

February 19, 2018

Board of Directors
Care of Paula Riso, Clerk to the Board
Marina Coast Water District
11 Reservation Road,
Marina, CA 93933
priso@mcwd.org

Re: Negative Declaration and Initial Study for Ord Community Sphere of
Influence Amendment and Annexation for the Marine Coast Water
District (MCWD)

Dear Member of the Board:

I write on behalf of LandWatch Monterey County to object to the inadequate environmental review of Marina Coast Water District's proposed Sphere of Influence Amendment and Annexation.

As LandWatch explained in its January 18, 2018 comments to the Board, the proposed annexation would allow and facilitate increased pumping of the Salinas Valley Groundwater Basin to provide additional water for projected development in the Ord Community, which is projected to require an additional 2,492 afy by 2035. This increased pumping would make a considerable contribution to significant cumulative impacts, including seawater intrusion and overdraft and depletion of the affected aquifers.

The Initial Study does not provide an adequate environmental analysis of the impacts of increased pumping to support future Ord community development, an analysis that is required to support annexation. FORA, the agency with overall authority and responsibility to manage water resources for the Ord community, will terminate in 2020. MCWD proposes the annexation in contemplation of that termination. Because there is no assurance that the present water management policies and mitigation measures will continue, and because these policies and mitigation measures have been ineffective, MCWD must evaluate the impacts that may occur after FORA is dissolved. If MCWD does not evaluate the impacts and is allowed to annex the land as it proposes, the significant water problems that the Army transferred to FOR A will in turn be transferred to MCWD – without assessment and without a commitment to avoid further harm.

If MCWD's proposed annexation is allowed to proceed prior to approval of a FORA transition plan and some new commitment to manage the water resource impacts from the Ord community, then it should be limited to just those parcels to which MCWD is currently providing service, e.g., parcels with a water meter that are currently being served. Without an adequate environmental review of the impacts of providing additional water for new development, MCWD should not act to commit itself in any way to serve these areas with water in the future.

At MCWD's January 20, 2018 meeting, the Board considered a proposed negative declaration. MCWD now proposes to adopt a negative declaration and to find the project exempt from CEQA. The record does not support either a negative declaration or an exemption.

A. Increased groundwater pumping to support future development of the Ord Community would be a considerable contribution to significant cumulative impacts in the form of seawater intrusion and depletion of the Deep Aquifer, but MCWD and the Initial Study fail to acknowledge this.

LandWatch's January 18 letter to MCWD and its attachments demonstrate that additional pumping to support Ord Community development will aggravate seawater intrusion and deplete the Deep Aquifer. Comments by hydrologist Timothy Parker in his February 15, 2018 letter, attached to this letter, further amplify this concern.

Comments by LandWatch and Parker demonstrate that seawater intrusion has continued *despite* the Fort Ord Reuse Plan policies and mitigation that were supposed to ensure that new development not use groundwater if seawater intrusion was not halted.

A key reason for this continuing harm has been the practices by FORA, MCWD, and FORA member agencies of (1) misinterpreting the 6,600 afy allocation of water rights to Fort Ord as an amount that can be pumped without harm, (2) ignoring the Fort Ord Reuse Plan policies that mandate the development of an additional water supply if seawater intrusion continues instead of pumping right up to the 6,600 afy allocation, and (3) failing to determine and respect the safe yield of the aquifers that are used to supply the ORD community. As Timothy Parker explained:

The BRP PEIR [Base Reuse Plan Program EIR] provides specific policy requirements to ensure adequate, timely mitigation of seawater intrusion, mitigation that may need to be implemented before 6,600 afy is committed or pumped for new development. Policy B-1 requires that the FORA members "shall ensure additional water supply." Policy B-2 requires conditioning project approval on verification of an "assured long-term water supply." Policy C-3 requires the member agencies cooperate with MCWRA and MPWMD "to mitigate further seawater intrusion based on the Salinas Valley Basin

Management Plan.” Program C-3.1 requires the member agencies to work with the water agencies “to estimate current safe yields within the context of the Salinas Valley Basin Management Plan for those portions of the former Fort Ord overlying the Salinas Valley and Seaside groundwater basins, to determine available water supplies.” MCWRA has now determined that the safe yield of the Pressure Subarea is about 110,000 to 117,000 afy and that existing pumping exceeds this safe yield by about 12,000 to 19,000 afy.¹ Indeed, the BRP PEIR acknowledges that pumping in the 180-foot and 400-foot aquifers had “exceeded safe yield, as indicated by seawater intrusion and water levels below sea level.” (BRP PEIR p. 4-63.) The BRP PEIR states that the “conditions of the 900-foot aquifer are uncertain”, including the safe yield and whether the aquifer is in overdraft. *Id.*

The BRP PEIR explains that Policies B-1, B-2, and C-3 are intended to “affirm the local jurisdictions’ commitment to preventing further harm to the local aquifers . . . by limiting development in accordance with the availability of secure supplies.” (BRP PEIR, p. 4-55.) The explicit provisions for determination of safe yield and for acceleration of water supply projects if 6,600 afy cannot be supplied without further seawater intrusion clearly demonstrate the intent that the member agencies not simply defer action until 6,600 afy has been allocated to development projects if seawater intrusion continues. To the contrary, it seems clear that the BRP PEIR directed the member agencies “to mitigate further seawater intrusion” by, among other things, ensuring that groundwater pumping beyond the determined safe yield is not permitted for new development projects. The BRP PEIR’s cumulative analysis makes it clear that Policy C-3 does not permit uncritical reliance on a 6,600 afy allocation: “existing water allocations of 6,600 afy . . . would allow for development to proceed to the year 2015, provided that seawater intrusion conditions are not exacerbated (Policy C-3).” (BRP PEIR p. 5-5 (emphasis added).)

Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 8-9.

In light of the historic failure to honor the Fort Ord Reuse Plan policies and mitigation, the contention in the Annexation Initial Study that these measures “have been incorporated in local jurisdiction planning documents” is either untrue or irrelevant to the issue of water supply impacts. Annexation Initial Study, p. 52.

MCWD’s Annexation Initial Study is inadequate because it fails to acknowledge that increased pumping to support Ord community development will cause impacts. The Annexation Initial Study fails to acknowledge that it is no longer possible to rely on the

¹ MCWRA, State of the Salinas River Groundwater Basin, p. 4-25.

1997 Fort Ord Reuse Plan EIR due to changes in circumstances, new information, and failure to implement the Fort Ord Reuse Plan itself. These include

- The significant advance in the seawater intrusion front since 1997, which should have precluded any reliance on the presumption that there is 6,600 acre feet of water to use without impact and should have triggered the obligation under the Fort Ord Reuse Plan to accelerate the provision of alternative supplies for any new development;
- The failure of MCWRA and MPWMD to mitigate further seawater intrusion based on the Salinas Valley Basin Management Plan, as provided by the Fort Ord Reuse Plan;
- The failure of member agencies to prevent harm to the affected aquifers by limiting development in accordance with the availability of secure water supplies, as provided by the Fort Ord Reuse Plan;
- The failure of FORA, MCWD, MCWRA, and member agencies to determine and abide by the safe yield, including the safe yield of the Salinas Valley Groundwater Basin and its Deep Aquifer, as required by the Fort Ord Reuse Plan;
- Significant new information regarding the Deep Aquifer. As explained by Parker and the 2018 MCWRA report recommending a moratorium on new wells in the Deep Aquifer, there is no evidence of significant recharge to the Deep Aquifer, and increased pumping will result in its depletion and will induce seawater intrusion in the overlying aquifers.

