Item Th17a
Recommended Revised Findings for Coastal Development Permit E-06-013
Poseidon Resources (Channelside), LLC

ATTACHMENT 1:
November 15, 2007 Hearing Transcript
(Note: attached transcript includes Commission deliberations only)

CA Coastal Commission
11/15/07
Poseidon Resources Channelside

* * * * *

(Commission deliberation only)

CHAIR KRUER: Thank you, sir.

At this time, I will close the public hearing. I'll go back to staff for staff response.

EXECUTIVE DIRECTOR DOUGLAS: Mr. Chairman, let me turn it over to Tom, and then Susan and I, and I think Hope will have a couple of comments, as well.

CHAIR KRUER: Okay.

STAFF ENVIRONMENTAL SCIENTIST LUSTER: Thank you, Mr. Chair and Commission.

I'll start with a key point, just to reemphasize. Staff is not recommending the Commission vote against desalination, just that you deny this particular project as proposed. Staff believes another version of this project, or other desalination projects, would be able to provide needed water and meet *Coastal Act* requirements.

I'll address some of the issues that you heard about in comments today. Regarding entrainment, staff's main issue is that we have not yet seen the entrainment study. Poseidon provided a 7-page memo, 2 different sets of protocols, and a letter addressing some concerns raised by the Regional Board, but it did not provide the study.

In the recent entrainment studies done for power plant projects, staff was involved in reviewing proposed protocols, evaluating partial and full sampling results, assessing the modeling approaches used, and interpreting the proposed study results.

For this proposed project, staff has no idea how Poseidon conducted the study, and how it arrived at its reported results. As a result, we cannot evaluate whether Poseidon's stated 37-acre impact is accurate, or whether their proposed mitigation measures would be adequate.

Regarding mitigation, last month Poseidon provided a brief document describing several possible mitigation options, including a 28-acre wetland mitigation option at San Dieguito Lagoon. Today, Poseidon stated that it plans to provide about 41 acres of mitigation wetlands at an already approve site at San Dieguito Lagoon, and included in its presentation a 1-page site plan of that area.

Staff notes that these proposed sites have not yet been approved as mitigation sites, neither proposal included standard elements that the Commission normally requires as part of its approval of a mitigation plan, such as

performance standards, monitoring measures, and contingency plans. Therefore, staff doesn't have the level of detail that the Commission normally requires for mitigation.

I am going to turn it over, briefly, to Deputy Director Hansch who will provide some more details on that issue.

CHAIR KRUER: Okay.

DEPUTY DIRECTOR HANSCH: Thank you, Commissioners.

As you know, I have been involved in the San Dieguito restoration project for years, because it is part of the Southern California Edison mitigation program, and I just want to set the record, remind the Commission of the history of what the Commission did.

The San Dieguito mitigation program was mitigation for entrainment and impingement impacts at the San Onofre Nuclear Generating Station, and the Commission imposed those mitigation requirements at San Dieguito, and included performance standards.

When the Commission looked at the whole San Dieguito Restoration Project, and approved it in October -- the focus of that permit is October 2005 -- when the actual permit was approved, that was for the restoration required for San Onofre, itself. The Commission did look at the broader restoration of the San Dieguito area, and there is additional acreage there available for restoration, but the specifics of it are not laid out enough that you could authorize that without a separate permit for that restoration. But, it looks like there is some available acreage there.

And, the other point I wanted to make, is that it looks like the applicant is talking about having just the Regional Water Quality Control Board approve the mitigation program, and this Commission has consistently approved, reviewed mitigation programs, as part of the Coastal Development Permit conditions.

STAFF ENVIRONMENTAL SCIENTIST LUSTER: Thank you.

A few more comments, regarding sedimentation, and the beneficial uses of Aqua Hedionda.

Staff is not suggesting that the lagoon will or should go back to pre-1950 conditions. The power plant owner has confirmed that they will continue to maintain the lagoon, or will allow qualified third parties, such as those involved in other nearby lagoon maintenance projects, to perform the needed maintenance.

Earlier today, Poseidon referred to the sediment volumes noted in staff's recommended findings, and said there was an error in staff's conclusion; however, much of staff's analysis was based on the figures provided in Poseidon's studies that showed a substantial reduction in sedimentation within the lagoon, both within the outer basin, which is now

subject to regular dredging, and its associated impacts, and within the inner basin, which is identified as impaired due to excess sedimentation.

In that regard, Poseidon's studies are supported by the analysis provided by the State Lands Commission in its environmental review from 2 years ago.

Regarding the designated impairment of the 6.8-acre area of the inner basin, Poseidon contends that its use of the estuarine intake would not be subject to measures needed to remove that impairment.

That is, the TMDL process that the Regional Board must complete before approving projects that would cause additional sedimentation; however, a TMDL is a watershed-based approach to restoring a water body to health. The needed TMDL is not likely to just include measures within that 6.8-acre area that will likely require water-body wide measures, including those necessary to reduce the amount of sedimentation in the outer basin that results in increased sedimentation in the inner basin.

Overall, regarding sedimentation, and Aqua Hedionda's beneficial uses, staff's conclusion is that the lagoon's beneficial uses could be maintained with no intake in the lagoon, with a much reduced dredging regime at the mouth of the lagoon.

Regarding alternative intakes, as the basis for its alternatives description today, Poseidon stated that an offshore intake would cause greater adverse impacts than the estuarine intake. It then showed an offshore intake that would be located in a kelp bed. Staff completely agrees with Poseidon that an intake in a kelp bed is a bad idea. We note that there is a large offshore area to the north of this location, that other Poseidon reports describe as several hundred acres of featureless sandy bottom habitat.

Again, staff doesn't have an entrainment study from that area, but at the very least, those areas generally have a much lower density of organisms than an estuary. Further, Poseidon's contentions suggests that its other proposed project, which would use an offshore intake at Huntington Beach, would create unacceptable impacts.

Regarding the EIR, in relation to the issues I have just mentioned, staff notes that the EIR's limited review of the stand-alone facility assumed that such a facility was speculative, and only looked at a small part of the entrainment issues. The EIR did not evaluate the implications a stand-alone facility might have on lagoon sedimentation, alternative intakes, and other issues.

Further, just to provide a partial time line, the EIR was certified in June 2006, and in September 2006, the Regional Board issued its provisional NPDES permit, that required Poseidon to come up with the flow minimization plan,

1 and potential mitigation plan.
2 Regarding the issues around the water transfer offsets, Poseidon contends the water it produces will reduce
3 the amount of water imported to the San Diego region. Although, there are mechanisms available, such as assigning
4 instream water rights that would allow such a 1:1 trade off, Poseidon has not presented any evidence that its project
5 would be subject to those mechanisms.
Further, the San Diego Water Authority is
6 continuing to seek additional imported water supplies. Recent announcements have identified the authority's efforts
7 to obtain additional water from farm interests in the central valley, and from the Imperial Irrigation District, near the
8 Colorado River.
Regarding greenhouse gas emissions, staff commends
9 Poseidon for its intent to become carbon neutral; however, given our concerns for their proposal, we do not yet have the
10 information needed to identify how or whether that will occur.
Our first concern is that Poseidon's proposed
11 baseline of about 546 pounds of carbon dioxide emission per megawatt hour is well below credible figures from other
12 sources, including the baseline figure used by the California Climate Action Register, which Poseidon cites as its source.
13 That baseline figure appears to be based on a math error, or an error in reporting. Other figures from the San
14 Diego Gas and Electric Company identifies its baseline figure as from about 800 to 1100 pounds per megawatt hour. Based on
15 SDG&E identified portfolio, and after consultation with staff from the State Lands Commission, and the Energy Commission,
16 your staff believes that a baseline figure of no less than 800 pounds would provide a credible baseline for Poseidon's
17 plan. We note, too, that the State Lands Commission's staff used an even higher figure at Poseidon's hearing before that
18 Commission two weeks ago.
Poseidon's plan also relies on getting credit for
19 foregone water imports, and as I noted just a moment ago, there is no mechanism in place that would result in that type
20 of tradeoff.
Staff is also concerned that Poseidon's plan
21 consist, primarily, of a list of measures that could be done. For example, its plan states that Poseidon could install
22 various types of equipment, and that it is exploring various options to offset emissions.
23 To sum up these comments, again, staff is not recommending you deny desalination. We are recommending only
24 that you deny the Coastal Development Permit for this particular project as proposed. The applicant has not yet
25 provided information needed to assess important aspects of the project, and has not yet provided the level of certainty

that the Commission generally requires to address the project's significant adverse impacts. Absent that information, it is not possible for staff to recommend approval.

We believe this proposal, if modified, or another facility could provide a desalinated water supply to the area, and meet *Coastal Act* requirements; however, as currently proposed, this project creates significant non-conformity to numerous *Coastal Act* policies, which results in staff's recommendation of denial.

With that, I'll turn it over to Executive Director Douglas.

EXECUTIVE DIRECTOR DOUGLAS: Yes, Mr. Chairman, again, I am not going to go over what Tom just said, but the fundamental flaw here, in our view, is lack of information, certainly lack of information relative to significant impacts from entrainment of this project, when the power plant stops its once-through cooling.

And, the mitigation that you have heard about, simply does not, in our view, meet the standard or the test that this Commission needs to meet in order to make the decision, if you are inclined to approve this, knowing what the impacts are, the extent of the impacts, and what the appropriate mitigation should be.

The precedent that would be set by approving the most environmentally destructive method for desalination is significant, and should be of significant concern to this Commission. There are many parties out there that are watching this Commission's action on this particular matter, and I think that is of major concern.

And, as Tom indicated, the suggestions relative to greenhouse gas reductions that Poseidon has presented, they are good ideas there. There are some good components, but from our perspective those are not components, from the way we view it at this point, that are specific enough for us to be able to make an assessment that there is an appropriate level of reduction and mitigation for the greenhouse gasses that will be emitted, as the result of this project.

So, we commend them for taking that initiative, but it doesn't have the degree of specificity that I think this Commission requires to make the findings necessary under the law.

The last item is the issue that was raised relative to indemnification. The representation by Poseidon's attorney that the Commission doesn't have the authority to require that, I would just ask Hope to comment on that issue.

CHAIR KRUER: Ms. Schmeltzer.

CHIEF COUNSEL SCHMELTZER: Through the Chair, thank you.

We believe that the plain language of the *Coastal Act* under Section 30620, and Regulation Section 13055, does allow the Commission to seek reimbursement of expenses, which includes attorney fees. This was presented to you in much more detail at a presentation at the June meeting, so I will refer you back to that, but attorney fees do fit the statutory and regulatory discussion of reimbursement of expenses, which are specifically provided for.

EXECUTIVE DIRECTOR DOUGLAS: And, again, you will recall that there was discussion about when it was appropriate to use that particular condition of approval, and we -- and you -- made the decision that you were not going to use that in the case of single family homes, but in other projects, especially when there is the question of potential litigation, it certainly seems to us that it is highly appropriate, and in fact, you have had applicants come in here and suggest that themselves, such as the Malibu Farms project did.

So, in terms of the Commission not having the authority to do that, that is simply not correct.

With that, Mr. Chairman, we are prepared to answer any questions you may have.

CHAIR KRUER: Thank you, very much, Mr. Douglas.

And, with that, I will move to the Commission, and I will go to Commissioner Hueso.

COMMISSIONER HUESO: I think I am ready to make a recommendation, but I need the assistance of staff, and the Attorney General's Office on two items that I think are still outstanding, but get to the point of some of the concerns raised by staff.

So, I am looking at two documents here. One is Exhibit A, the applicant's proposed Coastal Development Permit conditions. And, the other one is the staff's proposed conditions for Coastal Commission potential approval of Poseidon's project. So, these are the two documents I am looking at, and maybe we can -- I don't know if the staff has had an opportunity to look at the applicant's proposed Coastal Development Permit conditions, marked as Exhibit A, but I would like to go through them, if possible, to bring some more clarity to some of the concerns.

I don't know if it is possible to put these on the screen? The first one is Special Condition No. 8 of the applicant's conditions, and Special Condition No. 8 of the staff's recommendation. We see that the applicant has made some modifications to staff's Special Condition No. 8 that includes some deletions and some additions, and I, right now, would like to just have the staff respond to the applicant's changes to the staff's version of No. 8.

So, they added some language:

"Prior to commencement of construction, the

1 permittee shall submit to the Coastal
2 Commission evidence of the Regional Water
Control Board's approval of a marine life
3 mitigation plan. The marine life mitigation
plan shall provide for the restoration of no
4 less that 37 acres of marine wetlands. The
plan shall detail the specific site of
5 mitigation. The site shall be contained within
the San Dieguito Wetland Restoration Plan that
6 was approved by the Coastal Commission
October 12, 2005, Coastal Development
7 Permit No. 6-04-88, and was the subject of
a final environmental impact that was
8 prepared and become certified by the San
Dieguito River Park Joint Powers Authority,
9 and the U.S. Fish and Wildlife Service, or
such substitute sites, or site, approved
10 by the Regional Quality Control Board,
no later than the commencement of commercial
11 operations of the desalination facility.
The permittee shall commence implementation
12 of the plan, and the executive director may
extend the deadline from its implementation
13 plan upon Poseidon's request and showing of
good cause. The plan shall include the
14 following..."
And, it lists staff's goals A, B, and C with some
15 minor modifications.
Now, how is that a big departure from what staff
16 proposed, and is that acceptable to staff, in terms of the
appropriate course of action to insure that this information
17 is provided to the Coastal Commission?
EXECUTIVE DIRECTOR DOUGLAS: Commissioner Hueso,
18 it is not. This, basically, eliminates any role by the
Commission, in terms of your responsibility to assess impacts
19 on the biological productivity of the marine waters, as
required by the *Coastal Act*, and defers any kind of
20 mitigation relative to those impacts to whatever the Regional
Board comes up with.
21 And, it limits it to an acreage number, that as
Tom just pointed out, we have no way of knowing that that is
22 adequate mitigation for the impacts from the entrainment that
will result from this project.
23 And, then, it refers to the San Dieguito permit.
That permit, as Ms. Hansch just pointed out, does not
24 contemplate this kind of mitigation, so the reference here is
meaningless. It is not doable. And, there is a difference,
25 a very significant difference between the notion of prior to
commencement of construction, and prior to issuance of the
permit, and I would ask counsel to note the difference. So,

it is fundamentally, from our perspective, not only would totally wipe out, neutralize, what we had recommended, if you were going to approve this, but it also -- we don't think it is adequate at all, under the law.

Hope, if you could just hit the difference between prior to issuance and commencement of construction.

CHIEF COUNSEL SCHMELTZER: Sure.

COMMISSIONER HUESO: Going back to staff's recommendation -- just before you respond -- do you think the staff recommendation meets that threshold of fulfilling the Commission's responsibility and our role?

EXECUTIVE DIRECTOR DOUGLAS: Well, we prepared these, thinking that if you were going to approve this, this at a minimum would be what we think would be necessary. Whether or not it is going to be adequate to pass muster, is for you to decide, and then who knows, if it gets challenged.

But, if you were to go with what the staff has recommended, relative to the marine impacts, the change that I just want to make right now for the record, would be if you look at the bottom of page 3 of 8, under "B" which is shown in strikeout, if you keep our suggested conditions, we would strike, on the second line from the bottom:

"...within Aqua Hedionda Lagoon..."

COMMISSIONER HUESO: Where are you?

EXECUTIVE DIRECTOR DOUGLAS: I am on page 3 of 8 --

COMMISSIONER HUESO: Of your report?

EXECUTIVE DIRECTOR DOUGLAS: Right.

COMMISSIONER HUESO: Or of the applicant's?

EXECUTIVE DIRECTOR DOUGLAS: The applicant's.

COMMISSIONER HUESO: Okay, at the bottom of the page, okay.

EXECUTIVE DIRECTOR DOUGLAS: And, the strikeout language is what was in our proposed language, or suggested language.

So, it is the last two lines, it would just put a period after "wetland habitat", and strike the rest of that paragraph. So, that it leaves open the opportunity to have the mitigation at San Dieguito, but it also could be at Aqua Hedionda.

COMMISSIONER HUESO: Okay.

EXECUTIVE DIRECTOR DOUGLAS: So, that is the only thing we could change.

COMMISSIONER HUESO: So, and/or. It could be and/or?

EXECUTIVE DIRECTOR DOUGLAS: Pardon me?

COMMISSIONER HUESO: It could be and/or. It could be as it is expressed, or wetland habitat, period, and exclude "within the Aqua Hedionda Lagoon."

EXECUTIVE DIRECTOR DOUGLAS: That's right.

COMMISSIONER HUESO: Okay.

EXECUTIVE DIRECTOR DOUGLAS: So, that would be left open, and it could mean San Dieguito.

COMMISSIONER HUESO: I am just interested to know why the applicant might have deleted the staff's recommendation.

If you could come to the podium, and state your name for the record, and give us a response on why those conditions are unacceptable?

MR. ZBUR: The reasons why we had changed the condition were -- well, there were a number of them.

One was that this required a 2:1 mitigation ratio --

CHAIR KRUER: Name for the record, please.

MR. ZBUR: Oh, I am sorry, Rick Zbur, with Latham and Watkins, representing the applicant.

This required a 2:1 mitigation ratio, which was different from what the staff had asked us to do initially. Our 37 acres was based upon instructions -- which I think we quoted in the presentation -- from Mr. Luster, to use the AES protocol, and that protocol resulted in a -- which we believe is very, very conservative. It is consistent with what was imposed on AES, and resulted in the 37 acres.

The staff's formulation of this, basically, leaves open what the protocol might look like. It doesn't give Poseidon any certainty, in terms of what the number looks like, and what the mitigation costs would be, and would require us to come back to the Commission, which we think is an open-ended requirement.

We point out that we believe that this is not required because the Carlsbad EIR, City EIR, found in its certified EIR, which has been stood up to litigation on a dismissal, that there were no significant marine impacts.

So, the reason why we think you can act today is because we have followed the protocol staff asked us to do. It was based upon a study, and you have additional insurance in the form of concurrence by the Regional Board -- who has primary authority over this -- and it would give certainty and allow this to move forward, and we think fully mitigates this, and not only mitigates it, but enhances the marine environment.

COMMISSIONER HUESO: And, I am just concerned -- and I want you to respond to this -- that in advocating our responsibility to the Regional Water Quality Board, saying you decide this for us, I am just concerned that we are doing that.

MR. ZBUR: Well, I think you haven't advocated it. What you are doing is you are imposing a condition that imposes a mitigation requirement on the project through this process. This becomes an enforceable mitigation measure, but

what it does do is it requires that the Regional Board provide concurrence that, in fact, they approve the protocol.

COMMISSIONER SCARBOROUGH: A followup question on that?

CHAIR KRUER: Yes.

COMMISSIONER SCARBOROUGH: So, you have done an EIR?

[No Response]

Yes?

MR. ZBUR: Yes.

COMMISSIONER SCARBOROUGH: The EIR said no significant impact?

MR. ZBUR: No significant marine impact.

COMMISSIONER SCARBOROUGH: Marine impact, so technically you wouldn't have to do any mitigation?

MR. ZBUR: Under the CEQA process.

COMMISSIONER SCARBOROUGH: Under the CEQA process, so it is the CEQA process within the EIR that is within our purview, before us today, as connected to the CDP that wouldn't require any mitigation?

MR. ZBUR: That is correct. I think the Coastal Commission staff's -- to be fair -- position would be that the *Coastal Act* allows you to look at whether or not all measures are mitigated, and whether the marine environment is enhanced, and that is why they have asked us to look at mitigating the portion of the impact that was determined to be less than significant. So, what this does is that it mitigates that portion of the impact.

I do want to read from the February 20 letter, that this was consistent with what the Coastal Commission staff asked us to do.

Mr. Luster said:

> "We recommend that the assessment protocols be at least equivalent to those used in the recent AES Huntington Beach entrainment..."

CHAIR KRUER: Mr. Zbur.

MR. ZBUR: ..."conducted pursuant to review by the California Energy Commission."

CHAIR KRUER: Yes, you need to just answer the question.

MR. ZBUR: I am sorry.

COMMISSIONER HUESO: I was just letting him.

CHAIR KRUER: Keep going Commissioner Hueso.

COMMISSIONER HUESO: Okay.

I also want to go to Item No. 10, and Item 10 of the applicant's response, and Item 10 of the staff's response.

EXECUTIVE DIRECTOR DOUGLAS: Okay.

COMMISSIONER HUESO: And, they added some language there:

1 "Permittee shall submit to the Executive
2 Director, Climate Action Plan in substantial
conformance with the plan dated November
3 2007. Within one year of the commencement
of commercial operations of the desalination
4 facility, the permittee shall implement
the plan for the life of the project. Prior
5 to commencement of commercial operations,
the permittee shall provide written
6 conformation from the California Air Resources
Board that the emissions calculations contained
7 in the plan are consistent with CARB
recommended methodologies. The Executive
8 Director may extend these deadlines for
implementation of the plan upon Poseidon's
9 request and the showing of good cause."
And, they erased:
10 "Commission revised minimization and green
house gas reduction plan that address comments
11 submitted by staff of the Coastal Commission,
State Lands Commission, and the California Air
12 Resources Board."
And, I just wanted to go over if there were any
13 concerns from staff as to what they added and omitted?
EXECUTIVE DIRECTOR DOUGLAS: Our concerns here
14 would parallel the concerns that we raised relative to the
marine environment impacts, because it, basically, takes from
15 the Commission your discretion, and your responsibility to
determine whether or not the mitigation relative to
16 greenhouse gas emissions, and carbon emissions, that have
impacts on coastal resources, whether or not that is
17 adequate, so no approval by the Coastal Commission.
This would be after-the-fact, that is after the
18 commencement of the commercial operations -- whatever that is
-- rather than prior to issuance of the permit, so that you
19 are, again, deferring any potential mitigation until after
they have started operations, and in terms of your ability to
20 approve a project under the *Coastal Act* we just don't think
that that in any way conforms to the requirements of the law.
21 It, basically, provides that you defer to what the
Air Resources Board does, as opposed to exercising your own
22 responsibility to review what is proposed, to mitigate or
reduce greenhouse gas emissions from this project, which you
23 are being asked to issue a Coastal Development Permit for.
So, it is a process. It is a delegation of
24 authority and responsibility that this Commission has not
done in the past.
25 **COMMISSIONER HUESO:** Yes, attorney general? or
legal counsel?
CHIEF COUNSEL SCHMELTZER: Thank you, Commissioner

Hueso, I would just like to add to that, that both on Special Condition 8, which says, "Prior to commencement of construction..." so in that case, the applicant is asking for the mitigation to be approved after the permit is issued, so that is not knowing exactly what it is until after you have issued a permit.

In this case, for Special Condition 10, they are asking for prior to the issuance of the permit, but for Executive Director approval, and both of those ways of setting them up are problems. Under the *Sundstrom* case, administrative approval is not sufficient. The way staff has set this up has them come back directly to you to make sure that the Commission agrees that the impacts are sufficiently mitigated prior to issuance of the permit.

EXECUTIVE DIRECTOR DOUGLAS: And, I might add, too, that this Commission has, in the past, when you faced similar situations, you have imposed conditions that require a plan for mitigation, and even though you didn't know it at the time that you approved it, at least you had the certainty that that plan would come back to you for approval before you issue the permit, and we think that that is the minimum required by the law.

COMMISSIONER HUESO: I would like --

COMMISSIONER BURKE: Mr. Chair.

COMMISSIONER HUESO: I'm sorry.

CHAIR KRUER: Commissioner Burke.

COMMISSIONER BURKE: Could I jump in here a minute?

COMMISSIONER HUESO: Sure, please.

COMMISSIONER BURKE: Now, I want to make sure that I understand correctly what we are talking about here. We are talking about two, at least two elements, one is a carbon neutral footprint, and the other is the water portion.

Well, when I read this, I figured that the carbon footprint is such a complex compound issue that at South Coast we have been studying it, now, for probably five years, and recently we created a Blue Ribbon Panel to develop a plan to deal with down the road carbon footprints, because my understanding is that these guys don't create any carbon footprint. They create carbon footprint only from the electricity they purchase. Is that true or false?

STAFF ENVIRONMENTAL SCIENTIST LUSTER: Thank you, Commissioner.

The analysis that staff provided was just for the carbon from the electrical use which is not --

COMMISSIONER BURKE: Which they purchase?

STAFF ENVIRONMENTAL SCIENTIST LUSTER: Correct.

COMMISSIONER BURKE: Now, here is another thing that bothered me about that electricity they purchased, is it true or false that they have a contract with a utility which

has down-the-road carbon footprint which is less than we used in our calculations of mitigation?

It is a "Yes" or "No" question.

STAFF ENVIRONMENTAL SCIENTIST LUSTER: We don't know what sort of contract --

COMMISSIONER BURKE: Well, that is not what I understand.

Let me ask the applicant, do you have a contract within a power company that provides power with a lower carbon footprint than used in this equation?

This is not a trio thing. It is a "Yes" or "No".

MR. MAC LAGGAN: Commissioner Burke, we do not have a power purchase agreement. We will be taking the power from our local utility, San Diego Gas and Electric, just like any other customer does.

COMMISSIONER BURKE: And, their carbon footprint is lower than used in this equation, true or false?

MR. MAC LAGGAN: Today, it is -- we are using their carbon footprint, as provided to the Climate Action Registry last year, as the numbers in the plan. That number will go down over time, as you --

COMMISSIONER BURKE: Well, it can't be --

MR. MAC LAGGAN: -- because they are moving toward --

COMMISSIONER BURKE: -- my role and your role.

MR. ZBUR: The number that was used for San Diego Gas and Electric is lower than the number that the Coastal Commission's staff used in their analysis, significantly lower.

COMMISSIONER BURKE: I know that. So, but I didn't know that until I asked these guys to go in and meet with the scientists at South Coast, because I knew it was too complex for me to grasp, so I had them meet with our top scientists, and have them give me a report, which said that they are better than carbon neutral.

Now, we don't want to issue a report from South Coast, because this is San Diego, and San Diego has an excellent air quality district. But, one of the things that mystified me was that I looked all through here, and I couldn't find one reference -- they talk about what carbs are not doing -- is the San Diego Air Quality District doing anything in carbon footprinting?

Not you, them.

When you were doing your research to say that, you know, they had a carbon footprint problem, did you ask the local air district? It is a "Yes" or "No" question.

STAFF ENVIRONMENTAL SCIENTIST LUSTER: No, we didn't confer with them.

COMMISSIONER BURKE: You didn't, okay.

Now, in our discussions earlier today of the

manner in which we deal with various items as it relates to budget, I would think that you would be looking for expertise that is paid for by another government agency to provide you with information -- positive or negative. I am not saying they are good guys at this moment or not, because I am still trying to figure this out, myself.

But, I was -- after talking with our Executive Director there, I was less than impressed with our analysis of their positions related to this carbon footprint.

So, if this -- and I don't know how this is going to go, either, but if this was to go, my attitude would be I am not interested in trying to learn all of the facts necessary to evaluate ongoing, because it is changing by the day, this analysis of this issue, so it would seem to me that we would want the experts in the area to handle that. It would seem to me, if we did pass this thing -- eventually tonight or whenever, if ever -- we would want the San Diego Air Quality District evaluating whether they were actually -- because there is another addition to this thing.

They are talking about purchasing carbon credits. I wish I were 20 years younger. In Los Angeles, carbon credit trading program is currently operating at $1.5 billion a year. It is a great business to be in. The problem is there are as many shysters in the carbon trading credit business as there are in any business you can name -- where there is $1.5 billion laying around, which would lead me to go back to the same point. You go back to the San Diego Air Quality District, they know who the real guys are. They know if you are buying real credits, and so you let them make that evaluation, because we would never know that, not in a million years, sorry to talk so long.

COMMISSIONER HUESO: I want to make a motion, Mr. Chair?

CHAIR KRUER: Yes, go ahead, Commissioner.

[**MOTION**]

COMMISSIONER HUESO: I move that the Commission approve Coastal Development Permit No. E-06-013 with the following modifications and conditions.

From the staff, conditions for Coastal Commission potential approval of Poseidon project, standard Condition Items 1, 2, 3, 4, and 5, Special Condition Items 1, 3, 4, 6, 7, 9, 12, 13, 14, 15, 16.

From the applicant's proposed Coastal Development Conditions, Special Condition Items 2, 5, 11, 17, 8, and 10.

And, I recommend a "Yes" vote.

COMMISSIONER BURKE: I'll "second" it.

EXECUTIVE DIRECTOR DOUGLAS: Mr. Chairman.

CHAIR KRUER: Yes, okay.

EXECUTIVE DIRECTOR DOUGLAS: Can we ask you to go through those again, because he read through them so fast

that we couldn't keep up.

COMMISSIONER HUESO: Standard Condition Items from the staff's conditions for Commission potential approval of Poseidon project, Standard Condition Items 1, 2, 3, 4, and 5. So, the first five, 1, 2, 3, 4, and 5.

Of the Special Condition Items 1, 3, 4, 6, 7, --

EXECUTIVE DIRECTOR DOUGLAS: Slow down, please.

COMMISSIONER HUESO: 1, 3, 4, 6, 7, 9, 12, 13, 14, 15, 16.

From the applicant's proposed Coastal Development Conditions, Special Condition Items 2, 5, 8, 10, 11, and 17.

CHAIR KRUER: Okay, that is your motion, and you have a "second" by Commissioner Burke.

Is that right, Commissioner Burke, did you "second" that?

COMMISSIONER BURKE: Yes.

CHAIR KRUER: Thank you, sir.

Okay, would you like to speak to your motion now?

COMMISSIONER HUESO: Sure, and my speaking to the motion, I would like to ask a question of the applicant, just for clarification. I heard it all, but I would like to get it back on the record with some more clarity and some more detail.

You mentioned reforestation, as one of the efforts to combat carbon emissions, what percentage of your -- can you speak to your budget for fighting carbon emissions, your program, and what percentage are you willing to apply to reforestation, and are you willing to front load your reforestation efforts, as a priority of your plan?

MR. WINROW: Mr. Chairman, Commissioners, my name is Walter Winrow. I am the president of Poseidon Resources.

With respect to your question, Commissioner Hueso, our Climate Action Plan, that element that relates to offset projects represents about $5 million, so over the course of the 30-year life of the project, and we would be prepared to dedicate 10 percent of that, or $500,000.00 a half-a-million dollars to reforestation.

And, furthermore, we would be prepared to have those expenditures to be the first ones that are expended of that $5 million budget.

COMMISSIONER HUESO: Okay, thank you, very much.

As far as my comments, first of all, I have been very, very impressed by all of the members of the public that have come today to speak, and I first of all would like to offer my sincere thanks to NOAA, Coast Keeper, Surfrider, Coastal Law Enforcement Action Network group, and many others for their active participation in this project. Public scrutiny is a very vital part of insuring that the characteristics, services, impacts, every project has in our community are dealt with.

There is no doubt that the efforts of these groups have contributed greatly to this project, so I, personally, want to thank Marco Gonzalez, who came and spoke here very eloquently, and his excellent and enlightening presentation was very, very well done. There is no doubt in my mind that he is probably one of the best with what he does in his profession.

I also want to thank all of the staff for their excellent work, excellent work on this project, and for their recommendations. I think without their work, we would really be deprived of a very, very important debate that needs to take place. And, I think they have taken a lot of criticism for what they have done, and they don't deserve that, because I really believe that this staff is very, very passionate about protecting our coastal resources, and they do their job with that in mind, and their contributions are very, very vital to the discussions, have gone a long way to helping protect the coast, and that is something that I really believe, that they care passionately and deeply about coastal resources, and for that they deserve praise and not scorn. So, I wanted to thank them for that. That is not to say that they are always right, but they do care deeply about the coast, and for that, again, they deserve praise.

I also want to thank my staff member, if he is still here, Alonzo Gonzalez, who has been out there working very, very hard for half a year on this project. We have gone through a lot of information and he has really helped me be at multiple locations through his presence, to gather facts for this project, and I think he has really done a great job in helping me balance the benefits and detriments of this project, as they apply to our coastline.

I also want to thank the City of Carlsbad for contributing their coastline, and taking a very proactive approach to finding a solution to a very important problem. And, they have really taken a leadership issue on a very important issue, and they should be commended for that.

And, I think they represent their coastline, they live there, and they play there, and what they have to say on the subject is very important, in terms of the impacts to the coastal resources.

I want to provide some background information that might not be relevant to the *Coastal Act*, but I think it provides kind of a frame of mind. We did have a lot of people to speak on issues across the state, economics, and other issues that are very important to everybody, but probably don't relate as much to the *Coastal Act*, and we are really here to enforce the *Coastal Act*, and that is something that most everybody doesn't, I don't think, from the comments I heard, I don't think people really understood that.

Our decision on this project really comes down to

1 whether this project is consistent with the *Coastal Act*, and
2 I would like to present some, maybe some information that
3 might not seem relevant at first, but I think I am going to
4 wrap it up into a point that is going to come down to the
5 *Coastal Act*, and it has to do a lot with our region.
6 San Diego is being a very, very large metropolitan
7 area, 21st in our country as a metropolitan area, and home to
8 3 million residents, if you include Tijuana, that also relies
9 on some of our resources, that is 5 million people that we
10 are trying to provide water and sewage treatment.
11 The city I represent, the city council, takes in
12 1.3 million of those residents, so we are talking about a lot
13 of people that rely on water.
14 San Diego's climate is semi-arid, and snow and ice
15 are virtually nonexistent in the winter time, making water
16 resources scarce and unreliably locally, so it is hard for us
17 to produce water locally. The famed Santa Ana winds that
18 many of you have come to know, affect our region yearly, and
19 have had a devastating effect on our water resources, by
20 reducing humidity rates to dangerously low levels that affect
21 our water availability, and contribute to fires, such as the
22 fire storm that we recently witnessed that had a devastating
23 effect on homes, and the environment throughout the county,
24 and that does effect the coast, because after rainstorms, a
25 lot of this ash, and a lot of this material comes into our
ocean, and it does effect water quality.
Much of the wildlife and plant life was destroyed,
so a project like this will provide an additional burden on
water quality, and -- or might provide. And, with some of
the comments that Chairman Burke made, it does present some
questions as to whether this project will provide impacts.
But, I think, in going to the extent of reforest-
ation that will help combat carbon emissions, whether this
project creates them or not.
And, one thing we have to note, with the ongoing
climate changes, some of this environmental habitat may not
regenerate, so in assisting it, we will go a long way in
helping to improve air quality.
I just want to also mention the largest sectors of
San Diego's economy is defense, which boosts the largest
naval fleet in the world, largest ship building yards in the
United States, and manufacturing tourism, which is important
to the country. We also have biotechnology companies, and
pharmaceuticals that rely on consistent water supplies to
function cost effectively.
San Diego ranks among the top biotech clusters in
the United States, and due to the large military presence,
which is responsible in providing the bulk of security to the
western United States and the Pacific, San Diego is home to
national defense contractors, such as General Tomics and

1 Science Applications International Corporation that relies on
2 a consistent water supply availability.
As the sixth largest city in the country, with
3 many of the country's vital defense and manufacturing
resources, it is obvious that in keeping San Diego
4 economically healthy is vital to our entire country.
In addition, protecting prosperity in our city
5 will be essential to our ability to generate revenues,
resources, and awareness to continue to improve our
6 coastline.
We have important manufacturers like Calco, and
7 ISP Algaenics that export food products derived from kelp,
that are threatening to relocate to other areas with a more
8 reliable water source. What then? we will lose quality jobs,
and very important stewardship of our kelp beds at risk to
9 our coastal resources.
San Diego is also plagued by very high housing
10 costs that may have hurt our economy and our ability to
provide affordable housing to our work force. In May, 2007 a
11 median house in San Diego cost $612,370.00 which is among the
highest in the country, forcing the city council to take
12 controversial far reaching efforts to increase affordable
housing in the city by inclusionary housing policies, density
13 bonuses, and huge subsidies to make sure our fragile economy
is protected.
14 Population is increasing naturally. If we do not
receive any new migration to our city, which is unlikely, and
15 unreasonable, our population will grow simly from our own
resident growth, and as the parent of four kids, I am
16 contributing to that.
Another important point, on August 31, 2007 U.S.
17 District Court Judge Oliver W. Wanger, announced a series of
severe restrictions on the operations of the massive pumps
18 that supply water from the California Bay, Sacramento, San
Joaquin Delta -- also known as the Bay Delta -- to two-thirds
19 of all Californians, including 3 million San Diego County
residents, water supplied or diverted to un-users by way of
20 the Central Valley Project, and the State Water Project.
San Diegans get their Bay Delta water from the cities water
21 departments by way of arrangements with San Diego County
Water Authority, who obtains this water from the Metropolitan
22 Water District as supplied by the water project.
Judge Wanger's ruling is the consequence of years
23 of significant water use impacts on threatened species, the
delta smelt. And, a recent proposed plan to increase water
24 usage, evaluating considered in the long term Central Valley
Project, and State Project operations criteria plan.
25 Judge Wanger found that the delta smelt was
indisputably in jeopardy as to survival due to the massive
water movement throughout the state to satisfy our state's

need for water.

San Diegans may be severely impacted by this recent court ruling, because the bay delta provides more than one-third of all water used in San Diego County. Last year, 41 percent of all water used in San Diego County was imported from the Bay Delta, and I understand that it is not this Coastal Commission's responsibility to protect the Bay Delta. This is just a fact that shows that our water resources are threatened.

In recognition of the county's serious water deficit, and the delta smelt determination, water supply impacts of this court's decision to San Diego County will be significant, and supply shortages and mandatory water use restrictions are a very real possibility. This decision comes on the heels of historic dry conditions we are experiencing throughout California, which are already impacting water supplies.

The Metropolitan Water District of Southern California has already been withdrawing water from storage reserves to meet demands this year, in advance of potentially worse drought in the foreseeable future.

Regard to this project's inducing growth, which we heard, the delta smelt decision is already impacting our current residents, commerce and industry, much less the buildout of our current community plans, which have already been approved, and in essence allow people to build at what our plans allow. So, even if we build what is already legally allowed, it would be too much in the wake of this decision, which puts our city in a very difficult position.

This decision casts a pall over the future of our water resources, and as an example of the real possibility of losing vital resources of water for our region. We have no guarantee that we will be able to continue to rely on our current water sources, and it is bad public policy to lead a state with the world's sixth largest economy, by making uncalculated assumptions.

Two weeks ago our city council approved a water plan that included water reuse, increased conservation, and is moving to identify water aquifer locations throughout our city, in strategic locations, and other methods to save water. Despite all of these efforts to increase water supplies, our biggest efforts will revolve around water conservation. We have made big gains in our city to reduce our dependency on water due to conservation.

Although our mayor just vetoed the water reuse aspect of our strategy, or the water reclamation part of it, it is unlikely, even if he had not vetoed it, that we would be able to make any short term meaningful gains in water reclamation, due to the enormous costs of introducing the system to our city, in an environment where water costs are

among the highest in our country.

Introducing reclamation at the cost of billions of dollars would impose undue financial hardship on our residents and our economy. Our mayor and council are jointly committed to expand our reclaimed water for irrigation through a purple pipe network that will help us reduce our reliance on outside water sources. Purple pipe will not satisfy our needs for drinking water, and I do believe that desal will.

Now, getting to the points of this project that I think are consistent with the *Coastal Act*, I think the *Coastal Act* endeavors to protect marine biology and coastal resources, and also endeavors to protect people, the primary users of the ocean and the coastal coast line. The project will advance the goals of the *Coastal Act* to maintain, restore and enhance public access, and recreation, and maintain, restore and enhance marine environment through the dedication of more than 15 acres of lagoon and ocean front land for public purposes.

It is true that there are impacts, but they are offset by the benefits, by the huge efforts to assist those impacted endangered species.

I mentioned that our region is facing numerous issues that deal with water treatment and purification, sewage treatment. It pushes financial thresholds that are creating a heavy burden on ratepayers and taxpayers.

The alternatives before us that include portable reuse are extremely costly, and while we did hear from people asking that we should push portable reuse, they didn't talk about the fact that portable reuse also contributes to poor air quality, in fact, this method of water reuse is more energy intensive than desalination.

Retooling our current water conveyance resource would cost taxpayers and ratepayers billions of dollars and would take decades to implement. Denying our reliable water supply, without having to invest in this costly infrastructure is responsible good public policy.

We, as Commissioners, need to keep the public trust and demonstrate that the *Coastal Act* is designed to help the public, and not to hurt them.

One of the weaknesses that was mentioned of this project, as it being too small, and because if it is small it makes it infeasible for the introduction of more environmentally sensitive technologies, and they mentioned -- and my response is a larger project that would be able to incorporate some of the technologies that people requested, would require a larger footprint, and may impinge on the coastal view shed, in addition, a larger project would have larger adverse effects on air quality, to a level that if this project increased CO_2 by 150,000 tons annually -- I

mean, I don't know if there is evidence to suggest that -- but what would a larger facility create?

So, it is kind of also an argument against a larger project that could sustain this technology that would help allay these fears, and I don't know that it necessarily would contribute to protecting marine resources, but it would definitely contribute to affecting air quality, if this project is going to affect air quality, and there have been some recent arguments that suggest that, and it might not be so.

It is obvious that much of the wildlife we are aiming to protect is thriving under conditions created by the operation of the power plant facility, due to the dredging of the salt marsh, as evident in the exhibit, we have a larger body, water body, that enhances coastal access, recreation, biological resources and education.

In addition, environmental protection efforts are possible in the newly created lagoon -- or our newly expanded lagoon that helps preserve and protect coastal resources.

The fact that water that is used for the cooling of the power plant will be reused to treat to drinking quality quantities, and again, there will be increases in adverse effects to the marine biology.

Also, the concurrence from all present that subsea water intake facilities are infeasible and not the way to go, in terms of appropriate technology, is also very compelling information, and deserves to be reemphasized.

The size of the project, and the scale -- was something that I spoke to -- I think it is also unfair to point to someone that is not before us. Somebody mentioned that somebody else can maintain the lagoon. It is unfair to say that when they are not here before us. We don't have a contract that is here before us. We don't have an application before us. And, that promise is only worth the paper they are printed on, since they are really not here before us. We have a project before us that is promising to maintain these precious coastal resources, and I think that that is what deserves our attention.

The HUB site along the lagoon north shore will be dedicated for expansion of the fish hatchery, marine research, and a public trail along the lagoon. The fishing beach along the shore of Aqua Hedionda Lagoon will be dedicated for public recreation and coastal access use. The bluff area on the west side of Carlsbad Boulevard will be dedicated for recreation and coastal access uses. South power plant parking area will be dedicated for public parking.

And, also, experience with the -- well, this is, maybe, I think we have a project before us that I think meets the threshold, and I just want to mention, reiterate again

that this project meets our litmus test.

Another thing I want to mention, I mean, we can study this to death, and sometimes those studies are not as accurate as you would like, in terms of meeting perfection. Perfection is very, very hard to achieve, and I don't think that there is no true perfect desalination project. Too big, it affects air quality. Too small and it incorporates the technologies that make people less more comfortable.

This project is absolutely not precedent setting, and should not be judged on its merits in relation to size, location. It is not precedent setting, and should be judged on its merits in relation to size, location, and mitigation program.

I think, in terms of the -- I want to thank staff for the conditions that were put forth. I think the ones that we have satisfy the concerns regarding the project, itself. I think this project is ready to proceed, and I would strongly encourage a "Yes" vote to get this project moving forward.

CHAIR KRUER: Thank you, Commissioner Hueso.

Commissioner Burke is the "seconder" of the motion. Do you want to add anything at this point?

COMMISSIONER BURKE: No... [not on microphone, out of hearing range]...

CHAIR KRUER: I was expecting --

COMMISSIONER BURKE: ...want to thank my colleagues for everything...probably a world's record here in speaking to -- in the history of the world, man.

