

# PUBLIC WATER NOW

P.O. Box 1293, Monterey CA 93942

www.publicwaternow.org publicwaternow@gmail.com



RECEIVED

JUL 17 2018

MPWMD

John Robertson, Executive Director  
#3, Central Coast Regional WQCB  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

July 12, 2018

Dear Sir,

This request is for this Regional Water Board to require a full feasibility analysis of Cal Am's test slant well (TSW) for sub-ocean intake for desal, consistent with regulations of the State Water Resources Control Board in its Ocean Plan of 2015. California American Water proposes to use this intake method for its Monterey Peninsula Water Supply Project (MPWSP), to be consistent with new state policy, **if feasible**. Cal Am is sponsoring and financing the project, in anticipation of obtaining all required permits, and recovering its costs in water rates.

Public Water Now (PWN) brings this request. PWN is a water ratepayer advocate organized in an all volunteer, 501(c)4 non-profit community organization operating on the Monterey Peninsula. Its mission is to track water supply issues, promote awareness with the general public and elected officials, and to seek a long term sustainable and affordable water supply through public ownership. The driving force is the extraordinarily high cost of Cal Am water, a string of project failures by Cal Am, the CPUC's continued willingness to charge ratepayers for those failures, and a general lack of transparency.

PWN requests that the CCRWQCB consider and evaluate the full range of feasibility factors of Cal Am's test slant well (TSW) subsurface intake arrangements for its proposed desal facility, as you review the permit for NPDES. PWN specifically asks that you require Cal Am to make a full feasibility report to your Board, and to the public, prior to acting on any related permit. 'If feasible' should be meaningful.

## FEASIBILITY IS A QUESTION

The demand to try subsurface intakes for ocean desal first, before any other option is pursued, is new. It requires large investments up front before any practical and useful work can be done, even before

## EXHIBIT 16-A

significant data collection and analysis. It has the support of several state agencies. But since this is a new technology, the state wisely asked for a feasibility determination before any new desal project proceeds, or before an alternative is proposed. The feasibility determination has evaluation factors described in the CA Ocean Plan.

A sham review of 'feasibility' at this stage will not serve the state's purpose to evaluate this option. If 'feasibility' is treated lightly, and the project succeeds or fails for whatever reason, will state agencies have learned anything? Will state agencies feel any pain without a specific feasibility assessment? Local customers and ratepayers sure will.

Ocean Plan Amendment, adopted in 2015, applies to new desalination projects. I call attention to several responsibilities assigned to the regional water board (underlined).

Ocean Plan Section M.2.a(1): The owner or operator shall submit a request for a Water Code section 13142.5(b) determination to the appropriate regional water board as early as practicable. This request shall include sufficient information for the regional water board to conduct the analyses described below. The regional water board in consultation with the State Water Board staff may require an owner or operator to provide additional studies or information if needed, including any information necessary to identify and assess other potential sources of mortality to all forms of marine life. All studies and models are subject to the approval of the regional water board in consultation with State Water Board staff. The regional water board may require an owner or operator to hire a neutral third party entity to review studies and models and make recommendations to the regional water board.

Has Cal Am submitted its request for a WC section 13142.5(b) determination, as required?

If yes, does it contain a full evaluation of the test slant well experience? It is available to the public? If it is available, please send a link to PWN, PO Box 1293, Monterey CA 93942-1283, and to my attention: georgetriley@gmail.com

If no, when is the earliest practicable time?

If no, PWN requests that you require a 'feasibility report' on the full experience and analysis of the test slant well located near Marina.

CA Ocean Plan Amendment Section M.2.a(2): The regional water board shall conduct a Water Code section 13142.5(b) analysis of all new and expanded desalination facilities. A Water Code section 13142.5(b) analysis may include future expansions at the facility. The regional water board shall first analyze separately as independent considerations a range of feasible alternatives for the best available site, the best available design, the best available technology, and the best available mitigation measures to minimize intake and mortality of all forms of marine life. Then, the regional water board shall consider all four factors collectively and determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life. The best combination of alternatives may not always include the best alternative under each individual factor because some alternatives may be mutually exclusive, redundant, or not feasible in combination.

## **EXHIBIT 16-A**

Section M.2.a(2) specifies an evaluation of four factors – site, design, technology and mitigation. However other provisions and the definition of ‘feasibility’ include future expansions, time, economic and social factors.

Definition of “feasible” in the CA Ocean Plan, 2015

**FEASIBLE** for the purposes of chapter III.M, shall mean capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors.

The regional board is not limited in the issues it analyzes.