Furthermore, as discussed below, even if the Fort Ord Reuse Plan policies and mitigation were effective in avoiding impacts, there is no assurance that MCWD would be subject to these policies and mitigation after FORA is dissolved in 2020.

B. MCWD's proposed annexation is a project subject to CEQA because (1) MCWD acts in the expectation that FORA will be dissolved and that MCWD will assume authority for provision of water for new development unconstrained by FORA or Fort Ord Reuse Plan policies and (2) MCWD would serve new development with additional groundwater pumping.

MCWD's claim that its proposed annexation would have no physical impacts is based on two unfounded assumptions: that there have been no changes to the environmental setting that would warrant new analyses and that MCWD would continue to provide the same amounts of water that have been previously *planned* and in accordance with the existing management regime. Annexation Initial Study, pp. 11, 18, 23. As discussed above, the first assumption is incorrect because there have been

substantial changes to the environmental setting, significant new information, and changes to the Fort Ord Reuse Plan.

The second assumption, that MCWD would simply implement existing plans for water supply is legally irrelevant and factually incorrect. The assumption is legally irrelevant with respect to the duty to provide an adequate analysis because CEQA requires an agency to compare its action to a baseline consisting of existing conditions, not a baseline consisting of a plan or a hypothetical future condition. Thus, it is not sufficient for the Initial Study to claim there would be no change to previous *plans* for groundwater pumping because the salient question is whether there would be changes to *existing* groundwater pumping.

The second assumption is factually incorrect because, as discussed below, the existing management regime for the Ord community water supply will be terminated in 2020, and MCWD is proposing to act based on that expectation, but without proposing a replacement plan.

1. MCWD acts in the expectation that FORA will be dissolved; and MCWD may assume authority for provision of water for new development unconstrained by FORA or Fort Ord Reuse Plan policies.

FORA is required to dissolve itself by June 30, 2020. Gov. Code, § 67700(a). Indeed, MCWD proposes the annexation with the expectation that the FORA will be dissolved by 2020, and MCWD expressly rejects the no-project alternative for just that reason. Annexation Initial Study, Appendix D.

Currently, MCWD is subordinate to FORA in critical decision-making regarding water supply under the Water/Wastewater Facilities Agreement between FORA and MCWD. Water/Wastewater Facilities Agreement, March 13, 1998, Articles 4.1, 5.1.1, 5.2. Thus, FORA, not MCWD, is authorized to obtain water extraction capacity rights. *Id.*, Article 3.4.1. And FORA, not MCWD, has decided to sub-allocate 6,600 afy of its presumed capacity rights to its member agencies. FORA, Development Resources Management Plan (DRMP), section 3.11.5.4 and Table 3.11-2, available at <http://www.fora.org/Reports/DevResourcePlan.pdf>. And, FORA, not MCWD, has primary responsibility to implement the policies and mitigation contained in the Fort Ord Reuse Plan.

The 1998 Water/Wastewater Facilities Agreement will no longer be in effect after FORA sunsets. Water/Wastewater Facilities Agreement, March 13, 1998, Article 9. Thus, after FORA is dissolved, and in the absence of another binding plan addressing water supply issues, MCWD, as a County Water District, would assume plenary authority over the water use and allocation that is currently constrained by FORA. For example, MCWD would have essentially unfettered responsibility and authority to establish rules

and regulations for water distribution. Gov. Code, § 31024. MCWD would have also have unfettered responsibility and authority to restrict water use in accordance with a threatened or existing water shortage. Gov. Code, §§ 31026, 31029.1, 31035.1; Water Code § 350.

After FORA is dissolved, and in the absence of the 1998 Water/Wastewater Facilities Agreement or a binding transition plan addressing water supply issues, MCWD's provision of water supply might be constrained only by the October 2001 "Assignments Of Easements On Former Fort Ord and Ord Military Community, County of Monterey, And Quitclaim Deed For Water And Wastewater Systems." This Assignment would purport to constrain MCWD to assume and comply with the terms and conditions of the October 24, 2001 "Federal Instruments" that conveyed the water systems from the Army to FORA. These Federal Instruments include, as consideration for the transfer, the assumption of the Army's obligation "to cooperate and coordinate with parcel recipients, MCWRA, FORA, MCWD, and others to ensure that all owners of property at the former Fort will continue to be provided an *equitable supply of water* at equitable rates." Department of the Army, Easement to FORA for Water And Wastewater Distribution Systems Located On Former Fort Ord," paragraph 2, emphasis added. However, the meaning of "equitable supply" is not defined. Critically, there is no assurance that the equitable considerations will take into account the environmental impacts of providing that supply. It is possible that MCWD would interpret "equitable" by simply reaffirming its stubborn and unsustainable commitment to provide up to 6,600 afy of groundwater regardless of environmental impacts.

Although FORA is now considering a transition plan, no plan has yet been adopted or approved by LAFCO. It is not yet clear whether there will be a successor agency to FORA, or, if there is, what powers and responsibilities that successor agency may have to manage water resources. In its transition planning, FORA has raised, but not yet answered, the critical questions as to the continuing effect of the Fort Ord Reuse Plan policies and mitigation provisions and the meaning of the obligation to provide a "fair and equitable" water supply. Consider this excerpt from FORA's most recent transition planning update:

"MCWD ANNEXATION: All infrastructure and water rights were provided to MCWD to provide for a fair and equitable water allocation. Can MCWD later only annex a portion of the former Fort Ord? Is this consistent? Does LAFCO need to consider and abide by the Fort Ord Reuse Plan when considering MCWD annexation?"

"In the event of a water shortage how will MCWD provide a "fair and equitable" water supply to the former Fort Ord? Will only entitled projects receive water? Only projects with a water supply assessment?"

FORA Board Report, Transition Planning Update, January 12, 2018, Attachment A1, Transition Planning/Summary Chart, Water Wastewater.

As discussed, the Fort Ord Reuse Plan policies and mitigation have not been effective in preventing further seawater intrusion or depletion of the Deep Aquifer. More fundamentally, as FORA acknowledges, MCWD may not even have to *abide by* these ineffective policies and mitigation after 2020. Certainly LAFCO cannot approve MCWD's proposed annexation without resolving this question.

In response to LandWatch's comments, the Final Initial Study/Negative Declaration (FIS/ND) claims that FORA allocates water supply. FIS/ND, p. 43. The Final Initial Study/Negative Declaration also claims that the annexation would not change the Fort Ord Reuse Plan policies. FIS/ND, p. 49. MCWD has failed to acknowledge that FORA will no longer manage this process, the Reuse Plan Policies will no longer govern the resource, and that MCWD will have the primary authority to do so.

To support LAFCO in its determination whether to approve annexation, and before MCWD is assigned any additional authority over the water resources, MCWD must provide an adequate analysis of water supply impacts and an *effective* plan to avoid or mitigate significant impacts – a plan that will supersede the ineffective Fort Ord Reuse Plan. The Annexation Initial Study does not provide such an analysis or plan. Instead, it states that addressing the Fort Ord Reuse Plan policies is “beyond the scope of the IS/ND.” FIS/ND, p. 47.

