

**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)

**PREPARED TESTIMONY OF CITIZENS FOR JUST WATER (“JUST WATER”)
FOR CPUC EVIDENTIARY HEARINGS**

Juli Hofmann
Representative
Citizens for Just Water (“Just Water”)
3201 Martin Circle
Marina, California 93933
Tel: (831) 883-1957

E-mail: jhofmann@redshift.com

Dated: September 29, 2017

**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)

**PREPARED TESTIMONY OF CITIZENS FOR JUST WATER (“JUST WATER”)
FOR CPUC EVIDENTIARY HEARINGS**

1. Introduction

Pursuant to the Administrative Law Judge’s Ruling of August 28, 2017, Setting Issues and Scheduling For Further Evidentiary Hearings and Requiring Submission of Supporting Documents (the “Ruling”), and in accordance with Rule 13.8 of the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure (“Rules”), the Citizens for Just Water (“Just Water”) submits Prepared Testimony in compliance with the prepared testimony submission date of September 29, 2017.

Citizens for Just Water is comprised of groups and individuals who receive potable water from the Marina Coast Water District (MCWD) and Cal-Am and who share a common interest in preserving and protecting a long-term water supply with equity among competing interests. Just Water promotes the fair and equitable use and development of sustainable groundwater without adverse consequences to the needs and rights of any party. Its mission is to educate the community on water issues and to advocate for regional water justice.

2. Discussion

Citizens for Just Water (“Just Water”) addresses herein its proposed testimony for eight issues identified in the August 7, 2017 ruling and one raised in the PHC pertaining to three of the four factors required by Public Utilities Code Section 1002 as bases for granting a CPCN: community values, recreational and park areas, historical and aesthetic values. Comments are provided in bold for ease of reading.

2.1 Issues

1. Demand: updated estimates and analysis of demand including but not limited to:
 - a. Use by existing customers:

Something in the way the entire review of the MPWSP has been set up is fundamentally amiss in unfathomable ways, be it in the DEIR or the current Evidentiary Hearing proceedings. One must take the 30,000 foot view to see it. The project straddles two jurisdictions, one involving customers who need a certain commodity; the other is a jurisdiction from which the other will take the resource and on whose property they will build the project. All the focus has been entirely upon the jurisdiction that needs the commodity... how much do they need? How

much will it cost their customers? How will they get the land elsewhere that they need? Do their residents support this project? Nowhere is it considered, even though critical to ask, these very **same** questions of the jurisdiction that is being directly affected. How much water do **they** need and is there enough? How much will the project cost **their** customers? How will they protect **their** land? Do **their** residents support this project?

Why is it that so little comparative focus has been given to the Marina and Ord communities, and MCWD in contrast to the volumes analyzed and documented on the MPWSP? This has been the visible focus... so much so, that the huge and endless distractions of Cal Am's "facts" and justifications has created neglect for full accountability to Marina. This omission reflects the parable of the "emperor's new clothes". We have been forced into contesting all the myriad of debatable elements to this fatally flawed project, but in essence, we have missed the point that rigorous study from the perspective of Marina and MCWD has not been mandated by CPUC. CPUC must hold an impartial entity accountable to provide this balanced and complete study of the jurisdictions from which the project intends to extract water. Who will speak for the Marina and Ord communities? Does CPUC or MBNMS or CCC actually expect that volunteers of the public, with little resources of money, time and expertise, or small public agencies with very limited budgets, counter all the one-sided information that Cal-Am has so professionally provided for "their" region only? Where is the devotion of the same amounts of public resources for a full and balanced evaluation that includes all the interests of Marina and Ord communities where the project is sited?

A closer scrutiny of estimates in the Appendices of the DEIR for future water shows embellished overestimates far beyond the data provided by cities. For example: the City of Carmel estimated 45 second units requiring water might be developed in the future. The MPWMD has helpfully boosted this number to 287 units. This padding is repeated again in estimating needs for future *toilets* in the City of Carmel. Of the 3,349 units that might consider adding another bathroom, this calculation assumes that 83% or 2,825 homes will add an entirely new bathroom! This calls into question any and all other numbers used to justify the quantity of potable water that the MPWMD says the peninsula “needs” and underlines the basic inequity between the wealth of the Peninsula and the complete and utter disrespect for the population of Marina. How many more “future toilets” in the City of Marina are anticipated? Nowhere are such questions posed and the persistent impermissible bias continues.

