

*California Coastal Protection Network \* California Earthcorps \* Elkhorn Slough Coalition  
\* Friends of the Sea Otter \* Friends Artists and Neighbors of Elkhorn Slough \*  
Public Citizen \* San Diego Baykeeper \* Save Our Shores \* Save Our Waterfront  
Committee \* Sierra Club \* Southern California Watershed Alliance \* Surfrider Foundation  
\* The Ocean Conservancy*

Mr. Ricky Ramos  
City of Huntington Beach Department of Planning  
2000 Main Street  
Huntington Beach, CA

May 27, 2005

**RE: Seawater Desalination Project at Huntington Beach  
Draft Recirculated EIR No. 00-02**

Via e-mail: [rros@surfcity-hb.org](mailto:rros@surfcity-hb.org)  
Via Facsimile: 714.374.1540

Dear Mr. Ramos:

We are writing as a group of local, regional, and nation-wide organizations in regards to the draft Poseidon-Huntington Desalination Re-Circulated Environmental Impact Report (REIR). We appreciate your careful consideration of the REIR. Your cautious scrutiny is important for several reasons, not the least of which is that this is the first such report in California to forecast the impacts of a massive desalination facility. In these unusual circumstances, the Huntington Beach City Council effectively bears the extra burden of setting a standard under the California Environmental Quality Act (CEQA) for the review of similar desalination facilities statewide. This is of particular interest to citizens in both the southern California region and the Monterey Bay – the focus of planning for numerous desalination facilities.

It is important to point out that the undersigned groups are not opposed to desalination as a source of potable water. Many of the groups signing this letter have been investigating and promoting the implementation of sound desalination policy as members of the Coalition on Responsible Desalination and the Statewide Environmental Desal Working Group. Nonetheless, in the absence of any detailed statewide or regional policy on the implementation of desalination facilities, we believe proposals like the Poseidon-Huntington facility are premature and currently unnecessary.

- The State of California is currently spending tens of millions of Proposition 50 dollars to research the best practices for collecting “source water” from the ocean, and for the most efficient means of

processing that ocean water into potable water. To race into massive production facilities that leave our precious natural resources at risk, before the research is complete, is simply “putting the cart before the horse.”

- 
- Similarly, since the initial review of this project, the United States Environmental Protection Agency has promulgated regulations for the use of “cooling water intake structures” at large facilities like the Huntington Beach Generating Station (HBGS). These regulations mandate a dramatic reduction in the current mortality of marine life from “impingement” and/or “entrainment.” It is unclear at the current time how the HBGS intends to comply with these new regulations. But, reliance on the current cooling water intake for desalination source water is, again, premature and unsound public policy.
- 
- The California Department of Water Resources is currently assessing the projected demands on our limited water supplies and the several alternatives available for meeting an ever-growing demand. The niche in our water portfolio that can be filled with environmentally sensitive desalination facilities is still undefined.

It is in the best interest of ratepayers and the environment to make sure that the answers to these outstanding issues are resolved before approval of such a permanent and massive facility as the Poseidon-Huntington proposal.

Finally, and possibly most importantly, as detailed below, the draft REIR still fails to allow a fully informed consideration of the proposal by the public and their elected representatives. The REIR, in several areas, is inadequate. In the most extreme cases, the REIR may also be misleading the public and our representatives.

It is critical that the public and our decision makers fully understand the scope of public policy issues that are raised by this project – considerations that go well beyond the surface issue of water supply. This project, and the associated REIR, raise serious considerations about future Clean Water Act compliance, coastal zone management, land use planning, electricity generation, marine life management/protection, etc. It is a major decision that demands thorough documentation and public policy debate before approval.

Once again, thank you for your thorough consideration of the comments below.

Sincerely,

Sierra Club  
Bruce Monroe  
Chair – Coast & Ocean Committee

San Diego Baykeeper  
Allison Rolfe  
Policy Director

Surfrider Foundation  
Joe Geever  
Southern California Regional Manager

The Ocean Conservancy  
Greg Helms  
Program Manager

California Earthcorps  
Don May  
Executive Director

Friends of the Sea Otter  
Heather Allen  
Policy Director

Save Our Shores  
Jane DeLay  
Executive Director

Friends Artists and Neighbors of Elkhorn Slough  
Klaus Kloeppe

Southern California Watershed Alliance  
Conner Everts  
Executive Director

California Coastal Protection Network  
Susan Jordan  
Executive Director

Public Citizen  
Juliette Beck  
California Director

Elkhorn Slough Coalition  
Madeline Clark

Save Our Waterfront Committee  
Barbara Bass Evans

## COMMENTS

### 1) **“Project Description” and “Alternatives Analysis” is Unnecessarily Narrow and Consequently Inadequate for Fully Informed Decisions**