I do have one quick one. I do have one quick one.

COMMISSIONER HUESO: You know, if I could just -- one more last thing.

COMMISSIONER BURKE: Oh, you have got one more last thing?

COMMISSIONER HUESO: -- I want to add to the record the applicant's proposed instructions to staff regarding the preparation of revised findings, or Exhibit B, because they get to some of the points that I made, and I just would like to add a Condition 6:

> "That the Commission finds that the project is a coastal dependent industrial facility, as it needs to be sited on or adjacent to the sea in order to function at all..."

And, just that whole paragraph, and just the entire document calls very much to what I am arguing in my --

CHAIR KRUER: So, that is in your motion?

COMMISSIONER HUESO: Yes.

CHAIR KRUER: Commissioner Burke, are you okay with that?

COMMISSIONER BURKE: I'm -- in less than a minute, I am fine with that. Need a million dollars worth of trees

up front, $500,000.00 doesn't get it, $500,000.00 worth of trees sounds like a lot of trees, not a lot of trees. I buy trees every year in huge quantities. My question is, are you prepared to do that?

MR. ZBUR: Yes, of the $5 million number, we are willing to $1 million of trees up front.

COMMISSIONER BURKE: Yes, $5 million, $1 million up front.

Number 2, you know there are trees that degrade the air quality? you know?

COMMISSIONER HUESO: Just make sure it is the ones that help the air quality.

COMMISSIONER BURKE: Right, well, that is what I am trying to get here.

Now, the San Diego Air District has also got an active tree program. I think that, if the maker of the motion would agree, that they should be directed to work with the San Diego Air Quality District in making sure that these trees are the appropriate trees to provide relief for the problem we are talking about here.

COMMISSIONER HUESO: Yes, and we also have a program within our city that identifies trees that --

COMMISSIONER BURKE: Well, I've heard your tree program is a little shaky.

COMMISSIONER HUESO: No, no, don't criticize our tree program. It is a great program --

COMMISSIONER BURKE: I think --

COMMISSIONER HUESO: -- as long we get trees in the ground --

COMMISSIONER BURKE: I think Commissioner Hueso has covered everything appropriately.

CHAIR KRUER: Okay, with that, we are going to take a 10 minute bio-break, and we will be back to keep proceeding.

[Recess]

CHAIR KRUER: We are ready to proceed where we left off.

Commissioner Burke has another question, and then we go to Commissioner Reilly, then Commissioner Neely, then --

COMMISSIONER BURKE: Actually, I don't have a question.

I was reminded during our break that I should have inserted in there, in the motion, that they are native and not invasive trees that are planted in this forestation program.

CHAIR KRUER: Okay. Is that acceptable to you, too, Commissioner Hueso?

COMMISSIONER HUESO: Yes.

CHAIR KRUER: Okay, thank you.

1 Commissioner Reilly, and thank you for your
2 patience, sir.
COMMISSIONER REILLY: Thank you, Mr. Chairman.
3 In one of my other lives, I sit as a member of the
4 board of directors of a Northern California water agency, and
5 earlier this year, in order to protect listed fish species,
6 the State Water Board ordered us to achieve a 15 percent
7 reduction in water use among our 600,000 customers.
8 Through an aggressive public outreach program we
9 were able to achieve a voluntary reduction of 19 percent in
10 our region. So, I know what it is to face the challenge of a
11 reduced domestic water supply and I commend San Diego for
12 seeking to diversify its water supply, reduce demand, and
13 lessen its reliance on imported water.
14 Fully 20 percent of all energy used in California
15 involves moving water from one location to another. Also
16 know that conservation, reuse, and desal are not mutually
17 exclusive in a comprehensive water plan.
18 Having said that, I have the task of determining
19 this project is consistent with our State *Coastal Act*. We do
20 rely heavily on our staff for direction and guidance in these
21 matters. With the largest desal facility ever proposed in
22 our country before us, we have a tremendous responsibility
23 to get this right. So, when our Executive Director cites a
24 lack of information for full analysis, characterizes the
25 proposal as premature, it makes it very difficult, for me at
least, to move forward in approving this project.
Receiving 200-plus pages from the applicant and
opponents on the day of the hearing doesn't help either. We
do not yet have benefit of the independent findings from
either State Lands relative to the energy issues, or Regional
Water Board relative to the marine life mitigation program,
and there are other aspects of the project that require
greater clarity in my mind.
Commissioner Hueso's motion is not one that I can
support. Staff --
[Audience Reaction]
Please, don't do that.
Staff put specific provisions in there to try to
legalize an approval prior to having adequate information on
either the marine life mitigation program, or the energy
minimization, and greenhouse gas reduction plan. Those
provisions, in my mind, were put in there in order to avoid a
Sundstrom violation for the Commission. In removing those
two provisions, and not having those two plans come back
before this Commission, in my opinion, Commission Hueso has
insured a *Sundstrom* violation, and I don't think he is doing
his applicant a favor by doing that.
I would be reluctant to vote for approval, even
with the full proposed staff conditions, in this case,

because I think, before we get that other information before us, and have the chance to analyze it, it really tilts the balance of this Commission to approve it without having that information. While I am very reluctant to vote for denial on this project, because I think there is a project here, there certainly is a tremendous need for it, the fact that we don't have the information before us, I would certainly support a continuance that would allow for time for them to provide the additional information and bring it before the Commission.

But, I can't support the motion before us. Thank you, Mr. Chair.

CHAIR KRUER: Thank you, Commissioner Reilly.

Commissioner Neely.

VICE CHAIR NEELY: I don't think I need to say any more.

CHAIR KRUER: Okay.

Commissioner Wan.

COMMISSIONER WAN: I have to say that I agree with you about the piles of information. This is, basically, what I have received in the last few days, and I received two binders like this from the applicant, two binders this size from the applicant on Monday afternoon, and another one yesterday. Now, I received it on Monday afternoon, Tuesday I spent traveling here, and Wednesday -- as you know, we were in meetings from 9:00 o'clock in the morning, until 11:00 or 11:30 last night.

I think that everybody know that, generally, speaking I read everything. It is not possible for me to read this in any depth, because of the lateness of the submission.

Let me say that I also recognize the need for desal as a part of a water portfolio for an area. But, this plant is not designed and sized to minimize its impacts on coastal resources. And, they could be minimized so that this project could be approved, but frankly, this project, as it is proposed, does not pass the test, the necessary test of 30260. Is it coastal dependent, industrial facility? yes, but that doesn't mean that they don't have to meet the test of 30260 to minimize, among other things, their impacts.

The design of this is a major problem, and it is one of the primary things is the use of the current power plant's intake, rather than a subsurface intake, or other intake which would eliminate entrainment and significantly reduce sedimentation, and energy uses, because it would eliminate all pre-treatment.

I am not going to deal with all of the issues, the specific issues like sedimentation and cost, which I could go through. But, I am going to deal with entrainment and energy.

I am not a legal expert, and I don't know if the

1 court EPA ruling under the *Clean Water Act* applies legally to
2 this, but the impacts of this facility have got to be the
3 same. How can you say that this causes insignificant
3 impacts, but once-through cooling is so damaging it doesn't
3 pass muster on the court ruling. This is the same intake,
4 and the same results, biologically.
4 And, I might add that the *Porter Cologne Act* does
5 apply to this facility, and it requires the use of best
5 available site design technology and mitigation measures.
6 The entrainment study really bothers me. We did
6 not receive a full study, and when I have scientific studies,
7 I read them, because I want to be able to look at them and
7 analyze them. A summary, and conclusions, is not an adequate
8 study. I can't look at the protocols. I can't determine --
8 or the data to determine how it was done, and whether it was
9 appropriate.
9 And, I have to tell you that based on some of
10 their conclusions, I really do question this study. The
10 conclusion, for instance, that planktonic organisms
11 experience a high natural mortality rate -- which is true,
11 okay -- and that this is simply similar to what happens in
12 nature. Folks, this is not in place of the natural
12 mortality, it is in addition to it. Removing the equivalent
13 of the natural process, effectively, doubles the predation
13 rate.
14 They also state that cropping via entrainment is
14 beneficial, in that it allows remaining individuals to have
15 less competition. Any kindergartner knows this is contrary
15 to nature's reproductive strategy for planktonic organisms.
16 They require high numbers for their species to survive. They
16 are subject to predation. If you remove or crop them, their
17 low percentage of survival doesn't increase, it is just the
17 small percentage of a smaller number, and it is probably, in
18 certain species, not sufficient for the species to survive.
18 And, then, there is the impact along the entire
19 food chain when you remove the plankton, which is the bottom
19 of the food chain, rather than having it removed through
20 predation, so you have a domino effect here, and to say that
20 this is insignificant when all of the studies elsewhere have
21 determined that entrainment is not insignificant. That is
21 why once-through cooling power plants are being phased out.
22 So, this is very troubling, okay, and apparently
22 -- and the study was done, for example over a 6-month period,
23 and not over a year, that is what I understand, and that is
23 not adequate. You need to look at these things through their
24 full life cycle.
24 But, again, I don't have the data. I can't really
25 analyze it, and that lack of information means that I don't
25 really know -- nor does anybody else on this Commission know
25 whether the 37 acres or 41 acres -- whatever it is that they

propose as mitigation for these impacts -- is adequate. How do I know that? Before I can even determine anything about the mitigation plan, I need to know what the impacts are. I don't have a baseline. I have no detail in their proposal -- not sufficient detail.

You have heard from staff that they can't just go into the San Dieguito Lagoon and say, "Okay, well, we are going to deal with this aspect of the permit." There is no detail about the habitat types that they are going to be dealing with, whether this is mitigation in kind, for the kind of impacts caused by this facility? or what the performance standards are? what the monitoring is? You can't approve additional mitigations at San Dieguito without full review.

It also relies on the approval of the plan by the Water Quality Board, and I have to say this, since when is a habitat mitigation measure the purview of the Water Quality Board? These are not water quality standards, and it is not inappropriate for them to review and approve the plan. In the very least, that plan needs to come to the Commission for review and approval.

And, to say that we don't have the authority, Section 30230 of the *Coastal Act* states:

> "Marine resources shall be maintained, and where feasible restored, and uses shall maintain healthy populations of all species of marine organisms."

And, even more to the point, Section 30231 states:

> "The biological productivity of coastal waters shall be maintained through, among other means, minimizing the adverse effects of entrainment."

Can't be more specific that this is our jurisdiction. It says so.

Frankly, this just doesn't meet any of the tests. You have to minimize the entrainment under Section 30260. We don't even know what is going on, and we don't have the information to make an informed decision.

Let's look at energy use, and skip through some, okay? The issue here is not just the carbon footprint. The issue is the requirement in the *Coastal Act* to minimize energy usage. Under 3025 -- I think it is 3 -- Section 4, it requires the Commission to minimize energy usage. I don't see enough analysis, or enough information in this to know that that is the case, and I certainly don't see enough information, and I did read the carbon footprint part of this, to know that these are all nice possible ways to reduce carbon footprint, but it is a suite of possible things. It is not specific.

And, again, I don't have enough information to really know what that carbon footprint is, or what the energy

usage actually is. They ask for credits for the carbon reductions for offset of imported water, but we have no guarantee that that will occur. There are ways to make certain this is the case, but I don't believe those mechanisms are in place at this time, and therefore, I don't know how you can use that as a carbon savings, if it is not guaranteed.

There is a whole bunch of information that is, simply, not available to us, to make our decision. And, again, when I looked at their nice suite of possible carbon reduction things, and I go to Appendix A, and they talk about high efficiency ERDs, the project could install a high efficiency ERD. That is what it says in what they handed me in what I got on Monday.

Okay, in addition to the high energy ERD, it is likely the most cost efficient option to reduce the energy of the project -- I get a lot of "may", and "might", and "should". This is not a specific program that you can rely on. This is premature. It is not ripe for approval. I really wish that in this time, that you had taken the time to come in, make the changes to your project, to make it approvable, because it could be approvable with some changes to it, but it is just not approvable now, and one of the principal reasons is because we don't have adequate information to make an informed decision. And, I don't know how you get around that in this hearing.

First, you must minimize the impacts, and then you mitigate for them. We don't know what all of the impacts are. We certainly -- you haven't minimized them, and we don't know about the specifics of the mitigation. And, if you don't have an appropriate baseline, whether it is entrainment, or carbon footprint, or energy use, whatever you want to call it, you can't know how to mitigate it.

And, again, I would love to be able to approve a desal project that would work, but this one doesn't.

CHAIR KRUER: Commissioner Thayer, I had you down. Did you want to speak at this time?

COMMISSIONER THAYER: I think I will wait --[voice fades out of hearing range, not on microphone]

CHAIR KRUER: Okay, Commissioner Blank.

COMMISSIONER BLANK: Thank you, Mr. Chairman.

While I appreciate all of the reasons presented why this plant is necessary for the people of San Diego, I think the issues facing me as a Commissioner, whether the project is in compliance with the *Coastal Act Section 30230* protection of marine resources, and 30231, biological productivity, which Commission Wan has covered both of those extensively, so I won't, but also 30233(a) dredging of a estuary, and Section 30253, energy use and greenhouse emissions.

It has been about a half century since the state embarked on infrastructure growth of this scale, in that during that time we built 20 state universities, we connected the state with 50,000 miles of highways, for water resources 34 lakes and reservoirs, 25 dams, 20 pumping plants, and a state water project with 700 miles of canals and pipelines. And, now that the 2005 update of the California's state water plan is reinvesting in our water infrastructure, we are reengaging the private sector as partners in this effort, and I think this project is an example of that.

I, personally, think public-private partnerships could be good for everyone; however, in the U.S. only 15 percent of the population buys water from privately owned utilities. I think we are about to find out the consequences of putting water -- historically thought of as part of the public trust -- into private hands for a major metropolitan area.

It took decades to understand the consequences of spanning the state with concrete, and building nuclear power plants on the coast, and as we found out when we deregulated electricity in California, there are risks when you put pricing for critical services onto market rules. In this case, we are going to depend on the PUC and the Regional Water Boards to manage these rules.

So, I support this project in concept, however, given what I have heard in the last hour, I am troubled by the applicant's and some of my fellow Commissioners' suggested conditions, particularly 8 and 10 in the motion proposed, which for those of you who know my history, kind of strips me, as a Commissioner, from oversight of this project, and I just have an issue with that.

Hopefully, after my questions -- which I am going to follow with this -- and some conditions I want to proposed I could support this proposal.

So, let me start with my first question, and this is for my fellow Commissioner Thayer, one of the things that struck me was that someone had mentioned that the applicant provided you with a contract with the power plant to the State Lands Commission, is that correct?

COMMISSIONER THAYER: That is.

COMMISSIONER BLANK: And, did the Coastal Commission get that same contract?

STAFF ENVIRONMENTAL SCIENTIST LUSTER: No, Commissioner, we didn't.

COMMISSIONER BLANK: Did we ask for it?

STAFF ENVIRONMENTAL SCIENTIST LUSTER: Yes, in several request letters.

COMMISSIONER BLANK: Can the applicant come up and explain that, please, and I understand you asked the -- just to make sure that I understand, you asked State Lands to sign

a non-disclosure because of some proprietary technology, which we do all of the time for oil and gas leases, so why wasn't that provided to our staff.

MR. MAC LAGGAN: [Inaudible]

CHAIR KRUER: Could you come speak into the microphone.

COMMISSIONER WAN: It is not on.

CHAIR KRUER: I think it is on.

MR. MAC LAGGAN: Can you hear me?

CHAIR KRUER: No.

[Pause]

Go ahead.

MR. MAC LAGGAN: Can you hear me now?

COMMISSIONER BLANK: Yes.

MR. MAC LAGGAN: Very good.

COURT REPORTER: May I have your name for the record, please.

MR. MAC LAGGAN: Peter MacLaggan, Poseidon Resources.

We provided staff, the Coastal Commission staff, a copy of the short form of the lease, which is still a pretty hefty document, that shows all of the our rights to use the property within the power plant, the leasehold itself, the easements within power plant, and all of the aspects of that lease. The effect of *Coastal Act* considerations are contained within that document.

The interests of the State Lands transcended that level of information. They needed information that got into the business arrangements between us and the power plant, because it effected our ability to use the state property, specifically, the intakes, so we shared that part of the document that was considered proprietary, with the Lands Commission, under a confidentiality agreement.

COMMISSIONER BLANK: So, I am still confused, and the answer is you decided that you didn't want to provided information requested by our staff?

MR. MAC LAGGAN: We gave your staff the information that they requested that was applicable to --

COMMISSIONER BLANK: Who made that decision, whether it was applicable? you or them?

MR. MAC LAGGAN: We did.

COMMISSIONER BLANK: Thank you.

And, then, is the representative of the construction team still here? or any of the contractors who are actually going to be building the facility? Can the applicant -- is that -- great.

MR. SHEA: Yes, sir, for the record, Andy Shea, Accona Aqua.

COMMISSIONER BLANK: Great, can you tell me what you learned from the desal plant in Tampa? lessons learned?

MR. SHEA: Lessons learned, lessons learned, as the co-partner down there, with our partners in American Water we -- as you learn the value of having an important owner, Tampa Bay Water, that worked with us in overcoming some significant challenges, intermediating the desal plant, which had not passed its acceptance test in 2003, we came on in 2004 within the partnership, and in a very short period of time came out onto the site and remediated to the treatment system, the RO system, and upgraded a number of errors that had sufficient deficiencies that were created by the turnkey contractor that was asked to leave the site.

COMMISSIONER BLANK: Was pre-treatment one of those issues?

MR. SHEA: Sand filtration was an issue, that is correct.

COMMISSIONER BLANK: Was it to do with the static mixer, or the baffle wall?

MR. SHEA: The static mixer was not included by the previous contractor. That is an item that we remediated for the fair-chloride system.

Your other question was related to the which ball?

COMMISSIONER BLANK: Was there a baffle ball? was there a baffle ball?

MR. SHEA: The baffle ball, can't help with that.

COMMISSIONER BLANK: Okay.

MR. SHEA: We did a significant rehabilitation of the two-stage sand filtration system into a single-stage system, and put in a diatomaceous earth polishing system.

And, as my colleague from American Water stated, we just passed the 15-day acceptance test in flying colors. The normal rating of the facility is 28 million gallons. We produced 29 million gallons on a sustained basis.

COMMISSIONER BLANK: Great, thank you.

MR. SHEA: Thank you.

COMMISSIONER BLANK: And, is the representative from the Carlsbad Water District here? thanks.

And, explicitly, I am not picking on you. You just happen to be the largest purchaser, and while you are up, let me just ask my fellow Commissioner Scarborough.

Commissioner Scarborough, are water purchase agreements public documents, as far as you know?

(Continued)

\\\
\\\
\\\
\\\
\\\
\\\
\\\

COMMISSIONER SCARBOROUGH: You are asking me? As far as I know, if the district is public those documents are public.

COMMISSIONER BLANK: Great, is the water purchase agreement available to this Commission?

MR. STONE: Sure, upon request.

By the way, I am Mark Stone, general manager.

CHAIR KRUER: Yes, thank you.

COMMISSIONER BLANK: Do we have a copy of the district's water purchase agreement?

MR. STONE: Yes, Poseidon provided several of the --

COMMISSIONER BLANK: Good.

MR. STONE: -- we don't have all of the APFs --

COMMISSIONER BLANK: Good, and in reading your WPA -- at least the part that was posted in your board minutes -- it assumed you received a $250-acre subsidy, in that still correct?

MR. STONE: Yes, sir.

COMMISSIONER BLANK: And, where are you in that? and what is the criteria for generting that subsidy?

MR. STONE: I would probably have to defer that to the county water authority, they are our member. As a member agency, the county water authority, they are pursuing that with the Metropolitan Water District --

COMMISSIONER BLANK: But, that is connected with the Poseidon purchase -- or water purchase, a water purchase contract?

And, when I read the top level bullets of the WPA it said if Poseidon determines the water rate set under the pricing section of the WPA are insufficient to implement the private seawater desal project, Poseidon may terminate the WPA, is that still correct? or Poseidon? yes, correct?

Where is the -- it is okay, there is no wrong answer. I am just trying to figure this out.

Is there a term when the district -- let's say the price goes too high, can the district terminate the contract?

MR. STONE: You know, I am the general manager of the water district, but I am very new to the district --

COMMISSIONER BLANK: That is okay --

MR. STONE: -- and I think --

COMMISSIONER BLANK: -- is there someone from --

MR. STONE: -- Mr. Jim Elliott, I think is --

COMMISSIONER BLANK: -- the water district who can answer.

MR. STONE: -- more familiar than I am.

COMMISSIONER BLANK: Okay, you can tag team this thing.

MR. ELLIOTT: Good evening, Jim Elliott, Deputy City Manager for the City of Carlsbad.

COMMISSIONER BLANK: So the question is, can you terminate the contract with Poseidon if the price goes up?

MR. ELLIOTT: Actually, our price is fixed. Our price that we will pay is actually pegged at the amount we would have paid to the San Diego County Water Authority for that same amount of water. The price we will pay is fixed. We don't have any risk in price.

COMMISSIONER BLANK: Perfect, all right, and is that true --

MR. ELLIOTT: That is for all of the agencies.

COMMISSIONER BLANK: All of the agencies. All of the agencies have the same contract.

MR. ELLIOTT: Perfect, thank you.

And, now, I'm done. Can I get a Poseidon representative?

So, I know that this is not an outcome that most executives of private companies tend to consider, but I'll just ask you to fantasize on something that isn't going to happen, but if you go Chapter 11, that is bankrupt, who cleans up the site?

MR. WINROW: Walter Winrow, with Poseidon Resources.

There are several protections available in the event of that type of a financial dislocation, a Chapter 11. First of all, is that we structure all of our projects on a stand-alone basis, so they are, contractually, structured on a stand- alone basis. They are financed on a stand-alone basis, and they are not crossed collateralized as other projects --

COMMISSIONER BLANK: So, there is a private offering for each desal facility?

MR. WINROW: Not necessarily a private offering, but the contracts are held at the project level. And, so, if there were a bankruptcy at the parent company level, there would be some protections from that trickling down to the project company.

However, if that were to occur, there are two additional protections. First of all, under our water purchase agreements with the City of Carlsbad, the City of Carlsbad, at its option, can either step in and operate the plant to its benefit, or it can take over ownership of the plant, again, at its discretion.

To the extent that, for whatever reason, the plant didn't work, or nobody stepped in to that role, then we are obligated to clean up the site, remove the facility, and return the property to a free and clean circumstance.

COMMISSIONER BLANK: But, certainly, in Chapter 11 there are lots of creditors who might disagree with your priority use of funds.

MR. WINROW: And, what we are required to do is

1 post a security in the form of either a letter of credit, or
2 a bond, irrevocable bond --
COMMISSIONER BLANK: Great, so I think the answer
3 is you are going to provide a bond?
MR. WINROW: At the start of construction, and it
4 --
COMMISSIONER BLANK: And, who is that with? is
5 that with the Coastal Commission? with the City of Carlsbad?
MR. WINROW: That is with the owner of the
6 property, because it is their property to --
COMMISSIONER BLANK: And, who is the owner of the
7 property?
MR. WINROW: The power plant.
8 **COMMISSIONER BLANK:** The one we don't have the
full agreement on?
9 **MR. WINROW:** That is true.
COMMISSIONER BLANK: That is correct, and was that
10 description in the material provided to us? or the material
you decided we shouldn't have?
11 **MR. WINROW:** I need to ask --
COMMISSIONER BLANK: That's okay --
12 **MR. WINROW:** -- my colleague --
COMMISSIONER BLANK: -- thank you, no, let's just
13 move on.
In the staff's description of project costs and
14 price for water purchase on page 17, footnote 16, can someone
just look that up and tell me whether that is generally
15 correct? page 17, footnote 16? that was the staff's estimate
of project costs, and then the price for water purchase
16 agreements. I just want to make sure that is correct when I
look at these numbers, because I am going to go through that
17 in a second.
And, my apologies to the rest of the Commission.
18 **COMMISSIONER POTTER:** F. Lee Bailey, and Fidel
Castro, all at the same time.
19 [Laughter]
COMMISSIONER BLANK: But, I am still breathing.
20 Again, I just wanted to make sure that within the
order of magnitude that the staff, since they have been
21 telling me they couldn't get the data from you, or I just
want to make sure that was semi-relevant data, and you guys,
22 why don't you come back up, and maybe some part of the team
could look at that while we are still talking. I have plenty
23 of questions to keep us busy.
Will somebody look at that, because it just brings
24 me to my next question. If you are a for-profit company, I
am just confused, because I am, obviously, interested in how
25 you stay in business, because it is now my interest as well
as yours. If you are providing water at cost, and your costs
are higher than your delivery, help me through just the --

there must be some secret sauce here. What is it about?

MR. WINROW: We expect that this project will be economically attractive investment for our shareholders, and --

COMMISSIONER BLANK: But, how? but, I mean, obviously, you have assumed the price per gallon to complete the project?

MR. STONE: Like any business, we, in fact, invest in our production facilities, based on what our expectations are, that the future price of our product can bear on the market place, and so our expectation is that the price of water will go up in San Diego County, rather than down --

COMMISSIONER BLANK: That is what I would expect, but what I thought I heard the water district say is that they have fixed price contracts, that the water price won't go up.

MR. STONE: No, the have a contract that has a fixed priced with identified escalations for --

COMMISSIONER BLANK: Thank you.

MR. STONE: -- example, inflation --

COMMISSIONER BLANK: And, what else?

MR. STONE: -- and there is one escalator for inflation, and another for the cost of electricity, but the price is capped at what the district would have otherwise paid for water --

COMMISSIONER BLANK: Okay, okay --

MR. STONE: -- plus the $250.00 financial incentive from the Metropolitan Water District.

COMMISSIONER BLANK: Great, this is very helpful. I'll just try to move on quickly, and to the rest of the Commissioners, I am almost done.

Just an observation, and correct me if my thinking is incorrect, but as a business, your job is to maximize the output of profit, right? 24/7 this plant needs to run full bore? It doesn't make any sense to mothball the plant, and someone else claimed why don't we just run it -- that is your business, right?

MR. STONE: About half of the cost of our operations are fixed costs --

COMMISSIONER BLANK: Yep.

MR. STONE: -- and so it makes sense for us to operate at --

COMMISSIONER BLANK: Got it, so having another incentive, not on your side, but somewhere else down -- excuse the pun -- in the pipeline, to reduce the use of your product, like water conservation, and using reclaimed water, seems just fundamentally in conflict with a for-profit, and I would just like -- at least, that is on first observation that would be true, and so educate me why that is not the case?

MR. STONE: Well, there are several aspects to that. First of all, what is performed by the local water agencies, and regional water agencies, in terms of their portfolio of resources, and the programs that they put in place to incentivize conservation, or make investments in recycling, really resides on their side of the ledger. It is their responsibility.

Our role, in this process is to treat water, and provide it at our delivery point to the local water agencies, and so it would represent a part of their larger water resource plans.

COMMISSIONER BLANK: Got it, so if I could interpret that which was a great answer, is that you are providing gas at $.29 a gallon, and whether people decide to drive a lot, it is not -- I mean you are the water supplier, and it is up to the districts to put the conservation measures in place, as to the regional water districts and the PUC, is that correct?

MR. STONE: That is an accurate representation.

COMMISSIONER BLANK: And, finally, to what size is this plant designed to be expanded?

MR. STONE: Pardon me?

COMMISSIONER BLANK: Is the -- let me -- I am just assuming that the plant is designed not to be expanded? is that correct or incorrect?

MR. STONE: That is correct, it has the capacities that are --

Pardon?

Oh, it is designed not to be expanded. I am sorry.

COMMISSIONER BLANK: Okay, all right, good.

MR. STONE: Let me be clear, because obviously I misunderstood, the --

COMMISSIONER BLANK: Well, either expanded --

MR. STONE: -- facility is designed for 54 million gallons per day, in total capacity without any capability for expansion.

COMMISSIONER BLANK: Great, and I have just one question for Mr. Zbur, if you can.

Thank you, so much. You have been very patience.

I thought, when I took ex parte -- and correct me if I misheard -- was when I asked whether the applicant would come back to the Commission when the power plant stops in 2010, can you remind me what you represented? I just don't want to put words in your mouth.

MR. ZBUR: Well, I think what we said was when the power plant does cease operations, it is likely that there would be physical modifications that would be required, which would be considered development under the *Coastal Act*, and to the extent that is the case, we would need to come back to

1 the Commission.
COMMISSIONER BLANK: Right, so, if that occurs in
2 2010 you would be back to the Commission if you had to physically modify the intake?
3 **MR. ZBUR:** That is right.
COMMISSIONER BLANK: But, since we don't have that
4 power plant contract, we don't know whether it says that plant will end in 2010, or what the economics are, et cetera,
5 right, so that is a critical piece of information we are missing, or would you call it financial arrangement?
6 **MR. MAC LAGGAN:** Mr. Blank, with respect to the lease provisions, and our ability to use the infrastructure
7 with the power plant -- my name is Peter MacLaggan, with Poseidon Resources -- it contemplates that the power plant is
8 not operating. The power plant has the ability to operate the cooling water pumps for our purposes.
9 To the extent that the cooling water pumps continue to be available, we can continue to use them in that
10 mode. Should they make some business decision to eliminate that system, and we need to go back and modify the system so
11 we can continue to operate, that would cause us to also need to go back to the City of Carlsbad, go through a land use
12 process, CEQA compliance, come back to the Coastal Commission with *Coastal Act* compliance, a subsequent Coastal Development
13 Permit.
COMMISSIONER BLANK: Okay, that was helpful, thank
14 you.
Yes.
15 **COMMISSIONER BURKE:** In your lifetime have you ever heard of a power plant shutting down?
16 **COMMISSIONER BLANK:** Yes.
COMMISSIONER BURKE: Within the last decade?
17 because, let me tell you, I have only been on the south coast --
18 **COMMISSIONER BLANK:** Humboldt County.
COMMISSIONER BURKE: -- well, I am talking about
19 where people live, big populations, okay?
COMMISSIONER BLANK: I think Commissioner Neely
20 would take exception to that.
COMMISSIONER BURKE: Right, sorry, Bonnie, didn't
21 mean it.
In south coast, we are always struggling to get
22 power plants to shut down, but rather than shut down, they will update their technology to meet the current requirements
23 so they can keep generating power. The chance of a power plant shutting down in San Diego, unless there is a
24 catastrophe, I think is --
COMMISSIONER BLANK: So, Commissioner Burke, I
25 think that maybe makes my point, in that, if the plant never shuts down then there is no coming back to the Commission for

1 redoing the intakes.
2 And, I am almost done, if I can, Commissioner Burke.
3 So, as I said, I am looking to support this thing. Given the performance in Tampa I would want a stronger
4 performance bond language. I think the applicant's request for Items 8 and 10 just kind of leave me a little cold about
5 my authority as a Coastal Commissioner, and as I said, I am trying real hard to like this. So, those are kind of my
6 comments, and I would like to see where this goes for the rest of the Commission.
7 So, thank you for indulging me, and I am sorry I exceeded Ben Hueso's time.
8 **CHAIR KRUER:** Commissioner Clark.
COMMISSIONER CLARK: Well, thank you, Mr. Chair.
9 Let me first state that I will not take the amount of time that my colleagues have taken -- although I don't critique
10 it, because quite frankly, I think it has been useful.
Let me also state, from this Commissioner's
11 perspective, a desalination facility for San Diego County is an absolute positive move, in terms of augmentation to your
12 capability of water, so I support it, in general.
The issue that I see, right now, based upon what
13 is before us, is that this facility, at this time or not, but let's take the premise that it is this facility at this time,
14 staff was asked at the beginning of this meeting to present to the Commission some draft special conditions, in case the
15 Commission, as a whole, majority of the Commission wanted to move forward with approval of this project. They have done
16 that.
We have also gotten from the applicant their
17 reaction to those conditions -- and this has been in virtual real time, okay. So, where do we sit tonight, at 8:30 with a
18 meeting that started at 8:00 a.m? We sit with what I call some dispirit special conditions that are really the lynch
19 pin as to whether or not I think this Commission could move forward on this particular project at this time.
20 And, quite frankly, as far as I can see, Conditions 8 and 10, in particular, are really problematic,
21 because it really does take away this Commission's prerogative, in terms of energy, and in terms of marine
22 impact mitigation plan review. I am, frankly, not willing to do that, okay.
23 Our Chair is very known to say, upon occasion, that the devil is in the details, and I agree with him. I
24 agree that the devil is in the details, and we have, in my opinion one of two options here. We have the option of
25 spending the next, probably 3 to 4 hours of going through every one of these conditions to reconcile what staff has presented to us, and what the applicant has in rebuttal, and

trying to, on the dais, craft new positions, revised positions, or accepted positions, or we can continue this matter.

And, quite frankly, my sense of it is we are far better off if we continue this matter with the understanding that we want to bring resolution to it in a timely manner. But, I am willing to stay here, and go through the conditions, and resolve the condition disparities, but that is what I see is on the table right now.

Thank you.

CHAIR KRUER: Thank you, Commissioner Clark.

Commissioner Shallenberger.

COMMISSIONER SHALLENBERGER: Yes, I have two different questions, kind of areas.

One is, to my fellow Commissioner Thayer, what is the State Lands role in this, and your process and your timing, and all of that. We haven't really talked about that.

COMMISSIONER THAYER: It was because I figured you would ask that question that I waited.

COMMISSIONER SHALLENBERGER: You and I have worked together a long time now.

COMMISSIONER THAYER: And, I do think it is appropriate that I do outline that, because the function of the State Lands Commission sitting on this Commission is to provide coordination between the activities of the two Commission, so that we can be coordinated, and not imposing conditions that are impossible to meet because they are in conflict, and this sort of thing.

Our Commission heard this October 30 in San Diego. It was the week after the fires, and at the request of some of the opponents, who had, in fact, been evacuated in those fires, the Commission decided, even before the hearing, that it was not going to make a decision at that hearing, to afford more time to the interested parties to further analyze the project.

But, we took extensive testimony, almost as long as this, and the Commission directed staff to investigate some additional details, and not surprisingly they are, in essence, the subjects of 8 and 10 before the Coastal Commission today, because -- as the Lieutenant Governor said, the Chair of our Commission this year -- what is the who, what, why, when and where of mitigation of the 37 acres. Where is it going to occur? how do we know it is going to occur? when is it going to occur? He wasn't satisfied with the details either, so asked that that be nailed down before it came back to our Commission.

And, a second issue is the carbon neutrality, which had been promised by Poseidon, at least -- maybe not for the first time -- but, very publicly in an email that I

1 think went out the Friday before our meeting, in which
2 Poseidon said they were going to make their project carbon neutral. And, again, there was quite a bit of discussion at
3 the State Lands Commission meeting about that, some discussion about what priority? what order that would be done
4 by Poseidon? but, also questions to staff, and basically the direction from staff nailed this down. There is a great
5 disparity between the carbon footprint we had calculated in coordination with Coastal Commission staff, and what Poseidon
6 had developed. And, the 815 pounds per megawatt hour that we use -- instead of the 500 -- was what the Energy Commission
7 staff had encouraged us to use.

So, we didn't go to San Diego -- just like Coastal
8 Commission staff, we didn't go to the San Diego District, but we did go to the ARB and we did go to the Energy Commission,
9 we not expert in this, and we needed some help. But, since then we are not quite sure that is the right number.

10 So, I am speaking too long here, but basically the exact same issues you are talking about, our Commissioners
11 were not satisfied, and asked staff to investigate this before coming back.

12 The original direction was to come back December 3, but there was some understanding that -- which is our next
13 scheduled meeting of the State Lands Commission in Sacramento -- but there was some discussion as well, both at the
14 meeting, and afterwards, that the Commissioners want it done right, and that it could take longer than that to put
15 together those answers.

COMMISSIONER SHALLENBERGER: And, does the State
16 Lands Commission take similar action to the Coastal Commission, as in you can approve something with conditions?
17 so your Commission might put conditions on the permit related to the substance of 8 and 10?

18 **COMMISSIONER THAYER:** Yes, and I think it will.

COMMISSIONER SHALLENBERGER: Okay.

19 **COMMISSIONER THAYER:** In fact, it is clear that they will.

20 **COMMISSIONER SHALLENBERGER:** Okay.

COMMISSIONER THAYER: Of course, we operate with
21 leases rather than permits, because we are, basically, leasing out property, rather than regulating it, and so the
22 conditions generally go on leases, although occasionally there is one that is more floating.

23 **COMMISSIONER SHALLENBERGER:** Okay, so now I turn to staff, and I guess I ask our legal counsel, if we were to
24 approve this today, with whatever conditions on it, and State Lands -- who is actually the owner of this land, right --
25 they took action after us, and put permits on it, would it need to come back to us to conform to them? What is -- it would.

1 So, why is this before us? don't we usually have
the owner of the -- I mean, this is an unusual process to
2 have the Coastal Commission -- don't we usually like to be
last in these things, so that we know what everybody else's
3 conditions are?
CHIEF COUNSEL SCHMELTZER: Often we do, however,
4 occasionally, we will have a condition on that it must
receive State Lands approval before our permit can issue.
5 So, that has happened on occasion.
COMMISSIONER SHALLENBERGER: It leads me to think
6 that this is part of being premature, that it is actually
before us, so there is that.
7 And, the other question I have is to, I guess, Ms.
Hansch, or whoever is the right one to ask, about how I am
8 still concerned about what the proposal before us, on No. 8,
and the mitigation for wetlands, particularly, which has a
9 set number of acres, and so could you talk about how that --
what we have already done with Edison? this Commission spent
10 a lot of time working out the wetlands plan and formula with
Edison, and how this compares as to what we asked Edison to
11 do? I mean, it is in the same wetlands area, the mitigation,
so it seems to me they should be --
12 **EXECUTIVE DIRECTOR DOUGLAS:** Before Susan answers
that, I do want to address that, because what is being
13 proposed, and what is on the table clearly would reverse
decades of precedent and action by this Commission. It would
14 also abdicate your responsibility under the *Coastal Act*,
deferring that to the Regional Water Board, which sets
15 standards, which is not the equivalent of a marine life
impact mitigation program.
16 Relative to what we did at San Diguito and SONGS,
that is a very important question, and I will ask Susan to
17 remind you what we did there, what you did, your predecessor.
DEPUTY DIRECTOR HANSCH: For the SONGS mitigation
18 program, the Commission, on the basis of years of scientific
evidence determined there were significant impacts from
19 entrainment and impingement at SONGS, at the San Onofre
Nuclear Generating Station, took that evidence based on lots
20 of scientific advice, and determined how many acres of
wetland mitigation were necessary to mitigate for the
21 entrainment and impingement, so that was done.
Then you selected, based on many different
22 locations for the wetland mitigation, that the site would be
Dieguito.
23 Then, an environmental impact report was done, and
covered the whole area for the San Dieguito project, and then
24 you issued a separate Coastal Development Permit in 2005 for
the San Dieguito project. And, in two different places in
25 the original permit, where we determined the amount of
mitigation, the Commission had very specific performance

1 standards so that the wetland mitigation met those standards,
2 and actually we could prove that there was workable real mitigation.
3 And, yesterday -- I think it was yesterday, days have blurred -- but you approved the mitigation monitoring
4 program, the independent monitoring program for the scientists that they go through this process with Edison, and
5 they make sure that the performance standards are met.
6 And, I think it is critical that if anything is done at San Dieguito, for another company that is mitigating
7 for entrainment and impingement, that it meets the same standards as Southern California Edison. It is fair, and it
8 is based on scientific information.
9 The San Dieguito project, the overall plan, there probably is adequate acreage there that could be used, or at
10 least some acreage that could be used by Poseidon, but they would need to determine what kind -- there are different
11 elements in the wetland restoration projects, some deeper water, some salt marsh, different things that mitigate
12 different kinds of impacts.
13 So, those are the sort of details that would need to be worked out, and that the conditions of the permit, they
14 would have to have a separate permit for the mitigation, and they should be in harmony with the longstanding statements
15 and work that you have done, especially, at the same site.
16 And, those are all things that could be done, but they could not be done in the way the applicant is suggesting
17 that the permit condition be written.
18 **COMMISSIONER SHALLENBERGER:** Well, and it strikes me they can't -- this is repeating what has been said, but
19 they also can't be done until we actually know what the impacts are of entrainment.
20 So, there is a circular problem here. We don't really know what the impacts are of entrainment, so we can't
21 come up with a mitigation, so we can't look at it and make sure that it meets at least the same standards that we have
22 done before.
23 So, it strikes me for a number of reasons, one is we don't know -- State Lands has said, Commissioner Thayer,
24 that they are concerned with the same issues, but we don't actually know what they are going to do. We have a sense
25 that they are going to put some kind of conditions on it, but what those conditions would be, exactly, we don't know. The odds that they are completely consistent with whatever we would do is not particularly, you know, who knows what the odds are? it would have to come back to us after that.
Absolutely, I am hearing from a number of Commissioners we don't want to give up the authority to look at the mitigation plan and make sure it is adequate, so you know, my preference is I would like to continue this, but

1 there may not be enough time to make a continuance worth-
2 while, and I don't know what the deadlines are here.
3 I am worried about the message of actually denying
4 it, because I absolutely, I mean a lot of the testimony today
5 made it sound like we were the water board and not the
6 Coastal Commission. I was, you know, the lead staff at the
7 Senate Water Resources Committee for 8 years, I know the
8 problems in San Diego. They are real, and they are long term
9 and they need more water. They need reliable water. They
10 need sustainable water. They need good water quality. And,
11 they need many, many different sources, conservation,
12 reclamation, and desal.
13 So, I wouldn't want -- my worry about a denial is
14 that it sends a message, perhaps, that this Commission is not
15 supportive of desal, and is not supportive of desal in San
16 Diego, and I haven't heard that from anybody up here at all.
17 But, this project is not ready to go, and I don't
18 think it is defensible in court, if we were to pass it the
19 way it is before us now, so.
20 If it were the will of the Commission to continue
21 it, how much time would that leave, to continue to work on
22 it?
23 **EXECUTIVE DIRECTOR DOUGLAS:** Well, under the
24 *Permit Streamlining Act* -- as you see on the front of your
25 staff report -- the 180th day is January 21. There is a
one-time 90-day extension that is possible with the approval
of the applicant, so that would have to be done, because I
can't see how a condition relative to the wetland and the
green house gas emissions could be worked out in that short a
period of time.
I think we can, if the Commission gives us
direction to do that, we would do that, but that is up to
you, and it is going to depend on what the applicant is
willing to do, relative to providing the 90-day extension.
COMMISSIONER SHALLENBERGER: Well, before there is
any sense from the rest of the Commission, if the Commission
wanted to do that, and if the applicant agreed to the 90-day
extension, is it doable in your workload? I mean, could you
-- that is actually not very much time.
EXECUTIVE DIRECTOR DOUGLAS: We would do the best
we could --
COMMISSIONER SHALLENBERGER: Okay.
EXECUTIVE DIRECTOR DOUGLAS: -- this is such an
important project, and hearing what the Commission is saying,
clearly, these are the two central issues, as I see it, and
if that is what you end up doing, we will spend the time
necessary to come back with conditions that, hopefully, we
and the applicant can agree with, but at least we would give
you conditions that give you more information, and would give
you a legal basis to act, at that time.

CHAIR KRUER: Commissioner Scarborough.

COMMISSIONER SCARBOROUGH: Thank you, Chairman.

I am here to help everyone know that the Resource Agency, I think -- as personally presented to you back in '04 -- wholeheartedly supports desalinization, has since the day I joined the administration, as an integral piece to the broadened portfolio of the water supply critical for this state, its economy, and its environment, and all of the individuals and residents that we suppose so for granted, turn on our faucet, and remember to turn it off while we brush our teeth.

