Salinas Valley Water Coalition
P.O. Drawer 2670 • Greenfield, CA 93927
(831) 674-3783 • FAX (831) 674-3835

Transmitted via Email to: MPWSP-EIR@esassoc.com

Mary Jo Borak
California Public Utilities Commission
c/o Environmental Science Associates
550 Kearny Street, Suite 800
San Francisco, CA 94108

30 September 2015

Re: DEIR – Monterey Peninsula Water Supply Project (MPWSP)

Dear Ms. Borak;

The Salinas Valley Water Coalition (SVWC) is a not-for-profit organization comprised of agricultural landowners, farmers and businesses within the Salinas Valley. The SVWC's primary purpose is to participate in various governmental proceedings in order to preserve the water rights of its members, to protect their water resources and to affect water policy decisions in a manner that provides this protection while sustaining agricultural production and quality of life.

Community participation is essential to any project and is critical to obtaining support for that project. Toward this end, we appreciate the efforts made by various agencies to reach out to the Salinas Valley agricultural community to discuss the effects of constructing and operating the MPWSP on the source of fresh water supply on which agriculture and local urban economies depend. The SVWC supports the MPWSP in concept, but that support depends on whether the Applicant (California American Water Company or Cal-Am) and the lead agency, California Public Utilities Commission (Commission), demonstrate that groundwater resources will be fully protected against direct, indirect and cumulatively significant adverse environmental effects from the MPWSP. The SVWC members want to continue being good neighbors to the Monterey Peninsula and support a resolution of the Peninsula's water supply problems; but that support depends on a solution that solves the Peninsula's water supply problems without creating or exacerbating water supply problems in the Salinas Valley and, particularly, in the Salinas River Groundwater Basin (SRGB).[1]

The Salinas Valley suffers from seawater intrusion that has degraded groundwater quality. Members of the SVWC and other landowners have paid decades of costly assessments to fund development and operation of groundwater recharge projects—including two reservoirs (Nacimiento and San Antonio), the Castroville Seawater Intrusion Project (CSIP), and the Salinas Valley Water Project (SVWP). The purposes of those projects are to recharge the SRGB to assure water availability during irrigation season,

[1] Note: The terms Salinas River Groundwater Basin and Salinas Valley Groundwater Basin are both used in the DEIR. The Salinas River Groundwater Basin, or SRGB, is the term referenced in the Monterey County Water Resources Agency Act. The SRGB is the area of the Salinas River and the Valley that is recharged by the alluvium of the Salinas River.

to stop seawater intrusion, to bring the SRGB into hydrologic balance, and to manage the SRGB for long-term sustainability. The two reservoirs capture high winter streamflows from Salinas River tributaries for gradual release into the porous Salinas River bed during the dry season to recharge Salinas River underflow and the SRGB (direct recharge). The CSIP delivers highly treated municipal wastewater for agricultural irrigation use in lieu of groundwater pumping (in lieu recharge). And the SVWP modified and reoperates the two reservoirs to increase their yield for increased dry-season recharge releases into the Salinas River (more direct recharge) and to supply a new surface water diversion for increased CSIP water deliveries in lieu of groundwater pumping (more in lieu recharge).

The hundreds of millions of dollars in groundwater recharge investment by the SVWC members and other landowners sustains an $8 billion agricultural economy that generates more than 76,000 jobs. The Salinas Valley's agricultural economy depends on irrigation with fresh groundwater from the SRGB.

To help solve the Monterey Peninsula's water supply problems, the MPWSP proposes to use slant wells in the Salinas Valley to pump more than 27,000 acre-feet per year (AFY) of source water[2] to produce and deliver up to 9,752 AFY of desalinated water for Cal-Am's urban service area within the Monterey Peninsula.

After analyzing the DEIR, the SVWC is concerned that Cal-Am and the Commission have failed to adequately analyze and disclose significant impacts of the MPWSP's proposed Salinas Valley well production on SRGB groundwater resources. The DEIR fails to prescribe mitigation measures, or alternative approaches to obtaining source water, that would avoid or reduce those significant impacts. And the DEIR fails to adequately assess the significance of groundwater impacts in light of past, present and reasonably foreseeable future projects, including groundwater recharge projects and programs to combat seawater intrusion and to bring the SRGB into hydrologic balance. The DEIR's assessment of the groundwater rights needed to make the MPWSP feasible is inadequate for similar reasons. Although the State Water Resources Control Board (SWRCB) outlined an analytical structure by which the MPWSP might properly exercise groundwater rights for wells to produce source water without injuring other legal users of SRGB groundwater, the DEIR fails to show that the MPWSP will comply with that structure, which includes an obligation to return to the SRGB the fraction of SRGB groundwater pumped as part of the 27,000 AFY of source water production.

With that background, we offer the following comments on the DEIR, including the attached Technical Memorandum prepared by Timothy Durbin, PE (Durbin Tech Memo).

General:

- **<u>Groundwater Modeling and DEIR's analysis of groundwater impacts from MPWSP's slant well production:</u>**

  According to the DEIR: "Groundwater modeling was a primary analytical tool used to evaluate project impacts on groundwater resources." (DEIR at 4.4-40.) In fact, the DEIR's groundwater

[2] The DEIR states that MPWSP would produce 24.1 million gallons per day (MGD) of source water to produce 9.6 MGD of desalinated water. (DEIR at 3-3, 3-19.) 24.1 MGD equates to 27,005 AFY. 9.6 MGD equates to 10,753 AFY, from which the DEIR subtracts approximately 1,000 AFY, apparently, to account for an obligation to return to the SRGB the fraction of well production that originates as SRGB groundwater. (*See* DEIR at 303 [describing 9,752 AFY to meet service area demand plus "approximately 875 afy to return to the Salinas Valley Groundwater Basin . . . ."].)

impacts analysis depends on groundwater modeling to assess how the MPWSP's production of 27,000 AFY of source water will affect groundwater elevations, groundwater flows and groundwater quality in the SRGB.

Recognizing that would be the case, on April 9, 2015, the SVWC and 12 other parties submitted a written request to the CPUC Energy Division to confirm that it would provide the DEIR's electronic modeling data files at the beginning of the DEIR public review period, to allow for meaningful public participation and input on the modeling, its conclusions, and how those conclusions relate to the DEIR's determination of whether the MPWSP would have significant groundwater impacts requiring mitigation.

The difficult and long-drawn-out process by which the modeling data files were finally made available on September 7, 2015—five months after the parties' request—is detailed in the attached Durbin Tech Memo, which explains the need for those data files. The five-month delay in providing the files has prevented the SVWC from reviewing them and preparing comments on the DEIR's use of groundwater modeling to support a determination of whether the MPWSP may cause significant adverse groundwater impacts. Although the DEIR comment period was extended to September 30, 2015, the SVWC's groundwater modeling expert, Timothy Durbin, is not physically available to analyze the files and comment on the DEIR's use of the modeling until after that comment deadline.

That limit on public participation in the Commission's CEQA process is improper, and particularly disappointing, in light of the great lengths to which the SVWC, Cal-Am and others have gone to develop a detailed understanding of, and consensus on, the analytical approach by which the significance of groundwater impacts from Cal-Am's MPWSP would be determined. (*See* Section 5, Hydrogeological Study, of the so-called "large settlement" executed by Cal-Am, the SVWC and 13 other parties [attached as Exh. A to Settling Parties' Motion to Approve Settlement Agreement, filed July 31, 2013]; *see* DEIR at 4.4-3, fn.1 [describing Hydrogeology Working Group (HWG) formed under the large settlement as defining "the hydrogeology investigation roadmap" underlying the DEIR's groundwater impacts analysis].) Without a thorough review of these files and possibly further analysis and additional model runs, the SVWC's hydrologist, Tim Durbin, who is an active member of the HWG, cannot evaluate and support the model output or the EIR's conclusions on the significance of the MPWSP's groundwater impacts.

According to the Notice to All Parties attached to the July 9, 2015, ALJ Ruling, the Commission plans to recirculate the "MPWSP environmental document as a joint CEQA/NEPA document" to complete its own fact-finding into the propriety of the DEIR's groundwater impacts modeling, which "would allow the parties an additional opportunity to comment on those issues, as well as any other subjects contained in the joint CEQA/NEPA document." (ALJ Ruling, Notice at 2 [filed July 9, 2015].) The Notice explains that the Commission is "now regarding that [modeling] work as if it had been performed by the proponent, Cal-Am, rather than as the Commission's work product." (*Id*.)

At this point, it is unclear whether the DEIR's groundwater impacts modeling will remain unchanged, be revised or be replaced when the Commission moves forward with re-circulation of a "joint CEQA/NEPA document." After the modeling basis for the "joint CEQA/NEPA document" is confirmed, the SVWC requests that the Commission accept and respond to

comments on that modeling. If the modeling remains unchanged from the current Draft EIR, the SVWC now has the electronic data files its needs to develop those comments. If the modeling changes, the SVWC requests that the new electronic data files be provided, just as the original model's files were provided—but with at least 45-60 days for review before any comment submission deadline.

Initial comments on select issues arising from the current modeling supporting the current DEIR's groundwater impacts analysis are presented further below and in the attached Durbin Tech Memo.

Chapter 2, Water Demand, Supplies and Water Rights:

- **Section 2.4.5, Groundwater Replenishment:**

We believe there are infrastructure limitations of the Groundwater Replenishment (GWR) Project as currently proposed, which are further discussed below. Moreover, although there may be adequate wastewater available to consider the development of a groundwater replenishment project, the PCA does not currently hold the contract rights or water right from the State Water Resources Control Board to use the wash water anticipated as a source of supply for the GWR Project. The DEIR's improperly assumes that such source water will become available under potential future agreements and water right approvals. The unsupported assumption makes the DEIR's assessment of the GWR Project speculative and insufficient to proceed with the GWR Project. Essentially, the GWR Project is infeasible given the uncertainties surrounding the agreements and water rights.

Please see additional comments on the DEIR's assessment of the GWR Project, below, in connection with DEIR Chapter 6.

- **Section 2.5, Plant Capacity:**

This section discusses the plant capacity needed under different scenarios to meet the annual demands assumed for the MPWSP along with an amount of inland-originating water to be returned to the SRGB. Table 2-5 shows the average monthly water supply that the MPWSP would provide to meet average monthly demand. This table shows that the MPWSP would provide 875 AFY of desalinated water for return to the SRGB. Delayed access to the DEIR groundwater impacts model data files has prevented the SVWC from verifying the amount of so-called "return water" that must be provided to the SRGB to avoid significant groundwater impacts and injury to prior groundwater rights of the SVWC's members and other landowners. Despite that, the DEIR's narrative analysis and tables show that the 875 AFY of return water specified in Table 2-5 is less than the 1,889-1,080 AFY of return water that must be provided based on the analysis of "inland water" that must returned according to DEIR Section 4.4, which states:

> "Based on the feedwater supply of 24.1 MGD, this (the volume of inland water pumped) would be about 1,889 afy. . . . By the time 2060 land use conditions have occurred, the percentage of inland water would have decreased to an average of about 4 percent or

about 1,080 afy, in response to the combined changes in land use in the inland areas. Over the life of the proposed project, this would be an average of 5.5 percent or about 1,485 afy."

(DEIR at 4-67.) Note C to Table 2-5 acknowledges that "groundwater modeling indicates that as much as 1,080 afy may need to be returned to the Salinas Valley Groundwater Basin (based on 4 percent of total source water intake being drawn from the Salinas Valley Groundwater Basin" and states that "MPWSP supply would be sufficient to provide this larger quantity of return water." However, the DEIR fails to reconcile the differences in the amounts of SRGB groundwater pumped by the MPWSP and the amount of return water to be provided to the SRGB to avoid significant impacts and injury to landowners' senior water rights. Section 2.5 fails to adequately discuss and analyze the impacts associated with Cal-Am's return water if the return water is at greater quantities than anticipated due to higher fractions of the source water originating as SRGB groundwater. As such, the DEIR fails to accurately and adequately analyze the annual quantity of water the project must return to the SRGB for each of the different demands provided in Table 2-5. Due to this failure, the DEIR inadequately discloses associated potentially significant impacts.

The DEIR asserts that the MPWSP's well production will help to alleviate seawater intrusion. If so, the fraction of the source water originating as SRGB groundwater will increase, so the MPWSP will need to deliver more return water to the SRGB. Failure to deliver the additional return water would reduce the effectiveness of the SVWP in combating seawater intrusion. Further, the MPWSP is required to return all SRGB groundwater back to the SRGB to make the Basin and its water rights users whole. The DEIR fails to adequately analyze (1) the greater amount of water that will be returned to the SRGB and (2) the environmental impacts associated with the actual physical conveyance structure(s) needed to deliver the return water to the SRGB to avoid significant impacts.

- **Section 2.7 Water Rights:**

The DEIR accurately explains that Cal-Am would not need any water rights to supply the MPWSP with 100% seawater but would need groundwater rights to supply the MPWSP with source water pumped from the SRGB. Concerns have been expressed as to whether Cal-Am would have legal rights to use the SRGB groundwater that it proposes to take as source water. The DEIR correctly states that because the project supply wells could draw some water from the SRGB, the "Commission must determine whether there is a sufficient degree of likelihood that CalAm will possess water rights to the water that would supply the desalination plant such that the proposed project can be deemed to be feasible." (DEIR at 2-34.)

The DEIR incorrectly asserts that "[f]rom a physical perspective, it is more than reasonably foreseeable that sufficient water is available to supply feedwater for the MPWSP desalination plant" and that "[t]here is knowledge as to where the water will come from and certainty that a sufficient quantity of water will be available." (DEIR at 2-35.) The DEIR's assertion of certainty that a sufficient quantity of source water is available ignores the physical competition for groundwater by existing and future users of SRGB groundwater and the seawater intrusion that has physically reduced the availability of this source of water supply. It also ignores the uncertainty as to the amount of fresh water that will be pumped and required to be returned to

the SRGB, including the potential for the amount of fresh water to increase over time. A project pumping 100% seawater would be physically certain to provide sufficient source water for the MPWSP, however, that is not the case here. The decision to rely upon wells makes the certainty of source water sufficiency far more complicated because of the potential for significant adverse physical impacts with respect to the SRGB—the region's largest single source of fresh water supply.