As noted in public comments on the original EIR, this re-circulated EIR (REIR) fails to adequately analyze “wastewater reclamation” and “water conservation” as alternative supplies of freshwater for the affected area. The EIR instead attempts to describe the potential for increased conservation under the “No Project” alternative. Most importantly, the inadequate consideration of these feasible alternatives does not include a comparison of the environmental impacts, both positive and negative, of pursuing these alternatives over a massive desalination facility. Furthermore, a more accurate assessment of alternatives available to meet projected future water demands would allow a mix of conservation, reclamation and a smaller desalination facility with environmentally preferable source water intake alternatives to the AES cooling water intake.

As in the original EIR, the draft REIR narrowly defines the purpose of the project as “local” in nature. We can only predict that the Response to Comments will again rely on this narrow project description to argue that reclamation and conservation are contingent upon imported water supplies and consequently do not meet the purposes of the narrow project description. In general, the REIR defines the project purpose in such a discreet and narrow description so as to effectively preclude any reasonable alternatives to balanced and reliable water supply portfolio. This narrow and specious approach undermines the intent of CEQA to offer the public full disclosure of the impacts of the project compared with those of feasible alternatives.

#### **Project Description, Needs and Objectives**

The REIR Section 3.4 (Project Needs and Objectives) states the need for increased supply in reference to past and future droughts. However, while the 1977-1978 drought provided a learning session or a window on the future, the current long-term drought in the Colorado River system and the previous driest four years locally have been met with minimal conservation and reclamation efforts -- alternatives that the REIR discounts. There have been no cutbacks or restrictions during this time, and when the drought turns to flood, as it has this past winter, and has happened historically, these local programs show their greater value. To base this project only on a drought period would leave the area with an overpriced, underutilized facility, as happened in Santa Barbara, where their desal plant, built in drought, now sits idle.

Furthermore, the discussion of the California Water Plan, the State Department of Water Resources’ long term planning tool, originally called Bulletin 160-2003, now version 2005, is now under a public hearing process with different assumptions than the scenarios laid out in the REIR. In addition, Water for California and the Planning and Conservation League are circulating “The Water Investment Strategy” See:

[http://www.pcl.org/pcl/pcl\\_waterforca.asp](http://www.pcl.org/pcl/pcl_waterforca.asp) as a response to the Water Plan. After careful review of the California Water Plan and the State’s Desalination Task Force recommendations, the study concludes that ocean water desalination is the lowest level supply option. Ocean water desalination should be used only when conservation and reclamation potential is exhausted and only when beach wells are the intake source to mitigate impacts on the marine environment. The State Desalination Task Force recommended that desalination should be included in a water supply portfolio where it is “economically and environmentally appropriate” and when recycling and conservation have been implemented to the “maximum extent practicable.”

The chart shown on Table 3-3 of the REIR lists assumptions from the MWD Integrated Resources Plan that can be refuted by the Water Investment Strategy table listed below.

<b>Additional Needs</b>	million acre-feet
Population Increase	2.0-2.4
Environmental Restoration	1.0
<b>Total additional needs</b>	<b>3.0-3.4</b>

<b>First Priority Options</b>	million acre-feet
Urban Water Conservation	2.0-2.3
Agricultural Water Conservation	At least 0.3-0.6
Recycled Water	1.5
Groundwater Treatment and Desalination	At least 0.29
<b>Total First Priority Potential</b>	<b>At least 4.09-4.69</b>

The REIR Section 3.4 B (Replacement Water) cites reductions in Mono Lake water as rationale for this project. The freshwater streams that feed Mono Lake only supplies water to Los Angeles. However, of interest in this case, any losses due to environmental mitigation are covered by conservation offsets by order of the State Water Resources Control Board in 1995. This is an excellent example of how conservation, in coordination with community-based organizations as the delivery mechanism, can provide real water for urban use and still let 30 % return to stream flows for environmental benefits.

The REIR Section 4 (Project Description) summarizes current estimates of water supply from wastewater reclamation (recycling) and water conservation in the Orange County distribution area. It is important to note that the Urban Water Management Plan is currently being revised and could provide additional projections on water availability from these sources. Furthermore, we are requesting that the goal of an “integrated resource plan” -- that is, a plan that thoroughly considers reducing surface water pollution while simultaneously supplying fresh water -- be more thoroughly considered in the Urban Water Management Plan. A thorough documentation of potential management approaches should evaluate the avoided costs of Clean Water Act compliance when water purveyors implement conservation and reclamation to the fullest extent.