The Resource Agency also supports this project, wholeheartedly, and we are here to express that. We understand, and I think best captured by Mr. Simmons -- who I personally have respect for, having been around the block with him for many years as a Sierra Club attorney challenging the City of San Diego when I was there -- as he put it, at least from my initial perspective, from a science perspective, we have what we need. They have a NPDES permit. There was an EIR. The EIR was not challenged. Scripps scientists have weighed in on this.

I do hear, and do respect the concern that is weighed in from the fellow Commissioners, on the concept of the Marine Life Protection act -- I mean plan. That piece, No. 8, to me is severable from -- also to my immediate left -- air. Air is different. It is changing by the hour. It is being created as we speak. The air board is different, I believe.

So, I think we are close. I represent an administration that is about action. We are close to this action. We are so close that I am not a motion maker, I am only here as ex-officio, but it seems to me that if it is within the ability of the applicants to give on 8, that maybe we could, like, have action here. Also, make the action contingent on this vote of -- also our sister agency -- the State Lands Commission. It is very precedential that this Commission takes action with conditions.

So, we condition it to have the confidence that is provided to the folks that are sitting up at this table, and take the action today.

Thank you.

CHAIR KRUER: Did you ask him a question, Commissioner Scarborough?

COMMISSIONER SCARBOROUGH: Yes, sorry -- and they want me to turn my phone off, but I won't.

Will you, are you willing to --

COMMISSIONER POTTER: State people, wouldn't you know it.

COMMISSIONER SCARBOROUGH: -- are you willing to afford the Commission the opportunity to review and approve

1 the marine life protection plan -- if I am getting the words
2 right -- mitigation plan.
MR. ZBUR: Rick Zbur, with Latham and Watkins.
3 Let me suggest something that, hopefully, would be
helpful to Commissioner Clark and Commissioner Blank, and
4 others that have raised this issue.
In the first sentence of Condition No. 8, we would
5 be willing to amend that so that it would read --
CHAIR KRUER: Yours or is it staff?
6 **MR. ZBUR:** Ours, which I think is what is on part
of the motion.
7 Prior to commencement of construction, the
permittee shall submit to the Coastal Commission for its --
8 to the Executive Director for his review and approval, a
marine life mitigation plan, and then the period would end.
9 And, then if we would take out the "no less than"
37 acres, so it is clear that it a 37-acre plan, and that it
10 would give the Executive Director the ability to look at the
protocol, the monitoring.
11 And, then, later on in the second section below,
which has the Regional Board approving the site, we would add
12 "the Regional Board and the Executive Director."
COMMISSIONER SCARBOROUGH: I am not the maker of
13 the motion. I am merely asking the question, so I defer to
my fellow Commissioners, who need to --
14 **CHAIR KRUER:** Okay.
COMMISSIONER SCARBOROUGH: -- take it from here.
15 **CHAIR KRUER:** Okay.
COMMISSIONER HUESO: I would like to ask --
16 **CHAIR KRUER:** No, just a second, Commissioner
Potter is next.
17 **COMMISSIONER POTTER:** Thank you, Mr. Chair, you
know my ADD kicked in hours ago, and I think we are
18 struggling with the same issue here, and that is 8 and 10. I
don't think there is any level of comfort that, one, this
19 Commission is interesting in ceding any of its authority, and
I don't think I am particularly interested in just ceding our
20 authority to the Executive Director, but back to the
Commission, itself.
21 My issue with this, you know, 11th hour word-
smithing is that it is prior to commencement of construction.
22 My feeling is that would be prior to permit issuance, as is
sort of standard procedure here.
23 There is a couple of things here that we have
heard redundantly, and that is that the mitigations are just
24 too vague, we have issues with that. And, the carbon
neutrality issue, I think we can give directions to staff
25 that 8 and 10 needs to be under the purview of the
Commission, itself.
I see significant lack of detail, and I wouldn't

1 want to, necessarily, restrict the mitigation to 37 acres. I
2 would strike the number entirely, and figure out what that
mitigation is going to be.
3 I certainly appreciated Commissioner Blank's
issues, but he kind of morphed from F. Lee Bailey into Ralph
4 Nader, and got just a little bit too concerned about the
financial underpinnings of the cost of water here, and I
5 don't necessarily think that is my concern, per se, but it
most certainly is a concern to me, if for some reason this
6 enterprise fails, and there is no in-perpetuity mitigations
for the wetlands mitigations, or, once you fail, the carbon
7 neutrality issue is moot.
But, most certainly, I would want to see whether
8 it is a bond, whether it is an endowment, whether it is a
trust, but something that goes on and continues this intent
9 ad infinitum.
Also, the power plant closing question remains
10 very, very vague and unanswered. And, also for me, the
ultimate death of once-through cooling, what is that going to
11 mean to the continued operation of this? I can't really
concern myself with the cost of that, but there is a cost
12 associated, and that really is with the people you contracted
with. That is the responsibility of those agencies to try to
13 avoid some sort of price rate that might occur, and I don't
necessarily want to get involved in that.
14 I am not necessarily adverse to taking a step back
in time, and taking a look at the SONGS process here. I
15 don't want to get into that today, but Susan certainly
alluded to it. You know why we had so much data on that was
16 because it got up and running, and we looked at, I think it
was, maybe, 10 years of data on entrainment issues. And, it
17 was that retrospective that gave us 100 percent accurate data
and technology that told us what had been going on with this
18 plant, and that wasn't just to entrainment, but it was also
the impacts to the kelp forest in that area of the warm water
19 discharges.
And, I just don't want to step into the future
20 here without taking a look at some of the issues that have
been raised today. So, I would hope that there is a way
21 through staff to amend Conditions 8 and 10, that gives us the
authority that we could move forward, but understanding that
22 8 and 10 are going to set the course for the future. I think
that is the best way to go, having recognized that I really
23 don't want to go through another long drawn out hearing on
the entire benefits of desal.
24 If we are going to have discussion at this
Commission level, it ought to be specific to the value of the
25 mitigation, and focus on those components, not just the
general benefits of desal to the area of San Diego, which is
indisputable. I mean, 75 - 80 percent dependency on imported

water is not a good thing at all, and the death of the Colorado River is imminent.

But, I would much prefer that we get down to the hard core brass tacks of the issues that are really bothering us, and I think that is 8 and 10, and if staff was inclined to come up with some cleaver way of incorporating the concerns I have aired here, and other Commissioners have, I would hope that the maker of the motion would be willing to amend his motion to include that direction.

CHAIR KRUER: Thank you, Commissioner Potter.

Commissioner Hueso, what about that?

COMMISSIONER HUESO: Yes, I think this has been an excellent discussion, and I am willing to do that.

I think the intent here, if I am not mistaken, is to bring back the marine life mitigation plan for Coastal approval, and the climate action plan -- well, I am getting to that -- the climate action plan for Commission approval.

So, I mean the only concern that I had about the staff recommendation was on the no less than 2:1 mitigation on an area basis for the impacts identified above, and I think that also gets to, kind of what I have been hearing from Commissioners, that that is not necessarily kind of a scientific approach. It is just kind of a number that is thrown out. It doesn't necessarily cover the impacts. It could be more than required, it could be less than required, and maybe through the process of having the marine life mitigation plan come back for Commission approval we can, maybe, come to a decision as after they have gone through the State Lands Commission, and all of the conditions that have been placed on this project can be brought to the Commission for review and approval.

And, my question is, am I accurate in hearing the Commissioners? and how would we accomplish that through a motion?

CHAIR KRUER: Okay.

COMMISSIONER POTTER: Mr. Chair, before --

COMMISSIONER HUESO: I am asking -- and I am willing to amend my motion, and I'll do it incorporating some of the comments that we heard from Commissioners.

COMMISSIONER POTTER: I am never quite sure, exactly, what I have said, but it would be refreshing to hear what staff thought we heard, and if we could get those into some sort of positive directions, I am hoping my colleagues here would --

COMMISSIONER REILLY: Mr. Chair, just a point of clarification.

CHAIR KRUER: Yes.

COMMISSIONER REILLY: Is what we are talking about is going back to the staff recommendations on 8 and 10, and simply omitting the 2:1 mitigation ratio, currently?

EXECUTIVE DIRECTOR DOUGLAS: That is what I heard.
CHAIR KRUER: That is what I heard.
COMMISSIONER REILLY: Okay.
COMMISSIONER POTTER: And, it sounds --
COMMISSIONER HUESO: Then, I'll amend my motion to accomplish that.
EXECUTIVE DIRECTOR DOUGLAS: Right.
CHAIR KRUER: Okay.
COMMISSIONER WAN: I need to --
CHAIR KRUER: Wait a second now, just one second --
COMMISSIONER POTTER: Commissioner Wan wanted to ask --
CHAIR KRUER: -- I want to ask Commissioner Burke if he agrees with that amending motion?
COMMISSIONER BURKE: Well, I --
CHAIR KRUER: Okay, thank you.
COMMISSIONER WAN: Point of clarification.
CHAIR KRUER: Commissioner Wan.
COMMISSIONER WAN: Commissioner Potter, I also heard you make some comment about removing the specificity with regards to this 37 acres?
COMMISSIONER POTTER: That is correct.
EXECUTIVE DIRECTOR DOUGLAS: That's right.
COMMISSIONER POTTER: I don't want to set a number, an arbitrary number that may not be enough, is my candid comment.
COMMISSIONER CLARK: Mr. Chair.
EXECUTIVE DIRECTOR DOUGLAS: Mr. Chair.
CHAIR KRUER: Yes.
EXECUTIVE DIRECTOR DOUGLAS: If you look at the staff condition that we have identified, there is no reference to acreage, and what we heard was to delete the 2:1, just leave that open, and then that would be addressed in the plan, but it would be the staff --
COMMISSIONER POTTER: As mitigation, as mitigation based on the conditions, that is the issue.
EXECUTIVE DIRECTOR DOUGLAS: Right.
COMMISSIONER POTTER: And, then I did have that piece in there regarding the once-through cooling component, and the possible plant closure issue. What is the sort of succession plan, or transition plan for that event? I would say the plant closure is questionable and at some point inevitable, but once-through cooling looks like it has a short shelf life, at this moment, so, if we could include that.

And, then, I just have one final issue, and that is the Special Condition 1, where we seem to be making a run back at Coastal Commission's legal reimbursement costs, and I have never been real fond of that, because I didn't think it

was actually necessary, but if Commissioners had concerns with that, I would certainly be interested in hearing that.

CHAIR KRUER: Thank you, Commissioner Potter.

Okay, Commissioner Neely.

VICE CHAIR NEELY: Thank you, Mr. Chairman, I just want to thank the Commission for this discussion. It has been very helpful for me, as well. I think that we have all gone on the record now supporting the need for the desal plant, acknowledging the needs of San Diego, with regards to water, and we are holding on to -- we are not relinquishing our authority as a Commission.

CHAIR KRUER: Okay.

Commissioner Wan.

COMMISSIONER WAN: I have just two -- a couple of questions of Mr. Thayer.

First of all, do you have the full entrainment study?

COMMISSIONER THAYER: We don't have anything, I think, beyond what the Coastal Commission has. I am not sure what our staff has in way of background documents.

COMMISSIONER WAN: Okay, are you going to be looking at, when you are looking at the entrainment issues, in addition to the mitigation plan, are you going to be looking at the adequacy of the mitigations? and the methodology? and all of that?

COMMISSIONER THAYER: That wasn't one of the directions from the Commission.

COMMISSIONER WAN: So, you will not be looking at that?

COMMISSIONER THAYER: No, we will not.

COMMISSIONER WAN: Okay, so at no place will anybody get to look at that.

How about looking at the nature of the input, because we have been talking about alternatives, and will you be looking at whether there is a possibility for other alternatives to be used that would minimize the impacts, for example, of entrainment? or energy use?

COMMISSIONER THAYER: Sub-ocean --

COMMISSIONER WAN: As an example?

COMMISSIONER THAYER: -- yes, there was no direction from the Commission on that.

I should modify slightly, because the Commission did ask us to look at the wetland mitigation, and I think that was both for nailing down what it was going to do, and make sure it was done properly. I suspect they would want some evaluation about the efficacy of that --

COMMISSIONER WAN: Okay.

COMMISSIONER THAYER: -- in terms of addressing the impacts.

COMMISSIONER WAN: Well, if that is the case, you

also would need the full entrainment study, and not just the summary.

COMMISSIONER THAYER: We may be looking at that issue.

COMMISSIONER WAN: Thank you.

CHAIR KRUER: Commissioner Clark.

COMMISSIONER CLARK: Thank you, Mr. Chair.

Maybe this came out, but it isn't clear to me. Once the State Lands Commission acts on this, I thought I heard it indicated that if there were changes or elements that would impact an approval that we made, it would automatically come back to us? or do we need to make that expressed in these conditions that it will come back to us?

EXECUTIVE DIRECTOR DOUGLAS: Well, it seems to me, that if you were going to approve it you would require approval from the State Lands Commission prior to issuance, and if there are conditions imposed --

COMMISSIONER CLARK: Right.

EXECUTIVE DIRECTOR DOUGLAS: -- that raise issues about consistency with the *Coastal Act* --

COMMISSIONER CLARK: Right.

EXECUTIVE DIRECTOR DOUGLAS: -- it would seem to me that that would require your review.

COMMISSIONER CLARK: And, that is my thinking.

Now, my question is does that need to be expressed as a condition in our set of conditions?

EXECUTIVE DIRECTOR DOUGLAS: Well, I would suggest that what you would do then is you would say prior to issuance you would have to have proof of the State Lands Commission's action, and the opportunity for you to determine whether or not conditions imposed, somehow contravene conformity with *Coastal Act* policies.

COMMISSIONER CLARK: Would the maker of the motion accept that?

COMMISSIONER HUESO: I'll accept that as part of the motion.

COMMISSIONER CLARK: And, the "seconder"?

[No Response]

CHAIR KRUER: "Yes" he said.

COMMISSIONER CLARK: Thank you.

CHAIR KRUER: Okay.

Commissioner Shallenberger.

COMMISSIONER SHALLENBERGER: Two quick points. Do we need to do the same thing for the regional board?

EXECUTIVE DIRECTOR DOUGLAS: No, it is --

COMMISSIONER HUESO: That is already in there, okay.

Then I just want to put on the record that we have deleted the 2:1 mitigation ratio, but I wouldn't want either staff or the project proponent to interpret that, that we

1 were opposed to a 2:1 ratio. It is a very, very common ratio
2 for wetlands for mitigation, in fact, it is not uncommon to
go 3:1 --
3 **COMMISSIONER HUESO:** But, it may be too little.
COMMISSIONER SHALLENBERGER: -- that is right, but
4 I just don't want it --
COMMISSIONER HUESO: So, we just --
5 **COMMISSIONER SHALLENBERGER:** -- interpreted as
that is something we don't support.
6 **COMMISSIONER HUESO:** We will put that into the
record.
7 **CHAIR KRUER:** Okay.
I am going to --
8 **EXECUTIVE DIRECTOR DOUGLAS:** Mr. Chairman.
CHAIR KRUER: Director Douglas.
9 **EXECUTIVE DIRECTOR DOUGLAS:** Just one point of
clarification.
10 So, the motion has been amended to include the
staff's suggested conditions with the deletion of the 2:1.
Did you do anything relative to the climate?
11 **CHAIR KRUER:** Yes.
12 **EXECUTIVE DIRECTOR DOUGLAS:** You did the same
thing there, and went with the staff?
13 **CHAIR KRUER:** Yes.
COMMISSIONER HUESO: Yes.
14 **EXECUTIVE DIRECTOR DOUGLAS:** Okay, good, thank
you. I didn't understand that.
15 **CHAIR KRUER:** Okay, I think I am going to save
everybody a lot of time, when it comes to me, this discussion
16 was very worthwhile. I do support desal, and I was moved
today by Robert Simmons, who I have a great deal of respect
17 for. He was the actual -- as Commissioner Scarborough said
-- the lawyer that represented the Sierra Club that beat the
18 City of San Diego on their secondary treatment plant. He is
a brilliant lawyer, and it meant a lot to me that for him --
19 and many of the other people who came in here today, on both
sides, their opinions, and he thought there was no
20 significant impact. And, I think with the changes I was
concerned about on 8 and 10, helped myself. So, with that I
21 am not going to make any more comments.
I am going to ask to call the roll, please, on the
motion.
22 **COMMISSIONER REILLY:** Mr. Chair, may I make one
final comment?
23 **CHAIR KRUER:** Yes, you can, Commissioner Reilly.
COMMISSIONER REILLY: Thank you.
24 I am still very bothered by the fact that we are
voting, potentially, to approve a project with so much
25 information missing, and particularly a project as important
as this. And, I would have much preferred to have had a

continuance, and provided the applicant with an opportunity to provide the information, so that we could make a studied judgment based on a good staff analysis. We don't have that in front of us.

And, I think that approving it does bias the Commission, even though we are requiring them to come back with a couple of studies. I think it bias us towards approving it, you know, even though we are saying, you have got to bring the studies back at some future date, and I think it is just inappropriate for us to do that on a project like this.

CHAIR KRUER: Okay.

COMMISSIONER REILLY: I am not going to be able to support the motion.

CHAIR KRUER: That is fine, Commissioner Reilly, thank you.

Call the roll, please.

EXECUTIVE DIRECTOR DOUGLAS: Mr. Chairman --

CHAIR KRUER: They are asking for a "Yes" vote.

EXECUTIVE DIRECTOR DOUGLAS: -- just one clarification, before you do.

Just to make clear that I did read into the record the deletion of the reference in Suggested Condition 8 to Aqua Hedionda, so it just leaves it open for the mitigation plan to look at other areas for restoration, and I just wanted to clarify that.

CHAIR KRUER: Okay, that's good, thank you, for that clarification.

Clerk, call the roll, please.

SECRETARY MILLER: Commissioner Burke?

COMMISSIONER REILLY: Asking for what?

CHAIR KRUER: "Yes".

COMMISSIONER BURKE: Yes.

SECRETARY MILLER: Commissioner Clark?

COMMISSIONER CLARK: Yes.

SECRETARY MILLER: Commissioner Hueso?

COMMISSIONER HUESO: Yes.

SECRETARY MILLER: Commissioner Secord?

COMMISSIONER SECORD: Yes.

SECRETARY MILLER: Commissioner Neely?

VICE CHAIR NEELY: Yes.

SECRETARY MILLER: Commissioner Potter?

COMMISSIONER POTTER: Aye.

SECRETARY MILLER: Commissioner Reilly?

COMMISSIONER REILLY: No.

SECRETARY MILLER: Commissioner Shallenberger?

COMMISSIONER SHALLENBERGER: No.

SECRETARY MILLER: Commissioner Wan?

COMMISSIONER WAN: No.

SECRETARY MILLER: Commissioner Firestone?

COMMISSIONER FIRESTONE: Yes.
SECRETARY MILLER: Commissioner Blank?
COMMISSIONER BLANK: Yes.
SECRETARY MILLER: Chairman Kruer?
CHAIR KRUER: Yes.
SECRETARY MILLER: Eight, four.
CHAIR KRUER: The motion passes --
EXECUTIVE DIRECTOR DOUGLAS: Mr. Chairman.
COMMISSIONER REILLY: No, it was nine, three.
CHAIR KRUER: Nine, three, wasn't it? I counted nine, three.
SECRETARY MILLER: Nine, three.
EXECUTIVE DIRECTOR DOUGLAS: Mr. Chairman.
CHAIR KRUER: Yes.
EXECUTIVE DIRECTOR DOUGLAS: Just so that we don't have argument down the road, I need to understand what happened to the finding language that they suggested, because that is inconsistent with the action that the Commission just took.
COMMISSIONER WAN: We didn't vote on that.
EXECUTIVE DIRECTOR DOUGLAS: You did not vote on that?
CHAIR KRUER: No, no, we didn't vote on that. It is out the window.
EXECUTIVE DIRECTOR DOUGLAS: All right, good. That is why I asked, thank you.
COMMISSIONER REILLY: But, staff may need to look at their findings, and bring them into conformance with what we did, too.
EXECUTIVE DIRECTOR DOUGLAS: That is a different issue, but at least these were not adopted, okay, thank you.
CHAIR KRUER: We are going to take a break, because we have more things to do here. We thank everyone for their patience in coming out on this item.
*

[Whereupon the hearing concluded at 9:10 p.m.]

Item Th17a
Recommended Revised Findings for Coastal Development Permit E-06-013
Poseidon Resources (Channelside), LLC

ATTACHMENT 2:
Staff's Proposed Conditions of November 14, 2007 and Poseidon's Proposed Conditions of November 15, 2007

Th13a

Staff Proposed Conditions For Coastal Commission's Potential Approval of Poseidon Project

STANDARD CONDITIONS:

1) **Notice of Receipt and Acknowledgment:** This permit is not valid until a copy of the permit is signed by the Permittee or authorized agent, acknowledging receipt of the permit and the acceptance of the terms and conditions, and is returned to the Commission office.

2) **Expiration:** Construction activities for the proposed project must be initiated within two years of issuance of this permit. This permit will expire two years from the date on which the Commission approved the proposed project if development has not begun. Construction of the development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made at least six months prior to the expiration date.

3) **Interpretation:** Any questions of intent or interpretation of any condition will be resolved by the Executive Director of the Commission (hereinafter, "Executive Director") or the Commission.

4) **Assignment:** The permit may be assigned to any qualified person, provided the assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5) **Terms and Conditions Run with the Land:** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS:

1) **Liability for Costs and Attorneys Fees:** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees – including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorneys fees that the Coastal Commission may be required by a court to pay -- that the Coastal Commission incurs in connection with the defense of any action brought against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.

2) **Proof of Legal Interest:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall provide for Executive Director review and approval documentation of the Permittee's legal interest in all property needed to construct and operate the project, including:

- Lease(s) from the California State Lands Commission for structures on state tidelands;
- Lease(s) or other forms of approval from the power plant owner allowing the Permittee to use portions of the power plant site and Agua Hedionda Lagoon.
- Lease(s) or other forms of approval from the City of Carlsbad and other local governments for the project's water delivery pipelines.
- Lease(s) or other forms of approval from the City of Carlsbad and the San Diego County Water Authority for use of Maerkle Reservoir for water storage.

3) **Lease and Deed Restriction:** PRIOR TO ISSUANCE OF THE PERMIT, the applicant shall provide to the Executive Director for review and approval documentation demonstrating that the applicant and has executed and recorded against its leasehold interest(s) in the property governed by this permit a lease restriction (in which any private owner of the fee interest in such property shall join or to which it shall agree to be bound), in a form and content acceptable to the Executive Director (a) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the Property, subject to terms and conditions that restrict the use and enjoyment of the Property; and (b) imposing all of the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The restriction shall include a legal description of the Property. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Standard and Special Conditions of this permit shall continue to restrict the use and enjoyment of the Property so long as either this permit or the development it authorizes – or any part, modification, or amendment thereof – remains in existence on or with respect to the Property.

4) **Other Approvals:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval documentation showing that the project has obtained final approvals for project construction and operation from the City of Carlsbad, the Regional Water Quality Control Board, the California Department of Health Services, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, or documentation showing that these approvals are not needed.

5) **Assumption of Risk and Waiver of Liability:** The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the may be subject to hazards from seismic events, liquefaction, storms, waves, floods and erosion; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the landowner.

6) **Limits of Development**: This permit authorizes the construction and operation of the Poseidon Carlsbad Desalination Project and associated infrastructure as described in the project description of this staff report, as clarified and modified by these conditions.

7) **Final Plans**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval final plans for the project components located in the coastal zone. The Permittee shall undertake development in accordance with the approved plans and any changes shall be reported to the Executive Director. No material changes within the coastal zone shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Changes to the project requiring review for amendment would include changes in the physical, operational, or delivery capacity increases, or extension of water supply distribution pipelines beyond those shown on the final plans.

8) **Marine Life Mitigation Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to and obtain from the Commission approval of a Marine Life Mitigation Plan in the form of an amendment to this permit that includes the following:

   a) Documentation of the project's expected impacts to marine life due to entrainment and impingement caused by the facility's intake of water from Agua Hedionda Lagoon. This requirement can be satisfied by submitting a full copy of the Permittee's Entrainment Study conducted in 2004-2005 for this project.

   b) No less than 2:1 mitigation on an areal basis for the impacts identified above. To the maximum extent feasible, the mitigation shall take the form of creation, enhancement, or restoration of aquatic and wetland habitat within Agua Hedionda Lagoon. Remaining mitigation outside of Agua Hedionda Lagoon shall consist primarily of similar aquatic and wetland mitigation at other nearby coastal lagoons.

   c) Goals, objectives and performance criteria for each of the proposed mitigation sites. It shall identify specific creation, restoration, or enhancement measures that will be used at each site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance critieria. The Plan shall also identify contingency measures that will be implemented should any of the mitigation sites not meet performance criteria.

   d) "As-built" plans for each site and annual monitoring reports for no less than five years or until the sites meet performance criteria.

   e) Legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.

9) **Change in Seawater Withdrawal:** If at any time during the life of the project Poseidon proposes or is required to withdraw more than an average flow of 304 MGD of seawater, it must obtain first an amendment to this permit.

10) **Energy Minimization and Greenhouse Gas Reduction Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to the Commission a Revised Energy Minimization and Greenhouse Gas Reduction Plan that addresses comments submitted by the staffs of the Coastal Commission, State Lands Commission and the California Air Resources Board. The permit shall not be issued until the Commission has approved a Revised Energy Minimization and Greenhouse Gas Reduction Plan after a public hearing.

11) **Public Access Enhancements:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall record one or more Public Access Easement Deed(s) in favor of one or more public agency(ies) or private association(s) acceptable to the Executive Director over four sites totaling approximately 19 acres as generally described below and as more specifically described in the coastal development permit application. The four sites are:

- Fishing Beach: approximately 3.5 to 4 acres of land along the west shore of Agua Hedionda Lagoon.
- Bluff Area: approximately 13 acres of land on the west side of Carlsbad Boulevard opposite the power plant.
- Hubbs Site: approximately 2 acres of land along the north shore of Agua Hedionda Lagoon to be used for a fish hatchery, aquatic research, and public access.
- South Power Plant Parking Area: land on the east side of Carlsbad Boulevard near the south entrance of the power plant to be used for public parking.

The Easement Deeds shall be of a form and content approved by the Executive Director, free of prior encumbrances, except for tax liens, that the Executive Director determines may affect the interest being conveyed. The Deed(s) shall provide that they shall not be used or construed to allow anyone to interfere with any rights of public access acquired through use which may exist on the property.

The Easement Deed(s) shall include stewardship plans for these easements that include the following:

- Descriptions of the allowable and prohibited uses of the easements. These descriptions shall identify the intended public uses of each easement area and the activities and structures that will be allowed or prohibited in order to support the intended uses.
- Descriptions of existing conditions within the easements, including any natural habitat areas, existing and proposed developments, and existing and proposed public accessways.
- Descriptions of how the easements will be managed to provide the allowable and existing uses described above.
- Descriptions of the funding needed to support stewardship of the easements. Based on the funding needs identified in the plan and upon approval of the plan by the Executive Director, the Permittee shall fund an endowment to provide for perennial stewardship costs.

12) **Dredging:** This permit does not authorize dredging that may be needed to maintain flows to the desalination facility's intake structure. The Permittee shall submit separate coastal development permit applications for proposed dredging operations. If dredge spoils are suitable for beach replenishment, the materials shall be placed at appropriate beach locations.

13) **Visual Resources:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Screening Plan. Desalination plant exterior mechanical equipment and facilities, including tanks, heating, air conditioning, refrigeration equipment, plumbing lines, duct work and transformers, shall be screened from view on all sides visible to the public. The design and material used for screening shall be architecturally compatible with the building.

14) **Lighting Plan**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit a Lighting Plan to the Executive Director for review and approval. Exterior lighting for the desalination facilities shall serve the purpose of operations, security and safety only. The Lighting Plan shall demonstrate that project lighting is shielded from surrounding areas, and that only the minimum amount of lighting required for safety purposes is provided to avoid adverse effects on surrounding areas. In general, lighting fixtures shall be shielded downward and away from the ocean, lagoon and adjacent properties. Construction of the desalination plant and related facilities and improvements shall be in conformance with the approved plan.

15) **Construction Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Construction Plan. The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view in the coastal zone. The Plan shall identify any expected disruptions to public access to the shoreline and shall include measures to avoid, minimize, or mitigate for those disruptions.

The Plan shall also identify the type and location of erosion control/water quality best management practices that will be implemented during construction to protect coastal water quality, including the following:

- Silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction areas to prevent construction-related runoff and/or sediment from entering the dunes and/or the Pacific Ocean.
- Grading and alteration outside of the approved construction zone is prohibited.
- Equipment washing, refueling, and/or servicing shall not take place on the beach or sandy dune area. All construction equipment shall be inspected and maintained at an off-site location to prevent leaks and spills of hazardous materials at the project site.
- The construction site shall maintain good construction housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach).

- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. A copy of the approved Construction Plan shall be kept at the construction job site at all times and all persons involved with the construction shall be briefed on its content and meaning prior to commencement of construction. The Permittee shall notify the Executive Director at least three working days in advance of commencement of construction, and immediately upon completion of construction. The Permittee shall undertake construction in accordance with the approved Construction Plan. Any proposed changes to the approved Construction Plan shall be reported to the Executive Director. No material changes to the approved Construction Plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

16) **Storm Water Pollution Prevention Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Storm Water Pollution Prevention Plan (SWPPP). At minimum the SWPPP shall include the following Best Management Practices (BMPs):

- Gravel bags, silt fences, etc. shall be placed along the edge of all work areas as determined appropriate by the City's construction inspector in order to contain particulates prior to contact with receiving waters.
- All concrete washing and spoils dumping will occur in a designated location.
- Construction stockpiles will be covered in order to prevent blow-off or runoff during weather events.
- A pollution control education plan developed by the General Contractor and implemented throughout all phases of development and construction.
- Severe weather event erosion control materials and devices shall be stored onsite for use as needed.

17) **Water Quality Technical Report:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Water Quality Technical Report as specified in the City of Carlsbad Standard Urban Stormwater Mitigation Plan (April 2003) (Carlsbad SUSMP) for the post construction project site, prepared by a licensed Civil Engineer, which shall include plans, descriptions and supporting calculations. The Storm Water Management Plan shall incorporate all feasible Best Management Practices (BMPs) designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater leaving the developed areas of the site. The plan shall include the following criteria:

- Post-Development peak runoff rates and average volumes shall not exceed pre-development conditions.
- Runoff from all parking areas, turnouts, driveways and other impermeable surfaces (e.g., roofs) shall be collected and directed through a system of structural BMPs including vegetated and/or gravel filter strips or other media filter devices. The filter elements shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants through infiltration and/or biological uptake. The drainage system shall also

be designed to convey runoff in excess of this standard from the developed site in a non-erosive manner.

- Provisions for maintaining the drainage and filtration systems so that they are functional throughout the life of the approved development. Such maintenance shall include the following: 1) the drainage and filtration system shall be inspected, cleaned and repaired prior to the onset of the storm season, no later than September 30th each year and 2) should any of the project's surface or subsurface drainage/filtration structures fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area.
- A drainage system approved by the City Engineer to ensure that runoff resulting from 10-year frequency storms of 6 hours and 24 hours duration under developed conditions, are equal to or less than the runoff from a storm of the same frequency and duration under existing developed conditions. Both 6-hour and 24-hour storm durations shall be analyzed to determine the detention basin capacities necessary to accomplish the desired results.

The Permittee shall implement and maintain the Plan for the life of the project.

EXHIBIT A

Th7a

Applicant's Proposed Coastal Development Permit Conditions
(Marked to show changes from Staff's Proposed Conditions)

STANDARD CONDITIONS:

1) **Notice of Receipt and Acknowledgment:** This permit is not valid until a copy of the permit is signed by the Permittee or authorized agent, acknowledging receipt of the permit and the acceptance of the terms and conditions, and is returned to the Commission office.

2) **Expiration:** Construction activities for the proposed project must be initiated within two years of issuance of this permit. This permit will expire two years from the date on which the Commission approved the proposed project if development has not begun. Construction of the development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made at least six months prior to the expiration date.

3) **Interpretation:** Any questions of intent or interpretation of any condition will be resolved by the Executive Director of the Commission (hereinafter, "Executive Director") or the Commission.

4) **Assignment:** The permit may be assigned to any qualified person, provided the assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5) **Terms and Conditions Run with the Land:** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

SPECIAL CONDITIONS:

~~**1)**~~ ~~**Liability for Costs and Attorneys Fees:** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees -- including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorneys fees that the Coastal Commission may be required by a court to pay -- that the Coastal Commission incurs in connection with the defense of any action brought against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission.~~

2) **Proof of Legal Interest:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall provide for Executive Director review and approval documentation of the Permittee's

legal interest in all property within the coastal zone needed to construct and operate the project, including:

- Lease(s) from the California State Lands Commission for structures on state tidelands;

- Lease(s) or other forms of approval from the power plant owner allowing the Permittee to use portions of the power plant site and Agua Hedionda Lagoon.

- Lease(s) or other forms of approval from the City of Carlsbad and other local governments for the project's water delivery pipelines.

- ~~Lease(s) or other forms of approval from the City of Carlsbad and the San Diego County Water Authority for use of Maerkle Reservoir for water storage.~~

3) **Lease and Deed Restriction:** PRIOR TO ISSUANCE OF THE PERMIT, the applicant shall provide to the Executive Director for review and approval documentation demonstrating that the applicant and has executed and recorded against its leasehold interest(s) in the property governed by this permit a lease restriction (in which any private owner of the fee interest in such property shall join or to which it shall agree to be bound), in a form and content acceptable to the Executive Director (a) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the Property, subject to terms and conditions that restrict the use and enjoyment of the Property; and (b) imposing all of the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The restriction shall include a legal description of the Property. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Standard and Special Conditions of this permit shall continue to restrict the use and enjoyment of the Property so long as either this permit or the development it authorizes – or any part, modification, or amendment thereof – remains in existence on or with respect to the Property.

4) **Other Approvals:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval documentation showing that the project has obtained final approvals for project construction and operation from the City of Carlsbad, the Regional Water Quality Control Board, the California Department of Health Services, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, or documentation showing that these approvals are not needed.

5) **Assumption of Risk and Waiver of Liability:** The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the project site may be subject to hazards from seismic events, liquefaction, storms, waves, floods and erosion; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) that any

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

adverse effects to property caused by the permitted project shall be fully the responsibility of the landowner.

6) **Limits of Development**: This permit authorizes the construction and operation of the Poseidon Carlsbad Desalination Project and associated infrastructure as described in the project description of this staff report, as clarified and modified by these conditions.

7) **Final Plans**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval final plans for the project components located in the coastal zone. The Permittee shall undertake development in accordance with the approved plans and any changes shall be reported to the Executive Director. No material changes within the coastal zone shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Changes to the project requiring review for amendment would include changes in the physical, operational, or delivery capacity increases, or extension of water supply distribution pipelines, each within the coastal zone, beyond those shown on the final plans.

8) **Marine Life Mitigation Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, The Permittee shall submit to the Coastal Commission evidence of the Regional Water Quality Control Board's approval of a Marine Life Mitigation Plan. The Marine Life Mitigation Plan shall provide for the restoration of no less than 37 acres of marine wetlands. The Plan shall detail the specific site of the mitigation. The site shall be contained within the San Dieguito Wetland Restoration Plan that was approved by the Coastal Commission on October 12, 2005 (Coastal Development Permit No. 6-04-88) and was the subject of a Final Environmental Impact Report that was prepared and certified by the San Dieguito River Park Joint Powers Authority and U.S. Fish and Wildlife Service, or such substitute site or sites approved by the Regional Water Quality Control Board. No later than the commencement of commercial operation of the desalination facility, the Permittee shall commence implementation of the Plan. The Executive Director may extend the deadline for implementation of the Plan upon Poseidon's request and showing of good cause. The Plan shall include the following:

~~ISSUANCE OF THE PERMIT, the Permittee shall submit to and obtain from the Commission approval of a Marine Life Mitigation Plan in the form of an amendment to this permit that includes the following:~~

~~a)~~ ~~Documentation of the project's expected impacts to marine life due to entrainment and impingement caused by the facility's intake of water from Agua Hedionda Lagoon. This requirement can be satisfied by submitting a full copy of the Permittee's Entrainment Study conducted in 2004-2005 for this project.~~

~~b)~~ ~~No less than 2:1 mitigation on an areal basis for the impacts identified above. To the maximum extent feasible, the mitigation shall take the form of creation, enhancement, or restoration of aquatic and wetland habitat within Agua Hedionda Lagoon. Remaining mitigation outside of Agua Hedionda Lagoon shall consist~~

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

~~primarily of similar aquatic and wetland mitigation at other nearby coastal lagoons.~~

~~c)~~ a) Goals, objectives and performance criteria for ~~each of~~ the proposed mitigation sites. It shall identify specific creation, restoration, or enhancement measures that will be used at ~~each~~ the site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the site~~s are~~ is meeting performance criteria. The Plan shall also identify contingency measures that will be implemented should ~~any of~~ the mitigation site~~s~~ not meet performance criteria.

~~d)~~ b) "As-built" plans for ~~each~~ the mitigation site and annual monitoring reports for no less than five years or until the site~~s~~ meets performance criteria.

~~e)~~ c) Legal mechanism(s) proposed to ensure permanent protection of ~~each~~ the site – e.g., conservation easements, deed restriction, or other methods.

9) **Change in Seawater Withdrawal:** If at any time during the life of the project Poseidon proposes or is required to withdraw more than an average flow of 304 MGD of seawater, it must obtain first an amendment to this permit.

10) **Energy Minimization and ~~Greenhouse Gas Reduction~~ Climate Action Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to the Executive Director a Climate Action Plan in substantial conformity with the Plan dated November 2997. Within one year of the commencement of commercial operations of the desalination facility, the Permittee shall implement the Plan for the life of the project. Prior to the commencement of commercial operations, the Permittee shall provide written confirmation from the California Air Resources Board ("CARB") that the emissions calculations contained in the Plan are consistent with CARB-recommended methodologies. The Executive Director may extend these deadlines for implementation of the Plan upon Poseidon's request and showing of good cause ~~Commission a Revised Energy Minimization and Greenhouse Gas Reduction Plan that addresses comments submitted by the staffs of the Coastal Commission, State Lands Commission and the California Air Resources Board. The permit shall not be issued until the Commission has approved a Revised Energy Minimization and Greenhouse Gas Reduction Plan after a public hearing~~.

11) **Public Access Enhancements:** PRIOR TO COMMENCEMENT OF OPERATIONS, Poseidon shall cause to be dedicated, in accordance with the City of Carlsbad's Precise Development Plan PDP 00-02, the below-described parcels of land. The dedications shall be in the form of easements, title transfers, and/or deed restrictions, whose purpose is to further Coastal Act goals of maximizing public access and recreational opportunities along the coast in the South Carlsbad Coastal Redevelopment Area and maintaining, restoring and enhancing marine resources ~~ISSUANCE OF THE PERMIT, the Permittee shall record one or more Public Access Easement Deed(s) in favor of one or more public agency(ies) or private association(s) acceptable to the Executive Director over four sites~~

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

~~totaling approximately 19 acres as generally described below and as more specifically described in the coastal development permit application~~. The four sites are:

- Fishing Beach: public access and parking easement in favor of the City of Carlsbad covering approximately ~~3.5~~2.4 ~~to 4~~ acres of land along the west shore of Agua Hedionda Lagoon.

- Bluff Area: approximately ~~13~~ 10.2 acres of land on the west side of Carlsbad Boulevard opposite the power plant, which shall be dedicated in fee title to the City of Carlsbad for recreational and coastal access uses.

- Hubbs Site: approximately 2 acres of land along the north shore of Agua Hedionda Lagoon to be used for a fish hatchery, aquatic research, and public access, which shall be deed restricted to uses such as fish hatchery, aquatic research, and trails.

- South Power Plant Parking Area: an access easement over approximately 0.3 acres of land on the east side of Carlsbad Boulevard near the south entrance of the power plant, which shall be dedicated to the City of Carlsbad ~~to be used~~ for public parking.

~~The Easement Deeds shall be of a form and content approved by the Executive Director, free of prior encumbrances, except for tax liens, that the Executive Director determines may affect the interest being conveyed. The Deed(s) shall provide that they shall not be used or construed to allow anyone to interfere with any rights of public access acquired through use which may exist on the property.~~

~~The Easement Deed(s) shall include stewardship plans for these easements that include the following:~~

- ~~Descriptions of the allowable and prohibited uses of the easements. These descriptions shall identify the intended public uses of each easement area and the activities and structures that will be allowed or prohibited in order to support the intended uses.~~

- ~~Descriptions of existing conditions within the easements, including any natural habitat areas, existing and proposed developments, and existing and proposed public accessways.~~

- ~~Descriptions of how the easements will be managed to provide the allowable and existing uses described above.~~

- ~~Descriptions of the funding needed to support stewardship of the easements. Based on the funding needs identified in the plan and upon approval of the plan by the Executive Director, the Permittee shall fund an endowment to provide for perennial stewardship costs.~~

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

12) **Dredging:** This permit does not authorize dredging that may be needed to maintain flows to the desalination facility's intake structure. The Permittee shall submit separate coastal development permit applications for proposed dredging operations. If dredge spoils are suitable for beach replenishment, the materials shall be placed at appropriate beach locations.

13) **Visual Resources:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Screening Plan. Desalination plant exterior mechanical equipment and facilities, including tanks, heating, air conditioning, refrigeration equipment, plumbing lines, duct work and transformers, shall be screened ~~from view~~ on all sides visible to the public. The design and material used for screening shall be architecturally compatible with the building.

14) **Lighting Plan**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit a Lighting Plan to the Executive Director for review and approval. Exterior lighting for the desalination facilities shall serve the purpose of operations, security and safety only. The Lighting Plan shall demonstrate that project lighting is shielded from surrounding areas, and that only the minimum amount of lighting required for safety purposes is provided to avoid adverse effects on surrounding areas. In general, lighting fixtures shall be shielded downward and away from the ocean, lagoon and adjacent properties. Construction of the desalination plant and related facilities and improvements shall be in conformance with the approved plan.

15) **Construction Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Construction Plan. The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view in the coastal zone. The Plan shall identify any expected disruptions to public access to the shoreline and shall include measures to avoid or~~,~~ minimize~~, or mitigate for~~ those disruptions.

The Plan shall also identify the type and location of erosion control/water quality best management practices that will be implemented during construction to protect coastal water quality, including the following:

- Silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction areas to prevent construction-related runoff and/or sediment from entering the dunes and/or the Pacific Ocean.

- Grading and alteration outside of the approved construction zone is prohibited.

- Equipment washing, refueling, and/or servicing shall not take place on the beach or sandy dune area. All construction equipment shall be inspected and maintained at an off-site location to prevent leaks and spills of hazardous materials at the project site.

- The construction site shall maintain good construction housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach).

- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. A copy of the approved Construction Plan shall be kept at the construction job site at all times and all persons involved with the construction shall be briefed on its content and meaning prior to commencement of construction. The Permittee shall notify the Executive Director at least three working days in advance of commencement of construction, and immediately upon completion of construction. The Permittee shall undertake construction in accordance with the approved Construction Plan. Any proposed changes to the approved Construction Plan shall be reported to the Executive Director. No material changes to the approved Construction Plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

16) **Storm Water Pollution Prevention Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Storm Water Pollution Prevention Plan (SWPPP). At minimum the SWPPP shall include the following Best Management Practices (BMPs):

- Gravel bags, silt fences, etc. shall be placed along the edge of all work areas as determined appropriate by the City's construction inspector in order to contain particulates prior to contact with receiving waters.