As the DEIR accurately explains, overlying landowners, like the SVWC's members, have "overlying" groundwater rights and public or private entities using groundwater to provide public water service—like Cal-Am—need "appropriative" groundwater rights. As stated in the DEIR, landowners with overlying groundwater rights have first right to a basin's groundwater, and appropriators may only take groundwater that is surplus to the needs of the overlying landowners. It is a known fact that the SRGB is in overdraft, which means there is no surplus groundwater available for appropriation by Cal-Am.

The DEIR recognizes that an appropriative right to "developed"[3] water may not be physically exercised in a way that causes "injury" to other legal users of SRGB groundwater. (DEIR at 2-36 to 2-37.) Citing the SWRCB's Final Review of California American Water Company's Monterey Peninsula Water Supply Project (July 31, 2013) (SWRCB Report), the DEIR states: "Even if Cal-Am pumps water unsuitable to support beneficial uses, the water could not be considered developed water unless users who pump from areas that could be affected by Cal-Am's MPWSP are protected from harm" and that "[i]f Cal-Am can show all users are uninjured because they are made whole by the replacement water supply and method of replacement, export of the desalinated source water would be permissible and qualify as developed water." (DEIR at 2-37.) However, the DEIR fails to adequately show that "all users are uninjured because they are made whole by the replacement water supply…." The DEIR must conduct additional analyses that show how much, when and the manner in which the return water (or replacement supply) will actually be returned, so that a fact-based determination can be made as to the significance of groundwater impacts.

The DEIR discusses the various studies and activities that have been undertaken in an effort to provide the data and analyses needed to apply the facts and evidence to the criteria set forth in the SWRCB Report for determining Cal-Am's ability and need to acquire appropriative water rights. As detailed in the Durbin Tech Memo, those studies and activities are not complete, which prevents the DEIR from reaching fact-based conclusions on the significance of groundwater impacts from the MPWSP's pumping more than 27,000 AFY of source water. Further analysis is required.

[3] "Developed" water means new water that is added to local, or native, supplies. (*See* Hutchins, Wells A., The California Law of Water Rights (1956) at 383 [defining "salvaged" versus "developed" waters].) "[S]alvaged waters are parts of a particular stream or other water supply that are saved from loss from the supply by reason of artificial work . . . whereas developed waters are new waters that are added to a stream or other source or area by means of artificial work." (*Id.*) Technically, the SRGB groundwater that would be pumped by the MPWSP would be "salvaged" water, not developed water. Water salvaged from a seawater intruded groundwater basin is available for use by the salvager, so long as no injury results to other lawful groundwater users. (*See Scott v. Fruit Growers Supply Co.* (1927) 202 Cal. 47, 51-55.) The no-injury rule also applies to use of developed water. (DEIR at 2-36 [stating "The key principle of developed water is if no lawful water user is injured, the effort of an individual to capture water that would otherwise be unused should be legally recognized."].)

For example, the DEIR admits that "once the test well results are complete, the modeling will be verified and will be re-run as warranted." But the well test was halted and will not be complete in time to inform any DEIR conclusion about the significance of the MPWSP's groundwater impacts. The necessity for the test well results is detailed in the Durbin Tech Memo. Absent those results, any conclusion that the MPWSP's groundwater impacts are less than significant would be based on groundwater modeling whose accuracy (or ability to simulate real-world groundwater effects validated by test well pump test results) is unknown. Such an impacts conclusion would not be based on substantial factual evidence.

Moreover, the DEIR does not even attempt to address those problems by stating objective performance standards that might guide the decision whether to re-run the groundwater model and, depending on the results, require the DEIR to acknowledge that groundwater impacts will be significant and require mitigation. The SVWC understands that the test well is permitted for, and expected to operate, for a period of two years in order to develop sufficient and adequate hydrogeological data allowing assessment of the DEIR groundwater model's accuracy in estimating MPWSP groundwater impacts. Without the complete test well results, there is no certainty as to the amount of seawater versus total inland groundwater that will be pumped by the MPWSP or the amount of return water that must be delivered to the SRGB to avoid injury to the Basin and its water right holders. Similarly, there will be no basis to conclude that the MPWSP's producing 27,000 AFY from wells screened in the Dune Sands and 180-Foot Aquifer will not extract water from the 400-Foot Aquifer.[4] Without that certainty, the DEIR simply assumes that the return of 875 AFY of return water to the SRGB will avoid significant groundwater impacts and will avoid injury to the prior water rights of overlying landowners. A legally defensible conclusion of no significant groundwater impacts, and no harm to prior groundwater rights, requires complete test well results from two years of operation.

- **Section 2.7.2 Project Water Rights:**

  This DEIR section asserts that "[t]he concept of significant effect under CEQA is not necessarily synonymous with harm or injury to water users" and 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 at 2-39.)

  That hypothetical scenario might be possible from an academic perspective, but it does not apply here, where the DEIR makes unsupported assumptions and disregards real-world impacts to justify a conclusion that the MPWSP's 27,000 AFY of well production will not cause any significant groundwater impacts requiring mitigation or an alternative approach to obtaining source water.

  Moreover, after asserting that CEQA's criteria for determining the significance of groundwater impacts from the MPWSP's source water production do not also determine whether that production will injure "a Basin water user" (i.e., landowners with overlying groundwater rights), the DEIR then uses the CEQA criteria to determine that the MPWSP will not injure landowners

[4] The DEIR improperly assumes that MPWSP well production from the 180-Foot Aquifer will not have a significant adverse effect on the 400-Foot Aquifer. In fact, the MPWSP's source water production threatens to exacerbates seawater intrusion and to substantially deplete SRGB groundwater resources including the 400-Foot aquifer.

with overlying groundwater rights. (DEIR at 2-39 to 2-40.) Such slight of hand makes the DEIR misleading and legally deficient.

Because the DEIR's water rights analysis, in fact, relies on its criteria for determining groundwater impact significance under CEQA, the SVWC's comments detailing flaws in application of those significance criteria in Section 4.4, Groundwater Resources, apply equally to the use of those criteria to evaluate injury to overlying groundwater rights in Section 2.7.2. Certain of those flaws also are addressed immediately below.

For example, the DEIR fails to adequately consider the significance of impacts from the MPWSP's well production, in part, because the DEIR assumes impacts may be determined primarily by estimating whether "the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned land uses for which permits have been granted" or cause "nearby municipal or private groundwater production wells . . . to experience a substantial reduction in well yield or physical damage due to exposure of well pumps or screens." (DEIR at 2-39.) Such impacts would be significant. But, as explained below, they are not the only potentially significant impacts of the MPWSP's well production.

The DEIR further states that the MPWSP's groundwater impacts would be significant if they caused a violation of water quality standards or were to exacerbate seawater intrusion. (DEIR at 2-39.) Again, such impacts would be significant. However, the DEIR fails to accurately describe the MPWSP's impacts with respect to seawater intrusion and water quality degradation. As explained in the attached Durbin Tech Memo under the heading "Southern Coastal Impacts," and as depicted in DEIR Figure 4.4-16's reverse particle tracking map, the MPWSP's 27,000 AFY of well production will draw seawater from Monterey Bay into the SRGB, increasing salinity concentrations and degrading existing groundwater quality.[5] The DEIR's "regulatory framework" discussion acknowledges the applicability of state and federal anti-degradation policy to the MPWSP. (DEIR at 4.4-30.) But the DEIR's impacts analysis fails to apply anti-degradation policy and, thus, fails to publicly disclose that increased salinity in SRGB groundwater (as depicted in Figure 4.4-16) would violate anti-degradation policy. Where groundwater quality already violates water quality standards, anti-degradation policy prohibits further degradation.

A significant problem with the DEIR is that it systematically applies both existing regulatory frameworks and its CEQA significance criteria in a narrow way that seems designed to justify a pre-conceived end result that will minimize or avoid Cal-Am's obligation to deliver return water to the SRGB in a way that avoids real-world significant impacts and is consistent with groundwater rights law, including the no-injury rule and the physical solution doctrine.

The time-pressure to develop a new water supply in response to the SWRCB's WR Order 95-10 and the Seaside Basin Adjudication—and the apparent political difficulty of getting an ocean intake approved—seems to be causing this EIR process to give short shrift to the MPWSP's groundwater impacts and injury to prior groundwater rights in a seawater intruded basin whose landowners are paying for ongoing groundwater recharge projects whose success is critical to

[5] The mushroom-shaped pattern on the right-hand side of Figure 4.4-16 shows the direction and path by which seawater from Monterey Bay (starting from the upper and lower outside edge of the mushroom pattern) will be drawn inland, along curving particle paths, into the SRGB.

sustaining a large agricultural and urban economy. It might not be quick, easy and cheap to acknowledge significant groundwater impacts and to mandate how return water actually will be delivered to the SRGB as mitigation, but that is what groundwater rights, water quality law and CEQA require.

Another example of the preceding problem appears in the DEIR's erroneous assertion that "the MPWSP would not result in a significant impact to groundwater resources" because it "would not reduce, or affect at all, the availability of fresh water (only brackish water from the Basin is projected to be drawn into the MPWSP supply) . . . ." (DEIR at 2-39.) The DEIR's assertion that "only brackish water from the Basin is projected to be drawn into the MPWSP supply" is based on the DEIR's contention that "[s]eawater intrusion in the 180-Foot Aquifer currently extends up to 8 miles inland," while "[t]he distance that would experience a water level decline of up to one foot in the 180-Foot and 180-Foot Equivalent Aquifer under project pumping conditions would extend about 5 miles from the supply wells in most years, but could extend up to 7 miles." (DEIR at 2-40.) In other words, the DEIR says seawater intrusion extends 8 miles inland, the MPWSP's well production will only reduce groundwater elevations up to 7 miles inland, so "[t]he logical conclusion confirmed by the modeling effort, is that the project will not draw fresh water into the supply wells, but will only remove brackish water from the Basin." (*Id.*) In turn, the DEIR invokes that conclusion to support its ultimate conclusion that groundwater resources impacts from the MPWSP's well production will be less than significant and cause no injury to other's groundwater rights. While difficult to ferret out, information in the DEIR shows the preceding analysis to be erroneous.

The DEIR seems to "hide the ball" by presenting one set of maps showing the geographic extent of existing seawater intrusion (*see, e.g.,* DEIR, Figures 4.4-9, 4.4-10), separately presenting another set of maps showing the "radius of influence" from MPWSP well production (DEIR Figures 4.4-14 and 4.4-15)—but never combining the two sets of maps. Perhaps that is because combining the maps would disclose that the "radius of influence" from MPWSP well production actually extends beyond the existing seawater intrusion front. (*Compare* Figure 4.4-9 [depicting seawater intrusion in 180-Foot Aquifer] with Figure 4.4-18 [depicting groundwater elevation changes at former Fort Ord groundwater contamination plumes].) Certain aspects of that problem are addressed in the attached Durbin Tech Memo under the heading "Southern Coastal Impacts."

The preceding analytical and disclosure problems show there is no support for the DEIR's conclusion that: "All in all, the project was determined not to result in a significant impact in terms of groundwater supplies either quantitatively or qualitatively. Thus it appears reasonable to conclude that the MPWSP would not result in harm or injury to the water rights of legal users of water in the Basin in terms of fresh water supply or water quality . . . ." (DEIR at 2-40.)

Further, that assertion disregards the DEIR's own conclusions about the fraction of the MPWSP's well production that originates from the SRGB. In Section 4.4, the DEIR states that 1,889 AFY of "inland water" would be produced under existing conditions and that 1,080 AFY would be produced under 2060 future conditions. (DEIR at 67.) In section 2.7, the DEIR states that "7 percent of the MPWSP supply water would originate in the Basin" under existing conditions and that "4 percent of the MPWSP supply water would originate in the Basin" under future 2060

conditions. (DEIR at 2-36.) The 1,889-1,080 AFY of "inland water" equates to the 7-4 percent fraction of inland groundwater the MPWSP would pump from the SRGB.

It seems as though the DEIR seeks to avoid a DEIR significance determination for groundwater impacts and a finding of injury to senior water rights—in order to limit costs of having to mitigate such impacts and to avoid such harm. That strategy seems evident in defining the MPWSP project description to include 875 AFY[6] of return water to the SRGB, so that the MPWSP would be "self-mitigating." (DEIR at 3-3.) Whether that amount of return water will actually mitigate the MPWSP's significant groundwater impacts and avoid harm to senior groundwater rights depends on: (1) the accuracy of the groundwater modeling on which it is based and (2) upon whether Cal-Am will actually deliver the return water to the SRGB in a way that offsets existing groundwater pumping to avoid and/or mitigate the impacts of seawater intrusion and make the SRGB water rights holders whole. The DEIR fails to describe in meaningful detail how and when Cal-Am will physically deliver the return water, to whom it will be delivered, and on what terms it will be delivered (free or at some price).

Those failings are like the problem the Court of Appeal found with the EIR in *Lotus v. Department of Transportation* (2014) 223 Cal.App.4th 645. There, the EIR for a road project found no significant impacts with respect to adjacent old growth redwood trees because the project incorporated the "self-mitigating" approach of committing to special construction techniques. The court found that "[b]y compressing the analysis of impacts and mitigation measures into a single issue, the EIR disregard[ed] the requirements of CEQA." The court explained that the EIR failed "to make the necessary evaluation and findings concerning the mitigation measures that [were] proposed," that "[a]bsent such a determination, it is impossible to determine whether mitigation measures are required or to evaluate whether other more effective measures than those proposed should be considered," and that "if such a finding were made, the lead agency would have to consider whether feasible alternatives might reduce the impact, and would also have to adopt an enforceable mitigation program."