As FORA also acknowledges, there is no understanding of MCWD's future obligation to provide an “equitable” water supply in the context of a water shortage. Indeed, MCWD fails to recognize that a significant water shortage *already* exists, and that this requires hard decisions about supplies for future development, because MCWD's Annexation Initial Study fails to come to terms with continuing seawater intrusion and aquifer depletion. Absent an adequate CEQA document that takes into account current conditions, and without a binding and continuing commitment to avoid or mitigate impacts, there is no assurance that MCWD would interpret “equitable” to ensure protection of the groundwater resources.

And as FORA points out, there are other water supply-related issues that must be clarified before FORA sunsets. For example, FORA admits that it has not yet met the Fort Ord Reuse Plan FEIR's mitigation requirement to develop a 2,400 afy water augmentation plan because MCWD's RUWAP project at 1,427 afy does not provide sufficient capacity. FORA Administrative Committee, Memorandum, January 27, 2016, p. 2, available at <http://www.fora.org/TTF/Additional/Transition-SunsetPlanMemo.pdf>. And FORA admits that oversight over Fort Ord water allocations must be assigned to another entity before its dissolution. *Id.*, p. 4.

MCWD's Agenda Transmittal, its proposed findings, and its response to comments all claim incorrectly that there would be no change to water service after the annexation because MCWD is contractually obliged to supply water. Agenda Transmittal, pp. 1, 3; FIS/ND, p. 49; Proposed Findings, p. 1. This claim fails to acknowledge that the annexation is being undertaken in express contemplation of the expiration of the primary contract that governs MCWD, the 1998 Facilities Agreement, which would end FORA's authority to allocate water and manage the resource. As a County Water District for the annexed areas, MCWD would have the authority to allocate water and to respond to water shortages, without any oversight by FORA, and subject only to the undefined obligation as a FORA successor to provide "equitable" service under the Army easement. Department of the Army, Easement to FORA for Water And Wastewater Distribution Systems Located On Former Fort Ord," paragraph 2.

In light of MCWD's assumption that it can pump up to 6,600 afy without further aggravation of seawater intrusion or depletion of the Deep Aquifer, MCWD is poorly positioned to accept the responsibility to manage the water resource. Thus, it is critical that MCWD provide an adequate environmental review before it annexes undeveloped portions of Fort Ord. CEQA requires an adequate review as a document of public accountability that protects informed self-government.

2. Annexation will allow and lead to additional groundwater pumping.

The response to comments states that the annexation is of "developed areas," and the proposed findings reference "annexation of developed areas already served by MCWD" and "all customers currently served." FIS/ND, p. 40; Proposed Findings, p. 2. The response to comments repeatedly claims that the annexation "will not allow for [] any increase in groundwater pumping. FIS/ND, pp. 46, 47.

This claim is not true. First, elsewhere in its response to comments, MCWD claims only that the "*majority* of the areas to be annexed are currently served." FIS/ND, p. 49, emphasis added. Second, the list of areas to be annexed in the Initial Study clearly includes undeveloped areas for which future development may occur and that are not currently being served. Annexation Initial Study, pp. 16-17. Indeed, the list of annexation areas includes a number of areas for which there are no development entitlements or for which there is not even an approved specific plan. Nothing in the proposed annexation would prohibit service based on increased groundwater pumping to parcels or development projects that are not currently served. As discussed below, the refinement to the project description in the Final Initial Study/ Negative Declaration to reduce the scope of the annexation does not exclude all undeveloped areas. See FIS/ND, pp. 60-61.

Contrary to the response to comments (FIS/ND, p. 41), the current Urban Water Management Plan and Annexation Initial Study do provide evidence of planned increases

in service for new development in the Ord community. MCWD's current UWMP projects an increased demand of 2,492 afy to serve Fort Ord development between 2020 and 2035. MCWD, 2015 UWMP, p. 21. The Annexation Initial Study repeats this projection and identifies it as the "total expected growth in demands from all currently expected development projects and population growth through 2035. Annexation Initial Study, p. 51.

And contrary to the response to comments (FIS/ND, p. 46), MCWD's plans do allow and assume the full use of the 6,600 afy groundwater allocation. For example, in calculating the Ord community groundwater shortfall through 2035, the UWMP assumes the full use of the 6,600 afy groundwater allocation. MCWD, 2015 UWMP, p. 57 (Table 4.3). MCWD's calculated need for an additional 2,901 afy to meet its groundwater shortfall is based on the difference between the 8,293 afy 2035 demand and the 6,600 afy allocation. *Id.* The Annexation Initial Study also assumes that the 6,600 afy allocation will be used to meet Ord community demand. See, e.g., Annexation Initial Study, pp. 50-51, Tables 5 and 6, notes 4 (comparison of demand growth to supply assumes use of 6,600 afy allocation plus 300 afy of existing desalination capacity).

Contrary to the response to comments (FIS/ND, p. 44-45), the fact that MCWD has plans to obtain recycled or desalinated water does not mean that it does not intend to exhaust the 6,600 afy groundwater allocation, regardless of the impacts of any increased pumping. MCWD's plans to develop additional water supplies are based on fulfilling its incorrect interpretation of the Fort Ord Reuse Plan requirement for augmented water supplies, which would be to require additional water supplies only after the 6,600 afy is exhausted. As set out in previous comments by Parker and LandWatch, MCWD and FORA have misinterpreted the Fort Ord Reuse Plan to permit the full use of the 6,600 afy groundwater allocation regardless whether increased pumping aggravates seawater intrusion and regardless of whether it has been determined to represent a safe yield. Significantly, MCWD's response to comments admits that the 6,600 afy allocation is neither the baseline use nor a sustained yield. FIS/ND, pp. 46-47.

Furthermore, MCWD has offered to furnish 600 afy of its entitlement to PWM/GWR recycled water and up to 700 afy of groundwater for use, directly or indirectly, on the Monterey Peninsula, for a ten-year term with options for renewal.² This offer is not identified as a potential use of MCWD's water resources in its 2015 UWMP. MCWD's willingness to commit its recycled water and groundwater supplies to this venture is further evidence that MCWD expects to be able to use the entire 6,600 afy allocation for Ord community demand.

² California Public Utilities Commission, Proceeding A1204019, In the Matter of the Application of California-American Water Company (U210 W) for a Certificate of Public Convenience and Necessity to Construct and Operate its Monterey Peninsula Water Supply Project and to Recover All Present and Future Costs in Connection Therewith in Rates, Direct Testimony Of Keith Van Der Maaten, Submitted On Behalf Of Marina Coast Water District -Supplemental Phase 1 Testimony, Sept. 29, 2001, pp. 10-14.

Finally, MCWD's *approved and funded* plans for additional water supplies will not even make up the 2,901 afy Ord community shortfall in 2035. MCWD, 2015 UWMP, p. 57 (Table 4.3 - shortfall); FIS/ND, p. 45 (outlining approved plans). And as noted, FORA and MCWD have not yet met the Fort Ord Reuse Plan FEIR's mitigation requirement to develop a 2,400 afy water augmentation plan because MCWD's RUWAP project at 1,427 afy does not provide sufficient capacity. FORA Administrative Committee, Memorandum, January 27, 2016, p. 2.

C. MCWD's negative declaration is inadequate and an EIR is required.

As discussed above and in previous comments, the proposed negative declaration is inadequate because it fails to disclose impacts to groundwater due to increased pumping. Those comments, supported by expert opinion and by substantial scientific evidence, constitute a fair argument that the annexation may result in significant impacts. Accordingly, an EIR is required if MCWD intends to pursue the proposed annexation.