- All concrete washing and spoils dumping will occur in a designated location.

- Construction stockpiles will be covered in order to prevent blow-off or runoff during weather events.

- A pollution control education plan developed by the General Contractor and implemented throughout all phases of development and construction.

- Severe weather event erosion control materials and devices shall be stored onsite for use as needed.

17) **Water Quality Technical Report:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Water Quality Technical Report as specified in the City of Carlsbad Standard Urban Stormwater Mitigation Plan (April 2003) (Carlsbad SUSMP) for the post construction ~~project site~~ desalination facility, prepared by a licensed Civil Engineer, which shall include plans, descriptions and supporting calculations. The Storm Water Management Plan shall incorporate all feasible Best Management Practices (BMPs) designed to reduce, to the maximum extent practicable, the volume, velocity and

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

pollutant load of stormwater leaving the developed areas of the site. The plan shall include the following criteria:

- Post-Development peak runoff rates and average volumes shall not exceed pre-development conditions.

- Runoff from all parking areas, turnouts, driveways and other impermeable surfaces (e.g., roofs) shall be collected and directed through a system of structural BMPs including vegetated and/or gravel filter strips or other media filter devices <u>or other equivalent means</u>. The filter elements shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants through infiltration and/or biological uptake. The drainage system shall also be designed to convey runoff in excess of this standard from the developed site in a non-erosive manner.

- Provisions for maintaining the drainage and filtration systems so that they are functional throughout the life of the approved development. Such maintenance shall include the following: 1) the drainage and filtration system shall be inspected, cleaned and repaired prior to the onset of the storm season, no later than September 30th each year and 2) should any of the project's surface or subsurface drainage/filtration structures fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area.

- A drainage system approved by the City Engineer to ensure that runoff resulting from 10-year frequency storms of 6 hours and 24 hours duration under developed conditions, are equal to or less than the runoff from a storm of the same frequency and duration under existing developed conditions. Both 6-hour and 24-hour storm durations shall be analyzed to determine the detention basin capacities necessary to accomplish the desired results.

The Permittee shall implement and maintain the Plan for the life of the project.

THESE MATERIALS HAVE BEEN SUPPLIED TO THE CALIFORNIA COASTAL COMMISSION STAFF

Item Th17a
Recommended Revised Findings for Coastal Development Permit E-06-013
Poseidon Resources (Channelside), LLC

ATTACHMENT 3:
Ex Parte Communications
and
May 2, 2008 Letter from City of Carlsbad Regarding Requested Revisions to Commission Staff's Recommended Revised Findings

WED. ITEM 13A

DISCLOSURE OF EX PARTE COMMUNICATIONS

Name or description of project:
Poseidon Resources Carlsbad Desalination Facility (CDP# E-06-013)
Revised findings
Date and time of receipt of communication:
Saturday, May 3, 2008 @ 3:00 PM

Location of communication:
Santa Barbara

Type of communication:
Meeting

Person(s) in attendance at time of communication:
Susan McCabe, Rick Zbur (by phone)

Person(s) receiving communication:
Dan Secord

Detailed substantive description of the content of communication:
(Attach a copy of the complete text of any written material received.)

The applicant's representatives discussed concerns with the staff recommendation on the revised findings that followed the Commission's approval of the desalination project. They indicated that Poseidon Resources, the City of Carlsbad, and several of the public water district partners in the project have requested detailed revisions to the original findings for denial to reflect the substantial evidence in the record that was provided during the proceedings for the project supporting permit approval, to clarify how the permit is consistent with the Coastal Act, and to further reflect evidence that the special conditions will ensure the projects potential impacts to coastal resources are mitigated to the maximum extent feasible, all of which the applicant believes formed the basis for the Commission's approval of the permit. They explained that Poseidon is requesting that the Commission approve revisions to the findings jointly prepared by Poseidon, the City of Carlsbad, Carlsbad Municipal Water District and the Vallecitos Water District.

Date:

Signature of Commissioner: Dan Secord

RECEIVED
MAY 02 2008
CALIFORNIA COASTAL COMMISSION

FORM FOR DISCLOSURE OF EX-PARTE COMMUNICATIONS

Name or description of the project:	Thursday 13.a. Application No. E-06-013 (Poseidon Resources (Channelside), LLC, Carlsbad)
Time/Date of communication:	9am, May 2, 2008
Location of communication:	La Jolla
Person(s) initiating communication:	Gabriel Solmer, Marco Gonzalez, Bruce Reznik & Anna Pierson
Person(s) receiving communication:	Patrick Kruer
Type of communication:	Meeting

Speakers urged denial of revised findings on the basis of:

- The findings do not support the decision
- The process must be reopened to provide Commissioners with accurate and new information

Date: May 2, 2008

Patrick Kruer

Chairman Kruer

RECEIVED
APR 29 2008
CALIFORNIA COASTAL COMMISSION

FORM FOR DISCLOSURE OF EX PARTE COMMUNICATIONS

Name or description of project , LPC, etc: Poseidon Resources Corporation
Carlsbad Desalination Facility
CDP E-06-013, Agenda Item Th13a

Date and time of receipt of communication: April 29, 2008; 10:00 a.m.

Location of communication: La Jolla, CA

Type of communication (letter, facsimile, etc.): Face-to-face meeting; Commissioner Pat Kruer was present

Person(s) initiating communication: Susan McCabe, McCabe & Company
Rick Zbur, Latham & Watkins LLP

Detailed substantive description of content of communication:
(Attach a copy of the complete text of any written material received.)

Applicant's representatives discussed Applicant's concerns with Staff's Recommended Revised Findings for the project's Coastal Development Permit. They indicated that the Applicant, the City of Carlsbad, and several of the Applicant's public water district partners had requested revisions to the findings to demonstrate the substantial evidence in the record supporting the Permit approval, to clarify how the Permit is consistent with the Coastal Act, and to further provide how the Commission's Special Conditions will ensure that the Project's potential impacts to coastal resources are mitigated to the maximum extent feasible, which the Applicant believes formed the basis for the Commission's Permit approval. They explained that the Applicant is requesting that the Commission approve revisions to the findings jointly prepared by the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District, instead of Staff's Recommended Revised Findings.

4/29/08
Date

Chairman Pat Kruer

FORM FOR DISCLOSURE OF EX PARTE COMMUNICATIONS

Name of project:	**Poseidon Resources Corporation, Carlsbad Desalination Facility**
Date and time:	**November 16, 2007 ~10:30pm**
Location:	**Sheraton, San Diego**
Type of communication:	**face-to-face meeting**
Person(s) initiating communication:	**Rick Zbur, Latham & Watkins**

Detailed substantive description of content of communication:
After the commission hearing had ended I was engaged in a social conversation with the applicants counsel, Rick Zbur of Latham and Watkins. The substantive ex parte is that I told Rick that:

1. **Power Plant Agreement**
   - During the hearing questioning regarding who would clean up if Poseidon went bankrupt, Poseidon assured the commission that there was sufficient performance guarantees in the agreement Poseidon had with the power plant operator.
   - I had also heard that part of the agreement allowed Poseidon to continue operating the plant so they never had to return to the commission. (Which was the implicit point of Commissioner Burke's questioning.)
   - Therefore, my understanding of Poseidon's response is that the answer to my question will be found in the power plant agreement.
   - I had not pursued my line of questioning further since I made a reasonable assumption that the Power Plant agreement would now be provided to the Commission.

2. **Poseidon Financials**
   - I told Mr. Zbur that since Poseidon did not answer my question about whether the staff financial analysis on page 17 was correct that I assumed it was.

Mr. Zbur said nothing in response to these two points.

11/16/07

Date

Signature of Commissioner

RONALD R. BALL
CITY ATTORNEY

JANE MOBALDI
ASSISTANT CITY ATTORNEY

CITY OF CARLSBAD

1200 CARLSBAD VILLAGE DRIVE
CARLSBAD, CALIFORNIA 92008-1949
(760) 434-2891
FAX: (760) 434-8367

RONALD KEMP
DEPUTY CITY ATTORNEY

PAUL G. EDMONSON
DEPUTY CITY ATTORNEY

RECEIVED
MAY 05 2008
CALIFORNIA
COASTAL COMMISSION

May 2, 2008

Honorable Chairman Kruer and Honorable Commissioners
California Coastal Commission
North Central Coast District
45 Fremont, Suite 2000
San Francisco CA 94105-2219

Re: Carlsbad Desalination Project CDP Application No. E-06-013 Requested Revisions to Commissions Staff's Recommended Revised Findings

Dear Chairman Kruer and Honorable Commissioners:

The City of Carlsbad and the Carlsbad Municipal Water District have jointly participated in preparing the requested revisions to the Coastal Commission Staff's Recommended Revised Findings contained in the letter to you of April 30, 2008 from Poseidon Resources (Channelside) LLC, ("Applicant") and we urge this Honorable Commission to adopt them. We believe, for the reasons set forth below, that the Applicant's proposed revisions will more accurately reflect the bases for the Commission's decision to approve the permits for this important project.

- The application for the Desalination Project and the certification of the Environmental Impact Report were unanimously approved by the City Council of the City of Carlsbad on June 13, 2006. An untimely lawsuit was filed after the certification of the Environmental Impact Report and was subsequently dismissed. Therefore, all approvals by the City of Carlsbad are complete.

- At its November 15, 2007 meeting, the Commission approved the Coastal Development Permit Application for the Carlsbad Seawater Desalination Facility over the Commission Staff's negative recommendation and directed Staff to prepare proposed revised findings reflecting the Commission's action.

- The Applicant's proposed revised findings have been reviewed by our office and our outside counsel and we believe will facilitate a court's review of the Commission's decision, as is fully explained by the letter from Applicant's attorney. The Applicant's proposed revised findings provide a better explanation of the decision and we support Applicant's proposed findings.

- The court will have the benefit of the entire record, including the May 8, 2008 hearing and the argument about which findings to adopt but, ultimately, it will review the findings that are officially adopted by this Commission.

- We do not feel it is necessary for Commissioners to orally recite during the decisional hearing what is already in the record. It is presumed the Commission considered all the facts and arguments, written and oral, before it. The written findings provide a roadmap for the court to review and, the more thorough they are, the easier it is for that review to occur.

Assistant City Attorney Mobaldi will attend the hearing to answer any questions regarding the above comments or the findings in support of the decision.

I appreciate your considered attention to this matter.

Very truly yours,

RONALD R. BALL
City Attorney

rn

c: Carlsbad Mayor and City Council
Lisa Hildabrand, Carlsbad City Manager
Assistant City Attorney, Jane Mobaldi
Jim Elliott, Carlsbad Deputy City Manager
Hayley Peterson, Deputy Attorney General
Jan Driscoll, Esq., Allen Matkins
Mike Cowett, Esq., Best, Best & Krieger

Item Th17a
Recommended Revised Findings for Coastal Development Permit E-06-013
Poseidon Resources (Channelside), LLC

ATTACHMENT 4:
April 30, 2008 letter from Latham & Watkins regarding Requested Revisions to Commission Staff's Recommended Revised Findings

Rick Zbur
Direct Dial: (213) 891-8722
rick.zbur@lw.com

633 West Fifth Street, Suite 4000
Los Angeles, California 90071-2007
Tel: +213.485.1234 Fax: +213.891.8763
www.lw.com

LATHAM & WATKINS LLP

FIRM / AFFILIATE OFFICES
Barcelona, Brussels, Chicago, Frankfurt, Hamburg, Hong Kong, London, Los Angeles, Madrid, Milan, Moscow, Munich, New Jersey, New York, Northern Virginia, Orange County, Paris, San Diego, San Francisco, Shanghai, Silicon Valley, Singapore, Tokyo, Washington, D.C.

RECEIVED
MAY 01 2008
CALIFORNIA
COASTAL COMMISSION

April 30, 2008

File No. 036182-0006

VIA FEDEX

Chairman Kruer and Honorable Commissioners
California Coastal Commission
North Central Coast District
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

Agenda Item Th13a

Re: Carlsbad Desalination Project CDP Application No. E-06-013
Requested Revisions to Commission Staff's Recommended Revised Findings

Dear Chairman Kruer and Honorable Commissioners:

On behalf of the Applicant, Poseidon Resources (Channelside) LLC, we request that the Commission approve the Requested Revisions to Coastal Commission Staff's Recommended Revised Findings jointly submitted by the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District, which are set forth as Exhibit A hereto (the "Jointly Requested Findings"). At its November 15, 2007 meeting, the Commission approved Coastal Development Permit Application No. E-06-013 (the Carlsbad Seawater Desalination Facility) (the "Permit") over Commission Staff's negative recommendation, and directed Staff to prepare proposed revised findings reflecting the Commission's action. Since the staff report recommended that the Commission deny the Permit, significant revisions were required so that the findings would accurately reflect and be consistent with the substantial evidence submitted by the Applicant, the City of Carlsbad, the Applicant's public water district partners and others into the administrative record that provided the basis for the Commission's Permit approval.

Following the November hearing, on January 14, 2008, two project opponents (Surfrider Foundation and Planning and Conservation League) filed a petition for writ of mandamus in California Superior Court that challenged the approval and alleged, among other things, that the Commission's findings, determination and decision were not supported by substantial evidence in the administrative record. Under California law, substantial evidence is "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached."[1] A court will

[1] *Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 393) (quoting Cal. Code Regs., tit. 14, § 15384).

These materials have been provided to the Coastal Commission Staff

review the Commission's findings to determine if they "bridge the analytic gap between the raw evidence and ultimate decision or order."[2] While the Commission's findings do not need to be as formal as judicial findings, they must show that relevant issues were considered and resolved by the agency, and they may cite to the record to support the agency's conclusions. Accordingly, when adopting the findings for the Permit, the Commission should ensure that the findings contain the basis for and the information supporting the Permit approval.

On February 21, 2008, Commission Staff released its Recommended Revised Findings (the "Original Revised Findings"), which generally reflected the conclusions reached by the Commission regarding the consistency of the Project, as conditioned, with the Coastal Act. Staff's revisions did not, however, incorporate much of the substantial evidence submitted into the record by the Applicant, the City of Carlsbad, the Applicant's public water district partners and others, or the competing theories advanced by the Applicant and others regarding Coastal Act consistency, which we believe formed the basis for the Commission's approval of the Permit. In response, on April 14, 2008, the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District submitted their requested revisions to the Original Revised Findings, which demonstrated the substantial evidence in the record supporting the Permit approval, clarified how the Permit is consistent with the Coastal Act, and provided how the Commission's Special Conditions will ensure that the Project's potential impacts to coastal resources are mitigated to the maximum extent feasible.

Also on April 14, 2008, Surfrider Foundation and San Diego Coastkeeper (the "Opponents") submitted their comments to Staff's Original Revised Findings. The Applicant has submitted a separate response to Opponent's comments, which is set forth as Exhibit B hereto. For the Commission's convenience, the Applicant has summarized this response in Section B, below.

On April 24, 2008, Commission Staff released a second version of its Recommended Revised Findings (the "Recommended Revised Findings"), which addressed some of the issues raised by the Opponents, the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District. However, the Recommended Revised Findings did not incorporate most of the supplemental information from the administrative record submitted by the Applicant, the City of Carlsbad, and the Applicant's public water district partners. Specifically, the Recommended Revised Findings did not include the numerous citations to the administrative record that support the Commission's Permit approval, including references to the Applicant's responses to the staff report and Notices of Incomplete, and citations to expert reports and studies that were provided to the Commission in support of the Permit.

In addition, Staff's Recommended Revised Findings did not incorporate evidence from the administrative record that the Applicant requested be included regarding several substantive areas that supported the Commission's approval of the Permit, including (among other things):

- the significant drought affecting the region and the need for the Project;

---

[2] *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.

- the Project's implementation of technologies that will reduce entrainment and impingement impacts;
- the environmental inferiority and economic infeasibility of Project alternatives, including alternative intake systems;
- the Applicant's proposed mitigation plans that will enhance marine resources and minimize greenhouse gas emissions; and
- the environmental and coastal resource benefits from continued dredging of Agua Hedionda Lagoon.

Since the Commission considered voluminous amounts of evidence regarding these issues, it is important that the Commission's findings for the Permit be complete and accurately reflect the substantial evidence in the administrative record that formed the basis for the Commission's action at the November 15 hearing. Accordingly, the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District prepared the Jointly Requested Findings set forth in Exhibit A, which contain suggested revisions to Commission Staff's April 24 Recommended Revised Findings. The Applicant requests that the Commission consider the Jointly Requested Findings, and vote to adopt those findings if the Commission determines that they more accurately reflect the basis of the Commission's Permit approval than the findings presented by Staff. The substance of and rationale behind the suggestions in the Jointly Requested Findings are discussed in greater detail in Section A, below.

A. Substantive Changes in Jointly Requested Findings

To avoid confusion in making its suggested changes, the Applicant incorporated all of Staff's April 24, 2008 revisions into a base document, and then added Applicant's proposed changes to that document. Therefore, only the Applicant's changes to Staff's proposals are shown in ~~strikeout~~ and underline in the Jointly Requested Findings set forth in Exhibit A. For the Commission's convenience, the Applicant has also identified how each of the Jointly Requested Finding's changes fall into one of five specific categories where the Applicant believes Staff's Recommended Revised Findings required clarification, revision or supplemental information to more accurately reflect the basis for the Commission's approval of the Permit. Those categories are:

- 1: Entrainment, Impingement, Discharge and Marine Life Mitigation
- 2: Dredging and Lagoon Sedimentation
- 3: Energy Minimization and Greenhouse Gas Reduction
- 4: Coastal Act Override (Coastal Act § 30260)
- 5: Other Modifications to Support Commission Approval

Below, the Applicant has described each of the five categories in detail, and how proposed revisions under each category support the Commission's action at the November 15 hearing. In Exhibit A, the Applicant has also placed a number (1 to 5) in the document's right margin next to each revision, which is a cross-reference to the category that provides the rationale behind the revision.[3] The Applicant asks the Commission to review each of the categories below, so that it may clearly understand the basis and rationale supporting each of the proposed changes in the Jointly Requested Findings.

1. Entrainment, Impingement, Discharge and Marine Life Mitigation

While Staff's Recommended Revised Findings provide an analysis of the Project's impacts to marine resources when operating as a co-located facility, they do not provide citations to the numerous evidentiary submissions in the record that show the Project would not have a significant effect on marine life if operating as a stand-alone facility. The Project's EIR, prepared by the City of Carlsbad, analyzed the Project's impacts as both a facility co-located with the existing power plant, and as a stand-alone facility, and determined that the Project would cause considerably less entrainment and impingement losses as a stand-alone facility and would have no significant impacts under either operating scenario. The requested revisions under this category demonstrate the substantial evidence in the record that shows the Project will have an insignificant impact on entrainment and impingement, which supports the Commission's finding that the Project is consistent with the policies of Coastal Act Sections 30230 and 30231.

The requested revisions under Category 1 also seek to incorporate into Staff's Recommended Revised Findings additional information from the record regarding: (1) the Project's design and technology features that are expected to substantially lessen any impacts to marine life; (2) the numerous studies and evidentiary submissions showing that the Project would not have significant entrainment and impingement impacts; (3) how the Project will not have significant discharge-related impacts and that the Project's discharge is under the jurisdiction of the Regional Water Quality Control Board; and (4) how the alternative intake systems considered by the Commission are environmentally inferior to the Project and infeasible.

Although Staff's Recommended Revised Findings do describe some of the Applicant's marine life mitigation plans, they do not explain in detail the mitigation measures that the Applicant has considered, and the habitat restoration plan that the Applicant has proposed, in order to ensure the Project is consistent with Coastal Act Sections 30230 and 30231. Applicant's revisions under Category 1 also demonstrate that substantial evidence in the record shows that with the imposition of Special Condition 8, which requires the Applicant to submit for approval a Marine Life Mitigation Plan that identifies specific mitigation measures, implementation plans and compliance monitoring, the Project's entrainment impacts will be more than fully mitigated

---

[3] Please note that the version of the Jointly Requested Findings provided to Commission Staff on April 14, 2008 did not contain cross-references to the five categories containing the rationale for the change. Those categories and the addition of the cross-referencing numbers were prepared by the Applicant for the Commission's convenience.

and that biological productivity of coastal waters, wetlands and estuaries will be enhanced and restored in compliance with Coastal Act Sections 30230 and 30231.

2. Dredging and Lagoon Sedimentation

The Jointly Requested Findings under this category clarify that the Permit does not authorize dredging of the Agua Hedionda Lagoon, that the Applicant will need to apply for a new Coastal Development Permit to conduct dredging activities in the Lagoon, that the Permit is not otherwise inconsistent with Coastal Act Section 30233, and that maintenance dredging of the Lagoon is also necessary to remedy sedimentation caused by urban run-off. The revisions in this category clarify Staff's Recommended Revised Findings to support the Commission's finding that, with the imposition of Special Condition 12, which requires a new CDP application for dredging, the Project is consistent with Coastal Act 30233. Proposed revisions under this category also clarify that Commission has authorized maintenance dredging of the Lagoon on 17 prior occasions, most recently in 2006, and has consistently found this dredging to be consistent with Coastal Act 30233. In addition, the requested revisions in this category explain and cite to the substantial evidence in the record demonstrating that sedimentation in the Lagoon is primarily the result of urban run-off, and that any dredging by the Applicant subject to the issuance of a separate CDP would serve to benefit the Lagoon because it would preserve existing marine resources, research, fishing, public access and recreational activities that would cease if regular dredging stopped and the Lagoon returned to its natural state of stagnant "stinky water" due to run-off sedimentation.

3. Energy Minimization and Greenhouse Gas Reduction

Although Staff's Recommended Revised Findings present all of the original staff report's arguments concerning the Project's potential carbon dioxide emissions due to the Project's energy consumption, the findings do not include the competing evidence in the record supporting the Applicant's position that the Project's carbon dioxide emissions will be substantially lower than Staff's estimates. Staff's Recommended Revised Findings also do not incorporate information regarding the Applicant's position that the California Air Resources Board has primary jurisdiction over issues relating to air quality and greenhouse gases, and that the Applicant has voluntarily committed that the Project will be net carbon neutral. In the Jointly Requested Findings, the suggested revisions under this category demonstrate that substantial evidence in the record supports the Applicant's carbon dioxide emissions calculations. Moreover, the revisions in this category also clarify the evidence in the record supporting the Commission's conclusion that with the imposition of Special Condition 10, which requires the Applicant to submit for approval an Energy Minimization and Greenhouse Gas Reduction Plan, the Project will minimize energy consumption in compliance with Coastal Act Section 30253(4), minimize greenhouse gas emissions to the maximum extent feasible, and be net carbon neutral.

4. Coastal Act Override (Coastal Act § 30260)

At the November 15, 2007 hearing, the Commission found the Project, as conditioned, will be consistent with all applicable Coastal Act policies, including Coastal Act Section 30233. While the Commission determined that it did not need to make the "override" findings under

Coastal Act Section 30260, the Commission found that even if the Project had inconsistencies with Coastal Act policies, there is substantial evidence in the record to support the override findings. Although Staff's Recommended Revised Findings do discuss the Project's consistency with Coastal Act Section 30260, they omit information submitted by the Applicant and others into the record that provides important additional support for the Commission's conclusion that the Project satisfies the override requirements. The Jointly Requested Findings under this category demonstrate that substantial evidence in the record confirms that the Project meets Section 30260's three-part test: (1) that there are no feasible and less environmentally damaging locations for the Project; (2) that the Project's adverse environmental effects are mitigated to the maximum extent feasible; and (3) that not permitting the Project would adversely affect the public welfare. While some of the suggested revisions in this category are similar to revisions under other categories, all revisions relating to Category 4 explain and cite to substantial evidence supporting the Commission's conclusion that even though the Project, as conditioned, conforms with all applicable Coastal Act policies, the Project also complies with the requirements of Coastal Act Section 30260.

5. Other Modifications to Support Commission Approval

In certain other instances throughout Staff's Recommended Revised Findings, Staff retained arguments from the original staff report for which Staff did not provide supporting evidence, or Staff omitted the Applicant's countervailing arguments and their support in the record. In these instances, the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District have proposed modifications to Staff's Recommended Revised Findings to more accurately reflect that the Commission considered competing legal theories – those of Commission Staff, as presented in the staff report, and those of the Applicant, as presented at the hearing and in various submittals in the record. The Jointly Requested Findings under Category 5 explain and cite to substantial evidence in the record that provides several clearly articulated, independent bases that support the Commission's action of approving the Permit. For example, Staff's findings did not include the substantial evidence in the record that demonstrates the State Water Project and the Colorado River watersheds were critically dry in 2007, that the Project will provide a needed and reliable source of potable water to the region, and that the municipal water districts who have contracted to purchase water from the Project have identified the Project as a component of their water plans. Changes under this category address such omissions and explain and cite to substantial evidence in the record that is consistent with the Commission's approval of the Permit.

Further, Staff also modified Special Condition 1 so that it inaccurately reflects the Condition as it was approved by the Commission. This change is also categorized under Category 5.

B. Applicant's Response to Opponent's Comments re Recommended Revised Findings

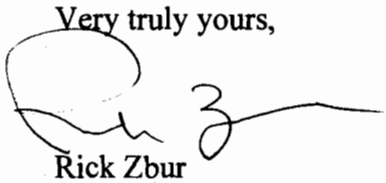
The Applicant has submitted a response to Opponent's Comments to Staff's Recommended Revised Findings, which is attached hereto as Exhibit B. In general, Opponents' comments rehash their arguments from the November 15, 2007 hearing and their prior

submittals, including arguments rejected by the Commission that the Project does not comply with the Coastal Act, that the record does not contain substantial evidence to support the approval, and that the Commission's approval of the Permit was inadequate. The Commission heard all of these arguments and considered them before approving the Permit. The Opponents also misrepresent the Commissioners' testimony at the November meeting, mischaracterize the law and Coastal Commission practice, and argue that the Commission cannot impose conditions of approval that require subsequent Commission approval.

As set forth in the Applicant's response, the Opponents are clearly wrong and their arguments do not cast any credible doubt on the legal sufficiency of the Commissions' Permit approval. Specifically, the Applicant's response explains that the administrative record supports the issuance of the Permit, the Commission's reliance on the record to support its approval was proper, and it is consistent with other Commission approvals to condition a Project on receiving the Commission's prior to issuance approval of a mitigation plan. Accordingly, and as the Applicant demonstrates, Opponent's comments are without merit and are contrary to the law, Commission precedent and the record.

We appreciate the Commission's consideration of these important issues and respectfully request that the Commission adopt the Jointly Requested Findings at its May 8, 2008 meeting.

Very truly yours,



Rick Zbur
of LATHAM & WATKINS LLP

Attachments

cc: Tom Luster
Jan Driscoll, Esq.
Peter MacLaggan

These materials have been provided to the Coastal Commission Staff

EXHIBIT A

APPLICANT'S REQUESTED REVISIONS
Marked to show changes to Commission staff's 4/24/2008 Recommended Revised Findings

STATE OF CALIFORNIA—THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, ~~GOVERNOR~~GOVERNOR

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

Th13a

Date Filed:	July 25, 2007
49th Day:	Waived
180th Day:	January 21, 2008
Staff:	Tom Luster-SF
Hearing Date:	November 15, 2007
Approved:	November 15, 2007
Revised Findings:	April 24, 2008
Hearing Date:	May 8, 2008

RECOMMENDED REVISED FINDINGS
COASTAL DEVELOPMENT PERMIT APPLICATION

APPLICATION FILE NO.:	E-06-013
APPLICANT/ SITE OWNER:	Poseidon Resources (Channelside) LLC / Cabrillo Power II LLC
PROJECT LOCATION:	On the Encina Power Plant site, adjacent to Agua Hedionda Lagoon, in the City of Carlsbad, San Diego County.
PROJECT DESCRIPTION:	Construction and operation of a 50 million gallon per day seawater desalination facility.
COMMISSIONERS ON PREVAILING SIDE:	Commissioners Blank, Burke, Clark, Firestone, Hueso, Neely, Potter, Secord, and Chair Kruer
SUBSTANTIVE FILE DOCUMENTS:	See Appendix A
EXHIBIT 1:	Location Map
EXHIBIT 2:	Site Layout
EXHIBIT 3:	Aerial View of Site
EXHIBIT 4:	Diagram of Subsurface Intakes

ATTACHMENT 1:	November 15, 2007 Hearing Transcript. Note: attached transcript includes Commission deliberations only.
ATTACHMENT 2:	Staff Proposed Conditions of November 14, 2007 and Poseidon Proposed Conditions of November 15, 2007.
ATTACHMENT 3:	Ex Parte Form – Commissioner Blank, November 16, 2007.
ATTACHMENT 4:	April 14, 2008 letter from Latham & Watkins regarding Recommended Revised Findings
ATTACHMENT 5:	April 14, 2008 letter from Coast Law Group regarding Recommended Revised Findings

STAFF NOTE:

Staff prepared these Recommended Revised Findings to reflect the Commission's November 15, 2007 decision to conditionally approve~~d~~ the proposed Poseidon desalination facility in Carlsbad, San Diego County (CDP #E-06-013).

Format of Revised Findings: Changes from the original November 2, 2007 staff recommendation are shown in ~~strikeout~~ and underline, with changes from the November 14, 2007 addendum shown in dotted underline.

Standard and Special Conditions: These Recommended Revised Findings include conditions the Commission adopted at its November 15, 2007 hearing. As shown in the attached Hearing Transcript, some of the Commission's deliberations were about whether to adopt conditions that had been suggested by staff or those suggested by Poseidon. Attached to the Hearing Transcript are staff's proposed conditions from November 14, 2007 and Poseidon's proposed conditions from November 15, 2007. The final amended motion approved by the Commission included staff's proposed **Standard Conditions 1 through 5**, **Special Conditions 1, 3, 4, 6, 7, 9, 10, 12, 13, 14, 15, and 16**, and a modified version of staff's **Special Condition 8**. It also included Poseidon's proposed **Special Conditions 2, 5, 11, and 17**.

During the Commission's deliberations about the requirement of **Special Condition 10** that Poseidon submit a proposed Energy Minimization and Greenhouse Gas Reduction Plan, Poseidon stated its commitment to purchase $1 million worth of native, non-invasive trees to plant in areas burned during the October 2007 wildfires in San Diego County. However, this commitment is included in the Revised Findings rather than **Special Condition 10**, since there was no motion to amend the condition.

Conclusion: Staff recommends the Commission **approve** these Recommended Revised Findings.

EXECUTIVE SUMMARY

Project Description: The proposed project is a seawater desalination facility to be constructed and operated at the site of the Encina Power Plant in Carlsbad, San Diego County. The facility would be owned and operated by Poseidon Resources (Channelside) LLC. It would withdraw about 304 million gallons per day (MGD) of water from Agua Hedionda, a coastal estuary, to produce about 50 MGD of potable water for sale and distribution.

The project was originally proposed to co-locate with the power plant in order to use some of the several hundred million gallons per day of water the power plant pumped from Agua Hedionda. However, the power plant owner announced earlier this year that it intends to shut down the existing plant and build a new one elsewhere on the site that would not use seawater for cooling. During the last few years, the power plant has operated at a substantially reduced level over its historical rate of use, and it is expected to operate only sporadically for a few more years once the new facility is built. As a result, the desalination facility would now operate as a "standalone" facility, and the analyses in these Recommended Findings are based on these "~~standalone~~**standalone**" operations.

Key Coastal Act Issues:

- *Protection of Marine Life and Water Quality*: The project as proposed ~~would not~~**and conditioned herein will** be consistent with policies of Coastal Act Sections 30230 and 30231 meant to protect marine life and water quality~~; however, with the imposition of Special Conditions, the Commission finds that it will conform to those policies. The~~**. As documented in the certified EIR prepared for the project by the City of Carlsbad, operating co-located with EPS, the project will not have significant entrainment or impingement impacts. Operating stand-alone,** entrainment caused by the project's use of an open-water intake within Agua Hedionda would result in a loss of productivity **for certain species** in the lagoon equal to that produced in no ~~less~~**more** than 37 acres of wetland and open water habitat**, which the EIR determined is less than significant**. The project's discharge of its waste stream into coastal waters would result in levels of salinity higher than the natural variability of these waters in an area ranging from about eight to over 40 acres of benthic habitat. To address these impacts, Poseidon submitted a conceptual plan to restore 37 acres of lost wetland and upland habitat. ~~However, the plan lacks details necessary for the Commission to determine that these adverse marine resource impacts will be mitigated fully.~~ Poseidon has also submitted the plan to the San Diego Regional Water Quality Control Board (Regional Board) as required by its conditional NPDES permit. The Regional Board ~~reviews~~**has primary jurisdiction over** various water quality issues and will ensure compliance with its regulations and policies via its review and approval of the plan. The Commission is therefore requiring through **Special Condition 8** that Poseidon develop a Marine Life Mitigation Plan for further

1

Commission review and approval that fully documents the facility's anticipated entrainment and impingement impacts, mitigates those impacts to the maximum extent feasible through creation, enhancement, or restoration of aquatic and wetland habitat, and ensures long-term performance, monitoring, and protection of the approved mitigation measures in a manner consistent with the policies of Coastal Act Sections 30230 and 30231. **In addition to the enhancement to the marine environment from the Marine Life Mitigation Plan, Poseidon's obligation to undertake dredging of the Agua Hedionda Lagoon, which Poseidon would undertake should EPS cease utilizing its intake system, would enhance the marine environment in the Lagoon by preventing the loss of tidal circulation, preserving and protecting the Lagoon's ecosystem and existing Lagoon based research, aquaculture, fish hatching, sand replenishment and visual and aesthetic enjoyment.** The Commission is also requiring through **Special Condition 9** that Poseidon obtain an amendment to its coastal development permit if it proposes or is required to withdraw more than the currently anticipated 304 million gallons per day of estuarine water from Agua Hedionda lagoon. Further, the project is subject to continuing review by the Regional Board to ensure conformity to federal Clean Water Act and state Porter-Cologne Act requirements related to protection of water quality impacts. **Special Condition 4** requires Poseidon to submit, prior to construction, documentation that it has received final approvals from the Regional Board and other agencies for project construction and operations. ②

With **the implementation of** these Special Conditions, the Commission finds the project will conform to applicable provisions of Coastal Act Sections 30230 and ~~30231.~~ **30231 by ensuring that marine resources are maintained, enhanced and restored.** ⑤

- *Energy Use and Greenhouse Gas Emissions*: The project's electrical use would cause emissions of carbon dioxide of an estimated ~~200 million pounds~~**60,000 to 90,000 metric tons** per year,[1] which would result in adverse impacts to a wide range of coastal resources, as described in Section 2.5.5 of these Findings. Poseidon has agreed to "go carbon-neutral" – i.e., to reduce its emissions through various measures so that its facility would contribute net zero greenhouse gas emissions, but it has not yet demonstrated how it would implement this mitigation proposal. To ensure the project conforms to the policies of Coastal Act Section 30253(4) and avoids or minimizes its effects on coastal resources, the Commission is requiring through **Special Condition 10** that Poseidon develop an Energy Minimization and Greenhouse Gas Reduction Plan for further Commission review and approval. ③

---

[1] **As described more fully in Section 4.5.5 herein, Commission staff estimates that the project will emit 90,000 metric tons (200,000,000 pounds) of carbon dioxide per year, while Poseidon, relying on the California Climate Action Registry's certified protocol, estimates 61,000 metric tons (134,500,000 pounds) of carbon emissions.** ③

- *Protection of Coastal Waters and Wetlands*: Although the project may require future dredging to ensure its continued use of the existing intake structure, dredging activities for the ~~immediate~~**foreseeable** future are the responsibility of the power plant owner. **The Commission has approved dredging of Agua Hedionda Lagoon on 17 separate occasions since 1977. In January 2002, August 2004 and October 2006, the Commission approved dredging projects identical to those that would be required to support the stand-alone desalination facility, and on each occasion found the proposed dredging consistent with the Coastal Act.**[2] Through **Special Condition 12**, which requires Poseidon to obtain separate coastal development permits for any proposed future dredging activities, the Commission has ensured conformity to those portions of Coastal Act Section 30233(a)-(c) related to dredging. ~~However, the proposed project represents a non-allowable use of Agua Hedionda Lagoon, one of 19 coastal estuaries in which permitted uses are limited to very minor incidental public facilities, restorative measures, and nature study.~~ The Commission therefore finds the project ~~cannot be found~~**is** consistent with ~~the use prohibitions of~~ Coastal Act Section ~~30233(c).~~**30233.** ②

~~Because~~**Although the project, as conditioned, conforms to the above-listed Coastal Act policies, because** the proposed project is a coastal-dependent industrial facility, ~~its~~**the Commission may "override" any** inconsistencies with ~~Coastal Act Section 30233(c) may be "overridden"~~**those policies** pursuant to Coastal Act Section 30260. That policy allows the Commission to approve coastal-dependent industrial facilities that are not consistent with other Coastal Act policies contained in Chapter 3 if the proposal meets three tests. Those tests require: (1) that there be no feasible and less environmentally damaging location for the proposed project; (2) that the project's adverse environmental impacts be mitigated to the maximum extent feasible; and, (3) that not permitting the proposed project would adversely affect the public welfare. ~~In~~**Although the Commission finds consistency with all applicable Coastal Act policies, in** applying these tests to the proposed project, the Commission **also** finds, as discussed in detail in Section 4.5.7 of th~~is~~**e** ~~report~~ **findings**, the following: ④

- There are no feasible and less environmentally damaging alternative ~~intake~~ locations to draw in the needed seawater (e.g., subsurface or offshore~~, as further described in Section 4.2.1 of these Findings) that would avoid nonconformity to the use prohibitions of Section 30233(c).~~). **For the reasons set more forth more fully below in these findings, the Commission finds that slant wells are infeasible because the water quality available from such intakes would make it difficult, if not impossible, to treat for desalination purposes, and that the construction impacts associated with this alternative render it environmentally inferior to the proposed project. The Commission also finds that an infiltration gallery is environmentally inferior to the proposed project because this alternative would**

---

[2] **Poseidon Resources Corporation Response to California Coastal Commission's February 20 Request for Additional Information, June 1, 2007, at p. 20.** ②

disrupt public access to marine resources, require frequent dredging and require the destruction of 150 acres of coastal habitat, and that the alternative is economically infeasible. The Commission further finds that an offshore intake system would result in greater environmental impacts than the proposed project's use of the existing EPS intake, and that construction of an offshore intake would render the project infeasible.

- **Special Conditions 4, 8, 9, 10, 11, 12, 13, 15, 16,** and **17**, ensure ~~the project's~~**any potential** adverse effects to Agua Hedionda Lagoon are mitigated to the maximum extent feasible. The Commission finds that the required development of the necessary mitigation plans, the limitation on water withdrawals, prohibition of dredging without further Commission review and approval, and imposition of water quality best management practices, will ensure that the project is mitigated to the maximum extent feasible.

- Denial of the proposed project would adversely affect the public welfare for a number of reasons. ~~The~~**As set forth in the project's EIR, the** project would provide public benefits in the form of a local water supply in an area where current and anticipated water imports are expected to decline. Although it is a privately-funded project, the water ~~it produces~~**produced by the project** will be put to public use by eight public water districts. The sale of water to public water districts is expected to both alleviate expected water supply shortfalls and augment other supply options such as recycled water and conservation. It also provides public benefits to those districts and their ratepayers because they will not be expected to pay directly for more than $300 million of the project's start-up and construction costs. The project also includes public benefits in the form of increased public access opportunities to both Agua Hedionda Lagoon and to the Pacific Ocean. **Further, in the absence of the project's maintenance dredging and stewardship of the Lagoon (if the EPS is decommissioned), sedimentation will cause the Lagoon to close within five to seven years, resulting in a loss of its beneficial uses.**

④

The Commission therefore finds that the project, as conditioned, will conform to Coastal Act Section 30260.

~~GLOSSARY~~

GLOSSARY

Terms Used:

- Acre-foot: An acre-foot is equal to about 326,000 gallons, which is enough to supply from one to four households for a year.
- Kilowatt-hour (kWh): As used in these findings, it refers to the amount of electricity needed to produce one kilowatt for one hour.
- Megawatt-hour (mWh): As used in these findings, it refers to the amount of electricity needed to produce one megawatt for one hour. A megawatt is 1,000 kilowatts.
- Million gallons per day (MGD): A million gallons is equal to about three acre-feet.

TABLE ~~OF~~OF CONTENTS

1.0 Recommended Motion and Resolution ..... ~~8~~**9**
2.0 Standard Conditions ..... ~~8~~**10**
3.0 Special Conditions ..... ~~8~~**10**
4.0 Findings and Declarations ..... ~~14~~**16**
4.1 Project Purpose and Description ..... ~~14~~**16**
4.2 Background ..... ~~16~~**20**
4.3 Coastal Commission Jurisdiction and Standard of Review ..... ~~28~~**35**
4.4 Other Permits and Approvals ..... ~~29~~**35**
4.5 Conformity to Applicable Coastal Act Policies ..... ~~32~~**40**
4.5.1 Protection of Marine Life (Coastal Act Sections 30230 & 30231) ..... ~~32~~**40**
4.5.2 Use of Wetlands and Coastal Waters (Coastal Act Section 30233) ..... ~~56~~**72**
4.5.3 Public Access ..... ~~61~~**80**
4.5.4 Scenic and Visual Resources ..... ~~63~~**82**
4.5.5 Energy Use and Greenhouse Gas Emissions (Coastal Act Section 30253(4)) ..... ~~64~~**83**
4.5.6 Development and Public Services (Coastal Act Sections 30250 and 30254) ..... ~~78~~**100**
4.5.7 Coastal-Dependent "Override" (Coastal Act Section 30260) ..... ~~79~~**102**
5.0 California Environmental Quality Act ..... ~~87~~**111**

1.0 RECOMMENDED MOTION AND RESOLUTION

Motion

Staff recommends the Commission adopt the following findings in support of its actions on November 15, 2007 to approve Coastal Development Permit E-06-013.

> *I move that the Commission adopt the Revised Findings in support of the Commission's actions on November 15, 2007 concerning the Commission's Coastal Development Permit E-06-013.*

Resolution

> *The Commission hereby adopts the Findings set forth below regarding Coastal Development Permit E-06-013.*

2.0 STANDARD CONDITIONS

~~1)~~ 1) **Notice of Receipt and Acknowledgment:** This permit is not valid until a copy of the permit is signed by the Permittee or authorized agent, acknowledging receipt of the permit and the acceptance of the terms and conditions, and is returned to the Commission office.

~~2)~~ 2) **Expiration:** Construction activities for the proposed project must be initiated within two years of issuance of this permit. This permit will expire two years from the date on which the Commission approved the proposed project if development has not begun. Construction of the development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made at least six months prior to the expiration date.

~~3)~~ 3) **Interpretation:** Any questions of intent or interpretation of any condition will be resolved by the Executive Director of the Commission (hereinafter, "Executive Director") or the Commission.

~~4)~~ 4) **Assignment:** The permit may be assigned to any qualified person, provided the assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

~~5)~~ 5) **Terms and Conditions Run with the Land:** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

3.0 SPECIAL CONDITIONS

~~1)~~ 1) **Liability for Costs and Attorneys Fees:** The Permittee shall reimburse the Coastal Commission in full for all Coastal Commission costs and attorneys fees – including (1) those charged by the Office of the Attorney General, and (2) any court costs and attorneys fees that the Coastal Commission may be required by a court to pay – that the Coastal Commission incurs in connection with the defense of any action brought ~~by a party other than the applicant~~ against the Coastal Commission, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit~~, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit~~. The Coastal Commission retains complete authority to conduct and direct the defense of any such action against the Coastal Commission. 5

~~2)~~ 2) **Proof of Legal Interest:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall provide for Executive Director review and approval documentation of the Permittee's legal interest in all property within the coastal zone needed to construct and operate the project, including:

- Lease(s) from the California State Lands Commission for structures on state tidelands. Any conflicts between conditions of the lease(s) and those adopted by the Coastal Commission shall be presented to the Coastal Commission for resolution.
- Lease(s) or other forms of approval from the power plant owner allowing the Permittee to use portions of the power plant site and Agua Hedionda Lagoon.
- Lease(s) or other forms of approval from the City of Carlsbad and other local governments for the project's water delivery pipelines.