By defining the return water obligation as part of the MPWSP, the DEIR suffers from the same problem leading the court to invalidate the EIR in *Lotus.* By failing to substantiate and specify in detail the "amount" of return water required to avoid significant impacts and water rights injury, and by failing to demonstrate in detail the feasibility of how the MPWSP will deliver return water to the SRGB, the DEIR suffers from the same problem as the vague reliance on special construction techniques in the *Lotus* EIR. These and other failings, detailed further below, make the DEIR inadequate and require substantial revisions to the DEIR, which requires re-circulation for public comment.

The SRGB is in excess of safe yield, and coastal farming operations are already impacted by seawater intrusion despite decades and millions of dollars of investment in ongoing groundwater recharge programs. The DEIR fails to provide an adequate factual basis to conclude that Cal-Am's proposal to provide 875 AFY of return water to the SRGB will avoid significant groundwater impacts and injury to groundwater rights holders. That is because the DEIR fails to adequately analyze the MPWSP's groundwater impacts. The result is that neither Cal-Am nor the

[6] This estimate as to the amount of water that will need to be returned to the SRGB is not correct; see discussion is preceding paragraph

Commission can show that the MPWSP's 27,000 AFY of well production (even with 875 AFY of return water) will avoid injury to prior groundwater rights.

There is no "surplus" groundwater available for appropriation by Cal-Am. The MPWSP's pumping from the 180-foot aquifer would harm the overlying water users with superior water rights. Exporting water from the SRGB for use elsewhere (outside the SRGB) would violate California groundwater law and is prohibited by the Monterey County Water Resources Act (California Water Code Appendix, Chapter 52, Section 21). All inland groundwater drawn by the MPWSP must be returned to the SRGB to avoid injury to overlying landowners.

- **Section 2.7.3 Variant Water Rights**

  - **Section 2.7.3.1 GWR Component**

The DEIR's conclusion that the GWR project is feasible despite the lack of legal rights to use wash water as a source of supply is indefensible. The DEIR discusses the legal framework and the various agreements and water rights from the State Water Resources Control Board that need to be in place in order for the GWR project to proceed. Currently, only a nonbinding Memorandum of Understanding (MOU) is in place among the stakeholder agencies. While the MOU may reflect the parties' then-existing intentions, only a Definitive Agreement (DA) can establish and determine the contractual rights and obligations of the parties. The DA has yet to be formed. The GWR DEIR recognizes the uncertainty of the DA as follows:

> "*If* a Definitive Agreement is reached, it would be approved after the EIR is certified."

There is no legal right to the wash water needed to proceed with the proposed GWR Project. Reliance on speculative future water rights to establish a smaller plant size for the MPWSP is imprudent, and the DEIR's reliance on potential future agreements is inappropriate.

  - **Section 2.7.3.2 Desalination Component**

The DEIR correctly states that no water right is needed for pumping pure seawater, and that a decision to use wells to produce source water for the MPWSP would require groundwater rights in the SRGB. The DEIR then concludes that the MPWSP Variant appears at least preliminarily feasible from a water rights perspective, because water would be returned to the SRGB to offset groundwater pumping from the SRGB to avoid injury to senior water rights holders. Yet, this conclusion is not supported by the analysis in the DEIR.

The DEIR states:

> [I]f all components of the GWR project are implemented as proposed, that project would be expected to supply all of the current need for and thus occupy the total capacity for additional water being delivered to CSIP. Thus, while in dry years the desalinated return water could readily be employed through CSIP to supply agricultural water needs in lieu of Basin pumping, CalAm would not predictably be able to use the CSIP return option…it is possible that CalAm could identify a

different return mechanism or location…that would offset groundwater pumping from the Basin.

(DEIR at 2-45.) The DEIR goes on to state "such a yet-to-be-identified option would return water to the Basin … in a manner that ensures that the water will be available for use by senior water rights holders … and appears at least preliminarily feasible from a water rights perspective." (*Id.*)

The DEIR's conclusion that no harm or injury to the Basin and senior water right holders would occur is invalid because the conclusion is based on a "yet-to-be-identified option." The measure to return the water to the Basin is an essential component of the MPWSP, in that Cal-Am's right to produce source water from the SRGB entirely depends on avoiding harm to the SRGB and landowners and others with senior groundwater rights in the SRGB. That is, the return of the SRGB groundwater to the SRGB is an essential component of the MPWSP, because the MPWSP cannot legally proceed without it. Failure to return SRGB groundwater to the SRGB would violate California groundwater law and the Monterey County Water Resources Agency Act (California Water Code Appendix, Chapter 52, Section 21).

Accordingly, the method for physically delivering SRGB groundwater back to the SRGB must be described in detail and analyzed in a revised DEIR, which must then be recirculated for public review; otherwise, the Commission's Final EIR will be legally inadequate. Under CEQA, the project analyzed in the DEIR must encompass the "whole of the action." (14 Cal Code Regs §15378.) The term "project" means the *whole of an action* which has a potential for physical impact on the environment and *refers to the underlying activity and not the governmental approval process*. (*Orinda Ass'n v. Bd. of Supervisors* (1986) 182 Cal. App. 3d 1145, 1171-1172.) Determining how, when and where the SRGB groundwater is returned to SRGB is necessary for the MPWSP to proceed (and is included as part of Cal-Am's project proposal and is part of the DEIR's project description), so the details by which this MPWSP component will proceed may not be deferred for a later decision. CEQA prohibits a lead agency from "piecemealing" its environmental review by dividing a single large project into smaller individual sub-projects, so as to avoid having to analyze and disclose the environmental impacts of the large project as a whole.

In sum, the DEIR is inadequate because it failed to describe and thoroughly analyze how much SRGB return water must be delivered to the SRGB, how the return water will be delivered, when the return water will be delivered, where the return water will be delivered, and who will use the return water. Instead, the DEIR unlawfully deferred this essential component of the MPWSP to a later decision. CEQA does not allow for a conclusion of no significant impact on the basis of a "yet-to-be-identified option." Accordingly, the EIR is legally inadequate.

Chapter 4.4 Groundwater Resources

- **Section 4.4.1.3 Groundwater Flow and Occurrence**

The DEIR cites a Brown and Caldwell "State of the Basin Report" that was prepared at the request of one Monterey County Supervisor and was meant to provide a "snapshot" of the SRGB at a certain point in time; nothing more. At a public workshop, the Monterey County Water Resources Agency disclosed that the analysis in the State of the Basin Report did not reflect

existing groundwater recharge projects, such as the Salinas Valley Water Project (SVWP) or the Castroville Seawater Intrusion Project (CSIP), nor did it include any modeling of groundwater conditions. As a result, the State of the Basin Report does not represent an accurate snapshot of the SRGB; instead, it represents an imprecise glimpse of SRGB conditions pre-dating approval and implementation of the SVWP and CSIP recharge projects using overly simplistic input and output calculations to arrive at a SRGB water balance that does not reflect reality. The State of the Basin Report has extremely limited value and should not be used to establish existing basin conditions or projected future basin conditions for purposes of conducting an impacts analysis for the MPWSP. References to the State of the Basin Report should be deleted from the DEIR.

- **The DEIR fails to apply a threshold of significance for the impact associated with the depletion of the SRGB water supply**.

The DEIR states that "implementation of the proposed project would be considered to have a significant impact associated with groundwater resources if it would:

> 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 rate 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); or
>
> Violate any water quality standards or otherwise degrade water quality.

(DEIR at 4.4-39.) The first criterion asks whether the MPWSP would substantially deplete groundwater supplies or interfere substantially with groundwater recharge (*i.e.,* "substantial depletion criterion"). The second criterion asks whether the MPWSP would degrade existing water quality or violate water quality standards (*i.e.,* "water quality degradation criterion"). The DEIR does not directly apply those significance criteria but, instead, attempts to restate them as more particularized criteria tailored to the MPWSP. (*Id.*) Although the DEIR states six particularized criteria, in essence they all boil down to the following two criteria, under which the MPWSP would be determined to have a significant impact on groundwater resources if:

> Extraction from the subsurface slant wells were to lower groundwater levels in the Dune Sand Aquifer or the 180-foot aquifer such that nearby municipal or private groundwater production wells were to experience a substantial reduction in well yield or physical damage (due to exposure of well screens and well pumps)
>
> Extraction from the subsurface slant wells were to adversely affect groundwater quality by exacerbating seawater intrusion in the SVGB.

The first particularized criteria focuses on whether the MPWSP would cause interference with nearby groundwater wells (i.e., "well interference criterion"). The second particularized criteria is whether the MPWSP would exacerbate seawater intrusion (i.e., "seawater intrusion criterion"). In both cases, the DEIR explains that "[g]roundwater modeling was a primary analytical tool used

to evaluate project impacts on groundwater resources." (DEIR at 4.4-40.) The SVWC's concerns about the accuracy, and appropriateness, of the DEIR groundwater impacts modeling are described above and in the attached Durbin Tech Memo.

The SVWC's comments on the DEIR's analysis of whether the MPWSP's well production will harm senior groundwater rights in the SRGB show errors, omissions and resulting misrepresentations in the DEIR's application of its criteria for determining groundwater impacts significance. (*See, e.g.,* SVWC comments re MPWSP well production degrading groundwater quality by exacerbating seawater intrusion as shown in DEIR particle tracking maps.) Those comments with respect to the DEIR's assessment of the MPWSP'sharm to water rights are incorporated by reference here with respect to inadequacies in the groundwater impacts analysis set forth in DEIR Section 4.4, Groundwater Resources.

In addition to the problems shown above, the DEIR does not adequately apply DEIR section 4.4.3.1's substantial groundwater depletion criterion, under which the MPWSP would cause a significant impact if it were to "[s]ubstantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume . . . ." (DEIR at 4.4-39.) Instead, DEIR section 4.4.3.5's impacts analysis applies the significance criterion by narrowly focusing on whether the MPWSP's well production would cause "a lowering of the local groundwater table level during operations *so as to expose well screens and pumps*." (DEIR at 4.4-58 [emphasis added].) Specifically, the DEIR focuses on whether the "Radius of Influence" caused by the MPWSP's well production would cause "depletion of groundwater supply to neighboring production wells or the CEMEX pond." (DEIR at 4.4-58.)

The SVWC agrees such impacts would be significant and require mitigation or an alternative approach to obtaining source water for the MPWSP. However, the DEIR's narrow focus on existing wells within the so-called radius of influence is legally inadequate because it fails account for depletion of the regional groundwater supply from the hydraulically interconnected SRGB as a whole. In other words, the DEIR is legally inadequate because the narrow focus of the impacts analysis in section 4.4.3.5 (titled "Operations Impacts and Mitigation Measures") fails to apply the substantial depletion criterion stated in section 4.4.3.1 (titled "Significance Criteria").

> If the DEIR's groundwater impacts modeling were correct, the MPWSP's well production would take 1,889 AFY of SRGB groundwater in the near term and 1,080 AFY of SRGB groundwater under future conditions in year 2060, resulting in an average SRGB groundwater take of 1,485 AFY. (DEIR at 4-67.) Given the SRGB's overdraft condition and hundreds of millions of dollars of ongoing investment in ongoing groundwater recharge projects (e.g., Nacimiento Reservoir, San Antonio Reservoir, Castroville Seawater Intrusion Project, Salinas Valley Water Project), any failure by the MPWSP to return to the SRGB the full amount of groundwater it produces from the SRGB must constitute a significant adverse unmitigated impact under the substantial depletion criterion. Under CEQA, a lead agency, like the Commission, may refuse to approve a proposed project, based on an unmitigated significant impact. (Pub. Res. Code § 21003, 14 Cal. Code Regs. § 15042.) Under CEQA, a lead agency, like the Commission, may not approve a proposed project if it is feasible to avoid or reduce a significant impact through mitigation or an alternative project approach. (14 Cal. Code Regs. § 15091, 15092.)

The DEIR's project description for the MPWSP includes 875 AFY of return water to be delivered to the SRGB. (DEIR at 3-3, 3-37 ["it is assumed that up to 875 afy of product water would be returned to the groundwater basin"].) That 875 AFY of return water is insufficient to avoid a significant impact under the substantial depletion criterion.[7] If the DEIR groundwater impacts modeling is correct,[8] and the MPWSP's wells produce 1,889 AFY of SRGB groundwater in the near term, either 1,889 AFY of return water must be delivered to the SRGB as mitigation or the MPWSP must pursue an alternative approach to obtaining source water. If the MPWSP's wells produce 1,080 AFY of SRGB groundwater under future conditions in 2060, then either 1,080 AFY of return water must be delivered in the future to the SRGB as mitigation or the MPWSP must pursue an alternative approach to obtaining source water. The DEIR's failure to mandate that approach makes it legally inadequate.

Not only is the DEIR deficient by asserting that 875 AFY of return water is sufficient to avoid a significant impact under the DEIR's substantial depletion criterion, the DEIR also is deficient because it fails to describe with specificity when and how the return water will be delivered to the SRGB. At best, the DEIR outlines a vague plan to deliver the return water through the existing CSIP infrastructure. But the DEIR fails to assess whether the CSIP infrastructure has capacity[9] to deliver such water and whether use of the CSIP to deliver return water would have adverse impacts on implementation of existing, approved and planned future groundwater recharge programs to combat seawater intrusion and bring the SRGB into hydrologic balance.

The DEIR's conclusion of no significant groundwater resources impact is fatally flawed in that (1) it fails to identify a threshold of significance for the impact at issue (depletion of SRGB water supply), and (2) it relies on a vaguely described project component (return water to SRGB through CSIP) rather than proposing any feasible and enforceable mitigation measure as the basis for its conclusion.