For example, the Santa Ana Watershed Project Authority, which is working on a long-term plan to be imported-water free for a three year period, without ocean desal, is working upstream to clean and restore groundwater supplies on a watershed level. See: [www.sawpa.org](http://www.sawpa.org) This winter's high rain levels and runoff have improved groundwater storage beyond listed numbers reflecting recent local drought. Climate change estimates show that local resource programs, such as SAWPA, will have greater value as local areas may receive more water and areas with traditional water supplies receive less. With extensive studies for current and future storm water programs; this water is now seen as an asset not a liability, with multiple benefits of improved water quality, greater recharge potential, and water catchment with cisterns.

Furthermore, Section 4.8 doesn't list conservation as a demand-side program or supply source, along with other traditional supplies, which does include reclaimed water facilities.

Finally, the assumptions and conclusions of future demand, and the short timelines to meet that demand based on the projected completion date of Poseidon's desalination facility, are confusing at best.

**In short, the combination of Sections 3 and 4 of the REIR are confusing, inadequate, and misleading. These sections do not meet the mandate of CEQA to fully and accurately inform the public.**

### **Alternatives**

The REIR Section 7 (Alternatives) again relies on assumptions that there is a discreet demand for 56,000 acre feet of water, and that this water must be deliverable by 2008. These baseline assumptions are not thoroughly substantiated. More importantly, these arguably flawed assumptions undermine a reasonable review of potential alternatives for providing a sustainable and environmentally preferable water supply portfolio for the region.

Section 7 briefly discusses the potential for recycling and conservation. But, the EIR appears to treat each alternative as mutually exclusive rather than considering a combination of improved conservation and greater reclamation output. Furthermore, the alternatives analysis seems to conclude that these sources would not be available before 2008 – the proposed date for getting the Desal facility on-line. This date is not consistent with planning documents for 2025 demand relied upon in the REIR, and is consequently irrelevant.

Most importantly, the REIR fails to analyze the environmental benefits from alternatives such as heightened water conservation programs and increased wastewater reclamation. For example, a recent study by the Irvine Ranch Water District documents that fairly simple application of irrigation devices can reduce overall household water demand by 50%, reduce local urban runoff by 70%, and can reduce pollutant loadings in receiving waters by 75%. See: [www.irwd.com](http://www.irwd.com) and search for "Residential Runoff Reduction (R3)

Study.” Also, expanded wastewater reclamation programs can dramatically reduce treated sewage discharges to the ocean.

As the REIR points out in Sections 4 and 5, there are numerous potential sources of contamination contributing to the intractable problem of beach closures at Huntington Beach. Among these are the sewage discharge from Orange County Sanitation District’s treatment facility and urban runoff. These sources can be dramatically reduced by an aggressive program to expand wastewater reclamation and the Groundwater Replenishment System, as well as a progressive program to implement water conservation.

Furthermore, the Municipal Water District of Orange County is experimenting with alternative “source water” collection systems that avoid any impacts to marine life – either through direct open ocean intakes, or through reliance and exacerbation of existing cooling water intakes for a coastal generator.

Once again, it is the findings of the State Desalination Task Force that desalination should be included in a water supply portfolio where it is “economically and environmentally appropriate” and when recycling and conservation have been implemented to the “maximum extent practicable.”

**The REIR fails to give the public and our decision makers an adequate analysis of alternatives for meeting the projected demands for freshwater in the region. In particular, the combination of water conservation, wastewater reclamation and a downsized environmentally preferable desalination facility are not considered a separate “alternative.” More importantly, the scant consideration of these alternatives in the “No Project” alternative does not discuss the environmental benefits to water quality of this course of action – not to mention the economic benefits of reduced Clean Water Act compliance costs.**

## **2) Definition of Entrainment/Impingement “Significance” is Misleading and Scope of Impacts Too Narrow**

Once again, given that this is the first CEQA review of a desalination facility of this configuration and size, the REIR is effectively setting a new CEQA “standard of review.” With this in mind, the assumptions employed, as well as the scope and standards used, deserve heightened scrutiny.

The REIR relies on misleading standards for determining “significance” of impacts to marine life. Furthermore, the REIR narrowly defines the scope of potential impacts from the co-location of a massive desalination facility with the existing Huntington Beach Generating Station (HBGS).