~~3)~~ 3) **Lease and Deed Restriction:** PRIOR TO ISSUANCE OF THE PERMIT, the applicant shall provide to the Executive Director for review and approval documentation demonstrating that the applicant ~~and~~ has executed and recorded against its leasehold interest(s) in the property governed by this permit a lease restriction (in which any private owner of the fee interest in such property shall join or to which it shall agree to be bound), in a form and content acceptable to the Executive Director (a) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the Property, subject to terms and conditions that restrict the use and enjoyment of the Property; and (b) imposing all of the Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The restriction shall include a legal description of the Property. It shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the Standard and Special Conditions of this permit shall continue to restrict the use and enjoyment of the Property so long as either this permit or the development it authorizes – or any part, modification, or amendment thereof – remains in existence on or with respect to the Property.

~~4)~~ 4) **Other Approvals:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval documentation showing that the project has obtained final approvals for project construction and operation from the City of Carlsbad, the Regional Water Quality Control Board, the California Department of Health Services, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, or documentation showing that these approvals are not needed.

~~5)~~ 5) **Assumption of Risk and Waiver of Liability:** The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the project site may be subject to hazards from seismic events, liquefaction, storms, waves, floods and erosion; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the landowner.

~~6)~~ 6) **Limits of Development**: This permit authorizes the construction and operation of the Poseidon Carlsbad Desalination Project and associated infrastructure as described in the project description of this staff report, as clarified and modified by these conditions.

~~7)~~ 7) **Final Plans**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval final plans for the project components located in the coastal zone. The Permittee shall undertake development in accordance with the approved plans and any changes shall be reported to the Executive Director. No material changes within the coastal zone shall occur without a Commission-approved amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Changes to the project requiring review for amendment would include changes in the physical, operational, or delivery capacity increases, or extension of water supply distribution pipelines beyond those shown on the final plans.

~~8)~~ 8) **Marine Life Mitigation Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to and obtain from the Commission approval of a Marine Life Mitigation Plan in the form of an amendment to this permit that includes the following:

a) Documentation of the project's expected impacts to marine life due to entrainment and impingement caused by the facility's intake of water from Agua Hedionda Lagoon. This requirement can be satisfied by submitting a full copy of the Permittee's Entrainment Study conducted in 2004-2005 for this project.

b) To the maximum extent feasible, the mitigation shall take the form of creation, enhancement, or restoration of aquatic and wetland habitat.

c) Goals, objectives and performance criteria for each of the proposed mitigation sites. It shall identify specific creation, restoration, or enhancement measures that will be used at each site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance criteria. The Plan shall also identify contingency measures that will be implemented should any of the mitigation sites not meet performance criteria.

d) "As-built" plans for each site and annual monitoring reports for no less than five years or until the sites meet performance criteria.

e) Legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.

~~9)~~ 9) **Change in Seawater Withdrawal:** If at any time during the life of the project Poseidon proposes or is required to withdraw more than an average flow of 304 MGD of seawater, it must obtain first an amendment to this permit.

~~10)~~ 10) **Energy Minimization and Greenhouse Gas Reduction Plan:** PRIOR TO ISSUANCE OF THE PERMIT, the Permittee shall submit to the Commission a Revised Energy Minimization and Greenhouse Gas Reduction Plan that addresses comments submitted by the staffs of the Coastal Commission, State Lands Commission and the California Air Resources Board. The permit shall not be issued until the Commission has approved a Revised Energy Minimization and Greenhouse Gas Reduction Plan after a public hearing.

~~11)~~ 11) **Public Access Enhancements:** PRIOR TO COMMENCEMENT OF OPERATIONS, Poseidon shall cause to be dedicated, in accordance with the City of Carlsbad's Precise Development Plan PDP 00-02, the below-described parcels of land. The dedications shall be in the form of easements, title transfers, and/or deed restrictions, whose purpose is to further Coastal Act goals of maximizing public access and recreational opportunities along the coast in the South Carlsbad Coastal Resource Redevelopment Area and maintaining, restoring and enhancing marine resources. The four sites are:

- Fishing Beach: public access and parking easement in favor of the City of Carlsbad covering approximately 2.4 acres of land along the west shore of Agua Hedionda Lagoon.

- Bluff Area: approximately 10.2 acres of land on the west side of Carlsbad Boulevard opposite the power plant, which shall be dedicated in fee title to the City of Carlsbad for recreational and coastal access uses.

- Hubbs Site: approximately 2 acres of land along the north shore of Agua Hedionda Lagoon to be used for a fish hatchery, aquatic research, and public access, which shall be deed restricted to uses such as fish hatchery, aquatic research, and trails.

- South Power Plant Parking Area: an access easement over approximately 0.3 acres of land on the east side of Carlsbad Boulevard near the south entrance of the power plant that shall be dedicated to the City of Carlsbad for public parking.

~~12)~~ 12) **Dredging:** This permit does not authorize dredging that may be needed to maintain flows to the desalination facility's intake structure. The Permittee shall submit separate coastal development permit applications for proposed dredging operations.

~~13)~~ 13) **Visual Resources:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Screening Plan. Desalination plant exterior mechanical equipment and facilities, including tanks, heating, air

conditioning, refrigeration equipment, plumbing lines, duct work and transformers, shall be screened from view on all sides visible to the public. The design and material used for screening shall be architecturally compatible with the building.

~~14)~~ 14) **Lighting Plan**: PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit a Lighting Plan to the Executive Director for review and approval. Exterior lighting for the desalination facilities shall serve the purpose of operations, security and safety only. The Lighting Plan shall demonstrate that project lighting is shielded from surrounding areas, and that only the minimum amount of lighting required for safety purposes is provided to avoid adverse effects on surrounding areas. In general, lighting fixtures shall be shielded downward and away from the ocean, lagoon and adjacent properties. Construction of the desalination plant and related facilities and improvements shall be in conformance with the approved plan.

~~15)~~ 15) **Construction Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit to the Executive Director for review and approval a Construction Plan. The Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view in the coastal zone. The Plan shall identify any expected disruptions to public access to the shoreline and shall include measures to avoid, minimize, or mitigate for those disruptions.

The Plan shall also identify the type and location of erosion control/water quality best management practices that will be implemented during construction to protect coastal water quality, including the following:

- Silt fences, or equivalent apparatus, shall be installed at the perimeter of the construction areas to prevent construction-related runoff and/or sediment from entering the dunes and/or the Pacific Ocean.

- Grading and land alteration outside of the approved construction zone is prohibited.

- Equipment washing, refueling, and/or servicing shall not take place on the beach or sandy dune area. All construction equipment shall be inspected and maintained at an off-site location to prevent leaks and spills of hazardous materials at the project site.

- The construction site shall maintain good construction housekeeping controls and procedures (e.g., clean up all leaks, drips, and other spills immediately; keep materials covered and out of the rain (including covering exposed piles of soil and wastes); dispose of all wastes properly, place trash receptacles on site for that purpose, and cover open trash receptacles during wet weather; remove all construction debris from the beach).

- All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday. A copy of the approved Construction Plan shall be kept at the construction job site at all times and all persons involved with the construction shall be briefed on its content and meaning prior to commencement of construction. The Permittee shall notify the Executive Director at least three working days in advance of commencement of construction, and immediately upon completion of construction. The Permittee shall undertake construction in accordance with the approved Construction Plan. Any proposed changes to the approved Construction Plan shall be reported to the Executive Director. No material changes to the approved Construction Plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

~~16)~~ **16) Storm Water Pollution Prevention Plan:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Storm Water Pollution Prevention Plan (SWPPP). At minimum the SWPPP shall include the following Best Management Practices (BMPs):

- Gravel bags, silt fences, etc. shall be placed along the edge of all work areas as determined appropriate by the City's construction inspector in order to contain particulates prior to contact with receiving waters.

- All concrete washing and spoils dumping will occur in a designated location.

- Construction stockpiles will be covered in order to prevent blow-off or runoff during weather events.

- A pollution control education plan developed by the General Contractor and implemented throughout all phases of development and construction.

- Severe weather event erosion control materials and devices shall be stored onsite for use as needed.

~~17)~~ **17) Water Quality Technical Report:** PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit for Executive Director review and approval a Water Quality Technical Report as specified in the City of Carlsbad Standard Urban Stormwater Mitigation Plan (April 2003) (Carlsbad SUSMP) for the post construction desalination facility, prepared by a licensed Civil Engineer, which shall include plans, descriptions and supporting calculations. The Storm Water Management Plan shall incorporate all feasible Best Management Practices (BMPs) designed to reduce, to the maximum extent practicable, the volume, velocity and pollutant load of stormwater leaving the developed areas of the site. The plan shall include the following criteria:

- Post-Development peak runoff rates and average volumes shall not exceed pre-development conditions.

- Runoff from all parking areas, turnouts, driveways and other impermeable surfaces (e.g., roofs) shall be collected and directed through a system of structural BMPs including vegetated and/or gravel filter strips or other media filter devices or other equivalent means. The filter elements shall be designed to 1) trap sediment, particulates and other solids and 2) remove or mitigate contaminants through infiltration and/or biological uptake. The drainage system shall also be designed to convey runoff in excess of this standard from the developed site in a non-erosive manner.

- Provisions for maintaining the drainage and filtration systems so that they are functional throughout the life of the approved development. Such maintenance shall include the following: 1) the drainage and filtration system shall be inspected, cleaned and repaired prior to the onset of the storm season, but not later than September 30th each year and 2) should any of the project's surface or subsurface drainage/filtration structures fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system and restoration of the eroded area.

- A drainage system approved by the City Engineer to ensure that runoff resulting from 10 year frequency storms of 6 hours and 24 hours duration under developed conditions, are equal to or less than the runoff from a storm of the same frequency and duration under existing developed conditions. Both 6-hour and 24-hour storm durations shall be analyzed to determine the detention basin capacities necessary to accomplish the desired results.

- The Permittee shall implement and maintain the Plan for the life of the project.

4.0 FINDINGS AND DECLARATIONS

4.1 Project Purpose and Description

The proposed project is a seawater desalination facility proposed by Poseidon Resources (Channelside) LLC (referred to herein as Poseidon). Poseidon's proposed facility would use about 304 million gallons per day (MGD) of water drawn from Agua Hedionda Lagoon **(the Lagoon)** in Carlsbad, San Diego County (see Exhibit 1), to produce 50 MGD of potable water for local and regional use.[~~1~~3] At 50 MGD, Poseidon's proposed project would be the largest

---

[~~1~~3] The project would use about 100 MGD in the desalination process to create about 50 MGD of potable water and about 50 MGD of a high salinity discharge. The total amount would vary based on project operations – e.g., during maintenance, periods of start-up, etc. – and could be as high as 129 MGD. To reduce the salinity concentrations of

seawater desalination facility in the United States and in the Western Hemisphere. The proposed development also includes pipelines and pump stations necessary to deliver the produced water to a water reservoir in Carlsbad. The project's objectives include providing a local and reliable source of water, reducing local dependence on imported water, and providing water at or below the cost of imported water supplies. Poseidon has announced agreements to sell various amounts of its desalinated water to water districts in San Diego County for up to about 90 years.

Project Setting: The project would be located at the Encina power plant in Carlsbad on a site leased from the power plant owner, Cabrillo Power II, LLC (Cabrillo) (see Exhibit 2). During the past half-century, the power plant used water from Agua Hedionda Lagoon to cool its generating units. Poseidon's project as initially proposed in 1999 would have used some of the hundreds of millions of gallons of estuary water the power plant drew in from Agua Hedionda Lagoon to cool its generating units; however, Cabrillo recently proposed replacing the existing power plant with a new plant to be located elsewhere on the site, and which Cabrillo expects will be operating by 2010.[~~2~~4] This new power plant would use dry cooling instead of using water from Agua Hedionda. Cabrillo proposes to keep two of the five units in the existing plant available for a few years beyond 2010 to provide additional grid reliability if needed~~, and Cabrillo anticipates that these two units would operate only a few weeks per year.~~. **These two units represent two-thirds of the generating capacity in the existing plant.**[5] The power plant's generating capacity is subject to "Reliability Must Run" status, as contracted by the California Independent System Operator (Cal-ISO), which is meant to provide electrical grid reliability. At the October 2007 State Lands Commission meeting, a Cabrillo representative testified that the units will remain in service indefinitely and that Cal-ISO would determine when they are no longer needed for grid stability. ⑤

Cabrillo's announced change in the power plant's operations ~~represents a change in how Poseidon's facility was originally proposed. Poseidon's project would no longer function as a co-located desalination facility – that is, it would not re-use the estuarine water already used by the power plant – but instead would be a new "~~**was studied extensively in the project's EIR prepared by the City of Carlsbad. Specifically, the EIR analyzed the project's impacts as both a co-located and a stand-alone facility. The EIR determined that as a** stand-alone~~" facility, drawing in water just for desalination.~~ **facility, the proposed project would cause considerably less entrainment and impingement losses than the existing power plant** ①

---

its discharge, Poseidon would pump an additional 200 MGD into its intake and discharge system for dilution. This is discussed in more detail in Section 2.5.1 of these Findings.

[~~2~~4] On September 14, 2007, Cabrillo submitted to the California Energy Commission its *Application For Certification* to start the review process needed to replace the existing power plant (Application #07-AFC-06).

[5] **Poseidon Resources Corporation Response to Staff Report, November 9, 2007, Exh. B, at p. 2.** ⑤

operations and would have no significant impacts.[6] Poseidon's lease with the power plant owner would allow it to operate the power plant's pumps when the power plant is shut down and would allow the proposed desalination facility to operate for up to 90 years. These Findings evaluate Poseidon's proposal as a "~~standalone~~**standalone**" facility and the analyses herein are based on the coastal resource impacts that would result from the "stand-alone" project. ①

A key environmental feature of the proposed project site is Agua Hedionda Lagoon. Several sections of these Findings address **potential** project-related impacts to the lagoon's water quality and habitat values and the measures imposed to mitigate those impacts and ensure conformity to the Coastal Act. The description below provides a brief introduction to the lagoon and subsequent sections provide additional relevant details.

Agua Hedionda Lagoon is a coastal estuary that extends about 1.7 miles inland and is up to about one-half mile wide. It is at the downstream end of Agua Hedionda Creek, which has a watershed of about 29 square miles. The lagoon has been altered substantially over the past century or so. It has been bridged several times – in the late 1800s for a railroad, in 1919 for the Pacific Coast Highway, and in 1967 for Interstate 5. It now consists of three main "lobes" – an Outer Basin of about 66 acres, a Middle Basin of about 23 acres, and an Inner Basin of about 167 acres. The lagoon's mouth is about 3,000 feet north of the power plant, and is maintained by two jetties extending a few hundred feet into the ocean. The jetties are on State tidelands and are leased by the State Lands Commission to Cabrillo. The power plant also has a State Lands lease for use of its discharge structure, which crosses a state beach and state tidelands to the south of the lagoon mouth (see Exhibit 3).

Before the mid-1950s, Agua Hedionda Lagoon was a shallow coastal wetland that was periodically shut off from tidal flows (the name is Spanish for "stinky water"). In the mid-1950s, Southern California Edison purchased much of the lagoon and dredged about four million cubic yards of material to create an intake channel for the power plant's cooling water system.[~~3~~7] Edison sold the power plant in 1999. The power plant has operated since the mid 1950s using up to about 850 million gallons per day of water from the estuary, although its water use has declined significantly in recent years. It has required regular dredging during that time to maintain the power plant's intake channel, with at least 25 separate dredging events occurring during the power plant's history. The estuary is also used for other purposes, including aquaculture (sea bass net pens, and a mussel farm), recreation (primarily boating and beach use), and ocean research (Hubbs-Seaworld Research Institute). Cabrillo, the current owner, also allows use of the lagoon for various scientific research and monitoring activities. **A study**

---

[6] **See also Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 9-11; see Project EIR Section 4.3.** ①

[~~3~~7] In 1999, Southern California Edison sold most of the power plant property and Agua Hedionda Lagoon to Cabrillo, although it continues to own land along the lagoon's shoreline.

submitted by Dr. Scott Jenkins on September 28, 2007 on behalf of Poseidon indicates that if the Lagoon is not regularly dredged, the Lagoon would close in about five to seven years and slowly revert back to its natural state of stagnant "stinky water."[8] In its natural state, the Lagoon would be comprised of shallow marsh channels filled with hyper-saline water, and current recreational, fishing and aquaculture activities could no longer function. Dredging of the Lagoon also provides sand to maintain Carlsbad State Beach, grunion spawning habitat, and a popular surfing break. Without the sand provided by regular dredging, each of these uses would be severely impacted. ②

The state's water quality standards identify Agua Hedionda Lagoon's listed beneficial uses as the power plant's industrial use, recreational uses, aquaculture, and habitat. The estuary is also listed as impaired, pursuant to Section 303(d) of the federal Clean Water Act, due to excess sedimentation and coliform bacteria. Additionally, the Carlsbad Watershed Management Plan[~~4~~9] identifies the lagoon as being further impaired due to habitat fragmentation and the presence of invasive species. During the past several years, the lagoon experienced an outbreak of the highly invasive *Caulerpa taxifolia*, but in 2006 local and state efforts to eradicate *Caulerpa* from the lagoon were deemed successful. Monitoring for *Caulerpa* continues, however.

Despite these impacts and the degraded water quality, Agua Hedionda continues to provide significant habitat values. The California Department of Fish and Game (DFG) includes it in a list of 19 "high-priority" coastal wetlands and DFG manages a Marine Ecological Reserve within the lagoon that provides habitat for a number of listed sensitive species. These features are described in more detail in Section 2.5.1 of these Findings.

Need for the Project: The project would provide an important and much-needed source of potable water for Southern California. Since Poseidon filed its Coastal Development Permit ("CDP") application, the water supply situation in the State of California – already bad – has substantially deteriorated. Poseidon has previously provided the Commission with newspaper reports that recognize a looming water crisis and clearly identify the need ⑤

---

[8] **Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon: Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.** ②

[~~4~~9] The Carlsbad Watershed Plan was published in 2002 pursuant to an NPDES permit issued in 2001 by the State Water Resources Control Board to the cities of San Diego County. The permit requires participating cities to develop a cooperative and coordinated watershed approach to address water quality issues. The Plan's goals include the following: "*Protect coastal and wetland resources*: Extra credit should be given to "Action Items" that serve to protect the wetland resources, sensitive species and fragile ecosystems associated with coastal lagoons and riverine resources. These resources are not only sensitive and highly valued, but they support a great diversity of species and tend to be "sink holes" where water quality problems become much greater."

for California, and more specifically San Diego County, to lessen its demand on the State Water Project and Colorado River watersheds, which were critically dry in 2007.[10]

There is a convergence of warnings that California's water supply will continue to shrink. Climate change brought on by global warming could disrupt weather patterns, leaving the state vulnerable to punishing drought. There is a possibility that 2007 will be the beginning of a multi-year drought. If 2008 offers hydrologic conditions similar to those this year, some significant sources of water for Southern California may not be available. The most recent example of the deteriorating supply situation occurred in May 2007, when state water officials temporarily turned off the pumps that send water to Southern California from the Sacramento-San Joaquin Delta to protect the endangered smelt and salmon.[11]

This summer, the Metropolitan Water District put San Diego County Agriculture on notice that it will cut agricultural water deliveries by 30 percent beginning January 1, 2008. With $1.4 billion in annual revenue, San Diego County is the twelfth largest agricultural economy among all counties in the nation, and it could be severely harmed by this reduction in water supply. The Metropolitan Water District also has warned municipal and industrial water users to anticipate water rationing if 2008 – like preceding years – is a dry year. Rationing of municipal and industrial supplies would be highly disruptive to San Diego's $150 billion annual economy.[12]

Moreover, State, regional, and local water plans all have confirmed that the immediate and pressing water needs are so great, that they cannot be met by conservation and recycled water alone and that a substantial investment in seawater desalination, including the project, is required. The project's capacity of 56,000 AFY of new water supply for the San Diego region is about ten percent of 500,000 AFY of desalinated water identified by the California Department of Water Resources as needed by 2030, as stated in its 2006 Water Plan Update. This Update lists the project as a potential source of desalinated water. The Metropolitan Water District of Southern California's Integrated Water Resources Plan identified a need for 150,000 AFY of seawater desalination (including 56,000 AFY from the Carlsbad project) to ensure regional water supply reliability. In addition, the San Diego County Water Authority updated its 2005 Urban Water Management Plan in April 2007 specifically to reaffirm the need for 56,000 AFY of seawater desalination from the project

5

---

[10] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 5.

[11] See *id.*

[12] See *id.*

by 2011. The project is a central component of state, regional and local water supply planning to meet already-identified demand.[13]

Recognizing the importance of the project, eight water agencies – Carlsbad Municipal Water District, Valley Center Municipal Water District, Rincon del Diablo Municipal Water District, Sweetwater Authority, Rainbow Municipal Water District, Santa Fe Irrigation District, Vallecitos Water District, and Olivenhain Municipal Water District – have already contracted to purchase 100% of the project's capacity, and have identified the project's water supply as a component of their water plans.[14] ⑤

4.2 Background

Seawater Desalination's Role in California's Water Portfolio

Both California and the Coastal Commission have recognized that environmentally and economically appropriate seawater desalination is an acceptable method for providing part of the state's water supply. There are currently about a dozen facilities operating along the California coast, mostly providing relatively small amounts of water to local users or to certain industrial facilities. During the past few years there has been increased interest in seawater desalination, due largely to recent advances in desalination technology, concerns about increasing the reliability over local water supplies, and **interest in** reducing dependence on imported supplies. There are now about twenty proposals for new facilities to be built along the coast to serve both local and regional water needs.

The 2005 Update of California's State Water Plan expects seawater desalination to provide about 200,000 acre-feet of water by 2030. Both the Metropolitan Water District of Southern California (MWD) and the San Diego County Water Authority (SDCWA, or Authority) have included seawater desalination as part of their long-term water supply portfolio. The Authority has established a goal that seawater desalination provide 89,600 acre-feet of its water supply by 2030. Even the Southern Nevada Water Authority has identified seawater desalination as part of its long-term water supply, with its idea being that water from the Colorado River would be used in Nevada in exchange for the Nevada water users paying for desalinated water to be produced along the California coast.

Several recent initiatives in California illustrate this increased interest:

---

[13] **See *id.* at p. 6.**

[14] **See *id.* at p. 6-7.**

⑤

- **State Desalination Task Force:** In 2003, pursuant to AB 2717, the California Department of Water Resources convened an interagency task force[~~5~~15] to report to the Legislature on potential opportunities and impediments for using seawater and brackish water desalination, and to examine what role, if any, the state should play in furthering the use of desalination technology. Based on information provided during a series of workshops around the state, the task force developed recommendations and guidelines for desalination projects proposed in California. Some key task force findings applicable to this proposed project include:

  - *Desalination can provide a reliable supply during California's periodic droughts.*

  - *Many communities and water districts are interested in developing desalination facilities as a local, reliable source of water to reduce their dependence on imported water and/or to meet existing or projected demand. Some communities see desalination as a way to reduce their diversions from rivers and streams, thus contributing to ecosystem restoration.*

  - *Technologically, desalination is a proven, effective mechanism for providing a new source of water. A variety of desalination technologies have been applied in many locations throughout the world.*

  - *Economically and environmentally acceptable desalination should be considered as part of a balanced water portfolio to help meet California's existing and future water supply and environmental needs.*

  - *While they vary on a site-specific level, potential impediments to seawater desalination include the environmental impacts associated with the feedwater intake and brine/concentrate disposal. As is the case with many other water management strategies, other potential issues include cost, siting and growth-inducement.*

  - *With proper design and location of outfalls, brine/concentrate disposal may not be a major impediment to desalination.*

[~~5~~15] Task Force members included representatives from: State agencies – California Department of Water Resources, Coastal Commission, State Water Resources Control Board, Central Coastal Regional Water Quality Control Board, Energy Commission, Department of Health Services, Resources Agency, California Environmental Protection Agency, Department of Food and Agriculture, CALFED, Bay Conservation and Development Commission, Department of Fish and Game, University of California; federal agencies – Bureau of Reclamation, Monterey National Marine Sanctuary; local governments and water agencies – Monterey County Health Department, City of Long Beach Water Department, League of Cities, County Supervisor Association of California, Central Basin and West Basin Municipal Water Districts, Marin Municipal Water District, Inland Empire Utilities Agency; and interest groups – California Building Industry Association, Surfrider, American Membrane Technology Association, National Water Research Institute, Clean Water Action and Clean Water Fund.

- *Seawater desalination is more energy intensive, per acre-foot, than brackish water desalination or water recycling. For energy comparison purposes, current desalination systems using reverse osmosis technology require about 30 percent more energy than existing interbasin supply systems currently delivering water to parts of Southern California. Efforts including those supported by the Bureau of Reclamation, U.S. Desalination Coalition, and the National Water Research Institute are underway to increase the energy efficiency of desalination through improved membranes, dual pass processes, and additional energy recovery systems.*

- *Advantages to co-locating desalination facilities with coastal power plants using once-through cooling may include: compatible land use, use of the existing infrastructure for feedwater intake and brine discharge, location security, use of the warmed power plant cooling water as the feedwater for the desalination facility, reduction of the power plant discharge thermal plume and the potential to purchase power from the host power plant at prices below retail rates.*

- *Co-locating a desalination facility with a coastal power plant may provide a justification for the continued use of once-through cooling technology. Once through cooling technology has well-documented environmental impacts, including impacts on marine organisms.*

- *The appropriate State regulatory agencies have indicated that the siting of a new desalination facility, which utilizes any new or existing open water feedwater intakes, will require a current assessment of entrainment and impingement impacts as part of the environmental review and permitting process.*

- *Various technologies exist that may avoid, reduce or minimize the impacts of feedwater intake.*

  - *Drawing feedwater from beach wells is one way to avoid the ecological impacts of entrainment and impingement associated with open water intakes; however, the capacity of each well is limited and is subject to local hydrogeologic conditions.*

  - *Low velocity intake systems, marine fish screens, sub-floor intakes and appropriate intake pipe design and location are methods that may reduce or minimize impacts of entrainment and impingement associated with open water intakes.*

- *Water, including ocean and estuarine water, is a public resource, subject to the public trust doctrine, and should be protected and managed for the public good.*

- *The extent to which private companies are involved in the ownership and operation of proposed desalination plants varies widely, from completely private projects that may be regulated by the State Public Utilities Commission, to public-private partnerships, to*

projects that would be wholly owned, operated and controlled by public entities. The involvement of private companies in the ownership and/or operation of a desalination plant raises unique issues.

- *There are implications associated with the range of public-private possibilities for ownership and operation of desalination facilities. Local government has the responsibility to make the details of these arrangements available to the public.*

- *Recently adopted international trade agreements and international trade agreements currently being negotiated may affect how federal, State and local agencies adopt or apply regulations concerning activities of public agencies or private entities with multinational ties.*

- *Desalination proposals are subject to existing regulatory and permitting processes to ensure environmental protection and public health.*

- *Environmental justice considerations include the siting of desalination facilities, determining who accrues the costs and benefits of desalination and who has the opportunity to use higher quality (desalinated) water, and the possible impacts of replacing low-cost with high-cost water.*

- *Growth inducing impacts of any new water supply project, including desalination, must be evaluated on a case-by-case basis through existing environmental review and regulatory processes.*

- *Each desalination project involves different environmental characteristics, other water supply alternatives, proposed plant ownership/operation arrangements, demographics, economics, community values and planning guidelines.*

- **Coastal Commission Report – Seawater Desalination and the California Coastal Act:** In 2004, Commission staff published a report describing many of the issues associated with seawater desalination along the California coast and discussing how proposed desalination facilities could conform to Coastal Act provisions. The report provides general information about desalination, describes the status of desalination in California, identifies key Coastal Act policies most likely to apply to proposed desalination facilities, and identifies much of the information likely to be required during review of a coastal development permit application for those facilities.

  Its key conclusions recognize that each facility will require case-by-case review due to the unique operating characteristics and environmental settings, that Coastal Act policies do not suggest overall support of, or opposition to, desalination, that there may be differences in applying those policies to public or private proposals, that the most significant potential

impacts to address are likely entrainment of marine organisms and growth-inducement, and that proposed co-located facilities raise unique issues regarding Coastal Act conformity.

- **Proposition 50 Grants:** As part of Proposition 50, which Californians approved in 2002 to provide funding for a number of water-related projects around the state, the state Department of Water Resources distributed about $50 million to public agencies for various types of desalination research projects. Several of the Commission's past decisions have been in support of these projects – for example, the Commission has approved projects conducted by the City of Long Beach Water Department to conduct pilot tests and subsurface intake methods and projects by the Metropolitan Water District of Orange County for its innovative and successful research on using slant-drilled wells for subsurface desalination intakes.

  There are also a number of initiatives at local or regional levels to support or research the potential for seawater desalination to provide part of an area's water supply. For example, Southern California's Metropolitan Water District (MWD), which represents most water agencies in coastal Southern California, established a program offering to its member agencies subsidies of up to $250 for each acre-foot of desalinated seawater produced. The agencies eligible for this subsidy include the San Diego County Water Authority, Long Beach Water Department, Los Angeles Department of Water and Power, West Basin Municipal Water District, and the Municipal Water District of Orange County. The MWD has also provided about $250,000 to its member agencies for desalination research.

Association with a power plant once-through cooling water intake system

Poseidon proposes to use the existing Encina power plant intake and discharge. Originally, Poseidon planned to reuse some of the estuary water the power plant drew in from Agua Hedionda Lagoon to cool its generating units. However, as discussed in Section 4.1 above, Cabrillo has applied to cease operations of its existing facility and to build a new power plant. In September 2007, Cabrillo applied to the California Energy Commission to build by 2010 a new, smaller, dry-cooled power plant on site that would not use water from Agua Hedionda. Cabrillo's proposal includes removing three of the existing plant's five generating units and operating the remaining two units only part time ~~(expected to be up to a few weeks per year)~~ for several more years until replacement power becomes available**. The two remaining generating units represent 528 MGD of pumping capacity**. As noted previously, the power plant is subject to "Reliability Must Run" contracts with Cal-ISO. At the October 2007 State Lands Commission hearing, a Cabrillo representative stated that the generating units will be available for service indefinitely and that Cal-ISO would ultimately determine when they are no longer needed for grid reliability. Once the power plant's operations cease, Poseidon would continue to use the existing power plant intake and discharge for its water supply. The proposed project was the subject of CEQA review conducted by the City of Carlsbad, and the Final EIR, certified by the City on June 14, 2006, addressed the potential stand-alone operation of the facility and concluded that such a facility would not result in any ~~new~~ significant adverse environmental

5

impacts.[16] Poseidon also provided Commission staff with results of its entrainment study showing impacts roughly equal to ~~the loss of~~**reduced** productivity from 37 acres of wetlands and open water in Agua Hedionda Lagoon.[17] Poseidon also provided in December 2006 and ~~March~~**May** 2007 technical papers showing the amount of ~~l~~**L**agoon sedimentation caused by use of the intake.[18]

As a stand-alone facility, Poseidon would operate the power plant**'s** pumps to take in approximately 304 MGD of estuarine water.[19] The project would use about 100 MGD of that water in the desalination process to create about 50 MGD of potable water and about 50 MGD of a high salinity discharge. The **facility's** NPDES permit issued to Poseidon by the Regional Board requires that Poseidon's discharge not exceed a maximum salinity level of 40.1 parts per thousand. ~~To meet this discharge requirement,~~ Poseidon would use the additional **200 MGD of** estuarine water it pumps in to reduce its discharge's salinity concentration to ~~as required through~~**levels established in** the NPDES permit.

Some other reverse osmosis desalination facilities can produce a particular amount of potable water by using about twice that amount of seawater (i.e., a 2:1 ratio), but because of the approach used in this project to dilute Poseidon's discharge and due to the Regional Board's requirements, this project would require a 6:1 ratio. This is discussed in more detail in Section 4.5.1 of these Findings.

---

[16] **See Project EIR Section 4.3, Appendix E.**

[17] **See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007, Attachment 4, Tenera Environmental, Inc., Assessment of Potential Impingement and Entrainment Attributed to Desalination Plant Operations and Associated Area of Production Forgone, May 2007, at p. 4.**

[18] **See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007: Attachment 6, Scott A. Jenkins and Joseph Wasyl, Coastal Process Effects of Reduced Intake Flows at Agua Hedionda Lagoon, December 13, 2006, Attachment 8, Steve Le Page, Potential Adverse Changes in Agua Hedionda Lagoon Resulting From Abandonment of the Lagoon Intake, May 18, 2007.**

[19] **The power plant has five separate generating units, each with two cooling water pumps and one or two service pumps. Each unit's pumps have a different capacity, from about 73 MGD to 326 MGD. Poseidon's preferred scenario would be to operate the Unit 4 pumps, which would provide the required 304 MGD rate. The Regional Board determined that 304 MGD would be necessary to adequately dilute Poseidon's 50 MGD high salinity discharge. On June 1, 2007, Poseidon submitted to the Board a *Revised Flow, Entrainment and Impingement Minimization Plan* that the Board is currently reviewing. The draft Plan states that operating the Unit 4 pumps would result in a discharge of 304 MGD with a salinity level of 40.1 parts per thousand, which is the limit established in the facility's NPDES permit. This operating scenario serves as the basis of the various analyses in these Findings related to entrainment, impingement, greenhouse gas emissions, and others.**

Poseidon~~ intends to operate~~**'s preferred operating scenario is to use** the power plant's Unit 4 pumps~~, which would~~ **to** provide ~~the necessary~~ 304 MGD.[6]

A number of regulatory, policy, and legal challenges have been raised with respect to once-through cooling. Their relevance to the project is not yet certain, in part because while the project will use the existing once-through cooling system, it will not be using that system for once-through cooling. Issues that may be relevant include:

- *Entrainment/impingement studies along California's coast*: California's coastal power plants have been studied over the past few years to determine what effects their use of seawater for cooling has on the marine environment.[~~7~~**20**] These power plants can use from several hundred million gallons per day to over two billion gallons per day of water from the nearshore ocean, open embayments, and enclosed estuaries. Each of the studies showed these cooling water intakes cause significant adverse effects to the marine environment that in some cases extended up to dozens of miles along the coast or covered up to hundreds of acres of nearshore waters.

- *California Ocean Protection Council's Once-Through Cooling Policy*: In response to these studies and in recognition of the degraded quality of California's ocean environment, the California Ocean Protection Council last year adopted a policy to reduce the adverse effects of once-through cooling systems.[~~8~~**21**] The resolution recognizes that such systems cause significant adverse impacts to the marine ecosystem. The Commission further directed its staff to complete by December 2007 a study of alternative cooling methods that would reduce impacts, urged the State Water Resources Control Board to implement the most

①

~~[6] The power plant has five separate generating units, each with two cooling water pumps and one or two service pumps. Each unit's pumps have a different capacity, from about 73 MGD to 326 MGD. Poseidon's preferred scenario would be to operate the Unit 4 pumps, which would provide the required 304 MGD rate. The Regional Board determined that 304 MGD would be necessary to adequately dilute Poseidon's 50 MGD high salinity discharge. On June 1, 2007, Poseidon submitted to the Board a *Revised Flow, Entrainment and Impingement Minimization Plan* that the Board is currently reviewing. The draft Plan states that operating the Unit 4 pumps would result in a discharge of 304 MGD with a salinity level of 40.1 parts per thousand, which is the limit established in the facility's conditional NPDES permit. This operating scenario serves as the basis of the various analyses in these Findings related to entrainment, impingement, greenhouse gas emissions, and others.~~

[~~7~~**20**] Since 1998, power plant entrainment/impingement studies done in California include South Bay (in San Diego), Huntington Beach (Orange County), Diablo Canyon and Morro Bay (San Luis Obispo County), and Moss Landing (Monterey County).

[~~8~~**21**] See *Resolution of the California Ocean Protection Council Regarding the Use of Once-through Cooling Technologies in Coastal Waters*, April 20, 2006.

protective controls to reduce entrainment and impingement impacts by 90-95%, and established an interagency coordinating effort to address once-through cooling issues.[~~9~~22]

- *Changes in regulatory / legal status of seawater intake systems*: In January 2007, the 2nd Circuit Court of Appeals determined that U.S. EPA rules for regulating existing power plant cooling water intakes did not conform to Clean Water Act requirements (*Riverkeeper, Inc., v. United States EPA*, 475 F.3d 83, 97 (2d Cir. 2007).) The court's decision, known as *Riverkeeper II* and which applies nationwide, found that cooling water intakes had to reduce entrainment impacts through technological measures and could not use compensatory mitigation as a means of compliance. In response, the U.S. EPA rescinded its proposed requirements and directed state water quality agencies to use Best Professional Judgment in determining applicable NPDES requirements for once-through cooling systems. For most power plants, this *Riverkeeper II* decision means that continued use of their existing cooling water systems would not comply with the Act's requirements. As noted previously, five of California's coastal power plants have since announced that they will switch to a less environmentally damaging cooling method.

Poseidon contends that this decision has no effect on its ability to use the intake when the power plant shuts down because it would not use the intake for cooling water. ~~However, in conjunction with that ruling, the~~

Moreover, Poseidon contends, even though it is speculative how or whether future Phase II regulations might impact the EPS's use of the intake structures, the impacts of the project as a stand-alone facility already have been analyzed. These studies and analyses show that entrainment caused by a stand-alone project would be significantly less than that already caused by the EPS, which is a small amount that does not affect sustainability of the species. Similarly, the project, as a stand-alone facility, would impinge only a small mass of organisms. A stand-alone facility would also comply with a discharge limitation of 40 ppt, below which no salinity-related impacts would occur.[23] A study submitted by the applicant also shows that if the Lagoon is not regularly dredged, the Lagoon would close in about five to seven years and slowly revert back to its natural state of stagnant "stinky water," which consists of shallow marsh channels filled with hyper-saline water that would preclude current recreational, fishing and aquaculture activities.[24] Thus, Poseidon's commitment to continue operation and maintenance dredging of the Lagoon if EPS ceases to use its intakes ① ②

[~~9~~22] Coastal Commission staff is active in the interagency coordinating group.

[23] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 15.

[24] Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon: Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007

① ②

②

and stops its regular Lagoon dredging would avoid greater marine impacts that would otherwise occur in the Lagoon if dredging ceased.[25]

Poseidon states, even if future Phase II regulations do impact the EPS's use of the intake structures – which is speculative – they would not prohibit Poseidon's use of them. As indicated in Section 316(b) and the Phase II regulations, as well as the State Board's scoping document regarding its Section 316(b) policy, Section 316(b) does not apply to desalination facilities, such as the project. Section 316(b) applies only to "cooling water intake structures," which withdraw "water used for contact or non-contact cooling, including water used for equipment cooling, evaporative cooling tower makeup, and dilution of effluent heat content," intended "to absorb waste heat rejected from the process or processes used, or from auxiliary operations on the facility's premises."[26] The Phase II regulations apply only if the facility: (1) is a point source; (2) uses cooling water intake structures with a capacity to withdraw at least 50 MGD of cooling water; (3) generates electric power either to transmit or to sell for eventual transmission; and (4) uses at least 25 percent of water withdrawn exclusively for cooling purposes.[27] Poseidon contends that the regulations are not applicable to the project, as it is not an electrical generating facility and would not use water for cooling purposes. Poseidon relies on the State Board's Section 316(b) scoping document, which states that desalination plants are "outside the scope of the Clean Water Act [Section] 316(b)" and "would be more appropriately addressed through the other water quality control plans."[28] Thus, Poseidon contends it would not be prohibited by any future Section 316(b) regulations from using the EPS's existing intake structures.[29]

①

Furthermore, when petitioned to review the NPDES Permit issued by the San Diego Regional Water Quality Control Board ("Regional Board") for the Project, the State Water Resources Control Board ("State Board") determined that the petition, which included allegations that Section 316(b) is applicable, was without merit, and dismissed the petition.[30] Those petitioners alleged that the NPDES Permit should have contained a "reopener" requiring the Regional Board to reopen the permit upon finalization of the

---

[25] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 25-26.

②

[26] 40 § C.F.R. 125.93.

[27] See *id.* at § 125.91.

[28] See State Board, Scoping Document: Proposed Statewide Policy on Clean Water Act Section 316(b) Regulations, at 28 (June 13, 2006).

①

[29] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 15.

[30] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. B at p. 6.

State Board's Section 316(b) policy.[31] Poseidon's response to the petition explained that neither the Section 316(b) regulations nor the State Board's policy were applicable to the Project, and a reopener related to Section 316(b) thus was not necessary.[32] Finding that the petition "fail[ed] to raise substantial issues that are appropriate for review," the State Board dismissed the petition. The State Board has, therefore, decided that the Regional Board's actions with respect to Section 316(b) were not appropriate for review. Regardless of whether EPS will, in the future, be prohibited from using its cooling water intake structures, causing the Project to operate as a stand-alone facility, Poseidon contends that it would not be prohibited by Section 316(b) or future Phase II regulations from using the intake structures.[33]

The State Water Resources Control Board is developing a *Statewide Policy for Once-Through Cooling*[~~10~~34] that will incorporate the *Riverkeeper II* decision, which was a decision involving the federal Clean Water Act, but will also be based primarily on a state requirement that regulates more than just cooling water structures. Porter-Cologne Act Section 13142.5(b)[~~11~~35] states:

> *"For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life."*

Although Poseidon's use of the power plant intake structure would not be for cooling purposes, ~~it would~~**and while it is possible that it may in the future** be subject to this Porter-Cologne Act provision~~and would cause the same type of entrainment and impingement impacts both the Clean Water Act and the Porter-Cologne Act require be avoided and minimized~~**, such a scenario is speculative. At this time, the Regional Water Quality Control Board is processing a plan to regulate Poseidon's use of the power plant intake structure for desalination purposes. This plan is described in more detail in Section 4.5.1 of these findings**.

Without the mitigation measures in the Special Conditions contained herein, the proposed use of the existing intake and discharge facilities would be inconsistent with applicable Coastal Act

---

[31] *Id.*

[32] *Id.*

[33] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 16.**

[~~10~~34] In July 2006, the Board initiated CEQA review for the proposed policy and is expected to issue a draft policy sometime in early 2008, with a final policy later in 2008.

[~~11~~35] Pursuant to Coastal Act Section 30412(a), the Commission shares responsibilities with the State Board in implementing this section of the Porter-Cologne Act.

policies. As mitigated and conditioned, the Commission finds the project will be consistent with the Coastal Act **because all feasible measures will be adopted to reduce impacts to marine resources, and Special Condition 8 and Poseidon's mitigation package will ensure that marine resources are maintained and enhanced to the maximum extent feasible**. ①

Public use of water

Poseidon has announced purchase agreements totaling 57,900 acre-feet of water per year with the following water agencies:

- Carlsbad Municipal Water Department: 22,000 acre-feet per year, or about 20 MGD
- Olivenhain Municipal Water District: 5,000 acre-feet per year, or about 4.5 MGD
- Rainbow Municipal Water District: 7500 acre-feet per year, or about 6.5 MGD
- Rincon Del Diablo Municipal Water District: 4,000 acre-feet per year, or about 3.5 MGD
- Sante Fe Irrigation District: 2000 acre-feet per year, or about 1.8 MGD
- Sweetwater Authority: 2400 acre-feet per year, or about 2 MGD
- Vallecitos Water District: 7500 acre-feet per year, or about 6.5 MGD
- Valley Center Municipal Water District: 7,500 acre-feet per year, or about 6.5 MGD

Poseidon's stated objective is to provide water to purchasers at or below the price they would pay for imported water, and its purchase agreements with these agencies are based on that objective. These agencies, all of which are members of the San Diego County Water Authority, currently purchase imported water from the Authority at rates ~~ranging from about $250 to~~**based on the Municipal & Industrial (M&I) treated water rate, which is approximately** $700 per acre-foot, which ~~are well~~**is** below the costs anticipated for water from the Poseidon project. Cost considerations are described in more detail later in this section. ⑤

Of the purchasers above, several would not be able to receive water directly from Poseidon's facility, as they are some distance from Carlsbad – for example, the Sweetwater Authority is about twenty miles away at the southern end of San Diego Bay and both Rincon and Valley Center are several miles inland. Instead, Poseidon's intent is to allow some of the agencies to trade water it has purchased from Poseidon to agencies closer to the facility in exchange for those nearby agencies' rights to imported water.

