and return water deliveries.

Please explain whether these volumes of inland groundwater pumped and desalinated water to be delivered back to the SVGB remain accurate in light of current information. If the amounts have increased in light of current information, please explain whether that increase alters any of the conclusions in the DEIR.

D. Water supply.

Table ES-1 identifies total water supplied by the project as 15,296 afy. Table 2-4 shows total supplies as 15,296 afy during replenishment of the Seaside Groundwater Basin and 15,996 after replenishment. Please explain what the 15,996 afy was not used throughout the report's analysis and the proposed uses for the added 700 afy.

E. Slant-well feasibility.

The DEIR refers to State policies requiring the use of slant wells unless they are found to be infeasible. DEIR, p. ES-82. Please identify the criteria for determining feasibility and the process used to arrive at a determination.

F. Water demand and plant sizing.

The following comments are provided within the context of project size and related impacts on the environment. As the DEIR finds, the smaller project would have fewer environmental impacts including impacts on climate change and groundwater resources. DEIR, p. 2-43. It would also use less energy. Water demand for lots of record and tourism bounce-back are over-estimated, and total water demand should be reduced accordingly to mitigate the project's impacts.

1. Water demand for legal lots of record.

DEIR Table 2-3 shows 1,180 acre-feet per year for Legal Lots of Record. We concur with the DEIR finding p. 8-11 that the number of legal lots or record has not be validated by the MPWMD and that it is speculative. However, the DEIR fails to analyze the available data.

Information provided by those supporting 1,181 afy for legal lots indicate that water demand for vacant lots on vacant and improved parcels is 1018.1 afy. Joint Opening Brief on Plant Sizing, 4/23/12, p. 5. Water demand for the 2,519 vacant parcels is estimated at 0.40 afy per parcel. A more representative number would be 0.18 afy per parcel for incorporated areas and 0.45 afy for unincorporated areas. See attached County of Monterey, September Ranch Subdivision Project, Revised Water Demand Analysis, August, 2009, Table 4: Survey of Available Water Demand Data Water Year 2008.

Water demand for legal lots of record is overestimated. It should be revised to reflect a lower per parcel demand consistent with existing use and the impact of water pricing on elasticity. For example, water demand within cities averages 0.18 afy and demand within unincorporated areas averages 0.45 afy. DEIR Table 4.19-1 indicates that 86% of the housing units are within cities. Assuming that vacant lots are proportional, of the 2,519 vacant lots for which water would be allocated, 2,166 would be within cities and 353 in unincorporated areas. Assuming 0.18 afy per city unit, total demand for city units would be 390 afy. Assuming 0.45 afy per unincorporated unit, total demand would be 159 afy. Based on these assumptions water for legal lots of record should be 549 afy instead of the 1,018.1 afy, a reduction of 469 afy.

Finally, based on testimony by David Stoldt of MPWMD, there is no assurance that once the water for legal lots is allocated to local jurisdictions, it will be needed for legal lots. Moreover, the DEIR states:

> "Based on the past allocations as well as MPWMD's 2006 efforts to develop future demand estimates (described above in Section 2.6.2, under General Plan Buildout), this EIR assumes that water provided by the proposed project will be allocated to meet existing demand and that supply beyond that needed for existing demand would be allocated in general proportion to projected growth in the CalAm service area jurisdictions." DEIR, p. 2-34.

This statement affirms that the allocation would not be reserved for legal lots but would be based on projected growth. We concur with the findings on DEIR p. 8-12, that water for lots of record could be used for other land use entitlements. The water supply for legal lots of record is overstated and the plant size should be reduced to mitigate impacts.

2. Water demand for tourism bounce-back

Table 2-3 identifies 500 afy for tourism bounce-back. A study prepared by Dean Runyan Associates, April 2015, concluded that 18,710 jobs were created by tourism in 1993 with the number jumping to 23,850 in 2014. The report indicates that visitation countywide was up 22 percent in 2014 compared to 2013. Most of the tourism dollars was spent on the Monterey Peninsula. Since the hospitality industry has been able to accommodate growth within current constraints, the water for bounce-back should be down-sized or eliminated.