In addition to its failure to disclose significant impacts, the Initial Study is flawed in other respects, and its flaws are not cured by the Final Initial Study/Negative Declaration.

Revisions to the project description are offered in the Final Initial Study/Negative Declaration in order to make the project "more environmentally benign." FIS/ND, pp. 60-61. Revisions to a project to mitigate potentially significant effects must be included in the negative declaration that is circulated for public review. Public Resources Code §21080(c)(2); 14 CCR §§ 15070(b), 15071(e). Given the change to the project description, MCWD must recirculate the negative declaration. 14 CCR §15073.5.

Furthermore, the last-minute revisions render the project description unclear. First, the inclusion of the refinements in the Appendix D for alternatives renders it unclear whether the revisions are part of the project or merely an alternative project that may or may not be approved. The proposed findings do not clarify this. Second, the revisions are made with reference to large scale maps and parcel descriptions. No explanation is provided as to which part of the future development identified in the Annexation Initial Study in Table 2 would be included or omitted from the proposed annexation, although it is apparent that the revisions do not restrict the annexation area to parcels that are currently served by MCWD. In sum, the revision is insufficient because the public has no way to determine what the scope of the actual annexation project would be and because the annexation would still include undeveloped parcels expected to be developed. This must be rectified before MCWD acts to certify a CEQA document, whether a negative declaration, an exemption, or an EIR.

Purporting to buttress the claim that it provides an adequate impact analysis, the Final Initial Study/Negative Declaration “references” a number of additional CEQA documents as “background documentation.” FIS/ND, pp. 46, 52-53, 59-60. The Final Initial Study/Negative Declaration also incorporate by reference three of these documents: the RUWAP EIR and Addenda, the PWM/GWR EIR and Addenda, and the Fort Ord Reuse Plan EIR. FIS/ND, pp. 52-53. These documents do not cure the failure of the Annexation Initial Study to provide an adequate analysis.

First, the Final Initial Study/Negative Declaration disavows any actual reliance on these documents: “the IS/ND does not tier from the previous documents or rely on the conclusions in the previous documents for its conclusions regarding potential environmental impacts of the project.” FIS/ND, p. 53.

Second, the Annexation Initial Study fails to summarize, explain, or provide a roadmap to these referenced documents. The bare fact that CEQA review of prior development and alternative water supply projects has occurred does not address the concerns LandWatch has raised regarding the effects of supplying additional groundwater to future development.

Third, as previous comments have explained, reliance on the analysis in the 1997 Base Reuse Plan EIR is misplaced due to changed circumstances and the failure to implement its policies and mitigation.

Fourth, the Annexation Initial Study discusses the RUWAP and PMW/GWR projects to support its claim that additional water supplies are planned; however, it does not summarize or discuss any findings in these documents that would be relevant to the impacts of increased groundwater pumping. Indeed, it is unlikely that an EIR for these projects, which are intended to supply water in lieu of groundwater, would provide an analysis of the effects of increased groundwater pumping, including the effects of MCWD exhausting the 6,600 afy allocation.

Fifth, none of these prior CEQA documents reflect the significant new information relevant to the impacts of increased pumping, such as the most recent seawater intrusion mapping or the MCWRA recommendations for pumping moratorium in the Deep Aquifer and the 400-foot aquifer proximate to the seawater intrusion front.

Contrary to the response to comments (FIS/ND, pp. 42-43), the Initial Study does not present an adequate cumulative analysis. The fundamental flaw is that the Initial Study fails to acknowledge the severity of the existing cumulative impact or to assess whether any increase in groundwater pumping would be a considerable contribution in light of the serious problem.

The cumulative analysis is deficient in other respects. For example, the Initial Study provides no justification, and there is none, for the claim made in the Final Initial Study/Negative Declaration that the proper geographic scope of cumulative analysis can be confined to the former Fort Ord area. FIS/ND, p. 58. Seawater intrusion and aquifer depletion impacts are due to pumping throughout the Salinas Valley Groundwater Basin. As Mr. Parker explains, the area that would be affected by increased groundwater pumping includes the Pressure Subbasin and the Salinas Valley Groundwater Basin as a whole since these areas are hydraulically interconnected. Furthermore, CEQA does not define the geographic scope of cumulative analysis based on the area *affected* but based on the location of the cumulative projects that *cause effects* in the same area that the project causes effects. The Guidelines require identification of projects “producing related or cumulative impacts” or projections of conditions “contributing to the cumulative effect.” Guidelines §15130(b)(1). Case law is clear that it is improper to omit relevant past, present, and future projects that create related impacts. *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1213-1214; *Citizens to Preserve the Ojai v. County of Ventura* (1985) 126 Cal.App.3d 421, 430-432; *San Joaquin Raptor Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 739-741; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720, 724. As Mr. Parker explains, it is indisputable that past, present and future projects and pumping outside the Ord community affect the aquifer depletion and seawater intrusion to which addition pumping for the Ord community would contribute. This is acknowledged by the Reuse Plan EIR (at p. 5-5, acknowledging that regional growth could cumulatively affect aquifers and cause further overdraft and seawater intrusion), the MCWD 2010 UWMP (at p. 29, acknowledging that basin-wide pumping causes declining water levels in Pressure Subarea), and the Army’s 1993 FEIS (at p. 4-57, acknowledging that the available yield without seawater intrusion depends on the amount of pumping throughout the basin). The Annexation Initial Study simply fails to provide any justification for limiting the scope of cumulative analysis to the Ord community.

Nor does the Annexation Initial Study provide other essential information for cumulative analysis. An adequate analysis must provide either (1) a list of past, present, and future projects producing related impacts, including projects outside the control of the agency, of (2) a summary of projections of regional conditions contributing to the cumulative impact. 14 CCR § 15130(b)(1). There is no information about projected groundwater pumping in the Salinas Basin or its Pressure Subbasin.

In fact, the Annexation Initial Study does not provide any actual analysis of cumulative impacts other than vague references to the discussion in the Reuse Plan EIR. FIS/ND, p. 58. Not only is that prior analysis out of date, but, as noted, the Annexation Initial Study states that it “does not tier from the previous documents or rely on the conclusions in the previous documents for its conclusions regarding potential environmental impacts of the project.” FIS/ND, p. 53.

D. The project is not exempt.

Although MCWD did not include a proposed finding that the annexation would be exempt on the agenda for its January 20, 2018 meeting, staff has now proposed a finding of exemption to be considered at the February 20, 2018 meeting. Staff proposed that the Board find the annexation exempt under 14 CCR §§ 15301, 15319, or 15061(b)(3).

The exemption for existing facilities under 14 CCR § 15301 is inapplicable because that exemption precludes any expansion of previous use beyond that existing at the time of the lead agency's determination. Because the annexation will allow, and is intended to facilitate, the provision of water supply to currently undeveloped parcels there would be an expansion of previous use.

The exemption for annexations of existing facilities and lots for exempt facilities under 14 CCR § 15319 is inapplicable because that exemption is not allowed if it is foreseeable that utility services would extend into the annexed parcels and have the potential to serve a greater capacity than existing uses. Again, the annexation will allow, and is intended to facilitate, the provision of water supply to currently undeveloped parcels. Thus, there is an obvious potential to serve a greater capacity than existing uses.