The project as currently proposed would allow for only limited exchanges, since it does not include several elements of public infrastructure needed to distribute the water beyond adjacent communities. Poseidon's proposal includes pipelines and pumps necessary to transport its produced water to Carlsbad's Maerkle Reservoir, which serves parts of Carlsbad~~ and neighboring Oceanside and Vista only~~, and its other pipelines would serve parts of some other neighboring communities. Poseidon's proposal includes several pipeline route alternatives, for the most part outside the coastal zone, that would allow it to provide water to portions of the cities of Carlsbad, Oceanside, Vista, San Marcos, Escondido, Encinitas, and Solana Beach. The project EIR examined facilities to connect with these local water delivery systems. ~~Getting water from this reservoir to the regional distribution system where it would be usable or tradable by other water agencies would require an additional pump station and pipeline between the reservoir and elements of the regional system located further inland and several hundred feet higher in elevation.~~ Poseidon does not currently plan to connect the desalination facility to the regional water distribution system. ~~This connection is not necessary to deliver water between the facility and the neighboring communities listed above. The new pump station and pipeline are not a part of the proposed project, but instead are included in the SDCWA's 2007 *Draft Integrated Water Resource Management Plan*. This Plan shows that the anticipated capital costs for these facilities are $80 million and ongoing operations and maintenance costs would be $2.5 million. These costs would need to be added to any costs charged by Poseidon and would represent an additional cost to any purchaser needing to either obtain the desalinated water via the regional system or use that system to trade with other agencies. The Borego Water District, in its Board meeting minutes of September 26, 2007 describing its consideration of water purchases from the proposed desalination facility, identified the expected transmission costs as $140 per acre-foot. Cost issues are described in more detail later in this Section. Without the additional infrastructure, the actual usable water from Poseidon's proposed facility would be limited to water to those areas listed above in and near Carlsbad.~~ **Because all of the water districts in San Diego County are connected to the same imported water delivery system, it is not necessary for the desalination facility to be connected to the regional system to exchange water among the agencies located in close proximity to the plant and those that are located outside the reach of the desalinated water delivery system.**[36] Further, Maerkle Reservoir is currently designated by Carlsbad as its required emergency storage reservoir – that is, water stored there is meant to provide the City with a 10-day emergency water supply during a shutdown of the regional delivery system – and, as noted in the City of Carlsbad Water ~~*Master Plan Update* (March 2003), that designation would have to be changed to allow Poseidon to use the reservoir to store or transport water to the regional distribution system. That change would also presumably have to identify an alternative 10-day emergency source for Carlsbad.~~ **Purchase Agreement, Carlsbad's need for water from the regional delivery system would be significantly reduced after the project comes online; freeing up capacity in Maerkle Reservoir for operational storage of desalinated water.**

5

---

[36] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 32.**

Expected Project Costs

The Commission does not directly regulate costs; however, the Coastal Act includes consideration of project costs in an indirect ~~but important way. Some Coastal Act provisions require the Commission to determine whether~~**way, but only to the extent the Commission were to find that the project is inconsistent with one or more relevant Coastal Act policies and therefore was required to make findings under Coastal Act Section 30260 for Coastal Development Projects. If a project is inconsistent with one or more Coastal Act Policies, a coastal dependent use such as the project could be approved if the Commission finds that the** certain adverse impacts of the proposed project are mitigated to the **maximum** extent feasible or whether there are feasible and less environmentally damaging alternatives to aspects of a proposed project~~ (see, for example, Coastal Act Sections 30121.5, 30230, 30231, 30233(a), and 30260)~~. Coastal Act Section 30108 defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, ~~and~~ environmental, social, and technological factors." Therefore, information about proposed project costs may sometimes be necessary to fully evaluate what project changes or mitigation measures may be economically feasible. The Commission includes the following discussion of the project's estimated costs to use in later sections of these Findings regarding feasible mitigation measures and alternatives.[37] ⑤

One of Poseidon's objectives and the basis of its purchase agreements is to provide water to water districts at or below the costs of imported water.[~~12~~38] Those costs ~~now range from~~**are** about ~~$300 to $~~700 per acre-foot for water districts in the San Diego area.[~~13~~39] **Poseidon has provided**

---

[37] **However, as the Commission previously found, the Project is consistent with all applicable Coastal Act policies.**

[~~12~~38] More precisely, Poseidon's Water Purchase Agreements describe the price as: "The lower of (i) the sum of (A) $861/acre-foot [$0.70/m^3] (the "Base Price" in 2004 dollars) and (B) a delivery charge for transportation of the desalinated water to the Exchange Partner; and (ii) the sum (the "Avoided Cost") of (A) Buyer's cost of water supplied by the SDCWA and (B) any subsidy received by Buyer from MWD or any other third party for the purchase of water from the Project. To the extent the Base Price plus the delivery charge is less than the Avoided Cost, the savings shall be shared equally between the Parties."

The "Avoided Cost" method is equal to the sum of costs charged by the San Diego County Water Authority. The "Base Price" method is tied to the Consumer Price Index and is based on the following formula:

$$\text{Current Base Price} = (\text{Base Price}_{initial})(70\%(CPI_i / CPI_{initial}) + (30\%(EC_i / EC_{initial})))$$

[~~13~~39] The MWD, from whom SDCWA purchases most of its imported water, expects its imported water price to go up from 4-6% per year for the next ten years. In the shorter term, SDCWA expects its costs to increase next year by about 10%.

the Commission with a detailed accounting of its expected costs.[40] Commission staff, however, contends that Poseidon's actual costs would be higher than what local water districts are paying for imported water.

In July 2007, Poseidon provided the following figures for its expected project costs:

Total capital costs:	$300 million	
Annual gross revenues:	**$53 million**	
~~**Annual gross revenues:**~~	~~$53 million~~	
(based on 56,000 acre-feet per ~~year X ~$950 per acre-foot)~~ **year X ~$950 per acre-foot)**		
Annual operations and ~~maintenance costs:~~ maintenance costs:	$30 million	$535 per acre-foot
Debt service and taxes:	$21 million	$375 per acre-foot
Anticipated net annual ~~revenues:~~ revenues:	$2 million	$_36 per acre-foot
Total:		$946 per acre-foot

Commission staff ~~analysis showed, however, that the overall cost would likely~~**believe actual costs would** be somewhat higher and, in fact, for some components of the proposed project could only verify higher costs. These higher costs would make Poseidon's water cost substantially more than the expected $950 per acre-foot and even higher than current or expected costs for imported water. ~~The Commission believes the costs to provide this water will be higher than Poseidon currently estimates, for the following reasons~~**Poseidon disagreed with staff's cost estimates and presented evidence to the Commission that refuted Commission staff's contentions. A summary of staff's and Poseidon's contentions are provided below**: 5

- *Overall trend of desalination costs*: Over the past couple of decades, desalination costs have declined significantly, due largely to advances in technology such as increased energy efficiency, extended membrane and filter operating life, and other improvements. More recently, however, the trend appears to have reversed. Despite continued advances in some areas of desalination technology and energy efficiency, overall costs of desalinated water have increased during the past few years largely due to increased cost for energy and materials. Of all significant sources of water, seawater desalination is the most energy intensive and the most cost-sensitive to energy prices. Poseidon's expected costs in Carlsbad

---

[40] **Poseidon has provided the Commission with the following documents supporting its projections of expected costs: Poseidon Resources Corporation, Response to California Coastal Commission's September 28 Request for Additional Information, November 30, 2006 pp. 46-51; Poseidon Resources Corporation, Response to California Coastal Commission's July 3 Request for Additional Information, July 16 2007, at pp. 11-13; Poseidon Resources Corporation, Transmittal of Intake Cost Estimates, October 17, 2007.**

have ~~gone up, not down,~~**increased** over the past several years. In 2004, Poseidon estimated its water would cost $800 per acre-foot; its most recent estimate is $950 per acre-foot. Its overall capital costs have ~~gone~~**increased** from $270 million to about $300 million during the same period.

Further, although it is difficult to compare the cost of water from different desalination facilities, **in Commission staff's view,** Poseidon's purported costs are ~~much~~ lower than estimates at other seawater desalination facilities now operating or being developed. For example, testimony by the California-American Water Company before the state Public Utilities Commission shows that it expects water from a similar proposed seawater desalination facility at the Moss Landing Power Plant to cost from $1600-1800 per acre-foot. This proposed facility would be somewhat smaller than Poseidon's (between 10 and 20 MGD), but even allowing Poseidon a 10% "economy of scale" benefit would result in its costs being closer to $1500 per acre-foot.

- *Additional mitigation costs*: As noted later in these Findings, several mitigation measures are needed for the proposed project to conform to various Coastal Act provisions, and **Commission staff does not believe** these costs are ~~not yet~~ included in Poseidon's estimates. For example, Poseidon stated it is considering purchasing "carbon offset" credits for its greenhouse gas emissions. At a current average cost of $20 per megawatt-hour, these credits would cost Poseidon over $5 million per year to fully offset its emissions, which would add about $95 to the cost of each acre-foot produced. Poseidon ~~stated~~**indicated that** it has taken **all of** these costs into consideration in ~~determining that~~**assessing the feasibility of** the project ~~is feasible~~**, and addressed these costs in its Climate Action Plan**. 5

- *Poseidon's reliance on ~~a not-yet-available~~**MWD** subsidy*: Poseidon's anticipated costs are also based in part on it being eligible to benefit from the $250 per acre-foot subsidy available from the MWD. As described previously, the MWD several years ago adopted a policy to provide up to $250 per acre-foot to selected water agencies ~~(the San Diego County Water Authority, Long Beach Water Department, Los Angeles Department of Water and Power, West Basin Municipal Water District, and the Municipal Water District of Orange County). Poseidon is not at this time eligible for the subsidy. It would have to enter an agreement with one of the five eligible entities (presumably, the San Diego County Water Authority) to transfer its subsidy rights. Without this subsidy, Poseidon's stated costs would be $250 per acre-foot higher.~~**. Poseidon responds that, in a June 22, 2007 letter to the Commission's Executive Director, the MWD affirmed its intent to provide the $250 per acre-foot**

financial incentive to the water agencies who have contracted to purchase water from Poseidon.[41]

- *Present and future costs for electricity*: Poseidon estimates its average cost for electricity will be $0.0749 per kWh. It bases this estimate on the rates available from the San Diego Gas & Electric Company (SDG&E) for large industrial customers (SDG&E Tariff Sheet ~~#ALTOU~~**ALTOU**), which provides a range of energy prices based on the time-of-use~~,~~ (e.g., higher costs at peak afternoon hours, lower costs at night; generally higher costs in summer than in winter)**, and its eligibility for a discount due to its participation in SDG&E's emergency response program**. Poseidon states that it determined its expected $950 per acre-foot water cost in part by applying expected rates from that Tariff Sheet. ~~Poseidon also stated that the SDG&E tariff sheet provides a discounted rate for entities able to reduce electrical use during peak demand periods. However, it is not clear what cost savings might result from this discount, since Poseidon's proposed project and the analyses herein are based on the facility producing water at a relatively continuous 50 MGD rate.~~

~~It~~**However, to Commission staff, it** appears that applying the rates from that Tariff Sheet would result in an actual annual average rate of no less than $0.10 per kWh. The cost of desalinated water is highly sensitive to energy costs, with each penny increase in the rate per kilowatt-hour resulting in about a $50 per acre-foot increase in the end cost, so this average $0.10 rate**, if applicable,** would increase Poseidon's expected costs per acre-foot by about $125.[~~14~~42] **Poseidon responds that the applicable SDG&E tariff is subject to a discount due to the Project's ability to reduce demand during peak periods, and to shed up to 95 percent of the Project's energy load during local utility emergencies.**[43]

5

---

[41] **See also Poseidon Resources Corporation, Response to California Coastal Commission's September 28, 2006 Request for Additional Information, November 30 2006: (Attachment 3) Water Purchase Agreement by and between The Carlsbad Municipal Water District and Poseidon Resources (Channelside) LLC, September 28, 2004, at § 3.1.2; (Attachment 4) Water Purchase Agreement by and between Rincon del Diablo Municipal Water District and Poseidon Resources (Channelside) LLC, March 14, 2006, at § 3.1.2; (Attachment 5) Water Purchase Agreement by and between Valley Center Municipal Water District and Poseidon Resources (Channelside) LLC, December 20, 2005, at § 3.1.2.**

[~~14~~42] Poseidon stated that it could take advantage of lower off-peak electricity rates by reducing its production during peak hours and increasing it during non-peak hours – it proposed, for example, that it could operate at 80% capacity (40 MGD) during the highest rate periods and at 108% capacity (54 MGD) during lower rate periods. However, it appears this scenario would have little effect on average electrical costs, since Poseidon would use even more electricity during the longer low-rate periods and less during the much shorter high-rate periods. Further, this "start/stop" operating scenario would likely increase Poseidon's operations and maintenance costs due to shortening the operating life of the various membranes, filters, and other facility components.

[43] **See Poseidon Resources Corporation. Updated Response to Coastal Commission's September 28, 2006 Request for Additional Information, Section 13, CDP Energy Use, GHG Production & Mitigation, October 21, 2007, at p. 3.**

Additionally, Poseidon's anticipated costs do not recognize likely future rate increases for electricity, which **in Commission staff's view** are likely to help maintain the gap between Poseidon's production costs and the costs of imported water. For 2008, SDG&E has already proposed an increase of about 5% increase for its industrial users. Even though imported water sources would also be subject to future rate increases, at least two characteristics suggest that Poseidon would have disproportionally higher increases compared to imports. First, as noted above, seawater desalination is more sensitive to energy costs than are other sources; and second, Poseidon would obtain its electricity from the SDG&E service area, whereas much of the water imported to San Diego County is subject to the lower rates available to the state's water transport systems. Although Poseidon may be able to "hedge" all or part of its electricity costs through the purchase of natural gas futures, such hedges are relatively short-term, so Poseidon's costs would eventually be subject to rate increases similar to those experienced by other electricity users in the region. At this point, **in Commission staff's view,** the expected 5% increase next year by SDG&E would add about $25 per acre-foot to Poseidon's costs. **In response to these staff assertions,** Poseidon ~~has stated~~**confirmed** that it has taken these costs into consideration in ~~its determination that~~**assessing the feasibility of** the project~~ is feasible.~~**,**[44]

- *Additional costs to pump water into SDCWA distribution system*: As noted above, Poseidon's current proposal includes installing the pipelines and pumps needed to deliver water only to Carlsbad's Maerkle Reservoir and parts of Vista and Oceanside. Transporting water to other entities would require an additional pipeline from the reservoir to the regional distribution system along with an additional pumping station and additional electricity costs. ~~SDG&E's most recent cost estimates for these components are $80 million in capital costs and $2.5 million per year in operations and maintenance costs (which presumably include electricity costs), which would have to be reflected in the costs of water for any entity other than Carlsbad, Vista, or Oceanside. The additional operations and maintenance costs alone would add about $125 per acre-foot to the approximately 20,000 acre-feet that may need to reach the regional distribution system. As noted above, recent minutes of the Borrego Water District identify the Authority's expected distribution charge as $140 per acre-foot. Although Poseidon's project does not propose connecting to this regional distribution system, these costs would be borne by any entities other than the neighboring cities noted above that wish to use or trade the desalinated water. Again, Poseidon has stated~~**In response, Poseidon**

5

---

[44] **See Poseidon Resources Corporation, Response to California Coastal Commission's July 3, 2007 Request for Additional Information, July 16, 2007.**

confirmed that it has taken these costs into consideration in ~~its determination that~~**assessing the feasibility of** the project~~ is feasible~~.[45]

- *Additional costs for dredging Aqua Hedionda Lagoon*: The power plant owner is currently responsible for dredging the ~~l~~**L**agoon and is expected to maintain that responsibility as long as the power plant uses its once-through cooling system. When the power plant ends its use of that system, Poseidon is expected to take on responsibilities for dredging the ~~l~~**L**agoon. Poseidon would not need to dredge as large an area, since it would use less water than past power plant operations~~; even so,~~**.** Poseidon~~'s costs could be higher. The power plant has in the past dredged about every other year, with its most recent operations costing about two million dollars (or an average of one million dollars per year); however, it owns the barge and sand delivery pipelines it uses for dredging operations. A similar one million dollar per year average would add about $20 per acre-foot to Poseidon's water costs, which Poseidon stated has been taken into consideration in its determination that~~ **has demonstrated that it has taken this cost into consideration in assessing the feasibility of** the project~~ is feasible.~~[46]~~.~~

In sum, **Commission staff estimates that** the additional costs described above ~~would~~**could** add ~~up to about~~**a worst-case maximum of** $450 to Poseidon's stated $950 per acre-foot costs. ~~This~~**Staff's calculated** approximate cost of $1400 per acre-foot is more in line with ~~credible~~ cost estimates available from other seawater desalination facilities operating or being developed in California. In response, Poseidon stated at the Commission's November 15, 2007 hearing that it intends to operate at a loss for some unknown number of years until the costs of imported water increase to match Poseidon's costs for constructing and operating the desalination facility. **Regardless of which cost estimates are more accurate – those provided by Poseidon or by Commission staff – the Commission has found that the proposed project is consistent with all applicable Coastal Act policies (see Section 4.5, herein) and the Commission finds that the project, as conditioned herein, incorporates all feasible mitigation measures and that there are no feasible alternatives that would further reduce impacts to coastal resources. There are no feasible and less environmentally damaging alternative locations to draw in the needed seawater (e.g., subsurface or offshore). The Commission finds that slant wells are infeasible because the water quality available from such intakes would make it difficult, if not impossible, to treat for desalination purposes, and that the construction impacts**

---

[45] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Ex. B, at p. 7; see Poseidon Resources Corporation, Response to California Coastal Commission's July 3, 2007 Request for Additional Information, July 16, 2007, at p. 13.**

[46] **Coastal Process Effects of Reduced Intake Flows at Agua Hedionda Lagoon, Dr. Scott Jenkins, December 13, 2006.**

associated with this alternative render it environmentally inferior to the proposed project.[47] The Commission also finds that an infiltration gallery is environmentally inferior to the proposed project because this alternative would disrupt public access to marine resources, require frequent dredging and require the destruction of 150 acres of coastal habitat, and that the alternative is economically infeasible.[48] The Commission further finds that an offshore intake system would result in greater environmental impacts than the proposed project's use of the existing EPS intake, and that construction of an offshore intake would render the project infeasible.[49] ①

~~Should~~**Moreover, should** Poseidon's costs or other concerns make the project unsuccessful, measures exist to protect coastal resources. First, under the water purchase agreements between Poseidon and the Carlsbad Municipal Water District, the Water District at its option can assume operation or ownership of the facility. Second, if the Water District chooses not to assume either of those options, or if operations cease~~d~~ for some reason, Poseidon is required to remediate the site and remove the facility. To accomplish this, and as described in the Water Purchase Agreement between the Water District and Poseidon, Poseidon is required to post a security in the form of either a letter of credit or an irrevocable bond with the property owner.[50] ⑤

4.3 Coastal Commission Jurisdiction and Standard of Review

The proposed desalination facility and portions of its associated pipelines would be located in the coastal zone within the City of Carlsbad. Carlsbad has a certified Local Coastal Program (LCP), and the Agua Hedionda area is one of six segments of that LCP. Although most of the city's coastal zone is fully certified, the Agua Hedionda segment has only a certified Land Use Program (LUP), not a certified implementation program. Therefore, review and permitting authority within this segment remain with the Commission, with the standard of review being Chapter 3 of the Coastal Act. The Commission may also use provisions of the certified LUP as guidance.

---

[47] See Poseidon Resources Corporation Response to California Coastal Commission's Letter of September 28, 2006, November 30, 2006, at pp. 24-51; Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 16-17.

[48] See Poseidon Resources Corporation, Additional Analysis of Submerged Seabed Intake Gallery, October 8, 2007; Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 17-18. ①

[49] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 19-20; Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend An Alternative Seawater Intake for the Carlsbad Desalination Project, Graham, Le Page and Mayer, October 8, 2007.

[50] See Water Purchase Agreement by and between The Carlsbad Municipal Water District and Poseidon Resources (Channelside) LLC, September 28, 2004, at § 14.2. ⑤

4.4 Other Permits and Approvals

City of Carlsbad:

- **Precise Development Plan:** As part of its project review and approval, the City of Carlsbad approved a Precise Development Plan for the project site, which modified the allowable uses on the site to include the proposed desalination facility.

- **Environmental Impact Report:** On June 14, 2006, the City of Carlsbad certified a Final EIR for the project. At the request of the Coastal Commission staff, the City added a discussion to the Final EIR to address stand-alone operations of the project. In addition, the potential for stand-alone operations was ~~discussed~~**evaluated** in the City's staff reports to the City Planning Department and City Council. The City concluded that the project, operating as either a co-located or a stand-alone facility, would not result in any significant adverse impacts.[~~15~~51]

State:

- **Lease of state tidelands from the State Lands Commission: The proposed project would require a lease from the State Lands Commission due to its use of two sets of structures built on state tidelands – the jetties at the mouth of Agua Hedionda and the discharge structure built across a state beach about 3000 feet south of the Lagoon mouth.**

  ~~• **Lease of state tidelands from the State Lands Commission:** The proposed project would require a lease from the State Lands Commission due to its use of two sets of structures built on state tidelands – the jetties at the mouth of Agua Hedionda and the discharge structure built across a state beach about 3000 feet south of the lagoon mouth.~~

  The power plant currently has a lease from the State Lands Commission allowing it to use those structures until 2026; however, that lease allows use of those structures only for power plant cooling operations and for minor use by Poseidon's test desalination facility (up to 200

[~~15~~51] Note: The EIR found that all but one of the project-related impacts would be nonsignificant or through mitigation would be less than significant. The EIR found that the project~~'s cumulative impacts to air quality would be significant but~~ **would indirectly contribute to a significant cumulative impact to air quality because it is likely that at least part of the mix of electricity that the desalination plant uses will come from pollutant-emitting sources in the San Diego air basin. However, the EIR** also found that there were no feasible mitigation measures to reduce ~~their impacts.~~**this impact. (See Project EIR, Chapter 5, p. 5-9.) Emissions from power generation, which are the main source of emissions associated with project operation, would be within permitted emission levels for the electrical plants which are planned for and regulated by the San Diego Air Pollution Control District, South Coast Air Quality Management District, and other local air pollution control districts. (See Project EIR, Chapter 4.2, p. 4.2-20.)**

③

gallons per minute) only when the power plant is operating. The power plant's lease also states that the "Commission has expressed concerns regarding Once-Through Cooling (OTC) of power plants and the environmental impacts to the waters of California that may be caused by OTC systems", and further states that the lease includes provisions that authorize the State Lands Commission to amend the lease if the State or Regional Water Boards modify Cabrillo's NPDES permit. This lease requires additional written approval from the State Lands Commission for use of the intake or discharge by a future desalination project. Poseidon submitted its lease application in February 2007. ~~On October 30, 2007,~~**As Commissioner Thayer explained at the hearing,** the State Lands Commission held a hearing on Poseidon's lease application~~, but~~ **on October 30, 2007. Staff recommended approval of the lease but the Commission** took no action and continued the hearing~~.~~ **at the request of the public because the hearing was held just days after the San Diego Region fires and at least one individual who wanted to participate in that hearing had been evacuated. Commissioner Thayer said a second hearing would be scheduled in December 2007 or at a later date.** ⑤

Coastal Act Section 30601.5[~~16~~52] requires in part that an applicant demonstrate its ability to comply with all conditions of a coastal development permit prior to issuance of that permit. This demonstration includes landowner approval, which in this case would take the form of Poseidon obtaining the necessary State Lands Commission leases. To ensure Poseidon complies with this requirement, **Special Condition 2** requires Poseidon, prior to the Commission's issuance of the coastal development permit, to submit for Executive Director review and approval all necessary leases from the State Lands Commission, local governments, and the power plant owner showing that it has the necessary legal interest in all property within the coastal zone necessary to construct and operate the project. **Special Condition 3** further requires Poseidon to execute and record against its leasehold interests restrictions that bind both Poseidon and any future holders of those interests to the terms and conditions of the Commission's approval. This, too, requires review and approval by the Executive Director before issuance of the coastal development permit.

- **National Pollutant Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board:** Poseidon's proposed project ~~would be subject to a provisional~~**already has a** NPDES permit issued by the San Diego Regional Water Quality Control Board in August ~~2006.~~**2006 pursuant to the Clean Water Act (33 U.S.C. § 1251 et** ①

[~~16~~52] Coastal Act Section 30601.5 states: "Where the applicant for a coastal development permit is not the owner of a fee interest in the property on which a proposed development is to be located, but can demonstrate a legal right, interest, or other entitlement to use the property for the proposed development, the commission shall not require the holder or owner of any superior interest in the property to join the applicant as coapplicant. All holders or owners of any other interests of record in the affected property shall be notified in writing of the permit application and invited to join as coapplicant. In addition, prior to the issuance of a coastal development permit, the applicant shall demonstrate the authority to comply with all conditions of approval."

seq.) and the Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.). The NPDES Permit, issued after the Regional Board reviewed multiple studies and analyses of the project, covers discharges to the Pacific Ocean from the project. The NPDES Permit addresses marine impacts of the project by requiring compliance with applicable water quality control plans, water quality objectives, performance goals, effluent limitations, and other receiving water and discharge limitations. In September 2006, Surfrider Foundation and Orange County CoastKeeper filed a petition with the California State Water Resources Control Board ("State Board") challenging the NPDES Permit on several grounds. In June 2007, the State Board dismissed the petition because it "fails to raise substantial issues that are appropriate for review" by the State Board.[53] The permit requires Poseidon **to** submit additional documentation for Board approval before starting operations and is based on Poseidon operating with or without concurrent power plant operations, as long as either entity ensures a discharge of at least 304 MGD to provide adequate dilution of the desalination facility's high salinity discharge.[~~17~~]

One of the required documents is a *Flow, Entrainment and Impingement Minimization Plan*, which Poseidon **first** submitted in February 2007 and ~~revised in June 2007 and~~ which the Board is ~~still~~ reviewing. This plan is described in more detail in Section 4.5.1 of these Findings. The NPDES Permit states that the Board will determine through its review of this Plan whether the proposed project conforms to Porter-Cologne Act Section 13142.5.

Additionally, Poseidon's operations ~~would~~**may** cause ~~additional~~ sedimentation in Agua Hedionda, which is listed by the State and Regional Boards as an impaired water body due in part to high rates of sedimentation. **Poseidon states, citing documentation by the Regional Board, that the 303(d) listing of Agua Hedionda Lagoon as an impaired body is based on fine-grained sedimentation discharged by urban run-off into the Lagoon from the neighboring watersheds (predominantly Agua Hedionda Creek), impacting 6.8 acres primarily located in the east basin of the Lagoon.**[54] The federal Clean Water Act requires that states develop a plan to restore waterbodies that are listed as impaired by removing or

---

[53] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, at Exh. B p. 6; see also SWRCB/OCC File A-1773, June 5, 2007.**

[~~17~~] ~~**Note:** The Santa Ana Regional Board took an entirely different approach with its issuance of an NPDES permit for Poseidon's similar proposed desalination facility at the Huntington Beach Generating Station. In that permit, the Board required that if water used by the power plant cooling system was not available, Poseidon would have to find another water source or apply for a new permit. These two different approaches illustrate the value of the statewide policy described above that is being developed by the State Water Resources Control Board. The policy may provide consistency in the application of state water quality requirements.~~

[54] **2006 Clean Water Act 303(d) List of Water Quality Limited Segments Requiring TMDLs, San Diego Regional Water Quality Control Board, June 28, 2007.**

limiting the causes of impairment. The NPDES permitting program, at 40CFR22 prohibits issuance of a permit where a new source would contribute a pollutant to a waterbody already listed as impaired due to that pollutant, unless a plan is in place that demonstrates how the waterbody would be brought back in to compliance with the water quality standards (see also, for example, the U.S. Ninth Circuit Court's decision on *Friends of Pinto Creek vs. U.S. EPA*, October 4, 2007). The Board has not yet developed the required plan (known as a Total Maximum Daily Load, or TMDL) for Agua Hedionda. As noted in the *Carlsbad Watershed Plan*, developed pursuant to an NPDES Permit issued in 2001 to a number of local jurisdictions by the State Water Quality Control Board, continued use of the power plant intake by either Poseidon or Cabrillo would contribute to the high sedimentation rate in the ~~l~~**L**agoon. As described later in these Findings, Poseidon's studies show that sedimentation at the mouth of the ~~l~~**L**agoon caused by use of the intake results in increased sedimentation within the area of the Inner Basin identified as impaired. For example, in describing sedimentation caused by the intake, Poseidon states that the build-up of sediment near the ~~l~~**L**agoon mouth restricts the tidal prism so that outflows from the Inner Basin are both reduced and slowed, resulting in the ~~l~~**L**agoon having insufficient transport capacity to reduce the sediment load in the Inner Basin. **However, Poseidon contends that the intake is only partly responsible for this sedimentation, and that the fine-grained sedimentation in the Inner Basin is primarily the result of urban run-off discharge. Poseidon cites San Diego Coastal Lagoons TMDL Monitoring Workplan[55] in support of its position that Poseidon's operations (and associated maintenance dredging of the Lagoon) would have a beneficial impact on the sedimentation problem in Agua Hedionda Lagoon. In the absence of Poseidon's operations and its assuming of the responsibility for maintenance dredging and stewardship of the Lagoon after the Encina power station is decommissioned, the Lagoon sedimentation will result in closure of the Lagoon in five to seven years, and nearly complete loss of existing beneficial uses thereafter.[56]** This issue will likely require further consideration by the Regional Board as part of its ongoing review of Poseidon's provisional NPDES permit, which was issued in June 2006 before these studies were provided. The Commission expects that action by the Regional Board will result in conformity to these applicable NPDES requirements.

Federal: ②

- **Federal "incidental take" permits:** Poseidon's proposed project may result in the "take" of species protected under the Marine Mammal Protection Act through entrapment of seals or other marine mammals in the power plant intake. In a June 4, 2007 letter to Commission

---

[55] **Final San Diego Coastal Lagoons TMDL Monitoring Workplan, June 18, 2007, McLaughlin et al.**

[56] **Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.**

staff, Poseidon indicated it would apply for an independent "Incidental Harassment Authorization" ("incidental take" permit) under the Marine Mammal Protection Act for any impacts to sea lions, seals, or any other protected marine mammals resulting from construction or operation of the project. During review of Poseidon's application, the National Marine Fisheries Service would engage in consultation under Section 7 of the federal Endangered Species Act to ensure that the project will not jeopardize the continued exista~~e~~nce of any species listed as threatened or endangered under the Act. Past power plant operations have caused documented entrapment of species protected under the federal Endangered Species Act, including ~~the~~**two** endangered East Pacific green turtle**s** *(Chelonia mydas)* **over a 53-year period**. Poseidon's operations of the intake system at velocities of less than 0.5 feet per second are expected to decrease the likelihood of future sea turtle impingement.

Agua Hedionda historically provided habitat for the tidewater goby (*Eucyclogobius newberryi*) a species listed as endangered by the U.S. Fish and Wildlife Service in 1999. The goby is also listed as a Special Status Species by the California Department of Fish and Game. The Service was developing a critical habitat designation for the species about the same time as publication of Commission staff's recommended Findings to the Commission.[~~18~~57] In November 2006, the USFWS issued a proposed designation that did not include Agua Hedionda as critical habitat~~.~~**, stating that the Lagoon has not been occupied by goby for many years; the last goby specimen from Agua Hedionda was collected in 1940.**[58]

To ensure Poseidon conforms to these other coastal resource protection requirements, **Special Condition 4** requires Poseidon, prior to starting construction, to submit documentation of other permits and approvals needed for project construction and operation, including those from the City of Carlsbad, the Regional Water Quality Control Board, the California Department of Health Services, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, or documentation **showing** that these approvals are not needed.

[~~18~~57] In 1994, the U.S. Fish and Wildlife Service listed the goby as endangered. In 1999, the Service published in the Federal Register a proposed rule to retain the goby as a listed endangered species in Orange and San Diego County coastal waters and to establish Agua Hedionda as part of the critical habitat for the goby. The goby had been listed as endangered in February 1994. In November 2000, the Service published its final rule, which designated Agua Hedionda as critical habitat for the goby. In August 2001, Cabrillo Power L.L.C., owner of the Encina power plant, filed a lawsuit challenging that designation. The Service later filed a consent decree with U.S. District Court in which it agreed to vacate that designation and reconsider the entire critical habitat designation in the rule. That consent decree also established that the Service would publish a revised proposal for critical habitat by November 15, 2006 and a new final rule by November 1, 2007. The USFWS had not issued its final habitat designation as of the date of the Commission's decision.

[58] **See Poseidon Resources, Response to Staff Report, November 9, 2007, Exh. B, at p. 9.**

4.5 Conformity to Applicable Coastal Act Policies

4.5.1 Protection of Marine Life (Coastal Act Sections 30230 & 30231)

Coastal Act Section 30230 states:

> *Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

These Coastal Act provisions require generally that marine resources be maintained, enhanced, and where feasible, restored. They also require that the marine environment be used in a manner that sustains biological productivity and maintains healthy populations of all marine species. Coastal Act Section 30231 requires that biological productivity be maintained, and where feasible, restored, including by minimizing the adverse effects of entrainment.[~~49~~59]

Other policies as guidance

[~~49~~59] "Minimize", as used in these Findings, means "to reduce to the smallest possible amount, extent, size, or degree" as defined in the American Heritage® Dictionary of the English Language: Fourth Edition (2000).

In applying the above-quoted Chapter 3 policies, the Commission may be guided by Porter-Cologne Act Section 13142.5, pursuant to Coastal Act Section 30412(a).[~~20~~**60**] Subsection (b) of Section 13142.5 states:

> *For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible shall be used to minimize the intake and mortality of all forms of marine life.*

Poseidon contends that the State and Regional Water Quality Control Boards have primary authority over water quality related marine life issues, and that therefore the Commission has no or limited authority over issues related to Poseidon's use of EPS's cooling system. As set forth in Coastal Act Section 30412(b):

> ***The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality . . . The [Coastal] commission shall not . . . modify, adopt conditions, or take any action in conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality . . .***

Coastal Act Section 30412(b).

1

In exercising its responsibility for coordination and control of water quality, the Regional Water Quality Control Board must also ensure compliance with the California Ocean Plan, which is part of the Board's jurisdiction and provides that:

> ***Marine communities, including vertebrate, invertebrate, and plant species, shall not be degraded.***

California Ocean Plan Section II.E.1. The Regional Board has already reviewed the project's discharged-related impacts and is currently reviewing the project's intake-related impacts pursuant to the federal Clean Water Act and California's Porter-Cologne Act. Thus, Poseidon argues, the Coastal Commission may not take any action in conflict with the Regional Board's ongoing jurisdiction over the project. (See Coastal Act § 30412(b) ["The [Coastal] commission shall not . . . modify, adopt conditions, or take any action in

---

[~~20~~ **60**] Coastal Act Section 30412(a) states: "In addition to Section 13142.5 of the Water Code, this section shall apply ~~to~~ the commission and the State Water Resources Control Board and the California regional water quality control boards."

conflict with any determination by the State Water Resources Control Board or any California regional water quality control board in matters relating to water quality…"].)

State, regional and local water plans all have confirmed that immediate and pressing water needs cannot be met without a substantial investment in seawater desalination.[61] To that end: (1) the proposed project will provide 56,000 AFY of new water supply for the San Diego region; (2) the California Department of Water Resources' 2006 Water Plan Update identifies the need for 500,000 AF of desalinated water by 2030; (3) the Metropolitan Water District of Southern California's Integrated Water Resources Plan identified a need for 250,000 AFY of seawater desalination (including 56,000 AFY from the Carlsbad project) to ensure regional water supply reliability; (4) the San Diego County Water Authority (SDCWA) updated its 2005 Urban Water Management Plan in April 2007 specifically to reaffirm the need for 56,000 AFY of seawater desalination from the Carlsbad project by 2011; and (5) Carlsbad Municipal Water District, Valley Center Municipal Water District, Rincon del Diablo Municipal Water District and Sweetwater Authority have entered into long-term water purchase agreements with the Carlsbad Desalination Project.[62] Collectively, these water districts represent nearly 70% of Poseidon's capacity.[63] Poseidon is in negotiations with the City of Oceanside, Santa Fe and Vista Irrigation Districts and Olivenhain, Rainbow and Vallecitos Municipal Water Districts for the purchase of the remaining capacity in the project.[64] 1

The agencies that have or are planning to acquire water from the Carlsbad Desalination Project have organized the "San Diego Desal Partners" and meet on a regular basis to coordinate efforts to advance the project. In a communication to Commission Chairman Kruer, the San Diego Desal Partners described the Carlsbad Desalination Project as "one of the most important water infrastructure projects currently being planned for the state of California."[65]

The SDCWA's April 18 Update of 2007 Metropolitan Water District supply assessment projected 2007 to be a critically dry year in both the State Water Project and Colorado River watersheds.[66] In light of this concern, the public support for the project continues to

---

[61] See Poseidon Resources Corporation, Response to California Coastal Commission's February 20 Request for Additional Information, June 1, 2007, at pp. 7-9.

[62] See *id.*

[63] See *id.*

[64] See *id.*

[65] See *id.*

[66] See *id.*

grow. For example, among key findings of the SDCWA 2006 Public Opinion Survey, the top response by respondents when asked what the most critical things the SDCWA could do to ensure a safe and reliable water supply was to develop seawater desalination.[67] ①

Certified Agua Hedionda Land Use Plan: Because the proposed project is within the Commission's retained jurisdiction, the standard of review is Chapter 3 of the Coastal Act. However, in such instances, the Commission may use as guidance adjacent certified Local Coastal Programs (LCPs). The proposed project would be in the coastal zone within the City of Carlsbad. Although the City has a certified LCP, the Commission has not yet certified the LCP for the portion of the City, known as the Agua Hedionda segment, where the project would be.

The Commission, however, has certified the Land Use Plan (LUP) for the Agua Hedionda segment. The certified Land Use Plan recognizes the ~~l~~Lagoon's unique environmental status and designates the entire ~~l~~Lagoon as a "special treatment area". The Plan's goals for the ~~l~~Lagoon include the following:

- *Protect and conserve natural resources, fragile ecological areas, unique natural assets, and historically significant features of the community.*
- *Preserve natural resources by protecting fish, wildlife, and vegetation habitats; retain the natural character of waterways, shoreline features, hillsides, and scenic areas; safeguard areas for scientific and educational research; respect the limitations of our air and water resources to absorb pollution; and encourage legislation that will assist in preserving these resources.*

Agua Hedionda is also one of 19 coastal wetlands identified in the California Department of Fish and Game report, *Acquisition Priorities for the Coastal Wetlands of California*. This report identifies high priority wetlands for acquisition, based primarily on their values for fish and wildlife habitat and threats to their continued existence as a natural resource.[~~21~~68] Coastal wetlands identified in this report are subject to the additional protections of Coastal Act Section 30233(c), which are described in Section 4.5.2 of these Findings.

Other policies and requirements applicable to the proposed project

Marine Reserve Designation: Additionally, part of Agua Hedionda has been designated by the California Department of Fish and Game as the Agua Hedionda Lagoon State Marine Reserve. Pursuant to Section 1580 of the state Fish and Game Code, the Reserve is to be managed to:

---

[67] See *id.* ①

[~~21~~68] See also the California Coastal Plan, December 1975.

> *"...protect threatened or endangered native plants, wildlife, or aquatic organisms or specialized habitat types, both terrestrial and nonmarine aquatic, or large heterogeneous natural gene pools for the future use of mankind through the establishment of ecological reserves."*

NPDES permit: Activities within the City of Carlsbad affecting Agua Hedionda Lagoon are in part subject to an NPDES permit issued in 2001 by the State Water Resources Control Board to several San Diego County cities to address significant water quality impacts in several coastal watersheds. The permit in part requires the cities to develop a comprehensive plan to manage the region's watersheds and to avoid and solve surface water quality problems. The *Carlsbad Watershed Management Plan*, published in 2002 pursuant to these NPDES requirements, includes a number of goals and objectives to implement the NPDES permit requirements. Its goals include, for example:

> *Protect Beneficial Water Uses: To be considered supportable by this plan, all "Action Items" must protect, restore, or enhance beneficial water uses within the watershed. The action should focus on the protection of human public health first and then on the health of wildlife and natural ecosystems. The action item should recognize that public health includes flood protection and should strive to balance natural restoration with water quality improvements and flood control.*
>
> *Protect Coastal and Wetland Resources: Extra credit should be given to "Action Items" that serve to protect the wetland resources, sensitive species and fragile ecosystems associated with coastal lagoons and riverine resources. These resources are not only sensitive and highly valued, but they support a great diversity of species and tend to be "sink holes" where water quality problems become much greater.*

Multiple Habitat Conservation Program: The Multiple Habitat Conservation Program (MHCP) is a comprehensive habitat conservation planning process that addresses multiple species needs and the preservation of native vegetation communities for the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista, California. The MHCP is established in part to develop coordinated habitat preserve system. In Carlsbad, the MHCP is focused on preserving eight vegetation types, including marsh and estuarine wetlands. The covered species for this plan include invertebrates, birds, and plants found in and near Agua Hedionda and use the ~~l~~**L**agoon as habitat.

Marine Life Management Act: The California Marine Life Management Act (MLMA) was established to ensure the conservation, sustainable use, and restoration of California's marine life. This includes the conservation of healthy and diverse marine ecosystems and marine living resources. To achieve this goal, the MLMA calls for allowing and encouraging only those activities and uses that are sustainable. Although most of the MLMA is devoted to fisheries management, it also recognizes that non-consumptive values such as aesthetic, educational, and recreational are equally important. Unlike previous law, which focused on individual species,

the MLMA recognizes that maintaining the health of marine ecosystems is important in and of itself. The MLMA also holds that maintaining the health of marine ecosystems is key to productive fisheries and non-consumptive uses of marine living resources.

One of the MLMA's primary goals is to provide for sustainable fisheries. A sustainable fishery is defined in the MLMA as one in which fish populations are able to replace themselves. The MLMA recognizes that populations of marine wildlife may fluctuate from year to year in response to external environmental factors, such as climate and oceanic conditions. Unlike traditional definitions of sustainability in fisheries, a key feature of the MLMA definition calls for maintaining biological diversity "*Essential Fish Habitat*": Agua Hedionda Lagoon is also considered "Essential Fish Habitat" (EFH), pursuant to provisions of the federal Magnuson-Stevens Fishery Conservation and Management Act. The Act defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and establishes that activities that would affect this habitat require consultation with the National Marine Fisheries Service pursuant to Section 305(b) of the Act.