As identified above, Cal-Am’s project has carefully analyzed their own customers’ future demand projections but has had no regard for the Salinas Valley stakeholder needs from which they intend to illegitimately take water. The Marina and Ord communities have some of the largest undeveloped and valuable parcels in the region, and therefore also have significant future water demand need for these build outs. As an aside, the availability of this *actual* water (not allotment agreements) is currently in question with the critically over drafted nature of the Basin. MCWD’s service area include approximately 34,000 people with doubling water demands predicted in 10 years, an anticipated future CSUMB Master Plan enrollment of 25,000 students,

and a brand new, now opened Veterans Administration Outpatient Center. The demand needs of MCWD is of *equal importance* to the Cal-Am's water demands for the Peninsula. If Cal-Am takes water from the Salinas Valley Groundwater Basin, a zero sum game, this will cause a deficit of water for others in the region. Where are MCWD water needs considered in this Evidentiary Hearing? If one says, *that* is not the question here, then where should this be considered? It is not in the DEIR nor in this hearing. How does the demand need of Marina, Ord communities and MCWD not have relevancy?

- b. Status with respect to legal lots of record – **No Comment**
- c. Status with respect to Pebble Beach – **No Comment**
- d. Status with respect to economic recovery of hospitality industry

Economic Recovery of Tourism, Hospitality, and Growth in in Marina

There is no question that the Monterey Peninsula is a beautiful region—situated on the Monterey Bay with its mild climate and expansive live oak and Monterey pine forests rimmed all around. Many come from all over the world to enjoy the beaches and recreational offerings. Not surprisingly, tourism is the main foundation of the local peninsula economy. Visitors to the peninsula come to enjoy fishing, whale watching, kayaking, recreational boating, scuba diving, surfing, biking, hiking, horseback riding, hang-gliding, golfing, beachcombing, photography, touring, bird watching, and sightseeing. According to *Visit California's* 2017 annual economic

impact report; total direct travel spending was up 3.7 percent and accounted for \$2.8 million in Monterey County alone.¹

Marina not only serves a portion of the tourism on the Peninsula, but it is currently experiencing pressures of accelerated growth. Planned development projects that stalled during the economic downturn of 2008 are back on track. In the past year, Marina has added a 106-room Marriott Hotel and 6 fast casual dining businesses to serve visitors and residents alike. The city successfully partnered in building a 600 student housing unit at CSUMB, where housing is currently in short supply. New housing development has attracted Bay area buyers (who were once tourists to the area) who want to live on the Peninsula and enjoy its significant amenities. There will be a total of 1,237 homes in in the Shea Homes Dunes development at final build out and another 1,050 homes at the recently renamed Sea Haven development. This development will be the driver for more services and businesses within our community.

Other development projects that are now open or coming to fruition:

- Fort Ord Dunes State Park - will include interpretive center and camping facilities
- Cinemax Multi-screen Movie Theater
- The Fort Ord National Monument - interpretive center and facilities
- The Veterans Cemetery
- The Major General William H. Gourley VA-DoD Outpatient Clinic

¹ [Monterey County Herald](#)

- The Veterans Transition Center - expanded housing and facilities, including offices, community hall, and serenity garden

All of these developments have water agreements in place using Salinas Valley groundwater. So it is curious that CalAm has chosen to ignore any discussion of economic recovery of hospitality in Marina or to acknowledge that water needs will grow in our region as well. If CalAm sites its operation in the Salinas Valley groundwater basin , not in the communities where it provides service, this discussion of groundwater needs must be identified with as much detail as has been documented for the Peninsula needs. Any negative impact to groundwater supplies will cripple economic recovery and future expansion of industry in the Marina and Ord Communities.

2. Supply: updated estimates and analysis of supply including but not limited to:

- a. Plans for expansion of the Pure Water Monterey (PWM) project, if any.

No Comment

b. Can expansion of the PWM project provide water to applicant in excess of 3,500 acre-feet per year, in what amounts, and at what cost? – **No comment.**

- c. Is water available for purchase by applicant from Marina Coast Water District, in what amounts, and at what cost:

3. Costs: updated estimates and analysis of costs for the Monterey Peninsula Water Supply Project (MPWSP):

Costs for establishing Water Rights.