Even if the annexation otherwise qualified for a categorical exemption, an exemption would be prohibited here due to the presence of unusual circumstances and the possibility of a significant impact. 14 CCR § 15300.2(c). One unusual circumstance is the fact that the annexation is being undertaken with the expectation that the existing governance structure to protect the resource will be terminated, leaving MCWD free to manage the resource without constraints of the current governance structure. Another unusual circumstance is that the existing governance structure has not in fact protected the resource because it has allowed ground water pumping to induce further seawater intrusion and to exceed sustainable yield, and MCWD has not committed itself to avoid additional groundwater pumping.

A categorical exemption would also be barred because the cumulative effect of successive projects of the same type in the same place over time would be significant. 14 CCR § 15300.2(b). MCWD has identified the remainder of the developable areas of the Ord community as future study areas for annexation and seeks to include them in its sphere of influence. Thus, MCWD contemplates successive annexations in the Fort Ord area, which would result in provision of additional groundwater, resulting in a significant cumulative impact.

The common sense exemption under 14 CCR § 15061(b)(3) does not apply because MCWD cannot find with certainty that there is no possibility of a significant effect. MCWD's claim in this regard is based on the incorrect assertion that there would

be no change to existing conditions after the annexation. In fact, the annexation would allow, and is intended to facilitate, increased groundwater pumping to support new development in the Ord community. This increased pumping would result in significant impacts. Furthermore, the annexation is proposed with the expectation that the current governance structure intended to protect the water resource will terminate and without any commitment to a governance structure that would in fact protect the resource.

E. Annexation should be deferred until approval of a FORA transition plan or some other plan to manage water for future development; or, if annexation is not deferred, it should be limited to developed parcels already served by MCWD.

MCWD's proposed annexation puts the cart before the horse; it should await approval of a FORA transition plan that will address provision of water for future development in the Ord community. Alternatively, it must be accompanied with the adoption of policies, regulations, and mitigation that would ensure that provision of water supply for future development in the Ord community will not cause significant impacts.

LAFCO staff explain that the FORA transition plan must provide "clear direction on all projects, obligations and other pending matters in the transition plan." Kate McKenna, Report of the Fort Ord Reuse Authority (FOR A) Dissolution Process, January 22, 2018, p. 4. LAFCO staff explain that the transition plan is required in order to "*lay the foundation for future LAFCO actions such as annexations by local agencies to ensure the provision of municipal services (i.e. water, sewer fire, etc.)*" *Id.*, emphasis added.

The Initial Study suggests that the rationale for the annexation is to give existing customers a vote. Annexation Initial Study, p. 9. LandWatch has also been advised that MCWD seeks annexation to further its objective to qualify as a Groundwater Sustainability Agency under the Sustainable Groundwater Management Act. If MCWD intends to pursue the annexation for these reasons, and since it has seen fit to defer annexation of other developable portions of the Ord Community, there is no reason that it needs to annex *any* area that is not currently developed and currently being served with water. The Initial Study indicates that the annexation would include parcels in which hundreds of addition water service hook-ups would be required or that are not currently receiving water service. Annexation Initial Study, pp. 16-17, Table 2. LandWatch's concern that MCWD not assume plenary authority over provision of water for future development without a commitment to avoid or mitigate impacts would be addressed in part if the annexation were limited to just those parcels for which MCWD is now actually providing service.

In a telephone conversation on February 16, 2018 between LandWatch and Keith Van Der Maaten, Mr. Van Der Maaten indicated that restricting the area of annexation to parcels with current service may be problematic. He suggested that MCWD may feel an

obligation to provide service to areas without current water service but for which building permits or vesting subdivision maps had been issued, or even for areas without such entitlements but for which a specific plan had been approved, or even merely initiated, or even for areas for which MCWD had only provided a Water Supply Assessment. He also suggested that denial of water service to these areas might be considered a taking.

There are several response to this concern. First, MCWD's authority to deny hookups in the event of a water shortage, which clearly exists today, includes authority do deny service to proposed development for which there is an existing subdivision map. *Building Industry Assn. v. Marin Mun. Water Dist.* (1991) 235 Cal.App.3d 1641; *see also Swanson v. Marin Municipal Water Dist.* (1976) 56 Cal.App.3d 512; *San Diego County Water Authority v. Metropolitan Water Dist. of Southern California* (2004) 117 Cal.App.4th 13. Second, MCWD already plans to consider annexation of the Ord Community in phases, so there is no reason not to postpone annexation of currently undeveloped parcels until MCWD has provided adequate environmental review. Again, we note that MCWD's interests in the annexation – providing governance participation to the existing customers and facilitation of MCWD's SGMA role – can be met without annexing undeveloped parcels.

Finally, to the extent that the annexation of any of the Ord Community will provide bureaucratic momentum for MCWD to annex the rest, LandWatch opposes that annexation unless and until MCWD provides adequate environmental review of any increase in groundwater pumping to support the Ord community. At a minimum that review must include the evaluate the impacts of providing water for all of the foreseeable Ord community development as well as other cumulative projects affecting the Deep Aquifer or contributing to seawater intrusion.

LandWatch joins in the objections to the proposed annexation made by other members of the public and by public agencies. LandWatch remains willing to continue its discussions with MCWD staff to resolve its concerns with the proposed annexation. Please let us know if you would like to confer further toward that end. In the meantime, LandWatch asks that the MCWD Board not certify an inadequate CEQA document or act on the annexation at its February 20 meeting.

Yours sincerely,

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



John Farrow

JHF:hs

Attachment:

Timothy Parker, letter to John Farrow, re Groundwater Impacts from Increased Pumping to Support Ord Community Development, February 15, 2018

References: to be provided electronically via thumb drive

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13. MCWD, 2015 draft UWMP, available at http://www.mcwd.org/docs/agenda_minutes/2016-06-06_board/Item%2011-A%20-%20MCWD%20Draft%202015%20UWMP%20v20160520.pdf.
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15. Partial transcript and video file of Monterey County Planning Commission, Oct. 29, 2014, available in video file at http://monterey.granicus.com/MediaPlayer.php?view_id=14&clip_id=2745.
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17. MCWRA, Salinas Valley Water Project Engineers Report, available at http://www.mcwra.co.monterey.ca.us/salinas_valley_water_project_I/documents/SVWP%20final_engineers_report.pdf.
18. Monterey County General Plan DEIR, available at <http://co.monterey.ca.us/government/departments-i-z/resource-management-agency-rma-/planning/resources-documents/2010-general-plan/draft-environmental-impact-report-deir>.

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26. MCWD, 2015 Urban Water Management Plan.
27. MCWRA, presentation of Groundwater Level Contours And Seawater Intrusion Maps, July 13, 2017.
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29. Ian Gottschalk and Rosemary Knight , Preliminary Interpretation of SkyTEM Data Acquired in the Marina Coast Water District, June 16, 2017.
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34. FORA Administrative Committee, Memorandum, January 27, 2016.
35. Kate McKenna, Report of the Fort Ord Reuse Authority (FOR A) Dissolution Process, January 22, 2018.
36. Timothy Parker, letter to John Farrow, re Groundwater Impacts from Increased Pumping to Support Ord Community Development, February 15, 2018.
37. California Public Utilities Commission, Proceeding A1204019, In the Matter of the Application of California-American Water Company (U210 W) for a Certificate of Public Convenience and Necessity to Construct and Operate its Monterey Peninsula Water Supply Project and to Recover All Present and Future Costs in Connection Therewith in Rates, Direct Testimony Of Keith Van Der Maaten, Submitted On Behalf Of Marina Coast Water District -Supplemental Phase 1 Testimony, Sept. 29, 2001.