The standard of significance should be any additional water withdrawn from the SRGB, since the SRGB is already in excess of safe yield. The DEIR takes the position that the project would cause the seawater/freshwater interface to migrate back towards the ocean, thus reducing the extent of the area currently affected by seawater intrusion. In the same document, the DEIR takes the position that the inland water drawn from the SRGB would not be depleted because somehow the water taken will be returned to the SRGB. The DEIR appears to be taking conflicting positions in an effort to avoid disclosure of significant impacts and to escape CEQA's mitigation requirement. Moreover, the DEIR does not analyze the potential significant environmental

[7] As discussed above, it also is insufficient to avoid injury to prior SRGB groundwater rights.

[8] The DEIR's groundwater impacts modeling fails to accurately account for anticipated sea level rise, which results in the DEIR's understating the amount of SRGB groundwater produced by MPWSP wells during the first half of the MPWSP's expected lifespan. This flaw in the DEIR's groundwater impacts analysis is explained further in the Durbin Tech Memo.

[9] There are limiting factors in utilizing CSIP as currently constructed and operated, including existing water sources that already compete for CSIP distribution capacity (i.e., reclaimed wastewater and diverted river water from the SVWP) utilizing the CSIP pond at the PCA facility. Other limiting factors may include the CSIP distribution system sizing and scope of distribution area. The DEIR fails to adequately evaluate the impact to the SRGB if the freshwater from the proposed project cannot be fully utilized (to make the basin whole) due to the limitations of the CSIP. If the return water cannot be fully utilized in the SRGB to make the basin and senior water right holders whole, then that results in (1) significant and cumulatively considerable impacts that must be mitigated and (2) violation of groundwater rights and the Monterey County Water Resources Act (California Water Code Appendix, Chapter 52, Section 21). Mitigation measures to be considered include the expansion of the CSIP pond and/or expansion of the CSIP distribution system and service area in order to fully utilize the return water source in a manner that fully mitigates the impacts to seawater intrusion and to the SRGB.

impacts if (1) there is a shut-down of the slant wells or (2) there is any additional pumping under the misperception that the seawater intrusion problem has been solved. These impacts must be analyzed in the DEIR.

Because the SRGB is already in excess of the annual safe yield, any additional withdrawal from the basin (such as that proposed by the project) must be disclosed as a significant direct impact and cumulatively considerable impact. Specifically, the project's incremental contribution to the SRGB's imbalance would be cumulatively considerable. Yet, the DEIR fails to adequately provide a cumulative impact analysis disclosing that impact and requiring mitigation or an alternative source water intake approach to avoid the impact. The vaguely described return of water to the SRGB is insufficient to adequately address the impacts, particularly when the amount of the return water is less than the SRGB groundwater anticipated to be produced by the MPWSP wells.

- **The DEIR fails to adequately analyze the significance of impacts on the surface water-groundwater interaction at the Salinas River**

The DEIR acknowledges that the zone of impact from the MPWSP well production would reduce groundwater levels beneath the Salinas River by one foot or more. (DEIR at 4.4-76.) The DEIR explains that one result is that "the losing stream section of the river would increase in length," which "would increase recharge from the surface water to groundwater." (*Id.*) Given the Salinas Valley's enormous investment in past, present and planned future projects to recharge the SRGB, the general public might misconstrue this "increased recharge" as a benefit. In fact, increasing the length of the losing stream section of the Salinas River would be a significant adverse impact that must be publicly disclosed under CEQA.

The water rights for Nacimiento and San Antonio reservoirs include requirements that condition reservoir releases for groundwater recharge on rates of surface flow at different points in the Salinas River, including at its lagoon. If the MPWSP depletes Salinas River flows, reservoir operations may be affected and groundwater recharge programs, like the SVWP, may be impaired. The DEIR is legally inadequate because it fails to analyze and disclose the potential for the MPWSP's well production to impair groundwater recharge by interfering with reservoir operations and the SVWP surface diversion. (DEIR section 4.4.3.1 identifies interference with groundwater recharge as a criterion for determining the significance of the MPWSP's groundwater impacts.) Reservoir operations are affected by Salinas River flow conditions at different times of the year and by different hydrologic year types (e.g., wet versus critically dry). The DEIR must be revised to address this potential impact and to provide a detailed analysis that considers impacts at different times of the year, not simply based on total flows reaching the ocean in a single year or on long-term averages.

Nacimiento and San Antonio reservoir operations for groundwater recharge, and related surface water diversions for the SVWP, are regulated by the National Marine Fisheries Service (NMFS) to protect steelhead trout, which is listed as threatened under the federal Endangered Species Act (ESA). NMFS has designated the Salinas River as critical habitat for steelhead, and the Salinas River is listed as impaired under the federal Clean Water Act. Whether, and when, Salinas River flows reach the lagoon and ocean affect critical habitat and reservoir releases for SRGB recharge and SVWP surface water diversions. The MPWSP's impact on Salinas River flows has the potential to take steelhead and to destroy or adversely modify critical habitat for steelhead.

Such impacts require incidental take authorization under the ESA. The DEIR does not seem to anticipate Cal-Am's obtaining such authorization, which would make MPWSP source water production unlawful. Adverse impacts to steelhead and its habitat, in turn, has a significant potential to cause ESA-based regulatory restrictions on reservoir operations for groundwater recharge. The DEIR must be revised to analyze and disclose direct and indirect impacts to steelhead and indirect impacts to reservoir recharge operations. Such impacts also should be assessed as cumulatively considerable impacts.

Declines in river flow have the potential to significantly impact the reservoir releases for groundwater recharge and surface water diversions through the SVWP's surface diversion facility, which delivers water for in lieu recharge in the CSIP area. By operation of such indirect effects, the MPWSP's well production is likely to exacerbate seawater intrusion by impairing existing groundwater recharge programs. Moreover, any decline in river flow will adversely impact future full buildout of SVWP Phase I (*i.e.,* as originally designed) and SVWP Phase II, which anticipates additional diversion of river water to stop seawater intrusion.

Because the condition of the Salinas River is such that surface water does not always flow in some areas, the DEIR's standard of significance must be any additional decrease in the surface water flow. Any loss of, or reduction in, flow must be considered significant and cumulatively considerable impacts to Salinas River resources, including steelhead and its critical habitat, and to reservoir recharge operations, including the SVWP and its surface water diversion for in lieu recharge. Accordingly, the MPWSP will result in significant direct, indirect and cumulatively considerable impacts. The DEIR is legally inadequate because it fails to adequately analyze and disclose these impacts and fails to prescribe mitigation or an alternative approach to obtaining source water for the MPWSP that would avoid or reduce these impacts.

- **The DEIR must discuss alternative mitigation for depletion of the SRGB water supply.**

  SRGB groundwater extracted by the MPWSP must be returned to the SRGB and made available for reasonable and beneficial use by the senior water right holders of the SRGB to make the SRGB and the senior water rights holders "whole" and to mitigate significant and cumulatively considerable impacts under CEQA. As described above, there are limiting factors associated with CSIP, including its pond, distribution system, and distribution area. In order to make the SRGB and the senior water rights holders whole and to mitigate significant and cumulatively considerable impacts under CEQA, the DEIR must include either as a mitigation measure or as a project component (which must be fully described and analyzed in the EIR) the expansion of the CSIP pond and/or expansion of the CSIP distribution system and area.

Chapter 6 MPWSP Variant

The DEIR includes an evaluation and discussion of the Pure Water Groundwater Replenishment (GWR) Project. Accordingly, the SVWC is attaching here the comments it submitted June 1, 2015, on the GWR Project's DEIR and asks that they be incorporated and included herein as an integral part of the SVWC's comments on the MPWSP DEIR.

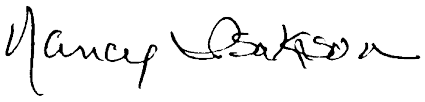
The MPWSP DEIR states that "as currently proposed, Salinas Valley return flows must be injected or routed to an alternate location because the additional GWR-produced water developed at the Regional Wastewater Treatment Plant would take up the capacity at CSIP."[10]

The DEIR goes on to state that, the "implementation of the MPWSP Variant would improve overall groundwater conditions of the SRGB by reducing extractions of groundwater in the CSIP area" and concludes that impacts associated with this "alternative" would result in less than significant impacts to SRGB groundwater resources. However, the DEIR fails to adequately analyze and provide a supportive basis for the impacts to the SRGB with the implementation of the Variant project, as discussed in our June 1, 2015, comments on the GWR Project DEIR. These impacts must be fully analyzed and mitigated; otherwise, this DEIR is legally inadequate.

The SVWC has actively supported the development of water projects within the Salinas Valley, and continues to do so. Its members have built and paid, or continue to pay, for two reservoirs, the Castroville Seawater Intrusion Project, the Salinas Valley Reclamation Project and the Salinas Valley Water Project—all in an effort to solve the SRGB's water problems. They have worked with their neighbors to resolve their differences so these projects could be successfully financed and implemented. The stability and security of their water resources and water rights are at stake with the implementation of the MPWSP.

Let's work together to develop the best water supply solution for our community. Thank you for your consideration of our comments and concerns.

Sincerely,



Nancy Isakson, President
Salinas Valley Water Coalition

Enclosures: September 18, 2015, Durbin Tech Memo
April 9, 2015, joint letter requesting DEIR groundwater impacts modeling data files
May 8, 2015, joint motion for DEIR groundwater impacts modeling workshops
SVWC comments on GWR Project DEIR

[10] DEIR at 6-114.

TIMOTHY J. DURBIN, INC.
CONSULTING HYDROLOGISTS

TECHNICAL MEMORANDUM

Date: September 18, 2015

To: Nancy Isakson, President
Salinas Valley Water Coalition

From: Timothy Durbin, P.E.
Timothy J. Durbin, Inc.

Subject: Initial technical comments on groundwater modeling and effects analysis in April 2015 Draft Environmental Impact Report for Monterey Peninsula Water Supply Project

Background

I have worked in the Salinas Valley as a hydrologist for about 40 years. My first work was with the U. S. Geological Survey in 1975 for the development of what was the first computer model of the Salinas River groundwater basin. Following that work, I was a member of a scientific committee that was tasked with identifying the opportunities and constraints on increasing the water supply to agricultural and municipal users within the Salinas Valley. Later I was engaged by the Salinas Valley Water Coalition to assist them in understanding the Salinas Valley hydrologic setting and the opportunities and constraints on groundwater and surface-water development. I have been working with the Coalition for about 25 years. I am currently a member of the Hydrogeologic Working Group regarding the CalAm Monterey Peninsula Water Supply Project. I am also a member of the Technical Advisory Committee regarding the development by Monterey County of a new groundwater/surface-water model of the Salinas River groundwater basin. A copy of my curriculum vitae is attached.

I have reviewed the April 2015 Draft Environmental Impact Report ("DEIR") for the Monterey Peninsula Water Supply Project ("Project"), including but not limited to Chapter 3, Project Description, Chapter 4.4, Groundwater Resources, and Appendix E2, Monterey Peninsula Water Supply Project Groundwater Modeling and Analysis. I also attended the Project DEIR groundwater modeling workshop conducted by the California Public Utility Commission ("Commission") Energy Division on May 19, 2015.

Following are initial technical comments on the groundwater modeling and effects analysis in the Commission's April 2015 DEIR for the Project.

Sensitivity Analysis

My primary concern regarding the modeling is the lack of a sensitivity analysis. The development of a groundwater model, including those described in the DEIR, involves making a large number of assumptions about the characteristics of the groundwater system. While some of the model assumptions have at least some basis in fact, other assumptions must be based on professional judgment or best guesses about the actual characteristics of the groundwater system. The assumptions include the geographic extent and thickness of the geologic units that comprise the groundwater system, the hydraulic characteristics of those geologic units, the non-Project pumping from the groundwater system, the relation of the system to hydraulically significant surface-water features, like the Salinas River, and other factors. In the end, the groundwater model is a gross simplification of the complexity of the actual, which the modeler hopes is an adequate representation of the actual groundwater system for the particular use of the model.

Two approaches are used by hydrologists to test the suitability of a model for its intended use. The first is model calibration, which involves testing whether the model can reproduce the historical behavior of the groundwater system. However, this approach has severe limitations with respect to the DEIR because historical observations are not available to which the model performance can be compared. The purpose of the model is to assess the impacts of the slant wells on the Salinas River groundwater basin. The critical zone of interest is the coastal areas, for which little historical data exist on the hydrologic impacts on pumping from wells near Monterey Bay. Little data have been collected on the slant-well test, but those were not used in the model calibration. Furthermore, the slant-well test (discussed in more detail below) was curtailed before truly useful data could be collected.

The second approach is a sensitivity analysis. The basic idea of a sensitivity analysis is to address the question: If the assumptions adopted in developing a model were changed, would the model predictions change so as to change the conclusions regarding the Project impacts. This question is answered by changing a modeling assumption, rerunning the model with that change, and examining the model predictions with and without the change. This process is repeated for all the potentially important model-development assumptions. Next, the cumulative effect of the collection of the changes in the model-development assumptions is assessed to quantify the uncertainty in the model predictions. Finally, a judgement is made as to whether the conclusions in the DEIR are justified given the level of uncertainty in the model predictions. That judgement cannot be exercised based on the calibration results reported in the DEIR.

Important model-development assumptions are the hydraulic connections between the dune-sand aquifer, 180-foot aquifer, 400-foot aquifer, and Monterey Bay. Those connections are quantified in the models by assigning hydraulic properties within the model regarding the resistance to vertical groundwater flow among the aquifers and Monterey Bay. Those assignments determine the modeled source of the groundwater pumping, where percentages of the pumped water comes from the dune-sand aquifer, 180-foot aquifer, 400-foot aquifer, and Monterey Bay. The DEIR states particular conclusions regarding the percentage of pumped water originating from Monterey Bay. Nevertheless, were the hydraulic connections to be quantified differently within the model, the conclusions stated in the DEIR very likely would be different. The magnitude of that difference cannot be assessed without doing a systematic sensitivity analysis. The magnitude of the difference cannot be assessed for the calibration results described in the DEIR.