CA Ocean Plan Amendment Section M.2.a(4): In conducting the Water Code section 13142.5(b) determination, the regional water boards shall consult with other state agencies involved in the permitting of that facility, including, but not limited to: California Coastal Commission, California State Lands Commission, and California Department of Fish and Wildlife. The regional water board shall consider project-specific decisions made by other state agencies; however, the regional water board is not limited to project-specific requirements set forth by other agencies and may include additional requirements in a Water Code section 13142.5(b) determination.

## **DISCUSSION**

### **1. History of Cal Am Failures**

In the 29 years between Cal Am's purchase of the Monterey system in 1966 and 1995, it made no effort to develop a larger supply. The local water management district made two major efforts in early 1990s, but voters turned both down. Only after the first CDO in 1995, did Cal Am even make its first attempt to develop a supply project. And since 1995, Cal Am has failed three times. All failures were from Cal Am decisions. None were from voter rejections. Cal Am failed in 1998-2004 when it abandoned its proposed new dam on the Carmel River, at a stranded cost on ratepayers of \$3 million. In 2006-07 it abandoned a desal project at Moss Landing, with a ratepayer cost of \$12 million. Cal Am withdrew from a public-private partnership in 2012, called the Regional Desal Project, at an additional ratepayer cost of \$20 million (which could reach \$38 million pending litigation and CPUC proceedings). The CPUC has already approved passing all these Cal Am stranded costs on to ratepayers.

This is an abysmal track record by California American Water. In 52 years, no new supply. In the last 23 years three consecutive failures costing ratepayers over \$35 million. This history prompted the emergence of Public Water Now, and other ratepayer advocacy groups. As ratepayers pay more and more, shareholders get the benefit. As ratepayers shoulder the cost of risks, corporate utilities continue to be rewarded with large profit potential for ‘risks’ they have not taken.

But the experience of ratepayers on the Peninsula is to pay for Cal Am’s stranded costs. Since litigation is a relatively high likelihood with this project, we fear another experience of paying for stranded costs. Now is the time to require a full feasibility analysis.

## EXHIBIT 16-A

### **2. No reports that address feasibility.**

There has been no feasibility report on the TSW made by Cal Am.

The Hydrogeologic Working Group has oversight responsibilities for data collection and analysis, but there is a problem here. It issued a special technical report in October 2017, but it failed to mention, much less address, issues of feasibility.

The FEIR/S has been released. It refers to computer modeling that suggests minimum harm to the source water in the Salinas Basin. But it did not refer to, nor conclude in any way, that the state guidelines on feasibility were met.

A proposed 'large settlement agreement' crafted in 2013 contains the provision that Cal Am shall determine feasibility.

Large Settlement Agreement dated 7/31/2013.section 5.3: After careful consideration of the findings and conclusions set forth in the Technical Report, California American Water, in consultation with the Technical Group and other necessary or appropriate agencies, shall focus its production from a shallow portion of the aquifer system, sometimes referred to as the Sand Dunes Aquifer, and pursue a source water project and program for the MPWSP, to the extent feasible, that is most consistent with the Technical Report and the recommendations of the Technical Group. Consistent with the foregoing sentence and to the extent feasible, California American Water will pursue source water development, for the MPWSP in the shallow portion of the aquifer system. As used in this paragraph, whether a source water project or program is feasible shall be determined by California American Water.

There is no feasibility report on the local TSW. Cal Am's claim to have that authority is in direct conflict with the Ocean Plan requirement that the Regional Water Board has that responsibility.

### **3. Experimental and new, needs evaluation**

The State Water Board, the CPUC and the CA Coastal Commission know that slant wells are a new engineering approach. It is experimental. Although highly desirable in concept, there is no evidence of a successful operation. Even with high quality design, engineering, and hydro-geologic data collection and analysis, there is still this one stunning fact – there is not one operational success to draw upon. Not in California. Not in the United States. Nowhere in the world.

That is the primary reason to seek a robust feasibility analysis. But another key reason this Regional Water Board needs to conduct an objective review is the current weaknesses and unaddressed matters in the TSW process to date.

The only experience with slant wells for desal intake to date is the pilot project at Dana Point, Doheney Beach, in Orange County. It was started a decade ago, tested for 18 months, but now sits idle. Of the five initial public agencies that sponsored it, four have withdrawn because of high and unpredictable future costs. Also the pump efficiency was less than expected, and the filter packs were not as effective as planned.

## EXHIBIT 16-A

After Cal Am proposed slant well technology for the Peninsula, many officials commented on the need for the test slant well. It was new and needed a test period to prove its practicality.