**ATTACHMENT - Timothy Parker, letter to John Farrow,
re Groundwater Impacts from Increased Pumping to
Support Ord Community Development, February 15, 2018**

February 15, 2018

John Farrow
M.R. Wolfe & Associates, P.C
555 Sutter Street, Suite 405
San Francisco, CA 94102

Re: Groundwater Impacts from Increased Pumping to Support Ord Community Development

Dear Mr. Farrow:

At your request, I have reviewed the Draft Initial Study/Negative Declaration for the Ord Community Sphere of Influence Amendment and Annexation together with the documents cited below. As set out in the discussion below, increased pumping to support new development in the Ord Community would aggravate existing seawater intrusion and further deplete the Deep Aquifer. The reported existence of an area of relatively fresher water in what Marina Coast Water District terms the North Marina Area does not change this conclusion. My resume is attached.

1. Increased pumping for new development in the Ord community would aggravate seawater intrusion and further deplete the Deep Aquifer.

As explained in my October 8, 2016 memorandum regarding the proposal to increase groundwater pumping to support the Monterey Downs project in the Ord community, seawater intrusion continues in the Salinas Valley Groundwater Basin (SVGB) due to overdraft conditions, despite various groundwater management projects.¹ The situation has not improved since my 2016 memorandum. The most recent MCWRA mapping shows continued substantial increase in seawater intruded areas, which have occurred *despite* reductions in MCWD pumping during the 2006-2015 period.² Groundwater levels continue

¹ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016.

² MCWRA, Historic Seawater Intrusion Map, Pressure 400-Foot Aquifer, June 7, 2017, available at <http://www.co.monterey.ca.us/home/showdocument?id=19378>; MCWRA, Historic Seawater Intrusion Map, Pressure 180-Foot Aquifer, June 7, 2017, available at <http://www.co.monterey.ca.us/home/showdocument?id=19376>; MCWD, 2015 Urban Water Management Plan (UWMP), Table 4.1 (reporting total MCWD pumping declined from 4,295 afy to 3,228 afy in that period), available at http://www.mcwd.org/docs/engr_files/MCWD_2015_UWMP_Final.pdf.

to decline, especially in the 400-foot aquifer.³ MCWRA reports that acreage within the 500 mg/l or greater Chloride contour in the 400-foot aquifer has increased from 11,882 acres in 2005 to 17,125 acres in 2015.⁴ Furthermore, because increases in intrusion may lag periods of drought, there may be substantial increases in intrusion still to come in response to the recent 4-year drought.⁵

In light of the continuing advance of seawater intrusion, MCWRA staff have recommended a moratorium on new wells in the Pressure 400-Foot Aquifer within an “Area of Impact” proximate to the 500 mg/l Chloride front.⁶ MCWRA also recommends a moratorium on new wells within the entirety of the Deep Aquifers of the 180/400 Foot Aquifer Subbasin pending investigation of its viability as a source of water (“Deep Aquifer” has been called variously including the 900-foot Aquifer, and herein is used to refer to multiple water-bearing units underlying the Pressure 400-Foot Aquifer).⁷

In sum, as set out in my 2016 memorandum and confirmed by subsequent investigations, future increased groundwater pumping above existing levels, particularly from the areas proximate to the seawater intrusion front, will contribute to seawater intrusion. Because MCWD’s current production wells serving the Ord community are located just inland of the seawater intrusion front in the 400-foot and Deep aquifers, increased pumping would aggravate seawater intrusion.⁸

MCWD has reported that its total pumping is a small fraction of total SVGB pumping.⁹ As I explained in my 2016 memorandum, the relevant question for assessing the cumulative impact of additional pumping is not whether that amount is large compared to total SVGB pumping, but whether it represents a considerable increase in the magnitude of annual overdraft.¹⁰ An increase of 2,492 afy to meet the projected increase in Ord community

³ MCWRA, presentation of Groundwater Level Contours And Seawater Intrusion Maps, July 13, 2017, available at <http://www.co.monterey.ca.us/home/showdocument?id=31294>.

⁴ *Id.*

⁵ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 2-3.

⁶ MCWRA, Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, October 2017, pp. 2-9, available at <http://www.co.monterey.ca.us/home/showdocument?id=57394>.

⁷ *Id.*

⁸ MCWD, 2015 Urban Water Management Plan (UWMP), pp. 35, 45, available at http://www.mcwd.org/docs/engr_files/MCWD_2015_UWMP_Final.pdf.

⁹ MCWD, 2015 UWMP, p. 38; MCWD, Draft Initial Study/Negative Declaration, Ord Community Sphere of Influence Amendment and Annexation (Annexation Initial Study), p. 49.

¹⁰ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 19-20.

demand from 2020 to 2035¹¹ would be a considerable increase in the existing 12,000 afy to 19,000 afy overdraft of the Pressure Subarea. And that pumping would make a considerable contribution to the existing seawater intrusion problem.

The Deep Aquifer contains ancient water and there is no evidence that it is recharged except incidentally by leakage from overlying aquifers and via well-perforations completed in both the Deep and shallower aquifers, so any pumping from the Deep aquifer is groundwater mining.¹² In addition, any increase in pumping from the Deep Aquifer will likely induce increased seawater intrusion in the overlying 180- and 400-foot aquifers through leakage.¹³ Any increase in pumping would simply lead to further depletion of this resource. As noted, MCWRA has recently recommended a moratorium on new pumping from the Deep Aquifer.

2. The reported existence of an area of relatively fresh water behind the seawater intrusion front does not alter the conclusion that increased pumping will contribute to seawater intrusion.

In connection with its opposition to the proposed location of the source water wells for the proposed California-America Water Company desalination plant, MCWD has engaged hydrologist Curtis Hopkins to evaluate water quality data from the test well for that project.¹⁴ MCWD has also recently arranged for the collection and analysis of airborne electromagnetic (AEM) data to characterize the aquifer in an area that MCWD identifies as the North Marina Area of the Salinas Valley Groundwater Basin.¹⁵ These analyses disclose the presence of some areas of relatively fresher water located north of, i.e, behind, the seawater intrusion front.¹⁶

¹¹ MCWD, Annexation Initial Study, p. 50

¹² Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 14-17; MCWRA, Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, October 2017, p. 54.

¹³ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 14-14; MCWD, 2015 UWMP, p. 50, citing WRIME, Deep Aquifer Investigative Study, 2003; MCWRA, Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, October 2017, p. 54.

¹⁴ Curtis Hopkins, North Marina Area Groundwater Data and Conditions, May 26, 2015, provided as Appendix E, pp. E-15 to E-50, of the MCWD, 2015 UWMP, available at

http://www.mcwd.org/docs/engr_files/MCWD%202015%20UWMP%20Appendices_Final.pdf.

¹⁵ Ian Gottschalk and Rosemary Knight, Preliminary Interpretation of SkyTEM Data Acquired in the Marina Coast Water District, June 16, 2017.