Sea-Level Rise

The expected sea-level rise due to climate change is a potentially important factor regarding the impacts of the Project pumping. Sea-level rise is incorporated into the modeling for the DEIR, but it is implemented poorly. The expectation is that the sea level will rise gradually during the Project life with the effect of gradually changing groundwater-flow patterns and inducing new regional seawater intrusion into the groundwater system. However, sea-level rise is implemented in the model by assuming that at the start of the Project operation the sea level immediately rises to the average rise during the Project life. Furthermore, the sea-level stays at that initial rise throughout the Project life. This is quite different than the real expectation for actual sea levels to rise gradually.

The DEIR indicates, and I was informed at the PUC groundwater modeling workshop, that the maximum amount of sea-level rise is 16 inches over the life of the Project, but that the model input was set at 8 inches of sea level rise from day one through the end of the modeling period scenario. That groundwater modeling assumption causes the DEIR to materially misrepresent the effects of Project pumping. The result is that, for the earlier years of Project operation the DEIR modeling overstates the amount of seawater pumped as part of the Project and understates the amount of fresh water pumped from the Salinas River Groundwater Basin ("SRGB"). That is because the fraction of brackish source water originating as fresh groundwater from the SRGB is projected to be highest during the project's earlier years, when sea levels have not yet actually risen.

The representation of sea-level rise in the model probably has other important consequences regarding the accuracy and reasonableness of the DEIR groundwater model predictions. Most serious would be impacts due to the inadequate modeling representation on the particle tracks from Monterey Bay into and through the dune-sand aquifer, 180-foot aquifer, and 400-foot aquifer. The modeling prediction about where Project-pumped groundwater originates, and how

much of that water is fresh groundwater versus brackish groundwater versus seawater, would be different had a more realistic representation of sea-level rise been implemented in the modeling. The magnitude of that difference cannot be assessed without rerunning the model with a gradual sea-level rise. This problem makes the DEIR's groundwater effects analysis inadequate to support a reasonable, environmentally informed decision on whether to approve the Project in light of its expected effects on SRGB groundwater.

Southern Coastal Impacts

The modeling results described in the DEIR indicate a particular pattern of groundwater flow that is induced by the project near Monterey Bay. This is shown on Figures 137-144 in the modeling appendix to the DEIR, which show pathway (or particle tracks) of groundwater movement for water molecules originating at different locations. The figures show that for seawater entering the groundwater system just westward from the Project wells, that seawater flows eastward within the groundwater system to the wells. However, for seawater entering the groundwater system north or south of the Project wells, that seawater travels paths that loop inland, around and behind the Project wells. Then, the seawater flows westward to the wells. The area crossed by the collection of particle tracks represents areas additionally intruded with seawater due to the Project pumping. Groundwater within the 180-foot aquifer already has been intruded by seawater, but the effect of the Project pumping will be to increase the aquifer salinity, causing degradation of groundwater quality.

The particle tracks shown on Figures 137-144 do not show the complete set of tracks. A more complete display of the modeling results would show additional particle tracks depicting loops originating further north and south of those shown on the figures. Those loops would extend further inland than those shown before turning westward to the Project wells. Each of those loops carries new seawater into the groundwater system. The southern boundary of the historical seawater intrusion within the 180-foot aquifer is located about 2 miles south of the CEMEX site, and the eastern boundary of the historical seawater intrusion within the 400-foot aquifer is located about 0.5 miles east of the CEMEX site. The complete set of modeled particle tracks may pass through and then outside the present limits of seawater intrusion. Were that the case, an impact of the Project pumping could cause seawater intrusion in previously un-intruded areas.

This possibility must be examined. Firstly, maps must be prepared showing a complete set of particle tracks for the 180-foot aquifer. Secondly, similar maps need to be prepared for the 400-foot aquifer. Currently none are shown in the DEIR for the 400-foot aquifer. The sensitivity of the particle-track trajectories to the model-development assumptions needs to be examined. Finally, particle tracks that cross un-intruded areas, if any, must be identified.

Slant-Well Test

The slant-well test is an import part of validating the modeling described in the DEIR and the conclusions based on the modeling results. The test is an application of the scientific method. The models prepared for the DEIR represent a theory on how the groundwater system will respond to the Project pumping. That theory needs to be tested by conducting an experiment: the slant-well test. The most important elements of the theory to be tested relate to the hydraulic connections among the sand-dune aquifer, 180-foot aquifer, 400-foot aquifer, and Monterey Bay. The model-development assumptions about those connections most likely are the determinants of the sources of the water pumped by the Project wells. Were those hydraulic connections to be quantified differently, the percentages of water coming from the sand-dune aquifer, 180-foot aquifer, 400-foot aquifer, and Monterey Bay would be different than derived from the modeling described in the DEIR. Furthermore, the particle-tract trajectories would be different than derived from the modeling, which would have potentially important consequences with respect to Project-induced seawater intrusion into zones currently un-intruded. This is the issue of particle tracks from Monterey Bay that cross areas currently without seawater intrusion.

A long-term slant-well test is needed to test the theory expressed by the modeling. A long-term test is needed to obtain information on the all the important hydraulic connections within the groundwater system. A short-term test (a few weeks to a few months) will yield information only on conditions within shallower parts of the groundwater system within the immediate vicinity of the Project site. A long-term test (many months to a few years) is required to yield information on the deeper parts of the groundwater system both at the Project site and more distant from that site. An important concern in this regard is the potential for inducing seawater intrusion into near-coastal zones of the 180-foot and 400-foot aquifers that currently are un-intruded.

Need for DEIR Groundwater Model Files

The Commission's Environmental Review Team retained Geosciences Support Services Incorporated ("Geosciences") to conduct the computer modeling to assess effects of the Project's slant wells on the SRGB groundwater. To do that, Geoscience used three different computer model programs: (1) the Salinas Valley Integrated Groundwater and Surface Water Model; (2) the North Marina Groundwater Model; and (3) the CEMEX Model. The DEIR's analysis of whether the Project's groundwater impacts are significant depends on the use of those models.

The adequacy of the DEIR's groundwater effects analysis to support an environmentally informed decision whether to approve the Project cannot be meaningfully assessed without understanding the DEIR modeling and its assumptions. Accordingly, the Coalition, California American Water Company and others asked the Commission to provide the following: (1) the electronic "input files" that Geoscience ran through its modeling programs for the suite of

scenarios described in the DEIR; (2) the electronic "output files" produced by the Geoscience modeling programs for the suite of scenarios; and (3) the executable file for each of the modeling programs runs for the suite of scenarios performed in connection with the DEIR impacts analysis.

Those modeling data files were requested in April 2015, about the time when the Commission released the DEIR for public review. Rather than providing the data files, the Commission hosted a "Hydrogeology Modeling Workshop" on May 19, 2015. The workshop was useful, but it failed to allow a meaningful assessment of the adequacy of the DEIR's groundwater effects analysis to support an environmentally informed decision whether to approve the Project. The Coalition and others requested a second modeling workshop to address unanswered questions and issues arising from the first workshop. To my knowledge, the Commission never responded to this request and has not conducted a second workshop.

An analogy to the Commission's restrictions on the model review is that of an accountant being asked to audit the books of a company with restriction to what parts of the financial records were allowed to be seen. If the accountant were allowed only to see the balance sheet (which is a summary of the financial condition of the company at a point in time), the accountant could not make any statement about the accuracy of the number on the balance sheet. To assess the accuracy of the company's accounting, the accountant would need full access to the underlying financial records and time to review them. The same applies to reviewing the models. The modeling information the Commission made available for all but the very end of the public comment period is equivalent to the balance sheet, and the electronic model data files are equivalent to the financial records. For the accountant or the hydrologist, full access to files is essential to a meaningful review.

On July 9, 2015, the Commission issued a notice stating that it would make the requested DEIR groundwater modeling data files available. After repeated follow-up requests for those data files, I received them on September 7. On September 19, I leave on a long-planned, pre-paid vacation lasting through September 30. I am unable to analyze the modeling files before the September 30, 2015, deadline the Commission has set for submitting public comments on the DEIR. Any reasonable groundwater modeling professional would require at least several weeks to analyze the groundwater modeling electronic data files to assess the adequacy of the DEIR's groundwater effects analysis to support an environmentally informed decision whether to approve the Project. As a result, I have been prevented from analyzing the groundwater model and providing the Commission with comments by September 30 on whether the DEIR's model provides a sound basis for assessing the significance of the Project's groundwater impacts.

Notice of Intent to Prepare Revised DEIR

I understand that the Commission has issued a notice stating that it will revise the DEIR and circulate that revised document for public review at some point in the future. To my knowledge, the Commission has not stated whether the revised DEIR's groundwater impacts analysis will be based on the existing modeling or on new, revised or different modeling.

Given the Commission's initial failure to made the DEIR groundwater modeling data files available for review, and the Commission's two-month delay in providing the data files after its July 9 notice that it would make them available, the Commission should commit to responding to comments on the existing DEIR groundwater modeling and impacts analysis, regardless of whether they are submitted by September 30.

If the Commission produces a revised DEIR with new or different information pertaining to the Project's effects on groundwater resources, it is critical that the Commission accept and respond to public comments on any and all aspects of that groundwater effects analysis. Revised or new information relating to one aspect of a revised DEIR's groundwater effects analysis would have a ripple effect throughout that analysis, making it important for the Commission to accept and respond to comments on all aspects of the groundwater effects analysis—even if certain aspects are unchanged from the original DEIR.

If the Commission uses new or revised groundwater modeling to support the revised DEIR's groundwater effects analysis, it should make available for at least a 45-to-60-day review period the electronic data files from that new or revised modeling. As explained above, failure to do that would prevent meaningful public review of the revised DEIR's groundwater effects analysis.

TIMOTHY J. DURBIN, INC.
CONSULTING HYDROLOGISTS

Timothy Durbin, P.E.

Experience

Tim Durbin has over 40 years of engineering experience and directs projects relating to groundwater and surface-water hydrology. Areas of expertise include design of multidisciplinary investigations, design of large-scale programs for the collection and interpretation of hydrologic data, and application of mathematical modeling to the analysis of problems in groundwater and surface-water hydrology. Tim Durbin's early professional career was with the U. S. Geological Survey, first as a research hydrologist, later as director of that agency's water-resource activities successively in Nevada and California.

Timothy J. Durbin, Inc. Carmichael, California, President (1999-present)[1]

Directs projects related to groundwater hydrology, surface-water hydrology, and water-resource management. Examples of such projects include:

San Diego County Groundwater, California. Analyzing the occurrence and availability of groundwater in southwestern San Diego County and northwestern Baja California. The work has involved characterizing the hydrogeologic setting, including the coastal sedimentary deposits and the inland crystalline rocks. The work has involved define the extent and thickness of water-bearing sediments and rocks, and it has include estimating recharge to water-bearing units underlying urban, agricultural, and natural areas. The study area includes the watershed areas tributary to the ocean from the San Diego River to the Tijuana River, including the portion of the Tijuana River watershed within Mexico. *City of San Diego*.

Eastern Yolo County Groundwater, California. Developing a plan for the optimal management of groundwater and surface-water resources within eastern Yolo County. The objective is to maximize the utilization of groundwater and surface water subject to constraints regarding groundwater levels, land subsidence, groundwater quality, streamflow depletions, surface-water rights, and facility capacities. A groundwater model has been developed for the study area, which will be used to allocate surface-water usage and to locate groundwater pumping to meet management objectives while satisfying the constraints.

Carbonate Aquifer System, Eastern Nevada. Analyzed the water-related impacts of groundwater development within the regional Carbonate Aquifer System that underlies central and eastern Nevada. The Southern Nevada Water Authority, which delivers water to Las Vegas and neighboring communities, is considering a project to import of groundwater from the Carbonate Aquifer. The analysis is focused on the possible impacts of the project on springs and phreatophytes. The work includes developing a groundwater model of the Carbonate Aquifer System. The model extends over an area covering 20,000 square miles. The work was done in support of hearings before the Nevada State Engineer on water-right applications by the Authority. *Southern Nevada Water Authority, Las Vegas, Nevada and subsequently U. S. Department of the Interior.*

Antelope Valley Groundwater Basin, California. The Antelope Valley groundwater basin is being adjudicated to address the overdraft within the basin. The groundwater basin underlies Palmdale, Lancaster, and Edwards AFB in northeastern Los Angeles County and southern Kern County. The work involved developing criteria for defining the geographic extent of the groundwater basin and estimating the natural recharge within adjudicated area. Work was done in support of litigation related to the adjudication. *City of Los Angeles, California.*

[1] Some of this work was done while associated with West Yost Associates, Davis, Calif.

Seaside Groundwater Basin, California. The Seaside groundwater basin was adjudicated to balance the threat of seawater intrusion against the need for groundwater production to supply water to communities overlying the basin and within the Monterey Peninsula area. Developed a groundwater model to assess the relation between groundwater production and seawater intrusion. Work was done in support of litigation related to the adjudication. *California American Water, Monterey, California*.