Because the CPUC and MBNMS will not review the water rights for this project, **there will be, without a doubt, significant litigation costs.** CalAm does not have water rights to extract SVGB water². The Sustainable Groundwater Management Act of 2014 is a statewide statute that mandates local communities to implement Groundwater Management plans to protect, preserve and restore groundwater aquifers to January 1, 2015 conditions. As the water purveyor in a groundwater-dependent region, MCWD is required to halt overdraft and bring basins into balanced levels of pumping and recharge. In the Sustainable Groundwater Management Act of 2014, uncodified findings³ state:

(a) The legislature finds and declares as follows:

(5) Failure to manage groundwater to prevent long-term overdraft infringes on groundwater rights

² Letter to California Coastal Commission from Ag Land Trust, dated Nov. 12, 2014 re: Opposition to Proposed California American Company (CalAm) Appeal/Application to Acquire a Well Site to Violate Mandatory Policies of the Certified Local Coastal Plan and to Prescriptively Take Groundwater from the Over drafted Salinas Valley Groundwater Basin; signed by Marc Del Piero, Attorney at Law, and Richard Nutter, Monterey Co. Agricultural Commissioner (ret.). (See Appendix A)

³ State of California Department of Water Resources, Sustainable Groundwater Management Act 2014, pg. 1 (See Appendix A)

(7) Groundwater management will not be effective unless local actions to sustainably manage groundwater basins and sub basins are taken.

The SVGB is one of 21 critically over drafted groundwater basins in California.⁴ There is no surplus water. CalAm states in the DEIR that it plans to extract 2100 gallons of water per minute from the 180-Foot Aquifer. This rate of water extraction means that 3,024,000 gallons a day are being lost by MCWD consumers, but calculations for maintaining balanced levels of pumping and recharge to satisfy SGMA are glossed over. This puts an undue burden on MCWD to manage groundwater while CalAm freely extracts this resource! If approved, there *will* be lawsuits that significantly contribute to the overall costs of this project, and unfortunately, includes costs shouldered by the water ratepayers and less financially endowed public agencies (MCWD) who can ill afford this necessary challenge.

The Agency Act prohibits the exportation of groundwater from the critically over drafted Salinas Valley Groundwater Basin beyond Fort Ord.⁵

Sec. 21. Legislative findings; Salinas River groundwater basin extraction and recharge.

The Legislature finds and determines that the Agency is developing a project which will establish a substantial balance between extraction and recharge within the Salinas River

Groundwater Basin. For the purpose of preserving that balance, no groundwater from that

⁴ State of California Department of Water Resources, Bulletin 118, December 22 2016, pg. 15 (See Appendix A)

⁵ Chapter 52 Monterey County Water Resources Agency Act 4/11/95 pg. 15

basin may be exported for any use outside the basin, except that use of water from the basin on any part of Fort Ord shall not be deemed such an export. If any export of water from the basin is attempted, the Agency may obtain from the superior court, and the court shall grant, injunctive relief prohibiting that exportation of groundwater.

If approved, this project *will* incur litigation costs.

Cal Am does not have rights to process water and “return” it to Castroville and its Castroville Seawater Intrusion Project (CSIP). It is a clever sleight of hand to maintain that the water taken from one jurisdiction that possesses overlying rights will be “returned” nine miles north to the “same location” because it can be considered a part of the larger basin (SVGB). This argument does not stand up to scrutiny. What if someone extracts \$100 from my account and then argues that they have “returned” that money because they have deposited it to a different account in the same bank! How will this water be “returned” to its point of origin? At what rate of percolation will the “return” water ever arrive from Castroville to Marina? Will any of this proposed “returned groundwater” ever actually return to the CEMEX pumping site or anywhere near it? If approved, this project *will* incur litigation costs.

There is a freshwater layer (called Dune Sand aquifer) that was completely overlooked by Cal-Am in its assessment of the Salinas Valley Groundwater Basin and now verified in new information from the AEM (airborne electromagnetic) imaging completed by MCWD this past

August⁶. This means that Cal Am's desalination project will not only be pumping our groundwater, and NOT pure ocean water as they misled us to believe, and this water turns out to be not *even* brackish groundwater (mix of fresh and seawater) but is actually also *freshwater!* Cal-Am has no rights to our groundwater and further cannot obtain "appropriative rights" based on their illegitimate claims of take of brackish water. If approved, this project *will* incur litigation costs.

Cal Am's claim to the groundwater is considered junior to existing appropriations and overlying users, but no such discussion of the costs of litigation exists in the MPWSP DEIR. Without this analysis, this project must be deemed "infeasible".