¹⁶ That water is not freshwater in the sense of being potable, because it does not meet the 500 mg/l chloride drinking water standards. MCWD's consultants characterize it as freshwater because it meets a 3,000 mg/l TDS threshold, but its

In its response to my 2016 memorandum submitted by LandWatch in connection with the Monterey Downs project EIR, MCWD has previously argued that Curtis Hopkins' analysis indicates that "beneficial conditions have developed (or have always existed) in the North Marina Area of the 180-400 Foot Aquifer Subbasin and may be contrary to information published by the Monterey County Water Resources Agency (MCWRA)."¹⁷ MCWD states that, because of this new information about "favorable groundwater conditions within the North Marina Area," its 2015 Urban Water Management Plan (UWMP) reflects a much different understanding of groundwater conditions than its 2010 UWMP.¹⁸

As noted, seawater intrusion will continue to occur in the SVGB for the foreseeable future because continued overdraft conditions preclude protective elevations. However, MCWD argues that findings by its consultant Hopkins contained in the 2015 UWMP contradict my conclusion with respect to seawater intrusion "*at least as applied to the North Marina Area.*"¹⁹

But MCWD does not pump groundwater from the North Marina Area behind the MCWRA-mapped seawater intrusion front; its wells are located inland of the seawater intrusion front.²⁰ Furthermore, the reported area of fresher water in the North Marina Area is not in fact potable.²¹ The UWMP admits with respect to the fresher water area behind the seawater intrusion front in the North Marina Area, "[f]uture use of this area for a potable groundwater supply may be unlikely; however, these conditions do show a retardation of seawater intrusion in these shallower aquifer zones in this coastal portion of the Salinas Valley Groundwater Basin, which provides some protection for inland uses of the 180-ft Aquifer."²²

Despite the UWMP claim that the fresher water area in the North Marina Area provides some protection for inland uses of the 180-ft Aquifer, the 2015 UWMP does not dispute that seawater intrusion is a continuing problem caused by overdraft of the SVGB.²³ The UWMP acknowledges that the seawater intrusion front continues to advance inland, that this has required the historic relocation and deepening of MCWD wells, and that it continues to

chloride levels exceed 1,000 mg/l in the study area. See Hydrological Working Group, Memorandum Responding To Comments On HWG Hydrogeologic Investigation Technical Report, January 4, 2018, pp. 3-4.

¹⁷ MCWD, Response to Timothy Parker Technical Memorandum Dated October 8, 2016, p. 5.

¹⁸ *Id.*

¹⁹ *Id.*, p. 6, emphasis added

²⁰ MCWD, 2015 UWMP, pp. 35, 45.

²¹ Hydrological Working Group, Memorandum Responding To Comments On HWG Hydrogeologic Investigation Technical Report, January 4, 2018, pp. 3-4.

²² MCWD, 2015 UWMP, p. 48.

²³ *Id.*, pp. 38, 43-45, 54-55

threaten its existing wells.²⁴ Consistent with my 2016 memorandum, the UWMP acknowledges that the reductions in agricultural pumping that were projected to occur in the analysis of the Salinas Valley Water Project have not in fact occurred.²⁵ And as I previously explained, the UWMP acknowledges that additional groundwater management projects may be required to halt seawater intrusion;²⁶ those projects are not currently committed or funded.²⁷

With respect to the North Marina Area, the UWMP discloses that the recent data “may just reveal the groundwater conditions in an area previously lacking in data.”²⁸ If so, it is evident that the existence of an area of relatively fresher water in the North Marina Area has not in fact retarded the historic advance of seawater intrusion, which has occurred *despite* groundwater conditions in the North Marina Area.²⁹ In this connection, it is important to understand that the MCWRA seawater intrusion mapping is based on sampling of production wells and represents an advance of the area in which groundwater exceeds the 500 mg/l chloride drinking water standard that can no longer be used for potable water. As the 2015 UWMP reports, MCWD has had to relocate its production wells due to the continuing advance of this seawater intrusion front, and its existing wells remain threatened.³⁰

In addition, there is no evidence that the relatively fresher water in the North Marina Area provides any recharge to the Deep Aquifer, from which MCWD pumps groundwater for the Ord community. The Deep Aquifer is increasingly recognized as geologically isolated water without any substantial recharge source.³¹ As the 2003 WRIME report and my 2016 memorandum explain, portions of the Deep Aquifer may be recharged through leakage in small amounts by water from the overlying aquifers.³² To the extent that the Deep Aquifer

²⁴ *Id.*, p. 44.

²⁵ *Id.*, p. 55.

²⁶ *Id.*

²⁷ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 7, 26-27.

²⁸ *Id.*, p. 48.

²⁹ Hydrological Working Group, Memorandum Responding To Comments On HWG Hydrogeologic Investigation Technical Report, January 4, 2018, p. 7 (“It is questionable how protective these groundwater levels are given the historic extent of seawater intrusion in the project area”).

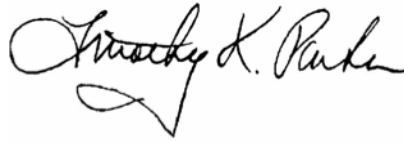
³⁰ *Id.*, p. 45.

³¹ Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 14-17; MCWRA, Recommendations to Address the Expansion of Seawater Intrusion in the Salinas Valley Groundwater Basin, October 2017, p. 54.

³² Timothy Parker to John Farrow, Technical Memorandum, Oct. 8, 2016, pp. 14-16, citing WRIME, Deep Aquifer Investigative Study, 2003.

is recharged by overlying aquifers, increased pumping of the Deep Aquifer has the potential to induce seawater intrusion in those overlying aquifers.³³

Sincerely,



Timothy K. Parker, PG, CEG, CHG
Principal Hydrogeologist

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Id.

RESUME

Timothy K. Parker, PG, CEG, CHG
Principal

WORK EXPERIENCE

2009 – Present: Parker Groundwater, President/Principal. Sacramento, California. Privately owned business, specializing in strategic groundwater planning, groundwater monitoring, groundwater modeling, groundwater recharge and aquifer storage recovery projects, program implementation, stakeholder facilitation, groundwater monitoring, policy and regulatory analysis, environmental document review and litigation support. Provides strategic planning, policy consulting and groundwater technical expertise to public and private sector clients to develop effective, sustainable solutions to complex problems in the water and evolving environmental and energy industries.

2005 – 2009: Schlumberger Water Services, Principal Hydrogeologist. Sacramento, California. Provided hydrogeologic expertise and project management on groundwater recharge and aquifer storage recovery projects, groundwater monitoring, groundwater resources management, and groundwater contaminant projects for public and private sector clientele. Application of advanced oilfield tools and technologies to groundwater projects. Integration of groundwater quality monitoring and protection on CO2 sequestration projects; liaison to Schlumberger Carbon Services, including planning, scope development, technical implementation, facilitation, and oversight. **Business Development** activities included strategic planning, prospect assessments, sales presentations, targeted workshops, client development and exploitation. Mentored and provided direction to staff; developed, tracked and controlled projects; worked closely with clients and other public and private organizations to implement projects on schedule, on budget with high level of quality.

2001 – 2005: California Department of Water Resources, Division of Planning and Local Assistance, Conjunctive Water Management Branch, Senior Engineering Geologist. Provided local technical and economic assistance to Sacramento and San Joaquin Valley groundwater authorities and water districts planning, developing, and implementing conjunctive water projects, groundwater recharge and aquifer storage recovery projects, and local and regional groundwater monitoring programs. Elements include developing technical scope, implementing work, providing geologic and groundwater technical expertise, attending and speaking at public meetings. **Central District, Groundwater Planning Section,** Sacramento, California (early 2001 prior to joining CWMB). **Senior Engineering Geologist, Groundwater Planning Section.** Elements included: Integrated Storage Investigations Program conjunctive use project technical support, coordination, and project management; technical support

on local groundwater monitoring and subsidence programs; technical support on Bulletin 118; Proposition 13 groundwater grant applications screening and ranking process for Central District geographic area. Supervised and provided direction to staff; developed, tracked and controlled program budgets; worked closely with other DWR groups, agencies and outside organizations to develop additional local assistance opportunities for DWR.