Here are quotes from key parties that point to the need for a robust feasibility evaluation.

- “...slant test is an experiment...” Congressman Farr (Pine Cone 11-7-14)
- “...further the state of knowledge with respect to alternatives to open ocean intakes.” Mark Stone, Assemblyman, 29<sup>th</sup> District, letter of support.
- “This will provide important information for the state.” Steve Kinsey, Chair of CCC, (at permit hearing on Nov 12, 2014)
- “...prove the feasibility of the state's preferred subsurface intake method.” Jan Zimmer, member of CA Coastal Commission. (Herald 11-13-2014)
- “This research is important to the entire water industry.” Re research grant of \$200,000 from WaterReuse Foundation
- “...is the right thing ...(locally) and the right thing for the state.” Rob MacLean, President, Cal Am, (Herald 11-13-14) “...critical to the future of desalination...” CA report 10/2014
- “We’re probably pushing the max as far as how large (intake)...can get.” “How well the bearings will hold up over time is an area of concern.” Rich Svindland, Cal Am Chief Engineer, National Driller.
- “...has only been done once...” “It’s still a very rare method.” Dennis Williams, president of GEOSCIENCE (Cal Am contractor), National Driller.

These general comments are informative. No parameters were set. Some areas of concern were identified. However the general tenor was clear – a feasibility analysis was expected. To date only comments by Cal Am interests have been made about the TSW – to wit, the pump works, the volume of water is what was expected, and salinity readings are close to the target numbers.

#### **4. Hydrogeologic Working Group (HWG) is compromised**

The creation of the Hydrogeologic Working Group (HWG) was an attempt to create a team of technical professionals to oversee site specific impacts, design and engineering elements, and to oversee the evaluation design and process of data collection, and assessment of trends. But the actual workings of the HWG has remarkable unprofessional and quality deficiencies.

The HWG is not objective. All four HWG members represent private interests (two for Cal Am and two for private agricultural interests represented by Salinas Valley Water Coalition). Both Cal Am representatives are serving in support of a positive outcome for Cal Am. The agricultural representatives intend to assure that extraction of ground water is in compliance with the Agency Act that forbids exporting water from the Salinas Basin. The possibility of a shallow evaluation of slant well data is high, thus leading to a bias in favor of the project. This makes HWG credibility and objectivity highly questionable.

## EXHIBIT 16-A

Research by Public Water Now discovered a conflict of interest in the HWG. Dennis Williams and his company Geoscience owns international patents for the slant well design and installation in the test slant well. Williams subcontracted to Cal Am AND the CPUC for evaluating the substance of test well modeling, data collection, and evaluation. Williams had not disclosed his patents to the CPUC, nor to the public. The company that can profit the most by a successful slant well test is the very same company charged with determining if the test is successful.

Cal Am initially denied, then admitted, that it was using the patents. This farce took a far more serious turn when the CPUC acknowledged the conflict of interest, and terminated its involvement with Williams/Geoscience.

These weaknesses in the HWGi are important because its reports will be used in support of the new policy favoring subsurface intakes. We know that major state agencies want a successful subsurface intake. The conflict of interest, and a narrow representation of the team of experts, suggest a bias. The 'expert' conclusion about test slant well outcomes cannot be considered legitimate. State interests in 'feasibility' will not have been addressed in a credible way.

### **5. Feasibility Issues not discussed in Cal Am or related documents**

1. Cal Am has designed the test slant well at 19 degrees from horizontal. Cal Am claims the lowest angle in the past was 21 degrees. There should be comments on this new angle being workable, or what problems may have, or not have, been encountered. This is especially relevant since Cal Am has proposed the next 7 to 9 wells in the well field at CEMEX will be drilled at 14 degrees. These steps to push the envelope should be part of 'if feasible' analysis.
2. Cal Am has not reported on the fact that about 150 feet of well casing could not be extracted from the TSW. It was left in place in the middle of the intake screens. Inflow may be restricted. What are the facts? Why did this happen? What was the reason for the original design? Have design changes been planned? What engineering or technological implications are there? Does a lower angle of 14 degrees for future wells face similar problems? How serious is this further expansion of the experiment? Does any state agency care?
3. Partially discussed in HWG reports is that salinity percentages have ranged from about 89% to 92%. The HWG, and the FEIR/S state this is close to the target of 96%, close enough to give their blessings to proceed. This has expensive implications. Every percentage point below 100% is a % of costs that is subsidized by ratepayers, because the percent below 100% cannot be exported for potable use on the Peninsula. This is the law in the Agency Act that is protected by the two members from agriculture interests on the HWG. Ratepayers are exposed from the narrow interests of Cal Am and agriculture.
4. The Dana Point well produced more sand than expected, indicating a well screen issue. Also the water chemistry changed throughout the testing period. The changing chemistry will require innovative operational flexibility. We do not know these details with Cal Am's TSW. There needs to be wider explanations of what is different, if so, and more transparency. This can come only with a bona fide feasibility assessment.
5. The life cycle cost projections need additional professional input. There is little history of large pumps operating at an angle over extended periods of time. So far, only Cal Am has offered