### **Defining “Significant”**

The REIR, in Section 5.10, page 41, concludes that, “Impacts due to operation of the proposed desalination facility in regards to impingement and entrainment are not anticipated to be significant.” This conclusion is based in part on reliance on the harvest control rule adopted in the Nearshore Fishery Management Plan – the so-called “40-10 rule.” Id. This harvest control rule is applied to fisheries where the necessary data is available. For many species, this data is not available and harvest controls must resort to “proxies.”

Additionally, the REIR does not document historical impingement/entrainment of species of major concern, nor does it compare these rates with dwindling populations. For example, populations of Sheephead, Vermillion Rockfish, Boccacio Rockfish, Cowcod Rockfish have declined from habitat losses, overfishing and other pressures over the past several decades that may lead to dramatic reductions in the number of individuals recorded in impingement/entrainment studies. Nonetheless, these population declines only underscore the importance of reducing marine life mortality from cooling water intake structures. Furthermore, numerous species likely entrained at the facility, such as Tidewater Goby and Garibaldi, are not regulated for sustainable harvests – several having total prohibitions on any “take.” Therefore, the use of fishery management plans and harvest control rules as an indicator of “significant impacts” on marine life in the REIR oversimplifies the complicated process of determining “total allowable catch” and misleads the reader.

Nonetheless, assuming the best case scenario (i.e., that the species’ populations, survival strategies, and life cycles are fully understood), the rule would not necessarily allow the “taking” of up to 60% of the existing populations – as implied in the REIR. In fact, the harvest control rule relies on estimates of “unfished biomass” – not current populations. If the current populations are below 40% of the estimated unfished biomass, “rebuilding plans” are implemented on a curve between 40% and 10% of those populations. Consider a species where the necessary data is available to employ the “40-10” rule, and current populations are below 10% of the estimated unfished biomass – the “40-10” rule may prohibit the take of these species altogether. There are species within the Southern California Bight where this is the case (e.g., “Cow Cod” rockfish) and others that have dramatically reduced harvest allowances because the current populations are estimated below the 40% target (e.g., “Sheephead”). Therefore, any “take” of these species and others under similar controls would be “significant” under the definition relied on in the REIR.

In short, the REIR’s use of the “40-10 rule” for defining “significant” -- and the inexplicable application of the rule to the species killed by the HBGS -- and the additional mortality attributable to the proposed co-located desalination facility -- is misleading. Without fully identifying the populations of consideration, and the applicability of the harvest control rule, the REIR falsely concludes that:

*The maximum “harvest” effect of HBGS operations at 127 MGD is 0.33 percent, significantly below the accepted (DFG) thresholds of 60%. The maximum harvest effect of the proposed project is 0.02 percent, an order of*

*magnitude less than 0.33 percent, based on HBGS entrainment mortality of 94.1 percent.*

This not only directs the public into falsely relying on a misleading definition of “significant impact”, it raises serious questions about the adequacy of the impingement/entrainment study itself. For example, the baseline of 127 MGD is a minimum withdrawal rate and does not accurately reflect current average cooling water intakes, nor projected increases in cooling water intake volume after the addition of the desalination facility.

Furthermore, the REIR should identify species killed in the process that do not have harvest controls and “take” is prohibited. For instance, there is no allowable fishery for Garibaldi or Black Sea Bass. “Take” of these species is prohibited altogether and any impact on these species would be “significant.”

**Therefore, the REIR should not be certified until it includes a thorough and defensible definition of “significant impact” on all species collected in historical and current impingement/entrainment studies. The REIR should also thoroughly explain the current population assessments for the species recorded in these studies and reconcile why some with already diminished populations may be recorded in relatively low numbers. Finally, the REIR should identify species killed in the intake that are protected under the Endangered Species Act, fishery management plan “take” reductions and prohibitions, and other regulatory and legislative protections.**

### **Scope of Impacts**

As noted in previous comments, the addition of a desalination facility of this size will create a dramatic new demand on the HBGS. In a misleading conclusion, the REIR states that: “The operation of the desalination facility would not result in any changes to the permitted operations or in the maximum HBGS intake flow rate....” This reliance on “permitted flow rates” versus actual historical cooling water intakes sets a misleading baseline from which to compare projected impingement/entrainment impacts.

The REIR is confusing in that in one instance, at Section 3, page 28, the REIR states that: “The desalination facility would not include a back-up generator. Emergency power would come from the electric power grid and/or HBGS auxiliary reserve bank.” This statement implies that the energy necessary to run the desalination facility under normal operating circumstances (i.e., not during “emergencies”) would come directly from the HBGS. Consequently, the baseline and average operations of the generators will surely increase to supply the necessary energy to run the desalination plant. It is important to repeat here that the baseline for calculating marine life mortality is not the “permitted” withdrawal of 514 MGD, but the actual historical withdrawal of cooling water.