2000-2001: California Department of Conservation, Division of Mines and Geology, Sacramento, California. **Associate Engineering Geologist**. Responsible for: multi-year aerial photograph review, identification of landslides and potentially unstable areas, field reconnaissance and confirmation, preparation of maps and images using MapInfo, Vertical Mapper, ArcView, Spatial Analyst, Model Builder, and ArcInfo working closely with GIS specialists; assisting in development of GIS methodologies and database for Northern California watersheds assessment/restoration project; review of timber harvest plans and pre-harvest inspections; review of regional CEQA documents as related to engineering geologic issues; watershed assessment; technical presentations at multi-agency meetings and landslide/mass wasting public workshops.

1997-2000: CalEPA Department of Toxic Substances Control, Stringfellow Branch, Sacramento, California. **Hazardous Substances Engineering Geologist**. Responsible for: groundwater monitoring and analysis; developing approach and preparing a work plan for a Stringfellow site revised hydrogeologic conceptual model; researching, providing, and maintaining a comprehensive environmental data management system; assembling and contracting with an expert panel for consultation on the site; evaluating an existing MODFLOW porous media groundwater flow model; providing direction on the strategy and approach for the development of a revised groundwater flow and fate & transport model for the Stringfellow site; providing input on an as needed basis in support of the litigation and community relations elements of the project.

1993 - 1997: Law Engineering & Environmental Services, Inc., Sacramento, California. **Manager Project Management**. Responsible for supervising and providing direction to senior project managers; maintaining appropriate tracking system and controls for assurance of successful execution of scope, schedule and budget of major projects; maintaining quality assurance and controls on projects. Responsibilities included development/implementation of group budget spending plan, establishing performance standards and evaluating program progress and quality, staff recruiting, mentoring, maintaining utilization, business development, proposal preparation, commercial and government project marketing, client maintenance. **Project Manager** and **Senior Hydrogeologist** on hydrogeologic evaluations, site and regional groundwater quality monitoring programs, hazardous substance site investigations and remediation. Responsibilities included technical direction of projects, project scoping, schedule, budget, supervision of field activities, preparation of documents, developing cost-effective strategies for follow-on

investigations and removal actions, and negotiating with state regulators on three Beale Air Force projects totaling more than \$15 million.

1988 - 1993: Dames & Moore, Sacramento and Los Angeles, California. **Senior Geologist.** Provided hydrogeologic technical support, project management, regulatory compliance, technical/regulatory strategy, and on a variety of commercial and industrial DTSC- and RWQCB-lead hazardous substance sites. Responsibilities included project technical direction, scope implementation, budgetary control, groundwater quality monitoring and analysis, supervision of field investigations, document preparation, client interface, negotiation with regulatory agencies on projects totaling approximately \$5 million.

1986 - 1988: California Department of Health Services, Toxic Substances Control Division, Southern California Region, Assessment and Mitigation Unit, Los Angeles, California. **Project Manager** in the Assessment and Mitigation Unit. Responsibilities included development and implementation of work plans and reports for, and regulatory oversight of, State Superfund preliminary site assessments, groundwater quality monitoring and analysis, remedial investigations, feasibility studies, remedial action, and interim remedial measures. **Engineering Geologist.** Provided technical support to Permitting, Enforcement, and Site Mitigation Unit staff, including evaluation of hydrogeologic assessments, groundwater quality monitoring programs, work plans, and reports on federal and state Superfund sites and active facilities; assistance in budget preparation; assistance in zone drilling contract review.

1983-86: Independent Consultant, Sacramento, California. Provided technical assistance on variety of geologic and geophysics projects to other independent consultants in local area.

1982: Gasch & Associates, Sacramento, California. Geologic assistant conducting shallow seismic reflection surveys in the Sierra Nevada for buried gold-bearing stream deposits.

1981 - 1982: Geologic Assistant, Coast Ranges, Avawatz Mountains, White Mountains, and Kinston Peak Range. Geologic Assistant on various geological field studies, including gravity surveys, magnetic surveys, landslide and geologic mapping projects.

PROFESSIONAL REGISTRATION

California Professional Geologist No. 5594

California Certified Engineering Geologist No. 1926

California Certified Hydrogeologist No. 0012

PROFESSIONAL AFFILIATIONS

California Department of Water Resources, Public Advisory Committee, Water Plan Update 2013

2010-2013: Appointed to participate on PAC and to lead new Groundwater Caucus

Department of Interior, Advisory Committee on Water Information, Subcommittee on Ground Water

2010-Present: Member – Work Group for Pilot Project Implementation, Nationwide Groundwater Monitoring Network

2007-2010: Co-Chair - Work Group on Implementation for development of the Framework for a Nationwide Ground Water Monitoring Network

2007-2010: Member - Work Group on Network Design for development of the Framework for a Nationwide Ground Water Monitoring Network

National Ground Water Association

2014-Present: Director - Scientists and Engineers Division

2007- 2010: Director - Scientists and Engineers Division

2007 - 2009: Member - Government Affairs Committee

2007 - Present: Chair - Groundwater Protection and Management Subcommittee

2005 – Present: Chair - Regional Groundwater Management Task Force, Government Affairs Committee

2004 – 2005, 2007,2009-10: Chair – Theis Conference Committee

2002 – Present: Member – Theis Conference Committee

2002 – Present: Member - Regional Groundwater Management Task Force, Government Affairs Committee

2003 – Present: Member – Groundwater Protection and Management Subcommittee

2009 – Present: Member - ASR Task Force

2009 – Present: Member - Hydraulic Fracturing Task Force

2008 – 2009: Member – CO2 Sequestration Task Force

American Ground Water Trust

2009 – 2012: Chair

2005 - 2013: Director

California Groundwater Coalition

2007-Present: Director

Groundwater Resources Association of California

2000 – Present: Director

2000 – 2001: President State Organization

2001 – Present: Legislative Committee Chair

1998-1999 Vice President

1996-1997 Secretary

1995-1996 President Sacramento Branch

1993-1994 Member-at-Large Sacramento Branch

ACADEMIC BACKGROUND

BS 1983, Geology, University of California, Davis

Graduate studies in hydrogeology, hydrology, engineering geology, waste management engineering

Selected Publications

California Groundwater Management, Second Edition, Groundwater Resources Association of California, co-author and project manager, 2005.

Water Contamination by Low Level Organic Waste Compounds in the Hydrologic System, in *Water Encyclopedia*, Wiley, 2004.

Potential Groundwater Quality Impacts Resulting from Geologic Carbon Sequestration, Water Research Foundation, co-author, 2009.

Aquifer Storage and Recovery in the US, ASR 9, American Ground Water Trust, Orlando Florida, September 2009 – a compilation of key ASR issues on DVD, contributing editor and speaker, 2010.

Sustainability From The Ground Up – Groundwater Management In California – A Framework, Association of California Water Agencies, principal author, 2011.

ISMAR9 Call to Action: Sustainable Groundwater Management Policy Directives, Principal Author, 2016.