CalAm has no prescriptive groundwater rights in the Basin. Thus, CalAm would take any Basin water for the project via appropriative rights, which are junior to existing appropriations and to overlying users. If the proposed project is approved and any dispute arises as to whether or not CalAm possesses legal water rights, such dispute likely would be resolved through court action. Naturally, however, if CalAm does not have the right to the supply water for the proposed project, the proposed project could not proceed and would thus prove infeasible. (CalAm MPWSP DEIR_EIS 2017)

If approved, this project *will* incur litigation costs.

⁶ Ian Gottschalk and Rosemary Knight. (June 16, 2017) "Preliminary Interpretation of SkyTEM Data Acquired in the Marina Coast Water District". (hard copy only)

It is a travesty that Cal Am plans to take water from the overlying users, apply enormously costly filtering, then ship the water nine miles north, through a water pipe that has not been built, to the Castroville services district at a reduced price. It is unjust that the entire mitigation plan will be ultimately subsidized by the CalAm ratepayers. It is unjust that the brackish groundwater that Cal Am claims would be of no use to anyone, can, will and has been very useful to Marina Coast Water District, as it establishes its groundwater sustainability plan as required by the state law. This plan may include building a desalter, as many small coastal cities are beginning to develop to assure future water needs are met for the regional users. It is unjust that the project has been promoted as a “regional” water solution when, in fact, it seeks to benefit only CalAm’s customer base. The Project burdens Marina and MCWD with all the adverse impacts and negative consequences while receiving no benefits at all.

If approved, this project *will* incur litigation costs.

California Water code, App 52, Section 21 states that all seawater intruded water is groundwater.

Calculating percentages to determine how much freshwater is being extracted is not legitimate since brackish water is still groundwater, not ocean water. All water CalAm extracts from the aquifers is classified as groundwater. The return water theory seems to be an invalid means to an unlawful end.

If approved, this project *will* incur litigation costs.

4. Project Financing: updated information and analysis of project financing.– **No**

Comment.

5. Downsizing: feasibility and costs of MPWSP being downsized including but not limited to:

a. Postponement of one or more wells

b. Operation of plant at lower rate until demand materializes.

c. Construction in modular increments including but not limited to whether the MPWSP can be authorized at a level smaller than 6.4 million gallons per day with the option for applicant to later request authority to add increments if and as demand increases.

In response to items 5 a, b and c (a. Postponement of one or more wells, b. Operation of plant at lower rate until demand materializes, c. Construction in modular increment) Just Water's response is:

The conclusion of any downsizing of the project presumes that there are no basic flaws of the larger project that would be carried over into a smaller version. This is a dangerous assumption that ignores the fact that CalAm asserts it is a "subsurface ocean intake" technology when, in fact, it is a groundwater intake from the 180 Foot Aquifer and its overlying Dune Sand aquifer.

ES.3.2 MBNMS Purpose and Need

"Federal proposed actions consist of the following: 1) authorization of a Coastal Development Permit for CalAm to drill into the submerged lands of MBNMS to install a **subsurface seawater intake system**;... " (Cal Am MPWSP DEIR-EIS, ES-4)

The MPWSP DEIR initially proposed an oversized 9.6 MGD project that it now seeks to downsize. This for profit corporation has invoked the specter of water rationing and scarcity with the looming State Water Resources Board Cease and Desist order to set a tone of urgency for Peninsula decision makers. This project has been presented as a regional solution, yet Marina has **not** been party to fair and meaningful participation in the environmental decision-making that will impact its groundwater. Without our groundwater, all plans for our local Marina economic recovery and growth would stagnate for lack of water. If the Cease and Desist Order were not the driving force for hasty decision making, wiser heads would see this project for the distortion

that it is. CalAm has misrepresented this plan as an ocean intake process from the start, and now creates dire consequences for innocent parties (Marina, Ord communities, and MCWD).

No amount of downsizing can mitigate this fundamental deception inherent in the MPWSP. The downsizing cannot be predicated on changes in demand need since *no Peninsula water demand need supersedes the illegitimacy of taking groundwater from one of California's 21 most critically over drafted basins*, i.e., the 180/400 Foot Aquifers in the Salinas Valley Groundwater Basin.