According to the REIR, the desalination facility will “require approximately 30 to 35 megawatts.... As such, the daily energy consumption of the facility is estimated to be 720 to 840 megawatt hours per day.” See: REIR § 5.4, page 13. The current average daily out

put of the HBGS is not presented in the REIR. However, if the average daily cooling water intake flow rates are any indication, HBGS, between 2002 and July 2003, was only operating generators 1 and 2 on average. See: REIR § 4, page 7 (average flow rate equaled 265 MGD, with low flow rates at 127 MGD). If so, on average, the HBGS is generating approximately 430 MW. See: REIR § 4, page 3. Given these extrapolations, the addition of the energy demand from the desalination facility will increase average operating output of the Huntington AES from 430 MW to 465 MW – an increase of approximately 8%. **Nowhere in the REIR is there an analysis of how much additional water will be withdrawn from the ocean to meet this increase in daily electrical output at HBGS.**

**Assuming the energy demand for the desalination facility will be supplied by HBGS under normal circumstances; the REIR fails to identify the resulting increases in on-site cooling water intakes and associated marine life mortality to supply the energy.**

Alternatively, the REIR may conclude that the energy demand for the desalination facility will be met under normal operating conditions by power from the electrical grid. In this case, some estimate of what percentage of power on the grid comes from facilities using “once through cooling” would help decision makers better understand regional impacts. In short, without some clarity of how the facility will meet the energy demands of the massive desalination facility, it is impossible to adequately assess the associated marine life mortality.

**Therefore, the REIR fails to adequately inform the public of the impacts of the project on marine life mortality until it is clear how the energy demand will be met. One potential solution would be an unequivocal and irreversible commitment to the source of energy – either the HBGS or the grid. This is not an unreasonable condition given the importance of this factual background for fully documenting foreseeable impacts to marine life.**

### **3) New Regulations for Cooling Water Intakes Not Analyzed**

The REIR fails to include all the relevant information currently available on marine life impacts, including the recently promulgated rules on cooling water intake structures [i.e., Clean Water Act 316(b)] and a recently completed impingement and entrainment study for HBGS.

It is uncertain how HBGS intends to comply with the recently promulgated Clean Water Act 316(b) regulations for cooling water intakes on existing power plants drawing more than 50mgd (“Phase II regulations”). These new regulations on cooling water intake structures require dramatic reductions in marine life impingement (80-95%) and entrainment (60-90%).

- . Relevant issues raised by the promulgation of these new rules include:
- the land used for the footprint of the desalination facility would preclude the option of adopting closed-cycle cooling for HBGS by disallowing use of the same land for cooling towers;
  - reducing cooling water flows for HBGS, or installation of alternative technologies, may offer alternatives to meet the performance standards in the new regulations. However, such mandated changes may render the desalination facility economically or practically inoperable without continued use of the ocean water intake structure.

**Licensing of the Desalination Plant At This Time Would Foreclose HBGS From Using EPA’s Preferred Technology**

The Phase II regulations specify closed-cycle cooling as the best technology available for minimizing adverse environmental impact. While the rule allows compliance in other ways that meet closed-cycle performance standards, the EPA expresses the preference for closed-cycle cooling. In fact, for new power plants, closed-cycle cooling is essentially required. However, closed-cycle cooling demands available land for construction of cooling towers. Therefore, licensing of the desalination plant would likely foreclose the use of closed-cycle cooling due to the available space taken up by the desalination plant. Furthermore, the desalination facility’s reliance on HBGS’s once-through cooling water will effectively preclude the transition to closed cycle cooling, or force the continued use of the intake structure for desalination “source water” -- undermining the intent of the new regulations.

**By precluding HBGS from employing closed-cycle cooling, or prolonging the use of the ocean water intake structure for other purposes, the desalination facility is effectively undermining the intent of the new 316(b) regulations. This foreseeable impact should be thoroughly documented in the REIR.**

If the Desalination Plant Attempts to Comply with the 316b regulations by means other than EPA’s preferred technology, the viability of the desalination plant is suspect.

The Phase II regulations provide compliance alternatives other than the use of closed-cycle cooling. For instance, the plant can reduce cooling flows through reduced operations, install new technology, or perform a combination of these to comply with the performance standards. However, each of these alternatives has consequences on either the total water available to the desalination plant or the electricity available to consumers, the desalination plant, or both.