The DEIR on p. 8-11 concludes that 250 afy is the amount of water needed to meet bounce-back needs. The 250 afy may be too high given findings in the Dean Runyan Associates report. Thus, water supply for the bounce-back should be reduced to reduce impacts on affected resources.

G. Project timing

Table 2-4, Footnote e states, "The GWR project is in preliminary planning stage and may not be operational in time for CalAm to meet the Order 2009-0060 deadline; therefore, supply scenarios with and without the GWR are provided." The footnote suggests that the desalination plant will meet the deadline, when in fact it has been stated frequently by CalAm that it is months if not years behind schedule.

H. Erosion and loss of supply capacity

Mitigation Measure 4.2-6a proposes abandonment of the test well and one other well in the event coastal erosion impacts occurring during the life of the project. The DEIR

should address the impact of this mitigation measure on meeting the project's water demand

I. Consistency analysis

The DEIR (p. 4.8-26) concludes:

> "CalAm would need to obtain a Coastal Development Permit from the City of Marina for implementation of the subsurface slant wells. The Coastal Development Permit review process would ensure that the proposed facilities are consistent with applicable plans, policies, and ordinances governing land uses at the site. Therefore, implementation of the proposed subsurface slant wells would not conflict with land use plan and zoning designations."

This analysis assumes the project is consistent with the LCP because the Commission would not approve an inconsistent project. Table 4.8-2 states,

> "The project's implications for agricultural, biological, air, and energy resources are discussed in EIR Sections 4.16, 4.6, 4.10, and 4.18, respectively. The project's implications for surface water and groundwater resources are discussed in EIR Sections 4.3 and 4.4. Specifically, please refer to Tables 4.16-2, 4.6-2, 4.10-3, 4.18-2, 4.3-5, and 4.4-6 for additional discussion of the project's conformity with applicable Marina General Plan policies related to these resource areas, respectively."

Conclusions from the referenced sections should be provided in the consistency analysis on p. 4.8-26. Additionally, the DEIR should identify potential Coastal Commission conditions related agriculture, and biological, air, and energy resources and assess whether these conditions could render the desalination plant infeasible.

J. Air Quality and GHG

Table 4.10-2 state and federal ambient air quality standards and attainment status for north central coast air basin identifies the NCCAB as unclassified for the federal ozone standard. The NCCAB is attainment for this standard.

Table 4.11-3 (total GHG emissions from project construction) identifies a total of 21,637.21 tons per year of construction emissions. These are amortized over the 40 year life of the project resulting in annual GHG emissions of 540.93 tons per year. Averaging emissions over the life of a project dilutes their impact. The analysis should be based on impacts when GHG emissions are actually released to the atmosphere.

In addition to Mitigation Measure 4.11-1 (GHG Emissions Reduction Plan) and Mitigation Measure 4.18-1 (Construction Equipment Efficiency Plan), the project

applicant should be required to purchase offsets from the cap and trade program to lower the project's impact to less than significant.

K. Noise

The DEIR concludes:

> "Implementation of the Monterey Bay Shores Resort (No. 19) and Moss Landing Community Plan (No. 37) projects could occur at the same time as the proposed MPWSP construction and therefore could adversely affect western snowy plover and its habitat through heavy equipment use, dust generation, elevated noise levels, and increased human activity. These effects would be cumulatively significant." DEIR, P. 5-32, emphasis added.

However, the Noise Impact Analysis. Section 4.12, does not address project level noise impacts on endangered species including the snowy plover. The Noise section should be updated accordingly.

L. Cumulative project list

Table 5-1 Cumulative Projects: The following changes should be made to the list:

- Remove Laguna Seca Villas which has been withdrawn.
- Add Harper Canyon Ranch east of Ferrini Ranch Subdivison – 17 units.
- Change the Pebble Beach Co. Project; Rancho Canada Village and Rancho Canada Gold Club to unincorporated, not City of Carmel.
- Add Pebble Beach Affordable Housing project - 24 units.
- Add Carmel Canine Sports Center - Carmel Valley

M. Growth-inducement

Table 2-4 shows water supplies of 15,296 afy until the Seaside Basin is paid back and 15,996 afy after the pay back, an increase of 700 afy. Please address the growth-inducing impact of the 700 afy increase.