The idea that a downsizing would be considered in increments is a ploy to reframe the original project in more palatable terms when the original project was to be constructed in stages anyway. Once a “smaller” project is approved, the process for further approvals becomes heavily weighted in favor of CalAm due to political, financial, and less than transparent processes that can and will be enacted, based on past and current history. For example, the attempt to approve a downsized version is being considered here before knowing whether the whole project even has basic scientific validity and the approval of the test slant well wellhead pipe being placed further inland creating more groundwater vs. ocean water intake via an obscured Addendum⁷.

⁷ California Coastal Commission Addendum: Energy, Ocean Resources & Federal Consistency, Item W14a &15a, Nov. 11, 2014, A-3-MRA-14-0050/9-14-1735 pg. 1 of 15. (See Appendix A)

All the points listed in a, b, and c above are: 1) mere distractions to the fundamental fact that a smaller version will not correct the fundamental flaws of the current project NOT being the same as the originally described project; and 2) a way to ensure project approval ostensibly for a smaller project that would eventually achieve the illegitimate capacity of the larger project.

To move forward on any consideration of downsizing is to enable the “bait and switch” tactic that will endanger the sole source of water for an entire region for which the Marina Coast Water District has direct responsibility and jurisdiction over.

6. Solar and Renewables: Feasibility and desirability of a desalination project configuration that includes the plant being energized by a combination of purchased electricity (including some or all renewables) and on site solar panels.–**No Comment**

7. CEMEX Site: status of applicant’s access to land at the CEMEX site if CEMEX ends operation and the land is transferred to another entity.

CalAm does not own the CEMEX property nor do they have any water rights on the Cemex property. What entity will acquire the Cemex property post cessation of sand mining operations in three years, and what amount of water of the 500 afy allotment will the new owner need and whether any would be left over for the MPWSP purposes is not within CalAm’s control nor can they predict a timeframe of when the property comes available. In the CA Coastal

Commission Cemex settlement agreement,⁸ the post sand mining Cemex property was reserved for conservation with a deed restriction to protect the access and the habitat at the site in perpetuity. The disposition of the Cemex property entails conveyance to a nonprofit or governmental entity approved by the CCC, in consultation with the City of Marina. The buyer is to hold the land, in perpetuity, primarily for conservation purposes but with allowances for low-impact, passive recreation, public access and education, restoration of native habitat, and activities consistent with existing easements (subject to obtaining a Coastal Development Permit, if required).

Another equally pressing issue is whether there is adequate water for a new owner to accommodate CalAm e.g. for visitor serving facility needs, restrooms, etc. *plus* the operation of the MPWSP plant. If the future property owner will need water, CalAm cannot assume that they can share the water rights of any new owner nor can water be commandeered from any new owner of this property. Has CalAm identified what volume of water, if any, from the Cemex site will be needed for their operational use and if their operation requires more than what can be pumped by new owners, how will CalAm acquire it? Will they be using expensive desalinated water for day-to-day operations? The future owner of the Cemex site would be entitled to only 500 afy, and this may or may not be available or accessible to Cal-Am.

⁸ CA Coastal Commission, Appendix A, July 13, 2017, Consent Settlement Agreement and Cease and Desist Order CCC-17-DC-02 (See Appendix A)

8. Settlement Agreements: Are modifications needed, if any, to any pending Settlement Agreement? **No Comment.**

9. Section 1002 Factors: In determining whether or not to grant the CPCN (in whole, in part, or not at all) what consideration should the Commission give to:

a. Community values:

Note: Just Water’s response to community values is organized as below:

- **Community values: Best practices scientific research**
- **Community values: Ethics**
- **Community values: Environmental Justice**
- **Community values: Open space, conservation and habitat protection**
- **Community values: Sustainable Economy**
- **Community values: Community Participation**

Community Values: Best practice scientific research

The subsurface ocean intake via slant wells has *not* been successfully implemented anywhere in the world; in today’s world quest for potable water, it should be questioned why such “subsurface ocean intake via slant wells” has been promoted as the preferred method over reliable open ocean intake desalination. If there is some unknown and insurmountable scientific or other challenge that has prevented its use on the world market, should not the MPWSP then

require the *highest* level of scientific scrutiny at our local level? In light of the MPWSP concluding that “no harm” will occur to an entire region’s sole source of water, the science backing such claims must be impeccable.