**One potential HBGS compliance response would be to reduce the volume of intake water from the historical baseline. Assuming this response, the REIR is incomplete until it provides an analysis of how the desalination facility would make up for the**

**reduction in cooling water at HBGS. More importantly, the REIR should document the marine life mortality associated with this response.**

Future 316b Regulations May Eliminate the Viability of The Desalination Plant Altogether.

The REIR indicates that, should the HBGS discontinue the use of the “once through cooling” system, Poseidon would take over operations of the cooling water intake structure to supply water to the desalination facility. In this scenario, all of the marine life mortality from the 100 MGD-plus withdrawal would be directly attributable to the desalination facility. The draft phase III regulations, which would likely apply to the desalination plant, would likely require the same reductions in impingement and entrainment from uncontrolled levels as the HBGS plant must meet. **The REIR does not indicate how the desalination plant might meet these requirements should it need to draw water directly from the ocean.**

Missing Relevant Information

It is our understanding that the California Energy Commission has recently released a comprehensive study of the marine life mortality rates at the HBGS. This “316(b) study” is currently available for public review, but has not been included in this REIR. It is also our understanding that there are significant differences in the scope of the analysis and the relevant information contained in that study as compared to the study provided in the REIR. **This is pertinent and significant information for the public and our elected representatives to make fully informed decisions. Absence of this information renders the REIR inadequate.**

Furthermore, the REIR does not summarize nor append copies of the recently adopted Clean Water Act 316(b) regulations controlling the use of “cooling water intake structures” for existing facilities, including the HBGS. **Again, this is essential information for fully informing the public of the scope of impacts related to this project proposal.**

Conclusion

In summary, the Phase II regulations were the focus of a great deal of discussion during public comment on the original DEIR, and should be treated as “significant new information” in this REIR. Before the HBGS demonstrates how it will comply with the Phase II regulations, it is premature for the City of Huntington Beach to license the desalination plant. Furthermore, relevant documentation of current impingement/entrainment is now available from the California Energy Commission, and that information is critical to a thorough understanding of the operations of HBGS as is, as well as predicted impacts from the co-location of a massive desalination facility. **Again, the absence of this pertinent and significant information precludes a fully informed decision and renders the REIR inadequate.**

#### **4) End Users Not Identified and Consequently “Growth Inducement” Analysis is Inadequate**

The REIR does not adequately identify the “end user” of the product water in a way that informs the public of the potential environmental impacts or allows informed decisions.

As noted in the REIR, water pollution in the surrounding region is the result of numerous point source and non-point source loadings. As mentioned above, improved water conservation and wastewater reclamation can provide a new source of fresh water while simultaneously reducing pollution loading. For example, see the Irvine Ranch Water District’s “Residential Runoff Reduction (R3)” study – see: <http://www.irwd.com/> click on “Conservation”, then “Landscape & Agricultural Irrigation”, and finally “Conservation Research.”

Alternatively, an overnight introduction of 50MGD into the water supply may exacerbate current difficulties meeting ever-stricter water quality regulations. This would be especially true in areas of the region where intractable non-point source pollution has yet to be abated, and/or sewage treatment facilities are under-capacity for the present water supplied to the service area.

The REIR seems to imply that the product water will simply be absorbed into the regional water supply and offset projected deficits in imported water. These conclusions are not substantiated with any discreet demand from specific water agencies and no way of disseminating the local environmental consequences. For instance, if the water were destined for delivery to the Rancho Mission Viejo area, the supply would raise serious concerns about the resultant land development – as well as the impacts on available sewage treatment capacity and the impact of a new source of water on polluted runoff into local streams and the ocean. Similarly, if the water is destined for areas within the Orange County Sanitation District service area, and in particular the Santa Ana River watershed, similar concerns would be raised concerning resulting development and the impact on sewer treatment capacity and urban runoff. However, should the water be destined for an area that is already “built-out” and has addressed predicted sewage treatment capacity demands and urban runoff problems – the impacts would be dramatically different.

**In short, avoiding the documentation of the “end user” of this potential new source of water precludes an analysis of the “growth inducement” aspects of the project, as well as the consequential water quality impacts. The absence of this significant information renders the REIR inadequate. As a side note, it is reasonable to request this information and analysis prior to certifying the REIR because, absent any commitment to take delivery of the water, postponing the decision should not create any hardships on the project proponent.**

## **5) Discharge of Cleaning Solution is Not Fully Identified and Impact Analysis Inadequate**

On page 3-26, the EIR indicates that chemicals used to clean the RO membranes would possibly be discharged directly to the ocean through the AES discharge conduit. Given that a major problem with operations of the Tampa Bay desalination plant revolved around filter clogging and the accumulation of excess cleaning chemicals, this EIR should fully explore the discharge of chemicals under a “worst case” scenario – similar to the experiences of the Tampa Bay facility.