Heavenly Valley, California. Analyzed the hydrologic impacts of the proposed use of groundwater for snow-making within the Heavenly Valley ski resort. The proposal was to pump groundwater from an alpine valley within which the groundwater and surface-water system were hydrologically connected. The analysis involved collecting field data, constructing a linked groundwater/surface-water model, and using the model to predict the impact of the proposed pumping on both groundwater levels and streamflow. Work was done in support of a permit to pump additional groundwater for snow-making. *Vail Resorts, South Lake Tahoe, California.*

North Platte River, Wyoming and Nebraska. Analyzed the impacts of water-resource development and reservoir operations on water supply, streamflows, regional economics, and wildlife resources within the North Platte River Basin, Nebraska and Wyoming. Designed and directed a multi-disciplinary investigation involving agricultural engineers, groundwater hydrologists, surface-water hydrologists, agricultural economists, and environmental scientists in six different consulting firms. Work was done in support of litigation before the U.S. Supreme Court between the states of Nebraska and Wyoming. *Attorney General, Lincoln, Nebraska.*

Santa Monica Groundwater Basin, California. Analyzed the occurrence of MTBE in the Santa Monica groundwater basin, California. MTBE contamination from multiple sites has resulted in abandonment of public-supply wells. An analysis of the sources and fate of MTBE within the Santa Monica groundwater basin is being conducted. Work was done within the context of State and Federal regulatory proceedings and litigation. *ConocoPhillips, Houston, Texas.*

Special Master, California. Assigned as Special Master in a technical dispute between City of San Bernardino, California and the Regional Water Quality Control Board. The issue is the cause of a wastewater discharge to the Santa Ana River. The work was being done within the context of a State regulatory proceeding. *Regional Water Quality Control Board, Santa Ana, California.*

Hydrologic Consultants, Inc., Sacramento, California, President (1988-1999)[2]

Directed projects related to groundwater hydrology, surface-water hydrology, and water-resources management. Examples of such projects include:

Modesto and Turlock Groundwater Basins, California. Developed groundwater models for the Modesto and Turlock groundwater basins to facilitate basin management. The first model covered both the Modesto and Turlock basins. It was developed to support participation in Federal Energy Regulatory Commission (FERC) proceeding on Don Pedro Reservoir by the Modesto Irrigation District (MID) and Turlock Irrigation District (TID). The second model was developed for the Turlock basin. It was developed to facilitate decision making by TID and other local entities on groundwater planning and management. The third model was developed for the Modesto basin to support preparation of an EIR on a large residential and commercial development within the northwestern part of the basin. The model simulated both groundwater flow and salinity.

Lake Tahoe, California and Nevada. Analyzed the impacts of urban development on the water quality of Lake Tahoe, California. Work involved the analysis of sediment and nutrient transport in streams tributary to the lake and nutrient cycling within the lake. Work was done for litigation.

Streamflow Temperature, California. Analyzed streamflow temperature within the Owens River, Owens Valley, California. Work was done to evaluate the hydrologic feasibility of reestablishing a fishery within the Owens River.

Groundwater Salinity, California. Analyzed the source and management of surface-water and groundwater salinity within the Lompoc groundwater basin. Work involved developing groundwater and

[2] Some this work was done while associated with Bookman Edmonston Engineers, Sacramento, Calif.

surface-water models of the Santa Ynez River basin, including salinity models. Work was done in support of litigation.

Agricultural Drainage, California. Analyzed the causes and management of drainage water discharges from the Firebaugh and Central California Water District to natural watercourses and the San Joaquin River. Work was done in support of litigation.

FERC Re-licensing, California. Developed a model for the optimal use of ground water and surface water within the Turlock and Modesto Irrigation Districts for the benefit of water supply and environmental resources. Work was done in support of the FERC re-licensing of New Don Pedro Reservoir.

Seawater Intrusion, California. Analyzed seawater intrusion in the Salinas Valley. Analyzed the impacts of groundwater pumping on seawater intrusion. Analyzed the impacts of reservoir operations on streamflow recharge and seawater intrusion. Work was done in support of litigation.

Petroleum Contamination, California. Analyzed the source of soil and groundwater contamination by petroleum hydrocarbons at Santa Barbara, California. Work was done in support of litigation. Analyzed the source of soil and groundwater contamination by petroleum hydrocarbons at Oxnard, California. Work was done in support of litigation.

San Bernardino Groundwater Basin, California. Analyzed the occurrence of high groundwater levels in the San Bernardino Valley, California using surface-water and groundwater models. High groundwater levels resulted from excess artificial recharge and other factors. Work was done in support of litigation.

Arkansas River, Colorado and Kansas. Analyzed the effects of groundwater pumping and other factors in the depletion of streamflow in the Arkansas River at the Colorado-Kansas state line using surface-water, groundwater, and institutional models. Work was done in support of litigation in the U.S. Supreme Court between the states of Kansas and Colorado.

Geothermal Development, California. Analyzed the effects of geothermal development on thermal-spring discharges in the Mammoth Lakes area, California using groundwater and heat-transport models. Work was done in support of litigation.

S.S. Papadopulos & Associates, Inc., Davis, California, Vice President (1983-1988)

Directed and conducted investigations of numerous aspects of groundwater hydrology. Examples of such projects include:

Love Canal, New York. Analyzed the migration of groundwater contaminants at the Love Canal hazardous waste site in Niagara Falls, New York using a groundwater model. The Love Canal site is a Superfund Site. Work was done in support of litigation.

Groundwater Contamination, New Jersey. Analyzed the migration of groundwater contaminants at the Lone Pine landfill near Freehold, New Jersey. The Lone Pine landfill is a Superfund site. Work was done as part of a remedial investigation.

Modeling Code. Developed a computer program for the simulation of soil-water movement within and near a land-disposal facility. Work was done for the U.S. Environmental Protection Agency in support of the preparation regulations relating to the design of cover, liner, and leak-detection systems for land-disposal facilities.

Sediment Transport, California. Analyzed the impacts of urban development on flooding and sediment transport for streams in Orange County, California. Work supported the permitting of a large residential and commercial development project.

U.S. Geological Survey, Water Resources Division, California District, District Chief (1980-1983)

Managed California District (350 persons in 14 offices) with annual budget of $25 million (in 1995 dollars) for hydrologic investigations. Responsible for developing plans for hydrologic investigations and ensuring plans were implemented. Provided organizational and technical input to development of large scale, multi-agency investigations. Examples of such projects include:

Agricultural Drainage, California. Investigation of water quality related to agricultural drainage from the west side of San Joaquin Valley, California.

San Francisco Bay, California. Investigation of hydrodynamics of San Francisco Bay and Sacramento-San Joaquin, California Delta hydrologic systems.

Groundwater Exports, California. Investigation of the effects of exporting water from Owens Valley groundwater basin, California, including both hydrologic and biological impacts.

Central Valley Groundwater, California. Assessment of the groundwater resources of the Central Valley, California. Work was part of the Central Valley Regional Aquifer System Analysis (RASA).

Modeling Code. Development of numerical finite element codes (now used within the U.S. Geological Survey) for simulation of two- and three-dimensional groundwater flow and solute transport.

U.S. Geological Survey, Water Resources Division, Nevada District, District Chief (1977-1980)

Managed Nevada District (80 persons in three offices) with annual budget of $10 million (in 1995 dollars) for hydrologic investigations. Projects included:

Truckee River, Nevada. Design and organization of Truckee-Carson River Quality Assessment and Great Basin Regional Aquifer System Analysis (RASA).

Groundwater Management, Nevada. Development of groundwater and solute transport models for Washoe Valley, Galena Creek, Eagle Valley, and Carson Valley groundwater basins in Nevada.

Geothermal Development, Nevada. Design and organization of regional geothermal investigations of areas throughout Nevada including Dixie Valley, Ruby Valley, Black Rock Desert, and Carson Desert.

U.S. Geological Survey, Water Resources Division, California District. Hydrologist (1972-1977)

Served as Project Chief for numerous groundwater projects involving hydrogeologic and geophysical investigations and groundwater modeling. Conducted research in development of finite-element models for simulation of groundwater flow and mass transport. Applied results of research to solution of management problems and provided assistance to hydrologists within USGS and other public agencies in use of these models.

Registration, Education, and Affiliations

Professional Registration

Professional Civil Engineer, 1972
California License No. 20651

Education

Master of Science, Civil Engineering, Stanford University, California 1971
Bachelor of Science, Civil Engineering, Stanford University, California 1967

Professional Affiliations

American Society of Civil Engineers
American Geophysical Union
International Association of Hydrogeologists
National Groundwater Association

Publications

Papers

Durbin, T.J., 1974, Digital simulation of the effects of urbanization on runoff in the upper Santa Ana Valley, California: U.S. Geological Survey Water-Resources Investigations 41-73, 44 p.

Durbin, T.J., and Hardt, W.F., 1974, Hydrologic analysis of the Mojave River, California, using a mathematical model: U.S. Geological Survey Water-Resources Investigation 17-74, 50 p.

Durbin, T.J., 1975, Selected effects of suburban development on runoff in south-coastal California: in Proceedings of Second National Symposium on Urban Hydrology and Sediment Control, Lexington, Kentucky, p. 209-217.

Durbin, T.J., 1975, Ground-water hydrology of Garner Valley, San Jacinto Mountains, California – a mathematical analysis of recharge and discharge: U.S. Geological Survey Open-File Report 75-305, 40 p.

Durbin, T.J., 1978a, Application of Gauss algorithm and Monte Carlo simulation to the identification of aquifer parameters: in Proceedings of 26th Annual American Society of Civil Engineers Hydraulic Division Specialty Conference, College Park, Maryland, p. 101-111.

Durbin, T.J., 1978b, Calibration of a mathematical model of the Antelope Valley ground-water basin, California: U.S. Geological Survey Water-Supply Paper 2046, 51 p.

Durbin, T.J., and Morgan, C.O., 1978, Well-response model of the confined area, Bunker Hill ground-water basin, San Bernardino County, California: U.S. Geological Survey Water-Resources Investigation 77-129, 39 p.

Arteaga, F.E., and Durbin, T.J., 1978, Development of a relation for steady-state pumping rate from Eagle Valley ground-water basin, Nevada: U.S. Geological Survey Open-File Report 79-261, 44 p.

Durbin, T.J., Kapple, G.W., and Freckleton, J.R., 1978, Two-dimensional and three-dimensional digital flow models of the Salinas Valley ground-water basin, California: U.S. Geological Survey Water-Resources Investigation 78-113, 134 p.

Van Denburgh, A.S., Seitz, H.R., Durbin, T.J., and Harrell, J.R., 1982, Proposed monitoring network for ground-water quality, Las Vegas Valley, Nevada: U.S. Geological Survey Open-File Report 80-1286, 25 p.

Durbin, T.J., 1983, Application of Gauss algorithm and Monte Carlo simulation to the identification of aquifer parameters: U.S. Geological Survey Open-File Report 81-688, 26 p.

Katzer, T., Durbin, T.J., and Maurer, D.K., 1984, Water-resources appraisal of the Galena Creek basin, Washoe County, Nevada: U.S. Geological Survey Open-File Report 84-433, 59 p.

Kapple, G.W., Mitten, H.T., Durbin, T.J., and Johnson, M.J., 1984, Analysis of Carmel Valley alluvial ground-water basin, California, using digital flow model techniques: U.S. Geological Survey Water-Resources Investigation 83-4280, 45 p.

Hromadka, T.V., and Durbin, T.J., 1984, Adjusting the nodal point distribution in domain ground-water flow numerical models: in Proceedings of Fifth International Conference on Finite Elements in Water Resources, p. 265-284.

Durbin, T.J., and Berenbrock, C., 1985, Three-dimensional simulation of free-surface aquifers by the finite-element method: U.S. Geological Survey Water-Supply Paper 2270, p. 51-67.

Mitten, H.T., Lines, G.C., Berenbrock, C., and Durbin, T.J., 1988, Water resources of Borrego Valley and vicinity, San Diego County, California: Phase 2, Development of ground-water flow model: Water Resources Investigations 87-4199.

Martin, P., and Durbin, T.J., 1990, Identification of net-flux rates for ground-water models: U.S. Geological Survey Water-Supply Paper, 2340, pp. 119-130.

Hromadka, T.V., and Durbin, T.J., 1986, Two-dimensional dam-break analysis for Orange County Reservoir: Water Resources Bulletin, v. 22, n. 2, p. 249-256.

Hromadka, T.V., and Durbin, T.J., 1986, Modeling steady-state advective transport by the CVBEM: Engineering Analysis, v. 3, n. 1, p. 9-15.

Durbin, T.J., 1988, Two-dimensional simulation of ground-water flow by finite-element method: Microsoftware for Engineers, v. 2, n. 1, p. 40-48.

Azrag, E.A., Durbin, T.J., and Nour El-Din, N.N., 1986, Two-dimensional simulation of solute transport by finite-element method: Microsoftware for Engineers, v. 2, n. 3, p. 171-180.

Atkinson, L.C., Durbin, T.J., and Azrag, E.A., 1992, Estimating the effects of non-Darcian flow on inflow to a pit and slope stability: Society for Mining, Metallurgy, and Exploration 1992 Annual Meeting, Paper 92-156, 4 p.

Durbin, T.J., and Atkinson, L.C., 1993, Optimizing the design of mine dewatering systems: Society for Mining, Metallurgy, and Exploration 1993 Annual Meeting, Paper 93-103, 5 p.

Avon, L., and Durbin, T.J., 1994, Evaluation of the Maxey-Eakin method for estimating recharge to ground-water basins in Nevada: Water Resources Bulletin, v. 30, n. 1, pp. 99-112.

Durbin, T.J., Bond, L.D., 1997, FEMFLOW3D: A finite-element program for the simulation of three-dimensional aquifers, Version 1.0: U.S. Geological Survey Open-File Report 97-810, 338 p.

Hromadka, T. V., Durbin, T.J., 2000, Estimating changes in sediment transport trends due to catchment changes: in Proceedings of Floodplain Management Association Conference on Non-Structural Solutions to Floodplain Management, San Diego, Calif.

Rajagopal-Durbin, A., and Durbin, T. J., 2008, Wells are not always water follies: Sustainable groundwater policies for the American West: Water Policy, v. 10, n. 2, p. 145-164.

Durbin, T. J., and Delemos, D. W., 2007, Adaptive under relaxation of Picard iterations in ground-water models: Ground Water, v. 45, n. 5, p. 648-651. .

Durbin, T. J., Delemos, D. W., and Rajagopal-Durbin, A., 2008, Application of superposition to non-linear ground-water models: Ground Water, v. 46, n. 2, p. 251-258.

Bredehoeft, J., and Durbin, T., 2009 Groundwater development – the time to full capture problem: Groundwater, v. 47, n. 1, pp. 2-9.

Books

Hromadka, T.V., Durbin, T.J., and DeVries, J.J., 1984, Computer methods in water resources: Lighthouse Publications, Mission Viejo (California), 344 p.