## EXHIBIT 16-A

its opinion. Since slant wells have no extended history with sea water, we deserve more confidence in cost projections. This is an economic factor of feasibility.

6. Mitigation. These costs are anticipated to be small with slant wells. However development, maintenance and replacement costs are expected to be high, possibly very high. In comparison, an open ocean intake will be less costly, but will it have high mitigation requirements? Would they be approximately the same, or would one be more risky and/or more costly than the other? Do agency professionals guess at this questions, or do they gather appropriate data? The FEIR/S avoids cost and expense questions. Where do these questions get raised, and how are they handled? This is why a robust feasibility review is required.
7. Cal Am and its well design contractor GEOSCIENCE Support Services Inc. have admitted to be pushing the envelope. According to an earlier article about the TSW, the length and size “is pushing the max...”. The angle will impose unique stress on pump bearings so that how they “will hold up over time is an area of concern.” (National Driller, September 1, 2014). There has been no public reporting on these questions.
8. Some allowance must be made that recognizes the complete lack of actual experience on which to base cost projections. Extraordinarily high contingencies should be anticipated. This should include as a minimum various unknowns about actual component parts, replacement requirements, design reconfigurations, type of maintenance demands, life cycle issues and redundancy requirements. This is another economic factor that should be considered.

### **6. Costs have skyrocketed**

Our community should not be expected to completely finance a new, state-ordered, experimental slant well with unproven technology. And since this new technology will be used for the bulk of our water supply, where does the state separate its interest by requiring it, and the ratepayers who pay for all of it.

PWN understands that slant wells are stated to be the “environmentally superior alternative” in past and current CEQA/NEPA documents. Ratepayers do not argue that point. But because they are superior environmentally does not mean they are practical or affordable or desirable or that harm is fully understood or fully mitigated.

Cal Am’s then President MacLean called it a “relatively novel approach.” This is a remarkable understatement. It is completely new for the entire world. The fact is this: slant wells for ocean desal intake are an unproven experimental approach. Cal Am initially estimated a \$4 million cost, but it has skyrocketed to over \$21 million in just over three years. This is atrocious to ratepayers. Furthermore it deserves a professional review by the state – a feasibility analysis.

High costs side-lined the Dana Point project after it reached about \$5 million. Dana Point received about \$1.5 in grants, or about 30%. Cal Am has received \$1 million, about 5% of the reported but unverified cost of \$21 million for its test well.

The water shortage on the Peninsula does not mean ‘water at any price’, including financing an entirely new and experimental approach, and paying for its fine-tuning into the future. And pouring good money after bad is not a plan. A feasibility analysis is required.

## **EXHIBIT 16-A**

This is still an experiment. All costs are based on one test well in Orange County. No operational experience exists. Costs estimates for long term maintenance and replacement are speculative guesses. For such an experiment, grant funds would be expected. After all, it is the state that has required this experiment. Ratepayer pocketbooks, not state coffers, are exposed. However since no appropriate grants are available, at the very least the project should comply with answering the 'if feasible' question so ratepayers can get the full picture. Doesn't the state also want a thorough and relevant feasibility assessment?

Three major state agencies advocated for sub-ocean intakes for desal, "if feasible" – State Water Resources Control Board, CA Coastal Commission, CPUC. All three make reference to cost as a factor of feasibility. The current \$21 million price tag should be a 'red flag' to state agencies. The 'demand' for the test, and the lack of state funding to offset local costs, is a slap in the face of ratepayers.

No small community, nor any sized community, should be exposed to the risk and the financial burden for such an experimental project. This is state-ordered research and development at local cost. The ratepayer base is quite small, about 40,000 meters. It is too small to assume the risks and costs for experimental and unproven technology with unknown impacts. It's importance goes far beyond the Monterey Peninsula. Ratepayers must be protected from high and unjustified costs, especially with Cal Am's track record of stranded costs.

PWN further fears the argument that will surely come – that more and more money needs to be invested so as not to waste money spent to date. How does a community prepare for this question, especially if the decision is in the hands of Cal Am? A robust feasibility analysis can minimize this possibility. A site specific set of criteria that ignores cost will not. 'If feasible' should be meaningful.