Proposed Project Location and Site Conditions

Poseidon's proposed facility would be located on the site of the Encina power plant adjacent to Agua Hedionda. The facility would pump approximately 304 million gallons per day (MGD) of estuarine water from the ~~lagoon.~~[22] **Lagoon.**[69] Although Poseidon's proposal is to use 100 MGD of seawater to produce 50 MGD of potable water, the Regional Water Quality Control Board has required through its issuance of an NPDES permit that Poseidon discharge no less than 254 MGD to dilute its high salinity discharge.[23] **70** These proposed project characteristics and issues associated with this discharge are discussed later in these Findings.

Characteristics of Agua Hedionda Lagoon: Agua Hedionda Lagoon is located within the City of Carlsbad and is used for a wide variety of activities. It is used recreationally, it includes extensive aquaculture operations, and it has served as the location for the power plant's cooling water intake structure since the mid-1950s.

The vast majority of the water in the estuary is from tidal sources. Each semi-diurnal tide brings in or discharges about 500 million gallons of seawater, so Poseidon's water withdrawals would

---

[22] **69** To provide a sense of scale, the 304 million gallons of estuarine water Poseidon would use each day equals about 932 acre-feet, or the amount of water that would cover 932 acres (about 1.5 square miles) with a foot of water. Over the course of a year, Poseidon would use more than 100 billion gallons of water from the estuary, or about 340,000 acre-feet, which would cover over 500 square miles up to a foot deep.

[23] **70** 304 MGD is an average volume. Poseidon's NPDES Permit limits the facility's salinity discharge to no more than about 40 parts per thousand, which requires Poseidon to pump from up to about 320 MGD at various times.

represent about 30% of the estuary's daily water influx.[~~24~~71] The ~~l~~Lagoon receives a relatively small amount of freshwater from Agua Hedionda Creek, from twenty-three storm drains, and from urban and agricultural runoff. The ~~l~~Lagoon's three basins have very different habitat characteristics, based largely on the hydrodynamics of the tidal flow and the resulting different substrates – finer materials in the Inner Basin grading to coarser materials in the Outer Basin.

Agua Hedionda Lagoon is listed by the Regional Board as having impaired water quality due to the presence of indicator bacteria and because of siltation and sedimentation.[~~25~~72] As noted in the *Carlsbad Watershed Plan*, part of the excess sedimentation within the estuary has been due to the power plant's water intake causing an imbalance between sediment inflow and outflow, and Poseidon's proposed project ~~would~~**may** cause similar sedimentation problems**. But Poseidon contends, citing documentation by the Regional Board, that the 303(d) listing of Agua Hedionda Lagoon as an impaired body is based on fine-grained sedimentation discharged by urban run-off into the Lagoon from the neighboring watersheds (predominantly Agua Hedionda Creek).[73] A study submitted by the applicant also indicates that due to sedimentation and in the absence of the power plant, if the Lagoon is not regularly dredged the Lagoon would close in about five to seven years and slowly revert back to its natural state of stagnant "stinky water."[74] Therefore, based on the evidence that has been submitted, sedimentation from urban run-off, not the power plant's water intake, is the predominant cause of sedimentation in the Lagoon, and but for the continued dredging of the Lagoon, it would revert to its stagnant natural state**. This issue is described in more detail in Section 4.5.2 of these Findings. ②

Despite these water quality concerns, Agua Hedionda provides extensive habitat values for a wide variety of marine biological resources and other wildlife. Surveys from 1994-95 found that the ~~l~~Lagoon and nearby wetlands supported 29 fish species and 143 species of benthic

---

[~~24~~ 71] Poseidon's Flow Plan states that the tidal cycle brings in about 475 million gallons. The San Diego County Water Authority estimated in its recent Draft EIR for a similar proposed desalination facility that tidal inputs were about 528 million gallons. The average of these two estimates would result in a twice-per-day influx of about 1003 MGD, so Poseidon's 304 MGD withdrawal would represent about 30% of the average tidal inputs.

[~~25~~ 72] As noted in Section 4.4 of these Findings, pursuant to provisions of the federal Clean Water Act, states are required to identify polluted surface water bodies that do not meet water quality standards. States are to then prioritize those waterbodies for cleanup activities through developing a "Total Maximum Daily Load" (TMDL) for those waterbodies that identifies the cleanup steps needed to allow the waterbodies to meet the standards. California has not yet developed a TMDL for Agua Hedionda Lagoon.

[73] 2006 Clean Water Act 303(d) List of Water Quality Limited Segments Requiring TMDLs, San Diego Regional Water Quality Control Board, June 28, 2007.

[74] Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007 ②

invertebrates.[~~26~~75] Agua Hedionda provides habitat for important commercial and recreational fish species, special listed species, and forage fish used by these other species. Fish in the ~~l~~**L**agoon include California halibut, which use the ~~l~~**L**agoon as an important nursery area, garibaldi, Northern anchovy, and various gobies, blennies, and others. The ~~l~~**L**agoon formerly provided habitat for the endangered tidewater goby (*Eucyclogobius newberryi*). The U.S. Fish and Wildlife Service determined in 2006 that the goby's absence from the ~~l~~**L**agoon is due to habitat loss and other anthropogenic factors.[~~27~~76] The ~~l~~**L**agoon is also identified as Essential Fish Habitat (EFH), pursuant to the Magnuson-Stevens Act described above.

The surveys also identified 81 different bird species in these areas, including 12 listed as sensitive: Belding's Savanna sparrow, California least tern, Western snowy plover, Brown pelican, White-faced ibis, California gull, Osprey, Cooper's hawk, Long-billed curlew, Loggerhead shrike, Northern harrier, and Black skimmer. In the coastal scrub sage habitat adjacent to many of its wetlands, the surveys found additional sensitive bird species, including the California gnatcatcher, the least Bell's vireo, and the light-footed Clapper rail. Many of these species rely on marine life within the ~~l~~**L**agoon and adjoining wetlands.

Anticipated Project Impacts and Coastal Act Conformity – Intake-Related

Findings in this section evaluate the proposed project's **potential** impacts on marine biological resources associated with its intake of estuarine water. Findings in subsequent sections describe **potential** discharge-related impacts caused by the proposed facility's discharge of highly saline wastewater into nearshore ocean waters and its cumulative impacts. All analyses are based on Poseidon's proposed use and discharge of an average of 304 MGD of estuarine water, and on Poseidon's use of the existing power plant pumps as a stand-alone desalination facility.

Adverse Impacts Caused by Poseidon's Intake: The project's proposed withdrawal of 304 MGD of estuarine water through the power plant intake structure ~~would~~**could** cause several types of impacts to marine biological resources, including impingement, entrainment, and **potential** "take" of protected species. ~~These adverse effects require~~**With implementation of the** mitigation ~~and Special Conditions~~**measures** described ~~later in these Findings to conform~~**below, however, these impacts can be mitigated to an insignificant level such that the project conforms** to Coastal Act Sections 30230 and 30231. ①

[~~26~~ 75] From California Wetlands Information System database at: http://ceres.ca.gov/wetlands/geo_info/so_cal/agua_hedionda.html.

[~~27~~ 76] From *Federal Register*, November 28, 2006, proposed rule pursuant to 50 CFR 17 (see: http://www.epa.gov/fedrgstr/EPA-SPECIES/2006/November/Day-28/e9291.htm). Additionally, as noted in Section 4.4 of these findings, Agua Hedionda Lagoon is not listed as critical habitat for the species.

- **Impingement:** Impingement occurs when fish or other organisms are caught on an intake's screening system and are either killed or injured. The impingement rate for an intake is primarily a function of water velocity. The current Clean Water Act regulations (at 40 CFR 125) applicable to cooling water systems establish a maximum velocity of 0.5 feet per second as the required Best Available Technology. When velocities are below that level, fish are usually able to swim away from the pull of the intake. Impingement rates may also vary seasonally or when schools of fish get close to the intake.

Regarding Poseidon's expected impingement impacts, ~~its 2004-05 study described below~~**the City of Carlsbad's EIR concluded that the project will not cause any additional impingement losses beyond those caused by EPS. See Project EIR Section 4.3. In its 2004-05 study, described below, Poseidon** showed that its use of the power plant intake ~~would~~**may** impinge about 20,000 fish per year (or about 55 per day) weighing a total of about 4500 pounds (or about 12 pounds per day). During the study period, however, most of this impingement – about 80% – was caused by power plant heat treatments, which Poseidon would not have to do as a stand-alone desalination facility. Therefore, Poseidon's impingement rate would be much less~~, averaging less than 2.5 pounds per day. Poseidon contends its study shows that impingement caused by its 304 MGD flow would be about 1.92 pounds per day, which for this project the Commission considers *de minimis* and insignificant.~~ **.** ①

The City of Carlsbad's EIR determined that under the stand-alone "No Power Plant Operation" scenario, the project would have an intake flow velocity that would not exceed 0.5 feet per second, which is consistent with the U.S. EPA guidance for "best available technology" for cooling water intakes, and that under these operating conditions the project "would not result in significant impingement effects." See Project EIR Section 4.3. Poseidon has prepared a *Flow, Entrainment and Impingement Minimization Plan* in accordance with its Regional Board issued NPDES Permit (Regional Board Order No. 2006-0065). The *Flow, Entrainment and Impingement Minimization Plan* provides that the project, when operating stand-alone, is expected to impinge approximately 2.12 pounds of fish per day, which Poseidon provides is less than the average daily consumption of an adult pelican (more than 2.5 pounds per day), which for this project the Commission considers *de minimis* and insignificant.[77] Under stand-alone operations, the project will also enhance the marine environment in the Lagoon, because Poseidon will be required to conduct maintenance dredging that will ②

①

[77] **See also Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 9-10.**

prevent the Lagoon from reverting to anaerobic hyper-saline "stinky water," which would not support fish species currently present in the Lagoon.[78] ②

Moreover, **Special Condition 8** requires Poseidon to submit a Marine Life Mitigation Plan for Commission approval, and implementation of that Plan will mitigate any expected impingement impacts. Past impingement at the power plant has included entrapment and "take" of the endangered Eastern Pacific green turtle a protected species. During the ~~past several decades~~**last 53 years**, one green sea turtle ~~was~~**has been** entrained and released unharmed and ~~a second~~**one** was found dead at the intake structure~~.~~ **as a result of EPS activity. Sea turtles are rarely seen in the Lagoon area, or in the intake or outflow bays of the EPS. The flow rate of the water in the Lagoon and intake and outflow bays is very low; therefore, death of healthy sea turtles after entering these areas is highly unlikely. Because there will be either no change to the existing conditions, or in the case of the CDP operating by itself a substantial reduction in the seawater pumping rate, it is not anticipated that continued operation of the EPS or the needs of the CDP will have significant adverse impacts upon sea turtle species. The current design of the EPS minimizes the possibility of entrainment of sea turtles in the power plant structures. The intake structure is outfitted with metal guard rails (trash racks) that prevent animals from entering the forebay area on the plant side. The slow moving water in the Lagoon and through the intake trash racks allow the sea turtles to easily get out of the area if they enter.**[79] ① Because the turtles do not breed in this area, only adults would be susceptible to potential "take", and adult turtles are too large to fit through the bar racks at the intake entrance. ~~Poseidon has documented that stand-alone operation of the facility would result in intake water velocities at or below 0.5 feet per second, which is consistent with the U.S. EPA guidance for "best available technology" for cooling water intakes. As noted above, Poseidon will also apply for an incidental take permit from NMFS to mitigate any such impacts. Based on the above, and with **Special Condition 8**, the Commission finds~~[80] **The Commission finds that Special Condition 8 will ensure that** the impingement impacts and the potential for an incidental take associated with stand-alone operations ~~will be~~**are** consistent with the Coastal Act **and fully mitigated**.

- **Entrainment:** Entrainment occurs when small organisms, such as plankton, fish eggs, larvae, etc., are pulled into an open-water intake. Once-through cooling systems like the one at the Encina power plant are considered to cause essentially 100% mortality due to the organisms being subjected to high temperatures or high pressures within the system. Even if

---

[78] **See Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007** ②

[79] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. B at p. 14.** ①

[80] **See *id.***

some organisms survive the initial heat and pressure-induced stresses of passing through these systems, the **conservative** assumption used in entrainment studies is that the organisms that survive these initial stressors will die soon after due to injury, increased rates of predation, or other related causes. A stand-alone desalination facility using the same type of water intake structure ~~is expected~~**could conservatively be assumed** to cause the same level of mortality, due to its use of filters and high pressures to remove most particles from seawater. **The assessment that a stand-alone facility will result in 100 % mortality is an extremely conservative assumption, because it ignores the design and technology features that have been incorporated in the proposed project to reduce entrainment impacts.** Those organisms in the water drawn in to the structure just to dilute the desalination discharge may experience somewhat less than 100% immediate mortality~~; however, there are insufficient data or peer-reviewed scientific studies to conclude that the overall mortality from desalination processes and discharges would be any less than the approximately 100% mortality experienced by organisms going through the power plant processes and discharges. Entrainment causes direct impacts by killing the small organisms that are pulled through the cooling system and causes indirect impacts to the larger marine community by altering the food web and removing part of the community's productivity. Seawater is not just water, but is habitat, and along the California coast an acre-foot of seawater (about 326,000 gallons) can contain an average of about 500 different species of fish, invertebrates, plankton, and other marine life. Large intake systems such as the one Poseidon proposes to use can kill millions of organisms each day and cause a loss or change in ecosystem resources and alterations in community structure. While impingement rates are largely a function of water velocity and can be reduced when velocities are reduced, the amount of entrainment is primarily associated with the amount of water used, so the main way to reduce entrainment impacts is to reduce water volumes pulled into an intake system. As noted previously, adverse effects to marine biology evaluated in these Findings are based on Poseidon operating as a stand-alone facility. If the power plant operates at times when Poseidon is operating, the adverse impacts could be greater though Poseidon's "share" of the impacts could be decreased.~~. **As discussed in greater detail below, the following project design and technology features are expected to substantially lessen the impacts to marine life:**

1

- **EPS once-through cooling system is expected to continue operating indefinitely. The magnitude of the entrainment losses identified in Chapter 3 of Poseidon's Revised Flow, Entrainment and Impingement Minimization Plan, dated June 1, 2007, is estimated for continuous operation of the desalination plant on a stand-alone basis notwithstanding the fact that the EPS generating units will be available for service indefinitely. EPS has proposed removing three of the existing plant's five generating units and operating the remaining two units only part time for several more years until replacement power becomes available. The two remaining generating units represent 528 MGD of pumping capacity. Cal-ISO would ultimately determine when the remaining units are no longer needed for grid**

reliability. In the meantime, seawater pumping by the EPS would likely meet a substantial portion of the CDP flow requirements, resulting in a comparable reduction of entrainment and impingement impacts attributable to the CDP.[81]

- **Desalination facility will reduce impacts due to modified use of existing facilities. Potential entrainment mortality that occurs within the existing power plant screens, pumps and condensers upstream of the desalination facility intake would be substantially reduced under stand-alone operations due to the relatively lower temperature, volume, velocity and turbulence of the desalination operations compared to that of the power plant.[82]**

- **Two-thirds of the water is returned to the ocean without further processing. Only 35 percent of the seawater (104 MGD) actually enters the desalination plant and is subjected to additional processing that would potentially add to the entrainment mortality. The reminder of the seawater (200 MGD) bypasses the desalination facility and is returned to the ocean.[83]**

Entrainment causes direct impacts by killing the small organisms that are pulled through the cooling system and causes indirect impacts to the larger marine community by altering the food web and removing part of the community's productivity. Seawater is not just water, but is habitat, and along the California coast an acre-foot of seawater (about 326,000 gallons) can contain an average of about 500 different species of fish, invertebrates, plankton, and other marine life. While impingement rates are largely a function of water velocity and can be reduced when velocities are reduced, the amount of entrainment is primarily associated with the amount of water used, so the main way to reduce entrainment impacts is to reduce water volumes pulled into an intake system. ①

Background – How to Determine Entrainment Effects: Determining the scale and the extent of entrainment impacts generally requires a study that includes obtaining at least one year's worth of regular sampling data and application of any of several modeling approaches. The samples are taken from waters near the intake and from nearby source waters. Organisms captured are identified to the lowest possible taxon. In most cases, all organisms cannot be identified, so the known taxa serve as indicators or surrogates for the full set of affected species. Of the various models available, the most acceptable is known as the

---

[81] **See Poseidon Resources Corporation Response to California Coastal Commission's Letter of February 20, 2007, June 1, 2007, at Attachment 25.**

[82] **See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007, at p. 26.**

[83] **See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007, at pp. 1-19.**

Empirical Transport Model (ETM). It is used to provide an estimate of the proportion of organisms lost due to entrainment compared to the overall number of organisms in a source water body. The ETM approach allows estimates of loss for each identified species, in part by recognizing that each species is subject to entrainment during particular life stages. Once the species subject to entrainment are identified, the ETM approach then determines what period of time each of the species are subject to entrainment – that is, based on local currents, it determines how many days an egg stage or larval stage of a particular species is subject to being pulled into the cooling system rather than be able to move away and escape from it. This period varies by species, ranging from just a few days to several weeks. It will also vary by whether it is calculated using the maximum or mean duration of larvae in the source water. As a very simple example, if individuals of a species are "entrainable" for the first five days of their lives and the average currents in the area move past the cooling system intake at half a mile per hour, that species has a source water area of sixty miles (5 days x 24 hours x 0.5 mph = 60 miles). Determining source water areas may be complicated by seasonal changes in current speed or direction and whether the species are from nearshore or offshore areas, and for intakes proposed in enclosed estuaries, the calculations must incorporate the hydrologic pattern of the estuary.

The proportion of larvae lost to larvae in the source water (known as "proportional mortality") is then multiplied by the source water area to provide an estimate of how much overall production of the species in this area is lost due to entrainment. This result of this calculation, known as "habitat production foregone" (HPF) can be expressed in acres or in miles of shoreline. Even a low "proportional mortality" figure can result in a large impact if the loss occurs over a large stretch of shoreline. Using the example above, if 5% of the larval stage of that species is lost due to entrainment, that represents that species' production along about three miles of shoreline (0.05 x 60 miles = 3 miles). The HPF for the various species can be kept separate or can be combined as an overall average figure.

Results of entrainment studies such as this do not reflect all the variables that may affect populations within a given area – for example, populations may decrease or increase due to seasonal or long-term changes, the habitat within the source water areas is likely to include characteristics that affect particular species and may be of variable quality within the same source water area, etc. These methods do, however, provide a good sense of scale of the overall impacts of a given intake system during the period sampled.

(1) *Poseidon's anticipated entrainment effects*: The EIR determined that, under the No Power Plant Operation scenario, the project "would have no significant effect on the source water populations [ability] to sustain themselves." See Project EIR Section 4.3.; [findings made by the City of Carlsbad under CEQA]. Poseidon also evaluated potential entrainment impacts should it operate on a stand alone basis, through a comprehensive 1

Revised Flow, Entrainment, and Impingement Minimization Plan, as part of its compliance with its NPDES Permit.[84] To prepare this Plan, in 2004-05, Poseidon conducted a study to determine the entrainment impacts that would be caused by continuous 304 MGD water use, which was based on a published study plan reviewed and approved by the Regional Water Quality Control Board, representatives of the California Department of Fish and Game, the National Marine Fisheries Service, and by an EPA-appointed independent consultant.[85]

~~*Poseidon's anticipated entrainment effects:* In 2004-05, Poseidon conducted a study to determine the entrainment impacts that would be caused by continuous 304 MGD water use.~~ In May 2007, Poseidon provided a technical memorandum summarizing the results of ~~that study~~**the Revised Flow, Entrainment, and Impingement Minimization Plan** and stating that the ~~study~~**Plan** used Regional Board-approved protocols for sampling and analysis. ~~The summary showed that the desalination facility's water withdrawals would kill about 12% of three types of fish larvae in Agua Hedionda subject to entrainment – gobies, blennies, and garibaldi – in addition to smaller percentages~~**Entrainment samples collected during the study were consistently dominated by larvae of three lagoon-dwelling species and contained relatively few numbers of ocean-dwelling species. The three dominant species were gobies, a mud dwelling group of fish ubiquitous to all California lagoons and bays; blennies, fish that are crevice dwellers in fouling communities on pilings and bottles and cans on the seafloor; and garibaldi, a typical rocky reef dweller in open ocean habitat, but in this case occupying the rocky reef of rock rip-rap armoring the Lagoon side of the Carlsbad Boulevard jetty. None of the species entrained is listed as threatened or endangered. In addition, entrainment would affect about 0.2%** of other species, including white croaker, Northern anchovy, California halibut, and queenfish. ~~Poseidon~~**The Plan** identified these species as coming from about 302 acres of Agua Hedionda's open water habitat (253 acres) and its mudflat/tidal channel habitat (49 acres). Applying the ETM and HPF methods described above suggests that Poseidon's entrainment would cause a ~~loss~~**reduction** of productivity about equal to that created by 36 acres of Agua Hedionda's open water and mudflat/tidal channel habitat (i.e., 12% of 302 acres = ~36 acres). **The vast majority of the species that may be entrained as a result of stand-alone desalination plant operations are not commercially or recreationally fished. Since they are not harvested, the low levels of mortality imposed by entrainment are being imposed on populations that are at a level close to the natural carrying capacity of the coastal environment. Therefore, mortality due to entrainment would not affect such populations. In all, any potential impingement or entrainment impacts of the project, if it should operate stand-alone in the future, would have no significant adverse effects on**

1

---

[84] See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007.

[85] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 9-10.

marine biology. To ensure Poseidon's study accurately assesses the project's entrainment impacts, **Special Condition 8** requires that Poseidon provide a full copy of its study for further Commission review and approval.

Poseidon ~~has argued~~**'s experts (Tenera Environmental, Shaw Environmental & Infrastructure, Inc., Dr. Scott A. Jenkins and Joseph Wasyl) have concluded** that this expected entrainment impact does not constitute a significant adverse impact~~. It states, for example, that because there are large numbers of planktonic organisms in estuarine water and because they experience a very high natural mortality rate, the effects of entrainment are generally similar to what these organisms already experience. Poseidon further states that the "cropping" of these organisms via entrainment is beneficial in that it allows remaining individuals to have less competition~~ **and would be consistent with Coastal Act policies because the level of entrainment would have no effect on the species' ability to sustain their populations, and thus would maintain marine biological resources.[86] First, while the number of larvae produced by most fishes during their reproductive years as adults can be enormous, only two of those larvae need to survive to adult to maintain a stable population level.[87] Second, from a population stability perspective, the CDFG stated in its 2002 Nearshore Fisheries Management Plan that an overfished stock is one that has been reduced to 30% of its unfished biomass, and that controls would need to be enacted whenever a stock is reduced to 60% of its unfished biomass. Thus, Poseidon's experts demonstrated that, because the ETM indicates the species entrained by the power plant intake average only 12.2% of the species at risk, even if these proportional loses of larvae were the same as losses of adults of the species, the CDFG fishery management practice recognizes that losses to the population of up to 40% are safely sustainable and would have no adverse impacts on the population. Third, Poseidon contends that the vast majority of the species that may be entrained as a result of stand-alone operations are not commercially or recreationally fished. Since they are not harvested, Poseidon contends, as confirmed by the EIR, the low levels of mortality imposed by entrainment would not affect the populations.[88] Moreover, Carlsbad's Final EIR considered potential entrainment impacts of the stand-alone facility, and determined that entrainment would not cause any significant adverse impacts**. However, although the Final EIR found the project would cause no significant entrainment impacts pursuant to CEQA, the Commission finds that the project's entrainment impacts will require mitigation to ensure conformity to Coastal Act Sections 30230 and 30231. ~~Further, Poseidon's arguments are not supported by findings from the past several~~

1

---

[86] **See Carlsbad Seawater Desalination Project Revised Flow, Entrainment, and Impingement Minimization Plan, June 1, 2007.**

[87] **See Electric Power Research Institute Comment Letter regarding the Proposed Statewide Policy for Once-Through Cooling dated September 14, 2006, submitted to SWRCB.**

[88] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 10-11.**

~~years of entrainment studies conducted at power plants along the California coast and elsewhere in the U.S. In all entrainment studies done at California's coastal power plants, and per guidance from the U.S. EPA, entrainment mortality is assumed to be 100%. Although small numbers of live organisms may emerge from the discharge, they are expected to be injured and suffer mortality shortly after being discharged. Each of the studies done in California since 1998 concluded that the power plant intakes caused adverse impacts to local or regional marine biota.[28] Some studies evaluated intake volumes in the same range as those proposed by Poseidon – for example, the entrainment study for the Huntington Beach power plant determined that its use of 253 MGD of ocean water resulted in Habitat Production Foregone of over 100 acres. Each of the three recent studies done for intakes within estuarine environments identified adverse entrainment impacts and substantial mitigation needs. For example, the Moss Landing study showed that its 1224 MGD estuarine intake resulted in Habitat Production Foregone of 1135 acres. If applied proportionally to Poseidon's 304 MGD intake, the HPF would be about 281 acres. Similarly, the study of Morro Bay's 668 MGD intake showed an HPF of from 230 to 759 acres, which is applied proportionally to Poseidon's expected flow would result in an HPF of from 104 to 345 acres. In each of these power plant siting cases, the Commission found that mitigation was necessary to allow Coastal Act conformity. Finally, the South Bay power plant study of a 601 MGD intake resulted in an HPF of 1003 acres, which if applied to Poseidon's flow would require 507 acres of mitigation. Poseidon's contentions that its entrainment effects would be minimal or even beneficial are further refuted by both Coastal Act and Porter-Cologne Act requirements that call for entrainment to be minimized to protect marine biology and water quality.~~ Having seen only the summary Poseidon provided, rather than the full study, the Commission is requiring through Special Condition 8 that Poseidon provide the full study to confirm these contentions~~, especially in comparison to these other recent entrainment studies, all of which found significant adverse impacts and resulted in HPF and mitigation needs well above Poseidon's proposal. The previous entrainment study done at the Encina power plant in 1979 found that there was an average of more than 1400 individuals of just the ten most abundant fish species in each 100 cubic meters of estuarine water.[29] The results Poseidon provided of its more recent study did not include this information, but if the current densities are similar, Poseidon's 304 MGD intake would cause entrainment to at least 16 million fish larvae per day (i.e., 304 MGD / 100 cubic meters (or 26,400 gallons) = 11,515 x 1400 = 16,121,000). That 1979 study also found that the power plant's 795 MGD intake would cause annual entrainment losses of identified zooplankton (including Crustacea, copepods, Mysidacea, Decapoda, etc.) of 30.9x10^9;~~ ①

~~[28] Since 1998, entrainment studies completed at California coastal power plants include those done at Moss Landing, Morro Bay, Diablo Canyon, Huntington Beach, and South Bay (e.g., *Morro Bay Power Plant 316(b) Resource Assessment, 2001; AES Huntington Beach Generating Station Entrainment and Impingement Study, 2005 and California Energy Commission Entrainment and Impingement Final Staff Analysis*, August, 2006, etc.).~~

~~[29] See Cabrillo Power I LLC, *Proposal for Information Collection Clean Water Act Section 316(b) Encina Power Station*, April 1, 2006.~~

~~or more than 30 billion organisms per year. When applied to Poseidon's 304 MGD flow volume, this would be about 11 billion of these identified organisms per year.~~

~~Along with the lost productivity that would result from Poseidon's estuarine water use, the water use would also cause significant adverse effects to specific species. The species identified in the study as subject to entrainment include several subject to "take" prohibition or fishing limits and others that provide important functions in the estuarine food web. Of the species that would be entrained, most have a role in the estuary's food web as prey species for higher trophic level species, including many that are important for commercial or recreational fishing.~~[30]

State law prohibits any commercial or recreational ~~take~~**fishing** of the garibaldi (*Hypsopops rubicundus*), which is also California's state marine fish. The project EIR stated that entrainment of garibaldi should be considered a *de minimis* impact~~; however, this does not mesh~~**, Poseidon confirmed that garibaldi currently live in the rocks immediately adjacent to the power plant intake structure, and that biological surveys of the species indicate that it is thriving and has thrived during the operation of the power plant, notwithstanding the fact that historically the pumping rate of the power plant has been twice the rate at which Poseidon's project proposes to operate.**[89] **However, project opponents argue that, even if the species is thriving, entrainment may be inconsistent** with the provision of Coastal Act Section 30230 requiring that special protection be provided to species of biological or economic significance, or with California state law, which establishes a total prohibition on taking the species.[~~31~~**90**] ~~About 6% of the organisms identified in Poseidon's study were garibaldi. Using the entrainment figures from above, this would total about one million of the 16 million fish larvae entrained each day (6% x 16,121,000 = 967,260). This adverse~~**Poseidon counters that the California law prohibiting take of garibaldi is inapplicable here, as it relates to fishing garibaldi, not operating a desalination facility that may unintentionally entrain garibaldi. This** impact will require ~~species-specific~~ mitigation as part of the Marine Life Mitigation Plan required through imposition of **Special Condition 8**, described below. **Poseidon has proposed restoration of 37 acres of wetland habitat, which will significantly enhance the marine environment by creating habitats for species unaffected in any manner by intake flows. Operating as a stand-alone facility, the project will also enhance the marine environment because in the absence of the project's maintenance dredging and stewardship of the**

---

[30] ~~The recently published report by the Environment California Research and Policy Center. *Net Loss: Overfishing Off the Pacific Coast* (October 2007) identifies significant overfishing along the coast of California and other states. Among the populations identified as overfished (i.e., reduced to below 20-25% of its original population) are several that rely on fish that would be entrained by Poseidon's project.~~

[89] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 10.

[~~31~~ **90**] 14 CCR 28.05 states that Garibaldi may not be taken or possessed.

Lagoon, sedimentation from urban run-off will cause the Lagoon to close within five to seven years, resulting in a loss of its beneficial uses.[91] ②

The California halibut (*Paralichthys californicus*) would also be subject to entrainment. The study showed that about 0.15% of the entrained fish would be halibut; however, this may be considered a significant number, given the steep decline in California halibut populations over the past several decades. ~~Using the entrainment figures from above, more than 24,000 halibut larvae per day would be lost to entrainment (i.e., 0.15% x 16,121,000 = 24,181.5).~~ The California Department of Fish and Game associates this decline with the loss of nursery habitat in shallow bays such as Agua Hedionda and has established strict limits for commercial and recreational halibut fishing.[~~32~~92] Similarly, the Northern anchovy (*Engraulis mordax*) is subject to state fishing regulations and additionally serves as an important forage fish for a number of species, including the California halibut. ①

These three important species – the garibaldi, California halibut, and Northern anchovy – make up about 6% of the identified organisms collected during entrainment sampling. They would constitute a similar percentage of the ~~millions of~~ organisms that Poseidon's project would entrain, and therefore represent an adverse impact to marine biological resources protected under the Coastal Act.

Overall, Poseidon's entrainment study results show that its proposed use of an estuarine intake would ~~causes a substantial loss of important~~**cause a reduction in** individual species and ~~substantial loss of~~**a reduction in** production within Agua Hedionda. It may also cause losses in nearby nearshore waters due to the intake entraining organisms that would otherwise enter nearshore areas due to tidal discharges; however, the study results did not identify whether that hydrodynamic-related effect was included. **But, even in the absence of any mitigation, the project will also enhance the marine environment because in the absence of the project's maintenance dredging and stewardship of the Lagoon, sedimentation from urban run-off will cause the Lagoon to close within five to seven years, resulting in a loss of its beneficial uses for organisms currently living in the Lagoon.**[93]

Mitigating the Impacts Caused by the Poseidon's Use of an Estuarine Open Water Intake:

Mitigation Background: The standard approach for identifying, selecting, and implementing appropriate mitigation for project impacts is to first *avoid* the impacts, to then *minimize* the ②

---

[91] **See Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.**

[~~32~~92] See CDFG's information at: http://www.dfg.ca.gov/mlpa/response/halibut.pdf.

[93] **See Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.**

impacts, and to finally *compensate* for the impacts that remain.[~~33~~94] Mitigation sequencing, as it is known, requires that mitigation measures to achieve the first step be considered and selected (or be determined infeasible) before moving to the next step. If the third step, compensatory mitigation, is necessary to address remaining impacts, it also includes a preferred sequence – to first create environmental conditions similar to those being lost; to next restore or enhance conditions similar to those being lost; and to finally preserve or protect an area that provides habitat value. It is generally preferable to select "in-kind" mitigation; that is, to develop mitigation sites with habitat similar to that being adversely affected, rather than to develop "out-of-kind" mitigation. Similarly, it is generally considered better to develop mitigation on-site rather than off-site.

Avoiding and Minimizing Impingement Impacts: As noted above, Poseidon's study showed that its use of the power plant intake would impinge less than 2.5 pounds of fish per day, which the Commission considers a de minimis impact.

The primary method of avoiding and minimizing impingement is to maintain intake water velocities below 0.5 feet per second (fps), a rate that the U.S. EPA considers to be "best available technology" for cooling water intakes. This velocity represents the rate from which most fish species are able to swim away from intake screens and avoid being impinged. Poseidon showed in its draft *Revised Flow, Entrainment, and Impingement Minimization Plan* that its use of the power plant pumps would create intake velocities higher than 0.5 fps and that its preferred operating scenario – using the power plant's Unit 4 pumps—would result in rates between 1.8 and 2.8 fps, or from more than three to five times the acceptable rate. However, in Exhibit B of its November 9, 2007 letter to Commission staff, Poseidon states that water velocities at the intake bar racks during stand-alone operations would be less than 0.5 fps, which would conform to the U.S. EPA's "Best Technology Available" standard for minimizing impingement impacts. ~~Additionally, as noted previously, Poseidon has stated it intends to apply for an "incidental take permit" from NMFS. With these measures, the project is not likely to cause substantial adverse impingement effects.~~**Furthermore, Poseidon's Exhibit B and its *Revised Flow, Entrainment, and Impingement Minimization Plan* state that it will install variable frequency drives to further decrease water flow intake and any related impingement. At this low velocity and with variable frequency drives, the already de minimis impacts that Poseidon's project may cause will be further reduced, and thus mitigated to an insignificant level with no impact on the species, in conformity with Coastal Act Sections 30230 and 30231.** ①

Avoiding Entrainment Impacts: The most direct way to avoid Poseidon's expected adverse entrainment effects would be**, if feasible,** to use an alternative intake structure that avoids those effects. ~~Subsurface~~**Certain types of subsurface** intakes may avoid these effects by drawing in

---

[~~33~~ 94] See, for example, the CEQA Guidelines at Section 15370.

water through an overlying layer of sand. As discussed below, however, the Commission finds that these alternatives are infeasible.

The four main types of intakes are vertical beach wells, Raney-type wells, slant-drilled wells, and infiltration galleries (see Exhibit 4). Vertical beach wells are essentially the same as wells located at inland locations, drilled to a depth where they intercept an underlying aquifer, or for beach wells, where they intercept the seawater "wedge" underlying the beach. Raney-type wells are vertical wells with an additional series of horizontal collector wells extending out from the bottom of the vertical well shaft. This type of well can significantly add to the yield obtained from a vertical well shaft. Slant-drilled wells are drilled at an angle from the beach or from further inland, with a perforated well casing that extends below the seafloor to intercept water from below the substrate. An infiltration gallery consists of a series of perforated pipes that are placed in a trench dug on the seafloor, which is then backfilled with sand. ~~The~~**As explained more fully below, the** most common adverse effects **of wells** would be caused by construction or would be related to groundwater quality or quantity. For example, an improperly located subsurface intake could draw down aquifers or could intercept areas of contaminated groundwater or water with naturally high mineral content ~~that is difficult to treat~~**, excessive salinity concentrations or high levels of suspended solids that are difficult to treat, rendering the project practically and economically infeasible. Adverse effects of galleries include significant environmental impacts relating to construction and destruction of over 150 acres of coastal habitat**. Although subsurface intakes can, like open water intakes, cause adverse environmental effects, they may be less severe and temporary, and a properly designed subsurface system can be environmentally benign. At least four desalination facilities along the California coast use beach wells as their feedwater system, and the Commission recently approved two pilot studies to determine the applicability of both a slant-drilled intake and an infiltration gallery for desalination. 1

The amount of water subsurface intakes can take in depends on the permeability of the overlying substrate and other geotechnical characteristics. With an infiltration gallery, the substrate can be engineered to allow much higher permeability than would occur with the natural substrate. Subsurface intakes also offer additional operational advantages, such as reduced chemical use and reduced operating costs. Water from subsurface intakes generally has lower concentrations of solids, organic material, oil and grease, and other constituents that would have to be removed before the water contacts a desalination facility's reverse osmosis membranes. The natural filtering effect of the overlying substrate can buffer changes in the open water column caused by storms, runoff, or spills, and they may be able to operate during times when facilities with open water intakes would have to shut down. Subsurface intakes also provide some of the ~~pretreatment~~**pretreatment** needed before seawater goes through desalination filters or membranes, thus eliminating part of the chemical or physical treatment that would otherwise be required at the desalination facility. While subsurface intakes may have higher initial construction costs, they can result in long-term operational savings due to their lower pre-treatment and chemical costs, and because water quality from those intakes is generally less

variable, which allows for more efficient desalination operations. These characteristics are likely more evident from intakes that extend under the nearshore ocean water column than those that intercept aquifers that may be affected by surface infiltration from inland areas or have high mineral content.

~~Poseidon contends~~**The Carlsbad EIR analyzed the feasibility and environmental impact of several types of alternative intake systems pursuant to the Modified Intake Design Alternative. The EIR concluded that the use of horizontal wells, vertical beach wells and infiltration galleries in lieu of the project's proposed use of the EPS intake system was either infeasible and/or had greater environmental impacts that the proposed project.**[95] **Poseidon also provided evidence** that subsurface intakes would cause more significant impacts than those caused by the existing power plant intake and that they would be economically infeasible. In support of this ~~contention, it has submitted several documents and cost estimates described below.~~**position, Poseidon has submitted extensive analysis and cost estimates it prepared at the request of Commission staff. This information provides further confirmation that alternative intake systems were infeasible and not the environmentally preferred alternative.**[96] Regarding economic infeasibility, Poseidon believes that subsurface intake options would be infeasible in part because they would raise the anticipated cost of desalinated water from Poseidon's current estimate of $950 per acre-foot to about $1300 per acre-foot.

Regarding slant-drilled wells, a recent study conducted by the Municipal Water District of Orange County (MWDOC) showed that that type of intake could be used to draw in 30 MGD of seawater for its proposed desalination facility near Dana Point.[~~34~~97] The facility would draw 30 MGD from nine 500-foot long wells extending under the seafloor at about a 20° angle. Poseidon submitted evidence stating slant wells ~~would be infeasible due to their presence on the beach.~~**are infeasible because pilot testing indicates that the quality of the water available from them would be so low as to be difficult, if not impossible, to treat due to salinity concentrations**

---

[95] **See Project EIR at Section 6.3.**

[96] **See Poseidon Resources Corporation Response to California Coastal Commission's Letter of September 28, 2006, November 30, 2006, at pp. 24-51; See Poseidon Resources Corporation Response to California Coastal Commission's December 28 Request for Additional Information, February 2, 2007, at pp. 2-4; See Poseidon Resources Corporation Response to California Coastal Commission's February 20 Request for Additional Information, June 1, 2007, at pp. 2-7, 10-11; See Poseidon Resources Corporation Response to California Coastal Commission's July 3 Request for Additional Information, July 16, 2007, at pp. 4-8, 11-14; Poseidon Resources Corporation, Additional Analysis of Submerged Seabed Intake Gallery, October 7, 2007; Poseidon Resources Corporation, Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend an Alternative Seawater Intake for the Carlsbad Desalination Project, October 8, 2007; Poseidon Resources Corporation, Intake Cost Estimates, October 2007.**

[~~34~~ 97] See Boyle Engineering's *Dana Point Ocean Desalination Project – Engineering Feasibility Report* (March 2007), prepared for the Municipal Water District of Orange County.

twice that of seawater, excessive iron, and high suspended solids.[98] Poseidon's studies also confirmed that, at best, one slant well could provide only 5% of the water required by the project. Thus, numerous slant wells would be needed to meet project objectives and address the well-documented water needs in Southern California. As a result of the necessity for multiple slant wells in public areas, this option is infeasible due to their noticeable presence on the beach and disruption of public access and recreation~~. and because of water quality characteristics such as high iron, salinity, and suspended solid concentrations that would make the water more difficult and expensive to treat Poseidon also determined that well yields in the Carlsbad area would be lower than the example above and that up to about twenty wells would be needed to provide 304 MGD.~~. **The EIR prepared by the City of Carlsbad concluded that the construction and use of subsurface intakes for the project would cause adverse environmental impacts to coastal resources at Carlsbad beach, including but not limited to the creation of negative traffic, noise, and air pollution impacts for a period of two years during construction, and disturbance of and, loss of public access to, the beach area occupied by the wells both during and after construction.[99] The EIR also concluded that the slant wells would require the construction of permanent access ramps from the Pacific Coast Highway to the beach to transport equipment during construction and to permit well inspection during the life of the wells. Because the project would require multiple smaller well facilities to meet its water needs, these wells would result in far greater environmental impacts and costs than the project, and they would be neither feasible to address water needs nor consistent with Coastal Act policies.[100]** 1

An infiltration gallery is another potential alternative. These systems are in place at a number of locations around the world, including one that provides water for a 45 MGD desalination facility, with plans for other galleries that would provide up to several hundred million gallons per day for power plant cooling water use. While these systems would result in seafloor disturbance during construction, they would cause few, if any, impacts to marine life once in operation. When installed in an area of open sandy seafloor, the post-construction benthic habitat conditions would be essentially the same as pre-construction conditions. The initial construction impacts to the offshore sandy bottom habitat would be similar to the continual offshore sand deposition and movement already experienced by that type of habitat~~ and would be far less severe than the ongoing entrainment losses caused by open water intakes~~.

---

[98] See Poseidon Resources, Transmittal of Analysis of Alternative Subsurface Seawater Intake Structures, Proposed Desalination Plant, Carlsbad, CA, Wiedlin & Associates (January 30, 2007), sent February 2, 2007; Poseidon Resources Corporation, Response to California Coastal Commission's September 28, 2006 Request for Additional Information, November 30, 2006, at pp. 31-41.

[99] See Project EIR Section 6.3.

[100] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 16-18.