Furthermore, the predicted chemical concentrations of the membrane cleaning solutions are not directly compared to the discharge requirements applicable to either the Orange County Sanitation District or to the ocean through the AES discharge conduit. In the case of Orange County Sanitation District, the applicable discharge requirements are their industrial pretreatment requirements, and for ocean discharge the applicable limits are those found in the California Ocean Plan (COP). A cursory comparison of the COP limits with values presented in Table 14B of Appendix K of the EIR indicates that concentrations of lead, mercury and arsenic in some of the cleaning solutions may exceed water quality objectives in Table B of the COP.

**In conclusion, the REIR is inadequate in that it does not fully inform the public of the “worst case scenario” of the volume of cleaning solution, and the foreseeable impacts from the discharge of the cleaning solution.**

## **6) No Cumulative Impacts Analysis of Energy Demand, Marine Life Mortality or Growth Inducement**

The REIR does not adequately inform the public of the numerous desalination proposals in some stage of planning statewide or in the southern California region. For example, in southern California alone, there are proposals to build desalination facilities in San Diego, Carlsbad, San Onofre, Dana Point, Long Beach and 2 facilities in El Segundo. Some of these facilities are researching energy-saving alternatives and/or “source water” intakes that avoid marine life mortality.

Consequently, without a thorough understanding of the several desalination proposals currently being planned, it is impossible to fully understand the cumulative impacts on regional energy demand and the associated marine life mortality and other environmental impacts.

Similarly, as noted in the section above on “Growth Inducement,” the REIR does not allow a thorough consideration of cumulative impacts on growth inducement from the introduction of multiple desalination facilities region-wide. Nor does it provide any window into understanding the cumulative impacts on sewage treatment capacity and discharges, energy demand and associated environmental impacts, land use, traffic, etc – all potentially resulting from multiple desalination facilities and the associated growth induced by the introduction of new water to the region.

Finally, the apparent “first come – first serve” result of individual desalination permit applications to local jurisdictions precludes a thorough alternatives analysis that identifies sound approaches to providing desalination in the region in a manner that would minimize the cumulative impacts noted above.

**Absent a region-wide desalination planning policy, this REIR must make a reasonable attempt to document the cumulative impacts from this and several other desalination facilities currently proposed in southern California. Also, the REIR should compare the cumulative impacts from employing the technology proposed at this facility with the alternatives proposed by facilities like that being considered and currently researched in Long Beach and Dana Point.**

## **7) Drinking Water Quality and Human Health Standards (Boron)**

The REIR does not adequately address all the implications of the product water for human consumption and the applicable health standards, specifically as it concerns boron contamination.

A recent article on the subject concludes: "Reverse osmosis desalination has tremendous potential for a supply of new water for the 21st century, especially in areas of the world where water is scarce or the quality is inadequate. Its widespread application, however, is hampered by the fact that reverse osmosis desalination does not remove boron sufficiently (only 60 percent). As a result, desalination of seawater does not reduce the boron level below the new standard for drinking water in the European Union (and will be also problematic for the non-European Mediterranean countries adopting a similar drinking water standard for boron). Therefore, additional removal techniques must be introduced in order to bring boron levels down to drinking standards." See: [http://www.geotimes.org/may04/feature\\_boron.html](http://www.geotimes.org/may04/feature_boron.html)

Seawater contains about 4.5 mg/L boron. The California Department of Health Services (CDHS) has established an action level of 1 mg/L and the World Health Organization (WHO) has a guideline of 0.5 mg/L. Thus, you need about 78% removal to get to the CDHS limit and about 89% removal to get to the WHO guideline.

There is apparently ongoing research into boron removal technology and practices. For instance, the Long Beach Water Department (LBWD) says 43-78% is a range for boron removal. They also say "Boron rejection substantially deteriorates with warm water temperatures." See slides 13-27at:

<http://www.lbwater.org/pdf/presentations/ACEBoron2004.pdf>

LBWD is experimenting with a 2-stage RO process and has tried adding fluoride (unsuccessful) and a base (sodium hydroxide) to raise the pH to improve boron removal. This appears to be successful, but it adds to the cost and requires subsequent acid addition to bring the pH back down to neutral.