Hromadka, T.V., McCuen, R.H., Devries, J.J., and Durbin, T.J., 1993, Computer methods in environmental and water resources engineering: Lighthouse Publications, Mission Viejo (California), 590 p.

April 9, 2015

Timothy Sullivan
Executive Director
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: Joint request for groundwater impacts modeling technical memorandum and electronic files (Application No. 12-04-019)

Dear Mr. Sullivan,

This request is jointly made by California-American Water Company ("CAW"), the Salinas Valley Water Coalition ("SVWC") and most parties who entered into that certain settlement agreement[1] dated July 31, 2013, in the above-titled proceeding concerning the Monterey Peninsula Water Supply Project ("Requesting Parties"). The Requesting Parties seek certain information utilized by the California Public Utilities Commission's ("Commission") Energy Division in its preparation of a Draft Environmental Impact Report ("DEIR") for the Monterey Peninsula Water Supply Project ("MPWSP" or "Project").[2] As described below, the information should be made available for public review or to the parties to A.12-04-019 at the time the DEIR is released.

The Commission's Environmental Review Team has retained Geosciences Support Services Incorporated ("Geosciences") to conduct the computer modeling to assess potential effects of the MPWSP's slant wells on the Salinas River Groundwater Basin ("SRGB"). To do that, Geoscience is using three different computer model programs: (1) the Salinas Valley Integrated Groundwater and Surface Water Model; (2) the North Marina Groundwater Model; and (3) the CEMEX Model. The Requesting Parties would like to better understand the modeling and its assumptions, and accordingly seek the following: (1) the electronic "input files"

---

[1] *Settlement Agreement*, Entered by the Following Parties: CAW, Citizens for Public Water, City of Pacific Grove, Coalition of Peninsula Businesses, County of Monterey, Division of Ratepayer Advocates ("DRA"), Landwatch Monterey County, Monterey County Farm Bureau, Monterey County Water Resources Agency, Monterey Peninsula Regional Water Authority, Monterey Peninsula Water Management District, Monterey Regional Water Pollution Control Agency, Planning and Conservation League Foundation, SVWC, Sierra Club, and Surfrider Foundation. Not all parties to the Settlement Agreement are joining in this request.

[2] The Commission will make its DEIR available for a 60-day public comment period that is scheduled to start sometime in April 2015. *See* Administrative Law Judge's Ruling Updating Schedule (filed January 23, 2015), at p. 3. The DEIR will, among other things, analyze potentially significant environmental effects from the MPWSP's construction and operation of slant wells to produce up to 9 million gallons per day ("MGD") of seawater and brackish groundwater from an area near the mouth of the SRGB for desalination and distribution for beneficial use within the service area of CAW's Monterey District.

that Geoscience ran through its modeling programs for the suite of scenarios described in the DEIR; (2) the electronic "output files" produced by the Geoscience modeling programs for the suite of scenarios; and (3) the executable file for each of the modeling programs runs for the suite of scenarios performed in connection with the DEIR impacts analysis.

To assess the groundwater modeling, we are requesting the electronic input, output and executable files, so they can be run through each of the three modeling programs under different scenarios reflecting varied modeling parameters that reveal how the model works and the sensitivity of its output to changed inputs and other parameters.

The Requesting Parties are asking the Commission's Environmental Review Team to provide for public review or to the parties a copy of the Technical Memorandum ("Tech Memo") that Geoscience is preparing on its groundwater modeling work, as well as the following:

- The **input files** as the digital files input to the three modeling programs run to assess MPWSP impacts for each of the scenarios performed in connection with the DEIR impacts analysis;

- The **output files** as the digital files created by the three modeling programs run to assess MPWSP impacts for each of the scenarios performed in connection with the DEIR impacts analysis; and

- The **executable files** for each of the three modeling programs run for each of the modeling scenarios conducted to assess potential MPWSP effects.

A copy of the preceding electronic files can be saved on digital video disks or on a portable/external hard drive. If a portable/external hard drive is used to provide the files, the Requesting Parties are willing to pay the reasonable cost of the hard drive.[3]

The Requesting Parties respectfully request that the Commission produce the Tech Memo and electronic files by the start of the DEIR comment period for the MPWSP. The Requesting Parties also respectfully request that the Commission respond in writing by Monday, April 13, as to whether it will produce the files as requested herein. Thank you, in advance, for your assistance in obtaining this information. If there are any questions about our request, please call Sarah Leeper at 415-863-2960 or Eric Robinson at 916-321-4500.

Respectfully submitted,

[3] Requesting files in electronic form is consistent with the California Public Records Act ("PRA"), which provides for public records that are kept in electronic form to be made available in electronic form. Gov't Code §§ 6253(b), 6252(e), 6262(g), § 6253.9. Certain parties may, therefore, consider making a PRA request to obtain the above-mentioned information if it is not provided in response to this request.

By: _____

Sarah E. Leeper, Attorney
California American Water
333 Hayes Street, Suite 202
San Francisco, CA 94102
For: California-American Water Company

By: _____

George Riley
1198 Castro Road
Monterey, CA 93940
(831) 645-9914
georgetriley@gmail.com
For: Citizens for Public Water

By: _____

Bob McKenzie
Water Issues Consultant
Coalition of Peninsula Businesses
P.O. Box 223542
Carmel, CA 93922
For: Coalition of Peninsula Businesses

By: _____

Dan L. Carroll
Attorney at Law
Downey Brand, LLP
621 Capitol Mall, 18th Floor
Sacramento, CA 95814
For: Both the County of Monterey and the Monterey County Water Resources Agency

By: _____

John H. Farrow, Attorney
M.R. Wolfe & Associates, P.C.
1 Sutter Street, Suite 300
San Francisco, CA 94104
For: LandWatch Monterey County

By: _____

Norman C. Groot
Monterey County Farm Bureau
P.O. Box 1449
931 Blanco Circle
Salinas, CA 93902-1449
For: Monterey County Farm Bureau

By: _____

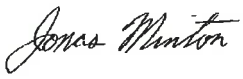
Russell M. McGlothlin, Attorney
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101
For: Monterey Peninsula Regional Water Authority

By: _____

David C. Laredo, Attorney
De Lay & Laredo
606 Forest Avenue
Pacific Grove, CA 93950-4221
For: Both the Monterey Peninsula Water Management District and the City of Pacific Grove

By: 

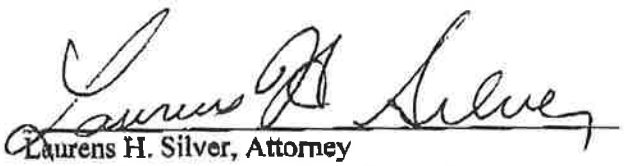
Robert Wellington, Attorney
Wellington Law Offices
857 Cass Street, Ste. D
Monterey, CA 93940
For: Monterey Regional Water Pollution Control Agency

By: 

Jonas Minton
Senior Water Policy Advisor
Planning and Conservation League
1107 9th Street, Suite 901
Sacramento, CA 95814
For: Planning and Conservation League Foundation

By: 

Eric N. Robinson, Attorney
Kronick, Moskovitz, Tiedemann & Girard
400 Capitol Mall, 27th Floor
Sacramento, CA 95814
For: Salinas Valley Water Coalition

By: 

Laurens H. Silver, Attorney
California Environment Law Project
P.O. Box 667
Mill Valley, CA 94942
For: Sierra Club

By: Edward Sabo for

Gabriel M.B. Ross
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, CA 94102
For: Surfrider Foundation

cc.: Andrew Barnsdale, CPUC Energy Division

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of California-American Water Company (U210W) for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates	Application No. 12-04-019 (Filed April 23, 2012)

JOINT MOTION OF SETTLING PARTIES FOR GROUNDWATER MODELING WORKSHOPS

Sarah E. Leeper
Nina Suetake
California American Water
333 Hayes Street, Suite 202
San Francisco, CA 94102
For: California-American Water Company
sarah.leeper@amwater.com
(415) 863-2960

Bob McKenzie
Water Issues Consultant
Coalition of Peninsula Businesses
P.O. Box 223542
Carmel, CA 93922
For: Coalition of Peninsula Businesses
jrbobmck@gmail.com
(831) 596-4206

Dan L. Carroll
Attorney at Law
Downey Brand, LLP
621 Capitol Mall, 18th Floor
Sacramento, CA 95814
For: Both County of Monterey & Monterey County Water Resources Agency
dcarroll@downeybrand.com
(916) 444-1000

John H. Farrow
M.R. Wolfe & Associates, P.C.
1 Sutter Street, Suite 300
San Francisco, CA 94104
For: LandWatch Monterey County
jfarrow@mrwolfeassociates.com
(415) 369-9405

[ADDITIONAL COUNSEL LISTED BELOW]

Dated: May 8, 2015

Norman C. Groot
Monterey County Farm Bureau
P.O. Box 1449
931 Blanco Circle
Salinas, CA 93902-1449
For: Monterey County Farm Bureau
norm@montereycfb.com
(831) 751-3100

David C. Laredo
De Lay & Laredo
606 Forest Avenue
Pacific Grove, CA 93950-4221
For: Both Monterey Peninsula Water Management District & City of Pacific Grove
dave@laredolaw.net
(831) 646-1502

Jonas Minton
Senior Water Policy Advisor
Planning and Conservation League
1107 9th Street, Suite 901
Sacramento, CA 95814
For: Planning and Conservation League Foundation
(916) 822-5634

Nancy Isakson
President
Salinas Valley Water Coalition
3203 Playa Court
Marina, CA 93933
For: Salinas Valley Water Coalition
nisakson@mbay.net
(831) 224-2879

Gabriel M.B. Ross
Attorney
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, CA 94102
For: Surfrider Foundation
ross@smwlaw.com
(415) 552-7272

Russell M. McGlothlin
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101
For: Monterey Peninsula Regional Water Authority
rmcglothlin@bhfs.com
(805) 963-7000

Robert Wellington
Wellington Law Offices
857 Cass Street, Suite D
Monterey, CA 93940
For: Monterey Regional Water Pollution Control Agency
attys@wellingtonlaw.com
(831) 373-8733

George Riley
1198 Castro Road
Monterey, CA 93940
For: Public Water Now
georgetriley@gmail.com
(831) 645-9914

Laurens H. Silver
Attorney
California Environment Law Project
P.O. Box 667
Mill Valley, CA 94942
For: Sierra Club
larrysilver@earthlink.net
(415) 515-5688

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of California-American Water Company (U210W) for Approval of the Monterey Peninsula Water Supply Project and Authorization to Recover All Present and Future Costs in Rates	Application No. 12-04-019 (Filed April 23, 2012)

JOINT MOTION OF SETTLING PARTIES FOR GROUNDWATER MODELING WORKSHOPS

I. INTRODUCTION AND BACKGROUND

Pursuant to Rule 11.1 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), California American Water, City of Pacific Grove, Coalition of Peninsula Businesses, County of Monterey, Landwatch Monterey County, Monterey County Farm Bureau, Monterey County Water Resources Agency, Monterey Peninsula Regional Water Authority, Monterey Peninsula Water Management District, Monterey Regional Water Pollution Control Agency, Planning and Conservation League Foundation, Public Water Now (formerly Citizens for Public Water), Salinas Valley Water Coalition, Sierra Club, and Surfrider Foundation (collectively the "Moving Parties")[1] submit this joint motion to request workshops in the above-captioned proceeding.[2] The Moving Parties request these workshops be held to

[1] California American Water files this motion on behalf of the above-named parties and provides electronic signatures in accordance with Rule 1.8 of the Commission's Rules of Practice and Procedure.

[2] On July 31, 2013, sixteen parties to the above-captioned proceeding entered into a large Settlement Agreement in an effort to avoid litigating disputes over certain issues, including how to assess impacts of the Monterey Peninsula Water Supply Project source water intake on seawater intrusion and fresh

review and discuss the groundwater modeling used by the Commission's Environmental Review Team in its environmental review of the Monterey Peninsula Water Supply Project ("MPWSP").

The Commission's Environmental Review Team's Draft Environmental Impact Report ("DEIR") for the MPWSP was made available to the public on April 30, 2015 for a 60-day public comment period. The DEIR, among other things, analyzed the significance of environmental effects from the MPWSP's construction and operation of slant wells. The Commission's Environmental Review Team retained Geosciences Support Services Incorporated to conduct the computer modeling to "evaluate how project implementation would influence the local and regional groundwater behavior over time."[3] The groundwater modeling was the primary analytical tool used to evaluate project impacts on groundwater resources.

IV. DISCUSSION

The Moving Parties would like to better understand the models used to develop the DEIR's conclusions regarding the MPWSP's impacts on SRGB groundwater. The Moving Parties request workshops in order to have the Environmental Review Team present the groundwater modeling to the parties, explain the inputs used to run the models, and to discuss the model's results. At the workshops, parties could also discuss whether and how additional scenarios could be run with the existing models so that parties can better understand the models. To this end, the workshop would be divided into two sessions. During the first session, the parties would identify additional model runs to be made by Geosciences. Additionally, the parties would identify displays of model inputs and outputs that would be useful for

---

groundwater availability in the Salinas River Groundwater Basin ("SRGB"). Many, but not all, of the settling parties join this motion.

[3] Draft Environmental Impact Report, made available on April 30, 2015 at http://www.cpuc.ca.gov/Environment/info/esa/mpwsp/deir_toc.html , section 4.4, Groundwater Resources, pp. 39-40; *See id.,* pp. 40-52 for discussion of groundwater modeling.

understanding the models. Those identifications would include specification of the formats for displaying the inputs and outputs. Following the first session, Geosciences would make the model runs and prepare the input and output displays identified during the preceding workshop session. During the second workshop session, Geosciences would present the results of the model runs to the parties.