Yet, the MPWSP has developed a model based upon scanty baseline data and CalAm twice ignored opportunities to utilize available and affordable technologies (first the Electrical Resistivity Tomography-ERT⁹ in which cables laid across the vast majority of the Monterey Bay except that data from the Cemex area was curiously not obtained, and then the Airborne Electromagnetic imaging-AEM¹⁰, second generation 3D imaging that is helicopter assisted and adds magnetism to the apparatus). Both techniques would have added critical information to assess the level of harm to another jurisdiction’s groundwater basin but neither was used by CalAm. Science has been highly remiss in this project. As a relevant analogy, no one today would accept a physician’s negative declaration of cancer using a random biopsy if he/she failed to obtain an MRI (magnetic resonance imaging) of the body. In this same way, choosing to not utilize state-of-the-art, available, and affordable methodology that images large expanses of land to depths of 1000 feet below the surface and claim “no harm” is an affront to scientific principles.

⁹ Meredith Goebel, Adam Pidlisecky; Rosemary Knight. (2017) “Resistivity imaging reveals complex pattern of saltwater intrusion along Monterey coast”. [Journal of Hydrology](#), (551), pp. 746-755. (See Appendix A)

¹⁰ Ian Gottschalk and Rosemary Knight. (June 16, 2017) “Preliminary Interpretation of SkyTEM Data Acquired in the Marina Coast Water District”. ((hard copy only))

The Cal-Am Desalination Project proposes to drill wells into Marina's groundwater aquifers and pull out groundwater right next to the ocean. This is a real threat to our precious groundwater resource by depleting the groundwater and increasing the inland movement of saltwater from the ocean. It is this new science that will disprove the utterly false conclusions of CalAm's "science".

The Marina Coast Water district (MCWD) completed a groundwater study with Stanford University in August, 2017 using the AEM imaging (airborne electromagnetics). The Basin is MCWD's sole source of water for its customers but Cal-Am claims it will do "no harm" to our groundwater Basin. Here are some important discoveries that state-of-the-art science has very recently shown (from preliminary data on the AEM by MCWD):

1. The AEM study confirms freshwater in the Marina area in a freshwater layer (called the Dune Sand aquifer) that was completely overlooked by Cal-Am in its assessment of our groundwater Basin! This means that CalAm's desalination plant will not only be pumping our groundwater and NOT ocean water as they misled us to believe, but this water is not even brackish groundwater (mix of fresh and seawater) and actually also includes *freshwater*! An extremely expensive "experimental" "subsurface ocean intake" desalination plant that intends to pump and process freshwater and groundwater is illogical and illegal.

2. This Dune Sand fresh aquifer also provides a valuable function of keeping seawater intrusion at bay by not only replenishing the next underlying water layer (called the 180' aquifer) but also pushing back on the ocean movement landward, thereby slowing saltwater intrusion into the Basin.

3. The Cal-Am Slant Well Project is proposed on the Cemex site, and the one slant well that is being used as a test is right near the sand mining plant. What wasn't factored in the test results was that the sand mining operation collects, washes sand and holds water from the ocean in ponds on that property. The test well draws in this water, as well. This has created false readings in the test well because this manmade inland saltwater body falsely results in more seawater intake and less groundwater intake. In essence, CalAm is taking even more of our groundwater than they reported! (MCWD presentation by Curtis Hopkins, August 7, 2017; <http://www.mcwd.org>)

The cautionary relevancy of any scientific groundwater modeling is documented in the DEIR statement: "The applicability or usefulness of the model depends on how closely the mathematical equations approximate the physical system being modeled."¹¹ Thus we see that CalAm's conclusion of "no harm" to the Salinas Valley Groundwater Basin was generated from applying a "super model" that was based upon 8 random vertical wells. Looking at the same subsurface and expanding beyond in total area surveyed and to depths of 1,000 feet, the Airborne Electromagnetic (AEM) imaging is indisputably a superior "approximation of the physical

¹¹ Section 4.4.4.2 Groundwater Modeling, 2017, MPWSP DEIR

system being modeled”. Already preliminary data suggests fundamental flaws in CalAm’s data and the AEM data is vital to disproving the theory of “no harm” to the Salinas Valley Groundwater Basin with the discovery of freshwater reserves in Marina’s subsurface.

It is distinctly clear that areas in the region of interest have a significant volume of freshwater in the near subsurface. In the Marina area, the thickness of freshwater grows, which corresponds to previous water quality measurements in the MPWSP wells, as well as a 2016 report by Curtis Hopkins. The AEM data furthermore show the extension of the isolated freshwater beyond the area formerly thought to contain freshwater in the near surface (in the Dune Sand Aquifer), likely up until near the Salinas River.¹²

The seriousness of the “no harm” determination merits inclusion of this new AEM data to meet the standard of a valid scientific inquiry. Without valid science, all is conjecture. This is a value that our local community and our state should embrace in the advancement of any new technology or to resolve technical groundwater issues. This AEM will rapidly become the fundamental, standard tool in all responsible groundwater management.