Table ES-2 identifies pipeline size as 36 inches. Pipelines for the proposed project could be considerably smaller, e.g., 9.6mgd desalination plant should be 24 inches and a 6.4mgd plant should be 18 or 20 inches.

The DEIR states:

> "According to the proposed Settlement Agreement between CalAm and other parties relating to CalAm's application before the CPUC for approval of the MPWSP, MPWMD intends to initiate a collaborative process to work with the

> Monterey Peninsula Regional Water Authority, Monterey County, and CalAm to develop a process for determining an accurate estimate of added water supply capacity needed to meet the General Plan buildout projections for communities served by CalAm. However, that process has not been initiated and the results of such a process cannot be predicted and would be speculative at this time. Because the provision of additional future supply that could be accommodated, with additional pumping pressure, by the MPWSP pipelines has not been proposed, and would require additional CEQA review and other discretionary approvals if and when such additional supply were proposed, the prospect that the MPWSP pipelines would convey more supply than is currently proposed is considered speculative and not considered further in this analysis." DEIR, p. 8-15.

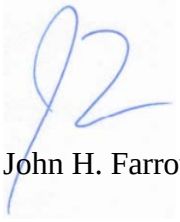
An analysis based on the amount of water that could be accommodated within the proposed infrastructure is not speculative. Please address the growth-inducing impact of the pipeline size including the delivery of Salinas Valley return groundwater for urban uses. Alternatively, the project could be conditioned to limit the amount of water.

The DEIR fails to assess impacts related to water for lots of record and tourism bounce-back. Instead it assumes that impacts have been addressed in the various general plans. All of the general plans are over 10 years old except for Monterey County's 2010 General Plan. Their findings are out-of-date and cannot be relied upon, e.g., LOS on local roads and highways have declined dramatically over the last 10 years, and climate change impacts have not been addressed. A 2015 DEIR prepared for Monterey Downs, a single project, found significant and unavoidable impacts on climate change, transportation systems, etc.

The DEIR should be revised to address the impacts from the amount of development that could be accommodated by the supply for future development of 1,755 afy (Table 8-3). This amount of water could accommodate over 7,000 dwelling units (assumes 0.25 afy per unit).

Yours sincerely,

M. R. WOLFE & ASSOCIATES, P.C.



John H. Farrow

JHF:hs
Cc: Amy White
Janet Brennan

Attachment

County of Monterey, September Ranch Subdivision Project, Revised Water Demand Analysis, August, 2009, Table 4: Survey of Available Water Demand Data Water Year 2008.

of the MPWMD/Cal-Am nondisclosure agreement. If MPWMD is able to provide any additional water demand data to the County—and that data is received prior to the Board of Supervisors' deciding whether to recertify the September Ranch EIR in light of this Revised Water Demand Analysis—the County will take the information into consideration.