Whatever is learned from the TSW, it will benefit the state, the industry, and beyond. It may benefit the patent holder as well. It is a crying shame that no state funds have been made available. It will be additional shame if the TSW does not get a robust feasibility evaluation.

### **7. Other factors: water rights, science, ocean intake alternatives, Water Rights not resolved**

These points acknowledge that there are many unresolved issues connected to this project.

Cal Am has no water rights for the project. A track for acquiring water rights has been suggested by SWRCB. Litigation may be necessary to gain clarity.

Actual location of the intake screens may be the critical factor in determining water rights. Under the ocean is relatively litigation-free. Under land will engage the decades of legal precedence. Cal Am's screen locations are about 80% under land.

The over-drafted Salinas River Basin is a state designated severely over-drafted basin in the SGMA legislation. It is very the location of Cal Am's slant well field. This makes it even more imperative that a robust feasibility analysis be conducted.

The well site is in a different water jurisdiction. The source water is intended to benefit a different jurisdiction, with no benefit of any kind to the source jurisdiction. This is bad.

More recent scientific imaging of the area has been completed by Marina Coast Water District. This new data significantly contradicts the computer modeling used in Cal Am's application. Science matters. When does this new data get considered? And does it trump computer modeling? Science



## EXHIBIT 16-A

and cost questions should be at the heart of the feasibility determination. Neither is getting the attention it deserves.

The CDO deadlines add an overlay of urgency that interferes with rational discussions. Facts and thoughtful review can prevail, but only if certain permitting or regulatory agencies show the nerve or leadership to not let new policy (subsurface intake) override practical consideration of all costs and implementation risks.

More good money after bad is an earmark of a project gone wild. Or maybe a management with tunnel vision. This is how "white elephants" are hatched.

There is no groundswell of opinion or fact to support this project. A failure to conduct a serious assessment will be an embarrassment to the state, a seriously unexplained project, and a huge cost to current and future ratepayers, and full of unaddressed questions.

### **CONCLUSION AND REQUEST**

Some project has to go first. But at some point, management decisions must consider more than site specific and engineering information. Surely cost, and cost comparisons, are part. Maybe it is risk avoidance, such as litigation delay. Maybe it is an alternative that has new or comparative advantages. Maybe it is larger policy implications, such as an opportunity to enhance a regional objective in addition to the Peninsula objective. May it is all of these.

Being blind is a choice. No new experimental large expensive project should be allowed to get too far without a focused cost and cost comparison assessment. At an absolute minimum, this is the feasibility determination.

PWN wants all decisions to be based on facts, not hopes. This is the objective of the 'if feasible' question. This is not the time to ignore hard questions. This is not the time for cheer-leading on limited facts, nor fear mongering about missing CDO milestones. However it is time to account for risks, particularly when facts are so scarce. Declaring a policy is a good start. Now is the time to be hard-nosed on implementation facts and risks.

From any point of view, "if feasible" needs a professional objective review. It is requested that your Regional Water Board conduct such an analysis. At a minimum, the Regional Water Board should require Cal Am to produce such a feasibility report, and the Regional Water Board make a robust vetting of it.

Please do not leave the community with the simple promise by Cal Am: "Trust us." That is not good enough under any circumstance. Clearly it is insufficient with the TSW history. And "trust us" absolutely does not pass muster with recent stranded costs from three previous project failures that Cal Am initiated and abandoned.

I would like to speak with you about this. Thank you.



George T Riley

Director, Public Water Now

**EXHIBIT 16-A**

CC: State Water Resources Control Board

Senator Bill Monning

Assemblyman Mark Stone

John Laird, State Secretary of Natural Resources

→ Board, Monterey Peninsula Water Management District *Chair + Board*

Board, Monterey Peninsula Regional Water Authority

Mayor and Council, City of Marina

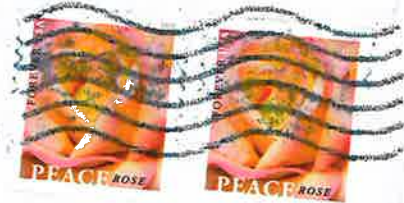
Board, Marina Coast Water District

EXHIBIT 16-A

Public Water Now  
PO BOX 1293  
Monterey, CA 939420

OAKLAND CA 946

14 JUL 2016 PM 3 L



Chair + Board Members  
Monterey Peninsula Water Agency District  
5 Harris Court. Bldg 6.  
Monterey CA 93940