Even beyond the application of science is the question of the integrity of the scientists reviewing the data. No amount of accuracy of data can be upheld if the test analysis is guided by

¹² Preliminary Interpretation of SkyTEM Data Acquired in the Marina Coast Water District, Ian Gottschalk and Rosemary Knight, June 16, 2017, pg. 13. ((hard copy only))

human bias or even intentional misrepresentations of the data. It is imperative to bring transparency and double checks on data analysis to ensure this integrity. The current Hydrogeology Working Group fails to ensure this integrity on two accounts: 1) at least 50% of the small group of four are favorable to Cal-Am, one Dennis Williams owning a patent for the Slant Well technology, and 2) lack of regional urban water user perspective that will consider potable water needs versus agriculture demands. To normalize this imbalance or minimize this significant omission is to turn a blind eye to ensuring that data analysis is objective.

Community Value: Environmental Justice

The United States Environmental Protection Agency defines environmental justice as follows:

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. EPA has this goal for all communities and persons across this Nation [*sic*]. It will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.¹³

¹³ [Wikipedia](#)

Other definitions of environmental justice include: equitable distribution of environmental risks and benefits; fair and meaningful participation in environmental decision-making.

The 2010 U.S. Census Bureau statistics indicate the racial makeup of the city of Marina is: 45.2% White, 7.5% African American (as compared to 6.2% for CA), 0.7% Native American, 19.9% Asian alone (as compared to 13.0% for CA), 2.8% Pacific Islander (as compared to 0.4% for CA), 27.2% Hispanic or Latino, and 10.0% from two or more races (as compared to 4.9% for CA). These minority percentages in Marina that are significantly higher than CA percentages, may be attributable to the U.S. Army relocation to Marina of G.I.s with inter-racial marriages, especially those from Asian wars (W.W. II, Korean War, Vietnam War). Additionally, persons in Marina below the poverty level was 15.3% as compared to CA averages of 14.3%. These demographics qualify Marina as susceptible for environmental injustice.¹⁴

To exemplify environmental injustice, Marina has borne the responsibilities for several regional projects i.e. Monterey Regional Environmental Park (sewage disposal) operated by Monterey Regional Waste Management District; Pure Water Monterey, a regional water recycling project, and the Monterey Peninsula Landfill (MPL) with 315 acres for solid waste disposal. Neighbors in Marina often complain of unpleasant smells in the air of unknown

¹⁴ US Census Demographics Marina, CA 2010

origins. Marina has also been assigned the second to the highest affordable housing requirements in the region, attesting to, once again, the consequences of environmental injustice ¹⁵

¹⁵ AMBAG Regional Housing Need Allocation Plan: 2014-2023, Association of Monterey Bay Area Government, pg. 15

Regional Housing Needs Allocation Plan: 2014 - 2023

RHNA Allocation

Geography	Total Allocation	Very Low (24.1%)	Low (15.7%)	Moderate (18.2%)	Above Moderate (42.0%)
AMBAG Region	10,430	2,515	1,640	1,900	4,375
Monterey County	7,386	1,781	1,160	1,346	3,099
Carmel-By-The-Sea	31	7	5	6	13
Del Rey Oaks	27	7	4	5	11
Gonzales	293	71	46	53	123
Greenfield	363	87	57	66	153
King City	180	43	28	33	76
Marina	1,308	315	205	238	550
Monterey	650	157	102	119	272
Pacific Grove	115	28	18	21	48
Salinas	2,229	538	350	406	935
Sand City	55	13	9	10	23
Seaside	393	95	62	72	164
Soledad	191	46	30	35	80
Balance Of County	1,551	374	244	282	651
Santa Cruz County	3,044	734	480	554	1,276
Capitola	143	34	23	26	60
Santa Cruz	747	180	118	136	313
Scotts Valley	140	34	22	26	58
Watsonville	700	169	110	127	294
Balance Of County	1,314	317	207	239	551

With a highly diverse, socio-economically challenged population who has historically been subjected to accepting regional projects that benefit or relieve the more affluent, less diverse communities in the region, the MPWSP reflects an even more blatant environmental