Table 4: Survey of Available Water Demand Data Water Year 2008

Jurisdiction/ Subdivision	Number of Residential Customers	Total Residential Use (AFY)	Average Res'l Use Per Unit (AFY)	No. of market-rate lots	Average use per Market-rate lot	Notes
CITY						
Monterey	**7897**	**1304.57**	**0.17**	**n/a**	**n/a**	**Mix**
Pacific Grove	**5912**	**921.95**	**0.16**	**n/a**	**n/a**	**Mix**
Carmel	**2853**	**529.99**	**0.19**	**n/a**	**n/a**	**Mix**
Seaside	**5530**	**1143.70**	**0.21**	**n/a**	**n/a**	**Mix**
Del Rey Oaks	**730**	**142.96**	**0.20**	**n/a**	**n/a**	**Mix**
Sand City	**95**	**14.24**	**0.15**	**n/a**	**n/a**	**Mix**
COUNTY						
Mont. County CV	**1359**	**403.92**	**0.30**	**n/a**	**n/a**	**Mix**
In Carmel San. Dist.	**2711**	**648.18**	**0.24**	**n/a**	**n/a**	**Mix**
Out Carmel San. Dist.	**1928**	**620.41**	**0.32**	**n/a**	**n/a**	**Mix**
Monterey County Monterey	**281**	**77.11**	**0.27**	**n/a**	**n/a**	**Mix**
Mont. Co. PG	**1**	**0.15**	**0.15**	**n/a**	**n/a**	**Mix**
MPPC DMF	**1990**	**485.17**	**0.24**	**n/a**	**n/a**	**Mix**
Monterey County Pebble Beach	**711**	**487.02**	**0.68**	**n/a**	**n/a**	**Mix**
Rancho Fiesta	**20**	**11.14**	**0.57**	**n/a**	**n/a**	**Mix**
Rancho Del Monte	**423**	**147.14**	**0.35**	**n/a**	**n/a**	**Mix**
OTHER[27]						
Hidden Hills	**435**	**197.87**	**0.45**	**n/a**	**n/a**	**Mix of market-rate and other**
Pebble Beach – LCP (Macomber Estates)	**20**	**16.17**	**0.81**	**20**	**0.81**	**Market-rate lots, no inclusionary**
Ambler	**378**	**184.19**	**0.49**	**n/a**	**n/a**	**Mostly market-rate lots, some smaller**
Bishop (Pasadera)	**319**	**205.86**	**0.65**	**n/a**	**n/a**	**Mix of market-rate and inclusionary**

[27] Several categories represent Cal-Am water service area designations, not subdivisions, as further described in the text. Cal-Am restricts data disclosure for its water service areas, so for some areas the County was unable to determine water use for market-rate lots.

Jurisdiction/ Subdivision	Number of Residential Customers	Total Residential Use (AFY)	Average Res'l Use Per Unit (AFY)	No. of market-rate lots	Average use per Market-rate lot	Notes
Santa Lucia Preserve[28]	97	50.132	0.5168	86	0.568	Construction still under way
Monterra Ranch	91[29]	44.158	0.496	49	0.69 (single family w/ caretaker units)	Construction still under way
Tehama / Cañada Woods	16	9.22	0.576	14	0.64 (single family w/ caretaker units)	Construction still under way

Additional water data charts by year are attached in Appendix B (Survey of Available Water Demand Data, 2002 to 2007).

ASSESSMENT OF DEMAND DATA BY SUBDIVISION

The County has obtained segregated water demand data for three subdivisions that are comparable to September Ranch: Monterra Ranch, Tehama / Cañada Woods and Santa Lucia Preserve. Cal-Am has been unwilling to provide MPWMD (or any entity, including the County) with segregated water data for its water service areas, which include several subdivisions near September Ranch and with comparable geography and topography, including Quail Meadows, Ambler Park, Hidden Hills and Bishop/Pasadera. As a consequence, the County was not able to make a detailed analysis of water demand in those subdivisions. This Revised Water Demand Analysis also addresses communities such as Pebble Beach that do not share an average evapotranspiration rate, topography or local climate in common with September Ranch, but are within the jurisdiction of the MPWMD.

Monterra Ranch

The Monterra Ranch subdivision is located within a few miles of September Ranch. The two subdivisions have similar topography and a similar climate. Monterra Ranch's first homes were built in 1998. The 42 inclusionary homes were completed that year. The first market-rate home was completed in 1999. During 2008, there were 49 market-rate homes, with construction continuing to an expected 172 homes. Projected water demand for the inclusionary homes is 0.24 acre-feet. Projected water demand for the market-rate homes under buildout conditions is 0.50 acre-feet for the homes with an additional allocation of 0.12 for associated caretaker units—for a total of 0.62 acre-feet.

[28] The Santa Lucia numbers are for water year 2007 and are provided for comparison. The 2008 figures for Santa Lucia Preserve are not yet available.

[29] Because the data is not segregated, the market-rate lots and associated caretaker units are treated as one unit for purposes of calculating average water demand per unit.