**In conclusion, the REIR is inadequate in that it does not fully inform the public or our representatives of the present difficulties addressing boron contamination, nor the potential environmental impacts. Furthermore, the REIR does not include a discussion of the on-going research and possible mitigation of boron contamination to levels considered not significant.**

## **8) Public vs. Private Ownership**

7.3 Alternate Ownership Alternative: Assuming that the environmental impacts would be the same under either public or private ownership ignores the fundamental motive and fiduciary responsibility underlying private ownership: private profit. Poseidon's foremost goals are to return profit to their investors and protect investor interests, whereas the purpose of a public desalination plant would be to provide a sustainable, environmentally sound water supply with direct accountability to the public. Given that water is a public trust resource, government entities such as the Huntington Beach City Council should give public ownership of a desalination plant greater weight and not weaken its public trust responsibility by permitting the commercialization of this vital resource.

The Tampa Bay experience underscores how private ownership of a desalination plant can weaken public accountability. The project changed hands three times and the most recent owner, Coventa Energy, finally declared bankruptcy in order to avoid its contractual obligations. Poseidon's involvement in the Tampa Bay project does not set a good precedence for responsible public trust stewardship.

The REIR also dismisses the potential concerns pertaining to international trade agreements as irrelevant because Poseidon is not an international investor nor should international trade law be evoked if regulation is uniform and non-discriminatory against foreign investors. International trade rules, such as NAFTA's Chapter 11, are written so broadly that international investors can challenge any government action that they might deem *tantamount* to expropriation or might *indirectly* discriminate against a foreign investor. The Methanex case challenging then Governor Davis' executive order banning MTBE is a good example of, in this case, a Canadian investor claiming indirect discrimination. They are seeking \$970 million in lost profits, including expected future profits. The case is being heard in a secretive NAFTA tribunal where environmental concerns have been blocked (petitions filed by Earthjustice Legal Defense Fund have been repeatedly rejected, for example).

Poseidon describes itself as a private water company that invests in water supply projects around the world. It is not inconceivable that in the future, if the desalination plant is not meeting public expectations and the public moves to seize the facility through eminent domain, Poseidon could use a foreign partner to file a claim in an international investment court. Bechtel, a San Francisco based company, is currently suing for \$50 million in compensation for a public-private partnership in Bolivia that was terminated under significant public opposition. Bechtel filed this claim under a bilateral investment

treaty between the Dutch and Bolivian governments, claiming a small Dutch subsidiary gave them legal standing. The case is currently underway in a highly secretive tribunal in a branch of the World Bank called the International Court for the Settlement of Investment Disputes. Clearly, corporations with a global reach are finding creative ways to circumvent domestic environmental laws. This threat can not be underestimated.

## **CONCLUSION**

In conclusion, we want to again emphasize the importance of setting a standard for CEQA review of this and future desalination facilities that fully informs the public of foreseeable environmental impacts. This REIR falls far short of meeting that standard.

We also want to incorporate by reference the comments submitted to you by Heal the Bay and the Planning and Conservation League.

The southern California region, like so many other areas of the state and nation, is facing intractable problems of water pollution, land use planning, energy demand, declining coastal and marine living resources, loss of coastal and marine habitat – amongst myriad considerations implicated by the development of desalination facilities. Proper planning for desalination facilities and other alternatives for meeting the increasing demand for fresh water in the region can either exacerbate these problems, or be a tool in resolving them.

The REIR will be the basis for several considerations in the future – well beyond the jurisdiction of the City of Huntington Beach. For example, the REIR will inform California Coastal Commission coastal development permit decisions, Santa Ana Regional Water Quality Control Board “Clean Water Act” decisions (including the ocean water intake and discharge permits for the HBGS), California Energy Commission permits, the California Department of Water Resources “California Water Plan”, several Urban Water Management Plans, etc. With this in mind, certification of the REIR demands a rigorous and thorough review.

For all the reasons stated above, the REIR fails to meet the mandates of the California Environmental Quality Act. The inadequate approach to documenting the environmental impacts of the proposed Huntington-Poseidon desalination facility fails to fully inform the public of the foreseeable impacts of this project on “stand alone” basis, within the context of changing regulations for the co-located HBGS, and within the context of the foreseeable cumulative impacts of multiple desalination proposals.

We therefore request that the REIR be re-circulated once again with a more thorough documentation and analysis of the issues raised above. We are concerned that a traditional “Response to Comments” in finalizing the REIR will be insufficient.

Once again, thank you for your consideration of these comments.