The Moving Parties request that the first workshop session be held on May 18 or May 19, 2015, or as soon as possible thereafter, and the second session be scheduled by the parties at the end of the first workshop. The Moving Parties request the workshops be scheduled in a timely manner in order for parties to apply the knowledge gained from the workshop to their comments on the DEIR, which are due by July 1, 2015. Additionally, the Moving Parties request that both workshops be held at the Commission's San Francisco offices or another convenient location.

III. CONCLUSION

As set forth in this joint motion, the Moving Parties respectfully request the Commission to schedule workshops on the groundwater modeling underlying the DEIR's findings on the MPSWP's impacts on groundwater resources.

Respectfully submitted,

Dated: May 8, 2015

By: */s/ Sarah E. Leeper*

Sarah E. Leeper, Attorney
California American Water
333 Hayes Street, Suite 202
San Francisco, CA 94102
For: California-American Water Company

Dated: May 8, 2015

By: */s/ Bob McKenzie*

Bob McKenzie
Water Issues Consultant
Coalition of Peninsula Businesses
P.O. Box 223542
Carmel, CA 93922
For: Coalition of Peninsula Businesses

Dated: May 8, 2015

By: */s/ Dan L. Carroll*

Dan L. Carroll
Attorney at Law
Downey Brand, LLP
621 Capitol Mall, 18th Floor
Sacramento, CA 95814
For: Both the County of Monterey and
the Monterey County Water Resources Agency

Dated: May 8, 2015

By: */s/ John H. Farrow*

John H. Farrow, Attorney
M.R. Wolfe & Associates, P.C.
1 Sutter Street, Suite 300
San Francisco, CA 94104
For: LandWatch Monterey County

Dated: May 8, 2015

By: */s/ Norman C. Groot*

Norman C. Groot
Monterey County Farm Bureau
P.O. Box 1449
931 Blanco Circle
Salinas, CA 93902-1449
For: Monterey County Farm Bureau

Dated: May 8, 2015

By: */s/ Russell M. McGlothlin*

Russell M. McGlothlin, Attorney
Brownstein Hyatt Farber Schreck, LLP
21 East Carrillo Street
Santa Barbara, CA 93101
For: Monterey Peninsula Regional Water Authority

Dated: May 8, 2015

By: */s/ David C. Laredo*

David C. Laredo, Attorney
De Lay & Laredo
606 Forest Avenue
Pacific Grove, CA 93950-4221
For: Both the Monterey Peninsula Water Management District and the City of Pacific Grove

Dated: May 8, 2015

By: */s/ Robert Wellington*

Robert Wellington, Attorney
Wellington Law Offices
857 Cass Street, Ste. D
Monterey, CA 93940
For: Monterey Regional Water Pollution Control Agency

Dated: May 8, 2015

By: */s/ Jonas Minton*

Jonas Minton
Senior Water Policy Advisor
Planning and Conservation League
1107 9th Street, Suite 901
Sacramento, CA 95814
For: Planning and Conservation League Foundation

Dated: May 8, 2015

By: */s/ George T. Riley*

George T. Riley
1198 Castro Road
Monterey, CA 93940
For: Public Water Now

Dated: May 8, 2015

By: */s/ Nancy Isakson*

Nancy Isakson
President
Salinas Valley Water Coalition
3203 Playa Court
Marina, CA 93933
For: Salinas Valley Water Coalition

Dated: May 8, 2015

By: */s/ Laurens H. Silver*

Laurens H. Silver, Attorney
California Environment Law Project
P.O. Box 667
Mill Valley, CA 94942
For: Sierra Club

Dated: May 8, 2015

By: */s/ Gabriel M.B. Ross*

Gabriel M.B. Ross
Shute, Mihaly & Weinberger LLP
396 Hayes Street
San Francisco, CA 94102
For: Surfrider Foundation

Salinas Valley Water Coalition
P.O. Drawer 2670 • Greenfield, CA 93927
(831) 674-3783 • FAX (831) 674-3835

Corrected

Transmitted via Email to: gwr@mrwpca.com

Robert Holden, P.E., Principal Engineer
Monterey Regional Water Pollution Control Agency
5 Harris Court, Building D
Monterey, Ca 93940

1 June, 2015

Re: DEIR – Pure Water Monterey Groundwater Replenishment Project

Dear Mr. Holden;

The Salinas Valley Water Coalition (SVWC) is a not-for-profit organization comprised of agricultural landowners, farmers and businesses within the Salinas Valley. The SVWC's primary purpose is to participate in the various governmental processes in order to preserve the water rights of its members, to protect their water resources and to effect water policy decisions in a manner that provides this protection while sustaining agricultural production and quality of life.

The SVWC has worked with, and supported, the Monterey County Water Resources Agency and other agencies in their pursuit of long-term water supplies for urban and agricultural needs. This support has been premised on the belief that they are committed to developing a program that is cost-effective, reasonable, hydologically sound and equitable to landowners and rate payers and protects existing water rights and needs, particularly in the areas of the Salinas Valley.

Community participation is an essential element in any project, and critical to obtaining support for that project. Toward this end, we appreciate the efforts made by the various agencies to reach out to the Salinas Valley agricultural community, and a willingness to discuss how these needs can continue to be best met.

The SVWC supports the consideration of this Project, but that support is predicated on the resolution of several outstanding issues, including water rights and the successful amendments to existing agreements along with new agreements. With this understanding, we offer the following comments on the DEIR:

General:

- The DEIR states that the primary object of the proposed project is to "replenish the Seaside Groundwater Basin with 3,500 AFY of purified recycled water to replace a portion of CalAm's water supply as required by state orders". It goes on to say that the proposed project would need to "be capable of commencing operation, or of being substantially complete, by the end of 2016 or, if after 2016, no later than necessary to meet CalAm's replacement water needs".

This seems to be very limiting and restrictive, and appears to rely solely on the success of Cal-Am and their ability to utilize this project and its water resources. We think this is short-sighted and that the proposed project should be considered within the context of a stand-alone project; how could it work without Cal-Am, what would the impacts be of such a project?

<u>Source Water Rights, Appendix C:</u>

- The DEIR, appendix C, discusses the legal framework and various agreements in place and those needed to be in place, to make this project work. It discusses the Memorandum of Understanding (MOU) the stakeholder agencies entered into, which also 'reaffirmed' the Marina Coast Water District and Monterey County Water Resources Agency with MRWPCA recycled water entitlements. The DEIR further states that the MOU:

> "is intended to provide a framework for negotiation of a Definitive Agreement and does not create a binding contractual obligation."

It is the Definitive Agreement (DA) that will establish the contractual rights and obligations of the parties, and the DEIR recognizes that the DA has not yet been completed, and further,

> "If a Definitive Agreement is reached, it would be approved after the EIR is certified."

What would the impact(s) be to the Carmel River and its water resource system if this project EIR is certified and there is a failure to successfully execute a Definitive Agreement, hence causing a further delay in the reduction of pumping from the Carmel River resource system?

- Appendix C states that the City of Salinas has the exclusive right to the treated wastewater it collects in its system and treats at the Salinas Treatment Facility. It further states that since the City of Salinas has the exclusive right to its treated

wastewater, a contract would be needed between MRWPCA and the City of Salinas for the diversion and use of agricultural waste water.

While the City of Salinas may have the exclusive right to the treated wastewater it collects in its system, we believe, as stated in Appendix C of your DEIR:

> "The 1992 agreement between MRWPCA and Water Resources Agency (including amendments)……In particular, Section 3.03 of the 1992 Agreement (Amendment 3) provides that the MRWPCA commits ***all*** of its incoming wastewater flows to the treatment plant from sources within its 2001 MRWPCA service area, up to 29,6 million gallons per day, …." (emphasis added)

We believe that Amendment No. 3 modified Sec. 3.03 of the Original Agreement, in that in Amendment No. 3 Sec. 3.03 which states the PCA will "commit ***all*** of its incoming wastewater flows to the ***regional treatment plant***" to the project[1]". (emphasis added) It remains clear that within Amendment No. 3 the 'project' is as defined in the 1992 Agreement; "the construction of a 29.6 MGD ***tertiary treatment system*** (hereinafter referred to as ***"the project".***" (emphasis added)

While we have supported, and continue to support, the City of Salinas and PCA's consideration of the further utilization of the City's treated wastewater, it is essential that the agricultural community and Water Resources Agency be part of the agreement. We believe that Amendment No. 3 clarifies that it was the intent of the parties to ***commit all of the wastewater (current and future***) ***flows*** coming to the regional treatment plant to the Castroville Seawater Intrusion Project (CSIP). Without further modification/amendment to the existing Agreements, we believe the MRWPCA cannot simply take wastewater flow coming into its existing system and 'by-pass' the tertiary treatment plant and use these flows for projects other than CSIP; this would equate to a 'taking' of water not entitled to, contrary to existing contracts.

The DEIR should evaluate the impacts to the existing CSIP if they are not provided the recycled water pursuant to, and as committed to, in the existing 1992 Agreement and its amendments. What is the potential for continued seawater intrusion because of the continued reliance on supplemental well water rather than delivered recycled water as agreed to?

The Pure Monterey Project relies on source water that should not be considered a secure, stable and uninterruptible supply, and the environmental impacts of this instability and interruptible source should be considered.

[1] Id at Exhibit 3 p 1

Unless and until these issues are resolved, the Pure Monterey GWR Project has the potential to significantly impact the growers, ratepayers of the Salinas Valley, and the projects they built to stop seawater intrusion, and thus potentially exacerbate seawater intrusion.

Salinas River Inflow Impacts, Appendix O:

Appendix O provides an analysis of the potential impacts to the Salinas River flows because of implementation of the Project, including an engineering analysis of the flow reductions in the Salinas River due to diverting City of Salinas stormwater runoff, agricultural wash water and Blanco Drain flows to the proposed project, and assess the potential project impacts on the hydrology and water quality in the Salinas River.

What appears to be missing from the analysis is what is the impact to the availability of Salinas river water to be diverted at the Salinas Rubber Dam Facility. The summary of Appendix O states that:

> "diverting agricultural wash water and City of Salinas stormwater to the Proposed Project would reduce average annual flows in the river by less than 1%. If water is also diverted from the Blanco Drain, the average annual flow in the Salinas River decreases by 1.7%."

Table 2-6 of Appendix O, details the 'average' and 'median' flow of the Salinas River near Spreckels over different time periods. Based on Table 2-6, 1% (rounding up because it is not clear what 'less than 1%' is) of the average flow during the period of 2010-2013 when the SRDF was operating, would equate to 1,622 afy. This in turn equates to 30% of the maximum amount diverted at the SRDF during this period. While 1% of the overall Salinas River flow may seem to have a minimal impact to overall flows, it could be a significant impact to the amount of Salinas river water that could be diverted at SRDF and to the agricultural lands that rely on that water. This impact needs to be further analyzed in the EIR.

Appendix O also states:

> "Due to the significant losses and travel time between the reservoirs and the SRDF, flows reductions affecting the by-pass releases would likely be addressed by temporarily reducing SRDF pumping before adjusting the reservoir release schedule. A portion of the diversions made for the proposed project will be used to augment the CSIP supply, off-setting the effect of any temporary SRDF reduction."

While the 'temporary SRDF reduction' may be off-set with an augmentation of supply to the CSIP area, this would significantly change the management and operation of the Salinas Valley Water Project, the amount of river water contemplated to be delivered to the CSIP agricultural users and would change the benefits of the SVWP because of this reduction in water to be supplied by it. In otherwords, does the Pure Monterey GWR Project simply exchange its project water for river water? To what extent would there be an impact to the existing SVWP and its SRDF component and to the CSIP landowners? What is the impact to seawater intrusion because of the reduction in river water that can be delivered and utilized by the CSIP agricultural lands? We believe these could be significant environmental impacts.

Brown and Caldwell, 2014 State of the Salinas River Groundwater Basin Report, 2014:

The Brown and Caldwell State of the Basin Report was prepared at the request of one Monterey County Supervisor and was meant to provide a 'snapshot' of the status of the basin at a certain point in time; nothing further. Further, we learned at a workshop held by Monterey County Water Resources Agency that the analysis in the report did not include existing projects in its analysis, such as the SVWP or the CSIP; so in reality, it wasn't even a true snapshot of the basin except as what existing pre-CSIP and pre-SVWP. The report has extremely limited value and should not be used to project future basin conditions, and yet it is cited and utilized to some degree in your DEIR and its various evaluations. Where it was used, should be re-examined and excluded from your report. It should not be utilized to establish certain baseline conditions for the basin

Conclusion

The Salinas Valley Water Coalition supports full environmental review of the proposed Project and the proposed alternatives. This DEIR does not fully analyze the proposed project as a true stand-alone, and we believe it should as the reliance on agreements that may not occur is a significant impact to the Carmel River water resources system and its fishery resources and habitat. This DEIR does not fully analyze the potential impacts to the SVWP, CSIP and seawater intrusion as discussed above, and the impacts to these agricultural lands.

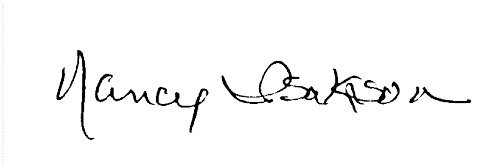
SVWC has actively supported the development of water projects within the Salinas Valley, and continues to do so. Its members have built and paid, or continue to pay, for two reservoirs, the Castroville Seawater Intrusion Project, The Salinas Valley Reclamation Project and the Salinas Valley Water Project—all in an effort to solve its basin's water problems. They have worked with their neighbors to resolve their difference so these projects could be successfully financed and implemented. The stability and

security of their water resources and water rights are potentially at stake in the implementation of this project, and these impacts must be fully evaluated and considered.

There may be adequate wastewater available to consider the development of a Groundwater Replenishment Project, but the PCA does not currently hold the rights to do so and the reliance on potential agreements is a great risk that the environment and landowners cannot afford.

Let's work together to provide the best Plan possible for our community. Thank you for your consideration of our comments and concerns.

Sincerely,



Nancy Isakson, President
Salinas Valley Water Coalition