~~Poseidon's concerns about infiltration galleries are similar to those it expressed about slant-drilled wells – that galleries would be environmentally and economically infeasible. Poseidon initially contended that a gallery needed for its facility would irreversibly destroy about 46 acres of seafloor and it describes this impact as significantly greater than that caused by its anticipated estuarine entrainment. Poseidon also contends that constructing the system would require that a 15-foot thick layer of sand be removed from this 46-acre area and loaded on trucks to be taken to a landfill, and that operating the system would trap marine organisms on the seafloor due to the pull of the intake pumps.[35] However, these two contentions are invalid.~~ As noted above, once a gallery is installed, it is essentially invisible from the surface of the seafloor, both in terms of its structure and any effects on marine life. The systems are designed so that the pull of the pumps are undetectable at the seafloor, thus making it highly unlikely that organisms would be "trapped". **While Poseidon's initial geophysical surveys of an area offshore of Agua Hedionda showed an area of over 200 acres of featureless bottom with fine-grained sand, which may be suitable for such a system, recent surveys of the area indicated that 70% of the inspected area would contain sensitive basement and high relief reefs.[101]** During construction, not all the seafloor material within the gallery area would need to be removed, and it certainly would not require being transported to a landfill. Most material would likely be suitable for the ongoing longshore sand movement in this area of the coast. ~~Poseidon's initial geophysical surveys of an area offshore of Agua Hedionda show an area of over 200 acres of featureless bottom with fine-grained sand, which may be suitable for such a system. However, in~~**The largest infiltration gallery used for desalination, at San Pedro del Pinatar in Spain, was selected in recognition of its location next to the highly sensitive marine environment of a regional nature reserve. That installation was also able to use horizontal directional drilling, which significantly reduced its installation impacts. However, based on testimony provided at the Commission's November 15, 2007 hearing, the facility in Spain is now having significant fouling problems with the intake; the plant and a future expansion will rely on an open ocean intake for its primary source of seawater.**

Infiltration galleries would cause even greater environmental impacts than slant wells, and would be and economically infeasible. In Exhibit B of its November 9, 2007 letter to Commission staff, Poseidon ~~states~~**confirmed** that over 70% of this area offshore of Carlsbad actually consists of more sensitive basement and high relief reefs. ~~It further states~~**Poseidon also provided evidence demonstrating** that an adequately-sized subsurface system would require about 150 acres of seafloor, which would be irreversibly damaged by gallery installation and operations. ~~Poseidon's documentation suggests that a 150-acre gallery in this area would therefore be physically and environmentally infeasible. Such a system would also result in extensive construction-related impacts along area beaches, which would reduce public access to the shoreline.~~ **Based on this information, the environmental impact of the loss of 150 acres**

~~[35] See Poseidon's July 16, 2007 letter to Commission staff.~~

[101] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Ex. B, p. 18.

of offshore habitat is far greater than the impacts from the proposed existing intake for the following reasons:

First, construction of an infiltration gallery would result in an actual physical removal and destruction of 150 acres of coastal habitat, such that a 15-foot thick layer of ocean bottom shelf with all living organisms in it would be removed. On the other hand, the estimated 36.8 acres of APF associated with the proposed project is acknowledged by the experts to represent a worst-case impact, extremely conservative measure of potential impact of loss of marine organisms that relies on a number of conservative assumptions, which are not likely to occur in practice.[102]

Second, it would be necessary to excavate and construct 76 intake water collection wells and trenches for collector piping along a three-mile beach strip of the City of Carlsbad shore, which would limit public access to the beach for a period of 2 to 4 years, result in significant loss of recreational activities for the City of Carlsbad, and result in a permanent loss in public access and visual resources impacts where the unsightly collection wells are located.[103]

Third, excavation of three-mile long by 400 feet wide strip of seafloor will make this area of the ocean unavailable for recreational activities such as fishing and diving and will result in additional NOx and carbon dioxide gas emissions associated with operation of barges and platforms and equipment needed to excavate and remove the ocean shelf material over this vast area.[104] 1

Fourth, in order to secure consistent operation of the filter bed, this bed would require dredging every one to three years to remove the sediment and entrained marine life that would accumulate in the intake filter bed and which, over time would plug the bed. The dredged material would require disposal away from the one-mile strip of the intake filter bed to prevent the removed solids from returning to the area of the bed. This would not only result in frequent adverse impacts to the marine flora and fauna in the area but would also render the area unavailable for recreational activities during maintenance activities.[105] Based on the foregoing, a 150-acre gallery in this area would be physically and environmentally infeasible.

---

[102] **See Poseidon Resources Corporation, Additional Analysis of Submerged Seabed Intake Gallery, October 8, 2007.**

[103] ***Id.***

[104] ***Id.***

[105] ***Id.***

Poseidon also ~~contends~~**submitted evidence demonstrating that** such a system would be economically infeasible. Its October 2007 cost estimates show that an infiltration gallery for its Carlsbad facility would cost $646 million.

In reviewing ~~Poseidon's documentation of~~**the EIR, Commission staff's presentation, and Poseidon's submissions about alternative intake systems, including the** potential **significant** environmental impacts**, site-specific constraints,** and costs of subsurface intakes, the Commission finds that **the substantial weight of the evidence is that** subsurface intakes ~~would be infeasible.~~ **are an infeasible alternative for two reasons. First, the proposed alternatives would result in greater environmental impacts than the proposed project due to destruction of coastal habitat from construction of the intake systems, the loss of public use of coastal land due to numerous intake collector wells that would be located on the beach, and the adverse environmental impacts to coastal resources during construction, including but not limited to the creation of negative traffic, noise, and air pollution impacts. Second, the alternative intake systems are infeasible at the project site due to site-specific geologic and/or water quality conditions, which render the water untreatable, and the increased and prohibitive costs of such intake systems.**

Minimize or reduce entrainment impacts: Another alternative that ~~would~~**was considered to** reduce but not eliminate adverse entrainment and impingement impacts would be to move the intake offshore into open coastal waters.

However, similar to its ~~views on~~**position on the environmental inferiority of** subsurface intakes, Poseidon ~~contends~~**provided evidence** that this alternative would cause even more significant impacts than its proposed use of the existing power plant intake, and that it is economically infeasible. It characterizes the impacts caused by an offshore intake as "significant and irreversible." In Exhibit B of its November 9, 2007 letter to Commission staff, Poseidon states that using an offshore intake would likely require ~~installing~~**installation of** a large diameter pipe over one thousand feet long which, depending on placement, might cross areas of rocky reef habitat, and ~~end~~**terminate** in an area near some kelp beds. It also states that the effects of this pipe's placement and operations on habitat, sand flow, and sedimentation are not known. Poseidon ~~further states~~**'s experts concluded** that entrainment and impingement **caused by** this intake ~~would cause~~ could potentially affect a greater diversity of organisms than those affected by the existing intake in Agua Hedionda and that organisms colonizing the inside of the pipe would consume much of the entrained plankton.[106]

---

[106] **See Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend An Alternative Seawater Intake for the Carlsbad Desalination Project, Graham, Le Page and Mayer, October 8, 2007.**

Poseidon also provided ~~documentation showing~~**evidence that** such an intake would **also** be economically infeasible. On October 18, 2007, Poseidon provided cost estimates showing that a 1000-foot long offshore intake would cost about $150 million.

One measure Poseidon offered to include in its facility to reduce entrainment would be to install variable speed pumps (see Poseidon's June 2007 *Flow, Entrainment and Impingement Minimization Plan*); however, since the entrainment rate is primarily a function of the amount of water used, this measure would not likely reduce entrainment as long as Poseidon continued to pump the anticipated 304 MGD into the desalination facility.

~~Other available mitigation options that would avoid or reduce entrainment impacts include the use of a zero-discharge system or routing more of Poseidon's discharge to the sanitary sewer system, as either of these options would reduce the amount of estuarine water needed for dilution. A zero-discharge system uses either mechanical means or evaporation to re-use and reduce discharge volumes. Some of these systems may also allow some cost savings through their recovery of salts or minerals from the seawater. Although the scale of the proposed project may prevent use of a zero-discharge system for the entire amount, it could possibly used for some of the discharge, perhaps in conjunction with routing additional volumes to the sanitary sewer system at the nearby Encina Wastewater Pollution Control Facilities. However, the sewer system has limited capacity, and this option would be feasible only if additional capacity were to be made available.~~ ①

As noted in Exhibit B of its November 9, 2007 letter, Poseidon has submitted to the Regional Board a *Flow, Entrainment and Impingement Minimization Plan* meant to identify feasible methods to minimize the remaining entrainment impacts. The Board's ~~eventual final~~ approval of that Plan is to be based on Poseidon identifying the best available and feasible operational, technological, and mitigation measures to meet that standard. Poseidon further notes that a proposed condition of the draft State Lands Commission lease would require, ten years after the lease is issued, that Poseidon be subject to further environmental review to ensure its operations at that time are using technologies that may reduce any impacts. Regarding the potential to route all or part of its discharge to the nearby sewer treatment system, Poseidon notes that the system is not designed to handle highly corrosive concentrated seawater.

Therefore, based on the above **and because the Regional Board's approval of Poseidon's *Flow, Entrainment and Impingement Minimization Plan* will ensure that Poseidon implements all feasible methods to minimize any entrainment impacts of the project**, the Commission finds that Poseidon's proposal is using all feasible methods to minimize or reduce its entrainment impacts. Even so, project operations will result in ~~ongoing substantial~~ entrainment impacts that require compensatory mitigation, as described below.

Compensatory mitigation: The third main step in mitigation sequencing is to provide compensatory mitigation – that is, creating, restoring, or enhancing the same or similar types of habitats as those a project would adversely affect. This mitigation step has its own sequence – it

should first be "in-kind", if possible – that is, it should result in the same type of habitat as that being lost; it should be "on-site" – that is, it should be at or near the site of the affected habitat; and it should be "in time" – that is, the mitigation site should provide habitat functions at the same time the affected habitat is losing its habitat value. As mitigation options move away from any of these three characteristics, the amount of mitigation needs to increase to reflect that the mitigation is not fully providing the habitat functions and values being lost. For example, if a mitigation site is not expected to provide its expected habitat functions for several years – due to the need to construct it, plant the necessary vegetation, let the vegetation take hold, etc. – that time lag is addressed by requiring mitigation at greater than a 1:1 ratio to make up for the time period between when the habitat impact starts and when the mitigation site begins providing the anticipated habitat function. Similarly, when mitigation is intended to replace lost high-quality habitat, a restoration or enhancement mitigation site will often be larger than the project site to reflect the overall lower quality of the habitat that comes about through mitigation. Mitigation ratios can range from as low as 1:1 when mitigation is certain, immediate, and of equivalent value as the lost habitat, to 30:1 or higher for lower quality or delayed mitigation to make up for the loss of high-quality habitat.

On October 10, 2007, Poseidon provided to Commission staff its updated proposed *Coastal Habitat Restoration and Enhancement Plan* that it ~~intends~~**prepared** to submit to the Regional Board. This Plan described seven possible mitigation options at various locations in Agua Hedionda or elsewhere in northern San Diego County. Commission staff evaluated it to determine whether it would provide adequate mitigation for Poseidon's anticipated entrainment and impingement impacts. As discussed below, the Plan does not yet include the level of information or certainty to determine that any of the possible measures would be implemented, would provide adequate mitigation, or would conform to Coastal Act provisions. However, with the Commission's imposition of **Special Condition 8**, ~~requiring that Poseidon submit for further Commission approval a revised Plan that fully documents Poseidon's entrainment study, identifies~~**which, as described more fully below, requires that the Plan identify** specific mitigation measures, implementation ~~criteria,~~**plans and compliance** monitoring ~~measures, and other standard mitigation plan elements~~, the Commission ensures that the Plan will provide adequate mitigation for Coastal Act conformity. ①

~~Poseidon argued that the Commission has no authority to require mitigation for the anticipated entrainment impact since it expects the Regional Board to address any mitigation needs. The Commission disagrees. Coastal Act Sections 30230 and 30231 confer on the Commission authority to regulate impingement and entrainment impacts of processes that involve the intake of seawater. This authority is not affected by the limitation of Section 30412(b) that prohibits the Commission from taking any action that is "in conflict with" any determination by the State Water Quality Control Board or a Regional Board "in matters relating to water quality…." The Commission's position is that adverse entrainment and impingement effects on marine organisms are not matters of "water quality." This interpretation of the "no conflict" language of Section 30412(b) is supported by the second paragraph of that provision which provides that~~

~~nothing in Section 30412(b) "shall be interpreted *in any way*...as...limiting the Commission...from exercising" its authority under the Coastal Act "except as provided in this section." (Emphasis added.) Past Commission decisions have included findings and conditions based in part on entrainment and impingement impacts to marine resources. Recently, for example, the Commission denied the proposed BHP Billiton Liquefied Natural Gas terminal (CC # 079-06) due in part to its inadequate entrainment mitigation. In several power plant siting cases during the past seven years, the Commission found that the predicted adverse entrainment effects would be significant and would require mitigation to conform to Coastal Act policies. As noted previously, these include Moss Landing, Morro Bay, and South Bay, which have intakes in estuaries.~~

~~One of Poseidon's possible mitigation sites is adjacent to the San Dieguito Wetlands Restoration Project. This restoration project results from Commission's Coastal Development Permit #6-81-330 that required Southern California Edison to mitigate for the marine resource impacts caused by the San Onofre Nuclear Power Station (SONGS), which include entrainment.~~ ①

Poseidon stated in the Plan that it would provide up to $2.79 million for various potential mitigation projects in northern San Diego County. The Plan identified those potential projects based on responses to Poseidon's distribution in August 2007 of a "Request For Expressions of Interest" (REI). The REI asked interested parties to submit mitigation proposals that would "preserve, restore or enhance existing wetlands, lagoons, or other high-productivity near-shore coastal areas" in San Diego County. The proposals were also to be consistent with requirements of the Coastal Commission, Regional Board, National Marine Fisheries Service, and other federal, state, and local agencies. Poseidon asked that the proposals cover areas of from five to 37 acres, that they hold promise for long-term benefits, and that they be technically feasible.

Poseidon's Plan then presented Commission staff with seven proposals from the responses received. On November 9, 2007, Poseidon presented to Commission staff a modified ~~version of the~~ plan ~~submitted on October 10, 2007 identifying just~~**focused on** one of the seven possible mitigation options described in its previous plan~~:~~ **(San Dieguito Coastal Habitat Restoration). The seven proposals are described and evaluated below:**

- *San Dieguito Coastal Habitat Restoration*: This proposal describes possible mitigation measures at San Dieguito Lagoon, about 12 miles south of Agua Hedionda. This mitigation site would be adjacent to a 115-acre mitigation site being developed by Southern California Edison pursuant to Coastal Development Permit #6-81-330. The proposal describes two options, each of which would create about 37 acres of various wetland and upland habitat types – e.g., high salt marsh, seasonal salt marsh, native grasslands, etc. – for about $2.4 million to $2.79 million. Both options would rely in part on water quality treatment ponds that have been funded but not yet constructed. It is unclear from the description how either option would be selected or implemented.

~~In Fall 2007, the San Dieguito watershed experienced major fire damage, which has greatly affected the Lagoon. The San Dieguito River Valley Regional Open Space Park Joint Powers Authority estimates the recent fires burned over 60% (45,000 of 74,000 acres) of the land adjacent to the river and within the park planning area. These upstream conditions suggest that landslides, sedimentation, and other phenomena resulting from the fire will create substantial disturbances downstream in the area of both the existing San Dieguito restoration area and Poseidon's possible mitigation site. These will likely affect the performance and success of existing mitigation and will affect how future proposed mitigation is implemented.~~

- ***Loma Alta Lagoon Restoration*: This proposal describes acquiring two privately-owned parcels that total 0.89 acres and restoring those and three other publicly-owned adjacent parcels to add 3.01 acres of wetlands to an already restored 2.0 acre lagoon in Oceanside. The overall project, proposed by the City of Oceanside, would cost about $5.6 million. It is not clear from the proposal whether other funds have been provided or what amount is being requested from Poseidon. The proposal does not provide specific descriptions of the expected habitat types.**

- ***Agua Hedionda Lagoon Ecological Reserve Expansion*: This proposal describes acquiring and preserving a parcel of land near the existing Ecological Reserve on the north shore of Agua Hedionda's Inner Basin. The subject parcel is apparently being considered for a housing development, but provides wildlife habitat adjacent to the Lagoon's wetlands. However, the proposal does not identify details about expected mitigation benefits or project costs. Additionally, it is apparently contingent on first determining whether the current owner is interested in selling and then raising other needed funds for the purchase. It describes Poseidon's potential contributions as helping with a down payment or helping to secure a loan for the property.** 1

- ***Agua Hedionda Lagoon Invasive Plant Eradication and Native Plant Restoration*: This proposal would involve removing invasive, exotic species from the Agua Hedionda watershed and planting native species. It proposes a one-year, $1 million project that would locate and map non-native, invasive plants, remove some number of those plants, revegetate those areas with native plants, measure water quality and habitat parameters before and after site treatments to determine ecosystem improvements, and provide public education and outreach. However, the proposal does not specify how many acres of invasive plants would be removed or how many acres of native plants would be planted, and does not include any monitoring or contingency plans to ensure the areas are maintained.**

- ***Agua Hedionda Lagoon Abalone Stock Enhancement*: This proposal by the Carlsbad Aquafarm would involve growing and planting about 100,000 abalone at unspecified**

sites in Agua Hedionda and other nearby waters. It would require $910,000 and is expected to take from three to five years.

- ***Buena Vista Lagoon Environmental Analysis*: This proposal consists of a request that Poseidon fund the completion of a Restoration Plan and Environmental Impact Report for the Buena Vista Lagoon Foundation.**

- ***Frazee State Beach Coastal Bluff Habitat Restoration*: This proposal, from the California Department of Parks and Recreation, would restore about 5.8 acres of coastal bluff habitat near Agua Hedionda. The project would cost $508,330 and would involve removing nonnative vegetation, performing unspecified habitat restoration, and providing public interpretation.**

Poseidon analyzed these options and determined that San Dieguito Coastal Habitat Restoration is best fit to preserve, restore and enhance existing wetlands, lagoons or other high-productivity near-shore coastal areas located in the vicinity of Agua Hedionda Lagoon and/or elsewhere in San Diego County.[107] The source of numerous environmental benefits, this option will generate 40.71 acres of coastal wetlands habitat comparable to that found in and around Agua Hedionda Lagoon (exceeding Poseidon's proposal to restore and enhance 36.8 acres of coastal habitat), is supported by, a broad array of local, state, and federal agencies, and will provide sustainable, comprehensive environmental benefits for water quality, habitat diversity for species abundance and for sensitive and endangered species.[108] 1

Overall, although **Poseidon contends** this proposal ~~has the potential to partially~~**will more than** mitigate for Poseidon's anticipated entrainment impacts, **Commission staff contends that** the Plan does not **currently** provide enough information or certainty to determine what mitigation would actually occur. ~~Its~~**The staff's position regarding its** shortcomings include the following:

- ~~The~~**Staff contends that the** Plan provides no certainty that the potential project would occur**, as Poseidon states the mitigation is contingent upon possible Regional Board approval**.

  The proposal does not include the type or level of information needed to determine what mitigation benefits would accrue, what performance standards or contingency measures would be used to ensure mitigation success, or other similar descriptions generally required for determining the adequacy of a mitigation proposal. ~~At best, the~~**The** proposal has the potential to ~~partially~~ mitigate for entrainment impacts, but the Commission would need a

---

[107] **Poseidon Resources, Carsbad Desalination Project, Coastal Habitate Restoration and Enhancement Plan, November 2007, at p. 3.**

[108] ***Id.* at p. 7.**

substantially more detailed proposal to determine whether it would meet Coastal Act mitigation standards.

The Commission notes, for example, that Poseidon's proposed mitigation area would be adjacent to a wetland mitigation site the Commission required as part of its approval of the San Onofre Nuclear Generating Station (SONGS). To ensure the Commission's approval of the SONGS mitigation plan conformed to Coastal Act policies, it required extensive scientific study, substantial amounts of data collection, and detailed impact analyses to determine the appropriate types and amount of mitigation needed to compensate for the identified adverse effects of the SONGS once-through cooling system – for example, the mitigation required included creation of new kelp beds to address the SONGS' impacts to nearby kelp beds. The Commission's approval also required Southern California Edison to meet specific performance standards and to provide ongoing monitoring efforts to ensure the mitigation area functions as intended. Mitigation necessary to address Poseidon's impacts will need to include a similar approach and level of detailed information to ensure Coastal Act conformity. ~~For example, to conform to Coastal Act Sections 30230 and 30231, Poseidon's mitigation plan should include compensatory habitat mitigation for the species of biological or economic significance affected by entrainment (e.g., garibaldi, halibut, etc.)~~

- ~~The~~**Commission staff further comments that the** Plan does not ~~recognize that~~**include projects in** Agua Hedionda **Lagoon, which** is already the subject of extensive mitigation work. There are a number of initiatives already occurring or planned that involve enhancing or restoring water quality or habitat in Agua Hedionda, many being implemented with substantial amounts of public funding. Poseidon's planned use of the estuarine intake and its proposed compensatory mitigation approach away from Agua Hedionda would diminish many of the water quality benefits and habitat values that these other mitigation efforts are expected to provide.

~~As noted previously, for example, Carlsbad and other nearby cities are subject to requirements of an NPDES permit issued by the Regional Board to improve stormwater management practices affecting Agua Hedionda. Also, the State Water Resources Control Board is funding development of an Agua Hedionda Watershed Management Plan by the Carlsbad Watershed Network. That plan calls for coordinated and integrated planning for watershed management initiatives.[36] As part of this plan, the Network is establishing a~~

~~[36] For example, the Carlsbad Watershed Management Plan includes the following objectives:~~

- ~~"*Coordinate watershed efforts:* "Action Items" should facilitate coordinated efforts between municipalities, regulatory agencies, and environmental organizations to implement watershed management policies and physical improvements at the most functional locations and in the most effective manner, without the restriction of political boundaries.~~

~~comprehensive and prioritized list of mitigation opportunities in the watershed, which it expects to complete in August 2008. The Network recently completed research identifying shortcomings in the mitigation approach used thus far in the lagoon that has resulted in low success rates and recommending steps to improve mitigation success.[37] The Network requested that any mitigation the Commission may require of Poseidon be integrated with this existing state-funded effort.[38] Thus far, however, Poseidon's possible mitigation projects do not show the necessary level of coordination with these other ongoing efforts.~~

- ~~Poseidon states that the Plan is based on providing 1:1 mitigation for the loss of about 37 acres of habitat within Agua Hedionda. However, none of the potential projects offered would provide "in-kind", on-site mitigation – that is, none would replace the habitat or organisms lost in Agua Hedionda due to entrainment – and so the individual projects or any combination of projects would have to provide mitigation at more than a 1:1 ratio.~~

- ~~The~~**Commission staff also comments that the** Plan appears to be based more on cost than mitigation needs. Poseidon has established an upper limit of $2.79 million for mitigation costs, but that does not appear to reflect the cost to provide adequate mitigation for its expected impacts. For example, the October 10, 2007 Plan assumes wetland restoration in Southern California would cost about $75,000 per acre, but it includes several proposals where the costs are unspecified or are well above that figure. The San Dieguito proposal comes closest to Poseidon's assumed cost figure, but about a quarter of the mitigation at that site would be uplands. The Oceanside proposal, to restore about three wetland acres for about $2.5 million is well beyond Poseidon's expected costs. Even the completely out-of-kind mitigation that could result from the Frazee coastal bluff restoration would cost about $100,000 per acre. 1

Poseidon contends, however, that the Plan adequately resolves the concerns raised by Commission staff, will more than fully mitigate any project-related entrainment impacts, and ensures that the productivity of coastal waters, wetlands and estuaries will be enhanced and restored in compliance with Coastal Act Sections 30230 and 3023, based on the following:

- **Regarding the concerns about Regional Board approval of the Plan, Poseidon's position is that Carlsbad and other nearby cities are subject to requirements of an NPDES**

~~• *Integrate various planning efforts:* Planning for land use, transportation, watershed protection and habitat conservation need to be integrated and coordinated. "Action Items" related to planning must look for as many overlapping benefits between these planning topic areas as possible."~~

~~[37] *Case Study: Systemic Evaluation of Compensatory Mitigation Sites Within the Carlsbad Hydrologic Unit*, by Nicholas R. Magliocca, UCSD.~~

~~[38] See September 24, 2007 letter from Carlsbad Watershed Network to Commission staff.~~

permit issued by the Regional Board to improve stormwater management practices affecting Agua Hedionda. Also, the State Water Resources Control Board is funding development of an Agua Hedionda Watershed Management Plan by the Carlsbad Watershed Network. That plan calls for coordinated and integrated planning for watershed management initiatives.[109] As part of this plan, the Network is establishing a comprehensive and prioritized list of mitigation opportunities in the watershed, which it expects to complete in August 2008. The Network recently completed research identifying shortcomings in the mitigation approach used thus far in the Lagoon that has resulted in low success rates and recommending steps to improve mitigation success.[110] The Network requested that any mitigation the Commission may require of Poseidon be integrated with this existing state-funded effort.[111]

- Poseidon has also stated that it would be very interested in collaborating on a habitat restoration project for Agua Hedionda Lagoon, but that it has not yet received proposals from entities interested in doing marine wetlands mitigation in the Lagoon. On-site mitigation has not yet been identified as a feasible mitigation option for the project, but the revised Plan provides for further research into on-site mitigation opportunities. The revised Plan contains a detailed description of Poseidon's efforts to identify feasible restoration projects on-site in Agua Hedionda Lagoon. In August 2007, Poseidon sent "Requests for Expressions of Interest" to 77 public and private entities and individuals that are involved in, have jurisdiction over, or interest in wetlands restoration in the San Diego region, including the Carlsbad Watershed Network. Through this effort, Poseidon received a total of eight mitigation proposals. Three proposals involved proposed mitigation projects in the Agua Hedionda Lagoon watershed; however, none of these proposals addressed the primary purpose of the mitigation project – restoration of marine wetlands. Because these proposals did not meet the mitigation project objective, they were not considered further. 1

---

[109] For example, the Carlsbad Watershed Management Plan includes the following objectives:

- *"Coordinate watershed efforts:* "Action Items" should facilitate coordinated efforts between municipalities, regulatory agencies, and environmental organizations to implement watershed management policies and physical improvements at the most functional locations and in the most effective manner, without the restriction of political boundaries.
- *Integrate various planning efforts*: Planning for land use, transportation, watershed protection and habitat conservation need to be integrated and coordinated. "Action Items" related to planning must look for as many overlapping benefits between these planning topic areas as possible."

[110] *Case Study: Systemic Evaluation of Compensatory Mitigation Sites Within the Carlsbad Hydrologic Unit*, by Nicholas R. Magliocca, UCSD.

[111] See September 24, 2007 letter from Carlsbad Watershed Network to Commission staff.

Because investigations to date have not resulted in the identification of any mitigation opportunities within Agua Hedionda Lagoon that meet the basic marine wetlands restoration objectives of the Plan, Poseidon's proposed mitigation includes a core off-site project that meets the Plan goals and objectives. This mitigation project, located in the San Dieguito River Valley adjacent to the marine wetlands restoration project implemented by Southern California Edison as mitigation for the entrainment and impingement impacts from its San Onofre Power Plant, is being developed in parallel with continued efforts to identify feasible mitigation opportunities in Agua Hedionda Lagoon.

In addition to the core off-site mitigation project, Poseidon's Flow, Entrainment and Impingement Minimization Plan sets forth a mitigation plan that includes additional coordination activities either (1) to identify if new mitigation options within Agua Hedionda Lagoon have arisen since Poseidon's last Requests for Expressions of Interest or (2) to confirm the lack of on-site mitigation opportunities. If mitigation opportunities within Agua Hedionda Lagoon have arisen, and such mitigation is determined to be feasible, Poseidon will coordinate with regulatory agencies – including the Commission – to implement such mitigation.[112] If Agua Hedionda Lagoon mitigation that meets the objectives is confirmed to be unavailable and infeasible, Poseidon will implement the proposed off-site mitigation project.[113] In the meantime, however, on-site mitigation remains as an option to be further explored after approval of the Plan. 1

- **Poseidon also contends that the Plan provides more than 1:1 mitigation for the reduced productivity in about 37 acres of habitat within Agua Hedionda. However, in Commission staff's view, none of the potential projects offered would provide "in-kind", on-site mitigation – that is, none would replace the habitat or organisms lost in Agua Hedionda due to entrainment – and so the individual projects or any combination of projects may have to provide mitigation at more than a 1:1 ratio. In contrast to Commission staff's view, Poseidon contends that the wetlands in the Plan's proposed off-site mitigation are of the same type of habitat that would be impacted by desalination plant operations (i.e., gobies, blennies, anchovy, topsmelt, white croaker, etc.), based on the biological survey of the existing tidal wetlands of the San Dieguito Lagoon completed as a part of the Southern California Edison Restoration Project.[114] Therefore, the implementation of the proposed restoration project will create in-kind replacement habitat, which has 1:1 restoration value. The 1:1 restoration ratio of the**

---

[112] *Id.*

[113] *Id.*

[114] SCE, *San Dieguito Wetlands Restoration Project, Final Restoration Plan*, November 2005.

proposed project is consistent with the methodology used by the California Energy Commission for establishing mitigation requirements for the entrainment effects associated with the operation of the AES Huntington beach and Morro Bay power generation plants. The Coastal Commission also found the San Dieguito Lagoon to be acceptable for mitigation of the entrainment and impingement impacts of the San Onofre Nuclear Generating Station, which is 45 miles away from San Dieguito Lagoon and is impacting open water fish species that don't necessarily reside in a lagoon environment. The proposed desalination facility is much closer to the proposed mitigation site (12 miles) and Poseidon is proposing to replace tidally exchanged coastal lagoon habitat with in-kind habitat.

- **Regarding Commission staff's concerns about the Plan's relationship to costs rather than mitigation needs, at the November 15, 2007 hearing Poseidon did confirm that it commits to providing 37 acres of tidally exchanged marine wetlands. Poseidon also voluntarily proposes additional marine resources restoration and enhancement above and beyond the Plan, including stewardship of Agua Hedionda Lagoon and dredging, which would have significant public access and recreational benefits.**

In sum, Poseidon has described several mitigation options, but has not ~~committed to provide the level or type of~~**yet confirmed which** mitigation ~~that would be needed~~**option(s) it will implement** to address impacts caused by its use of the estuarine intake~~. Poseidon has currently identified the need to restore no less than about 37 acres of marine wetlands~~. However, as described in these Findings and through imposition of Special Condition 8, which requires **that** Poseidon ~~to~~ submit ~~for Commission review and approval~~ a Marine Life Mitigation Plan that ~~includes a full entrainment study and contains the~~**identifies** specific mitigation measures, implementation plans~~,~~ and compliance monitoring ~~needed to mitigate the impacts identified in that study~~, the Commission is ensuring that Poseidon will provide the mitigation ~~adequate~~**needed** to address those impacts in a manner consistent with applicable ~~provisions of~~**Coastal Act provisions. The Plan will provide for the restoration of no less than 37 acres of marine wetlands, and an implementation protocol that includes monitoring and annual performance review for five years or until performance criteria are met. Special Condition 8 ensures that any project-related entrainment impacts will be more than fully mitigated, and that marine resources and the biological productivity of coastal waters, wetlands and estuaries will be enhanced and restored in compliance with** Coastal Act Sections 30230 and 30231.

Anticipated Project Impacts and Coastal Act Conformity – Discharge-Related

Description of Impacts: The proposed project would result in a discharge of about 250 MGD from the desalination facility to the outfall currently used by the power plant, which is located on state tidelands and on Carlsbad State Beach. The discharge would contain at least 50 MGD of high salinity water from the facility along with at least about 200 MGD of estuarine water

pumped into the intake system to provide dilution for the high salinity discharge. The expected "end of pipe" salinity of the blended discharges is expected to be about 40 parts per thousand (ppt) of salinity. This would be about twenty percent higher than the naturally occurring average salinity of about 33.5 ppt in these nearshore waters. Because the discharge would be immediately adjacent to the shoreline, the plume of higher salinity water would extend along the beach and nearshore waters. Poseidon's discharge would be subject to conditions of an NPDES permit that allows discharges at an average daily concentration of up to 40 ppt and an average hourly concentration of up to 44 ppt. ~~The NPDES permit additionally requires Poseidon to conduct monitoring, identify additional methods to minimize its discharge-related impacts, and to implement many of those methods.~~

Poseidon's desalination process would also include adding a number of chemicals to the water during desalination. The chemicals used would be those commonly used in water treatment plants, such as coagulants, alkalinity adjusters, and various membrane cleaning chemicals such as hydrochloric acid, detergents, or caustic soda. Poseidon stated in Exhibit B of its November 9, 2007 Response to Staff Report that chemicals used would be neutralized or sent to the sanitary sewer system instead of the seawater discharge. The discharge would also include biological matter – i.e., the entrained organisms from the intake.

Poseidon's project as originally proposed – that is, co-located with an operating power plant cooling water system – would have withdrawn 100 MGD of the several hundred million gallons used by the power plant, processed that water to produce 50 MGD of potable water, and discharged about 50 MGD of its high salinity waste stream back into the up to eight hundred million gallons of seawater being discharged by the p**f**ower plant. Blending the desalination discharge with the much larger power plant discharge would have resulted in an overall discharge with salinity levels very close to the natural background levels in the nearshore ocean waters. Without the power plant discharge, however, ~~Poseidon's 50 MGD high salinity~~**a** discharge **of only 50 MGD** would cause salinity levels twice that of seawater and cause~~d~~ significant adverse impacts to marine life in the nearshore waters and on the seafloor.

Mitigation measures: To address this issue, Poseidon proposes to maintain ~~an overall~~**a** discharge of at least 254 MGD when the power plant is not operating or is discharging less than that amount. Poseidon determined that an overall 254 MGD discharge would dilute its ~~50 MGD~~ desalination discharge so that salinity levels near the outfall would be about 40 ppt instead of 67 ppt. This 40 ppt level is about 20 percent higher than the average receiving water salinity and about 15 percent higher than the level of natural variation in local seawater salinity. Local seawater averages about 33.5 ppt and varies naturally up to about 34.4 ppt, due to phenomena such as upwellings, changes in freshwater inputs, and others. The project EIR ~~identified the 40 ppt as the level above which discharges~~**determined that a discharge of 40 ppt salinity** would

not cause significant adverse impacts to marine life.[~~39~~115] Guidance from the U.S. EPA recommends that salinity levels from a discharge should not vary more than 4 ppt from the range of natural variation in areas permanently occupied by food and habitat forming plants **(hard bottom habitat)**. Using the EPA guidance would result in a maximum allowable discharge level of about 38.4 ppt~~.~~ **in the kelp beds 2,000 feet offshore.** Poseidon's NPDES permit allows an average daily concentration of 40 ppt and an average hourly concentration of up to 44 ppt. Poseidon's hydrodynamic modeling indicated that ~~with~~**as long as the** discharge ~~concentrations~~**remains** at or below these ~~levels.~~**concentrations, the** salinity ~~levels~~ in the ~~nearest~~ kelp bed ~~about 2000 feet away~~ would **always** be **well** below ~~36.8 ppt.~~ **36.8.**

Poseidon also submitted modeling results showing the expected extent of the salinity plume based on local historical data for characteristics such as ocean temperatures, currents, and salinity levels. The extent of the high salinity in the discharge would vary based on how these characteristics interact at any given time. Poseidon's models show that salinity concentrations above the level of natural variation would cover about 8.3 acres of the nearshore seafloor during average conditions (i.e., a frequency of 50%) and would cover up to about 44 acres during extreme conditions (i.e., a frequency of less than 0.1%).

~~Under either condition,~~**The salinity range of the discharge would never exceed 40 ppt at the point of discharge, and the discharge would be rapidly diluted to near 36.5 ppt within the zone of initial dilution, which is within 1000 feet of the discharge channel. While** the discharge would create conditions beyond the range experienced by the local biota ~~and would cause some level of adverse impacts.~~ **.** Poseidon has provided test results showing that a 40 ppt salinity level would cause ~~minimal~~**no** acute **or chronic** effects to several test organisms~~;~~ ~~however, these organisms~~**. The site-specific, peer-reviewed *Comprehensive Salinity Tolerance Study* completed for the project by Dr. Steven Le Page and Dr. Jeffrey Graham indicates that the proposed discharge will not result in acute or chronic toxicity. The Study included long term (5.5 months) exposure of 18 marine species inhabiting the discharge area to a typical discharge salinity of 36 ppt. According to the project's EIR, all of the test species were chosen due to their known existence in the subject area, and several of the species (abalone, sand dollar and red sea urchin) where chosen for their susceptibility to environmental stress. (See Project EIR, at Appendix E.) Poseidon provides that the results of the 5.5 month test of exposure of the 18 species to typical discharge salinity of 36 ppt indicate that all organisms remained healthy throughout the test period. No mortality was encountered and all species showed normal activity and feeding behavior. Poseidon further provides that additional acute and chronic toxicity studies completed subsequently for the project using the United States Environmental Protection Agency's standard whole**

[~~39~~115] The EIR stated that elevated salinity levels would cause significant impacts if they had a substantial adverse effect on marine biota, included extended exposure to salinity levels above 40 ppt or permanent elevation of salinity levels above 38.4 ppt on hard bottom habitat.

effluent toxicity (WET) test have confirmed the validity and results of the Salinity Tolerance Study.

However, in Commission staff's view, the organisms studied in the Salinity Tolerance Study are not representative of the full suite of marine life living in these nearshore waters and benthic habitat that would experience this level of salinity. Further, several species used in these tests are generally considered more salinity tolerant than others, so the test results likely do not reflect actual effects that would occur to species exposed to these high salinity levels in the natural environment. For example, a State Board proposal to establish a salinity limit in the state's Ocean Plan includes a proposed limit of 36.5 ppt based on study results showing that level caused adverse effects to sea urchin embryos, which is one of standard test species more sensitive to salinity differences.[~~40~~116] Other studies show that slight differences in salinity levels can affect the population density of various species, their ability to tolerate various environmental stressors, reproductive rates, and other effects.[~~41~~117]

In addition to higher than natural levels of salinity, Poseidon's discharge would include some as-of-yet unknown amounts of other constituents that would enter the discharge from various materials or methods used in the proposed facility. As noted above, these include ~~various chemicals and~~ the dead organic matter from organisms entrained in the intake. ①

Based on the above, Poseidon's proposed discharge would likely result in salinity levels higher than the natural range in from about eight to 44 acres of nearshore benthic habitat. Although the extent of the areas would vary continually based on environmental conditions, some areas would be subject to nearly continual salinity concentrations higher than natural salinity variations.

~~There are a number of mitigation measures available to reduce the extent of the discharge's effects. As noted previously, one of the difficult issues with Poseidon's proposal to use the existing power plant cooling water system is that some options for reducing a discharge related impact would cause increased impacts on the intake end of the pipe. In this case, Poseidon's proposal to reduce its salinity concentrations at the discharge by drawing in additional water~~

[~~40~~116] The State Board is considering an amendment to the state's Ocean Plan that would establish an upper salinity limit for discharges into California's coastal waters. The Ocean Plan at this time does not have a specific salinity limit, but requires in general protection of beneficial uses and water quality objectives for other contaminants and physical water quality characteristics. In June 2007, the State Board issued a Scoping Document for its proposed policy that included three proposed alternatives: "No Action" – that is, do not add a salinity limit to the Plan; "No discharges above natural variation" – that is, limit salinity in discharges to the range of natural variation which is about 10% above average; or, "Numeric water quality objective of 36.5 ppt", based on study results showing that salinity levels above than 36.5 ppt caused adverse effects to sea urchin embryos.

[~~41~~117] See, for example, *Technical Report 39: San Francisco Estuary Regional Monitoring Program for Trace Substances, Result of the Benthic Pilot Study*, August 2000; and Voyer, R.A., and Glen Modica, *Influence of salinity and temperature on acute toxicity of cadmium on Mysidopsis bahia*, in *Environmental Contamination and Toxicology*, Vol. 19:1, January 1990.

~~means increasing its adverse entrainment effects at the intake. Using this dilution approach to further reduce discharge salinity levels would require pumping even more water from Agua Hedionda Lagoon, thereby increasing the already significant adverse entrainment impacts. Conversely, although allowing Poseidon to discharge at higher salinity levels would require less estuarine water and cause fewer entrainment impacts, it would increase the area and level of adverse effects in the nearshore ocean waters beyond the currently anticipated levels.~~

~~Other available mitigation options that would avoid or reduce discharge-related impacts are described previously in the discussion of entrainment impacts and mitigation. They include the use of a zero-discharge system or routing more of the discharge to the sanitary sewer system. A zero-discharge system uses either mechanical means or evaporation to re-use and reduce discharge volumes. Some of these systems may also allow some cost savings through their recovery of salts or minerals from the seawater. Although the scale of the proposed project may prevent use of a zero-discharge system for the entire amount, it could possibly used for some of the discharge, perhaps in conjunction with routing additional volumes to the sanitary sewer system. Although the sewer system has its own capacity limits, the City of Carlsbad is planning to route a new sewer line adjacent to the proposed facility and it may be possible to provide some capacity for additional desalination discharges. Additionally, if these systems were used to reduce either the overall amount of Poseidon's discharge or the concentration of salt and other minerals or contaminants in the discharge, they would also allow Poseidon to pull in less water from AHL, thus reducing the facility's entrainment impacts.~~ ①

The Regional Board studied the project's discharge before issuing the project's NPDES Permit (Regional Board Order No. 2006-0065). The Regional Board considered the discharge impacts of the project and conditioned all potential discharge-related impacts to ensure compliance with Clean Water Act and California Ocean Plan requirements. The Ocean Plan contains water quality objectives and beneficial uses for ocean waters of California. The beneficial uses of ocean waters include industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated areas of special biological significance; rare and endangered species; marine habitat; fish migration; and fish spawning and shellfish harvesting. The Regional Board determined that an average daily effluent limitation of 40 parts per thousand for salinity would protect beneficial uses of the Ocean (including protection of fish habitat) and ensure that no salinity-related toxicity effects would occur in receiving waters. The NDPES Permit establishes extensive monitoring and reporting requirements to ensure compliance with this effluent limitation.[118]

---

[118] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A, at p. 12; NPDES Permit, Regional Board Order R9-2006-0065 at 12, F-18, F-37 (Attachment 1 to Poseidon Resources

As noted previously, Poseidon states in its November 9, 2007 ~~letter~~ that the project's NPDES permit and the Regional Board's eventual ~~final~~ approval of Poseidon's *Flow, Entrainment and Impingement Minimization Plan* will ensure that the proposed facility uses all feasible measures to avoid and reduce ~~these~~**any** discharge-related impacts. ~~Further,~~

The Commission concurs that Poseidon's Plan will ensure that the proposed facility uses all feasible measures to avoid and reduce any discharge-related impacts, in part because the Board's approval **of the project's NPDES permit, which requires such a finding,** is necessary before the facility ~~can~~**could** operate. ~~Because the Board's final approval would include such findings and would ensure that the project's discharges conform to relevant requirements of the federal Clean Water Act and the water quality objectives of the state's Ocean Plan, the Commission therefore finds that project-related discharges result in minimal adverse effects to water quality and marine life.~~ **In reliance on the Regional Board's determinations in issuing the project's NPDES Permit as is required pursuant to Coastal Act Section 30412, the Commission finds that the project's discharge is conditioned so that it will not cause adverse impacts to marine resources. The Permit, along with its extensive monitoring and reporting requirements, ensures that the project's discharge would not harm marine resources and thus would maintain marine biological productivity and resources and minimize entrainment in conformance with Coastal Act Sections 30230 and 30231.** ①

Anticipated Project Impacts and Coastal Act Conformity – Cumulative Impacts

In addition to the adverse marine biological effects the proposed project would cause to Agua Hedionda Lagoon and the nearshore waters off of Carlsbad, the project would contribute to cumulative impacts already occurring in those waters. As noted above, Agua Hedionda Lagoon is listed as an impaired waterbody due in part to excess sedimentation. The impairment affects a number of beneficial uses of the waterbody and requires the ongoing dredging described in the next section of these Findings. ~~The~~**In Commission staff's view, the** sedimentation is due largely to the intake drawing in water from the ~~l~~**L**agoon that would otherwise exit through the ~~l~~**L**agoon mouth and take much of the sediment with it. The source of this sediment is the longshore sand movement off the coast of Carlsbad, and as a result of the jetties and the intake, sediment pulled into the ~~l~~**L**agoon is removed from that longshore process, resulting in the need for beach nourishment that causes effects to coastal resources in the form of ongoing dredging every few years and the accompanying disruption of public access to areas of the nearby beaches. **In Poseidon's view, as documented in by the Regional Board, the 303(d) listing of Agua Hedionda Lagoon as an impaired body is based on fine-grained sedimentation discharged by urban run-off into the Lagoon from the neighboring watersheds (predominantly Agua Hedionda Creek), impacting 6.8 acres primarily located in the east** ②

Corporation, Response to California Coastal Commission's September 28, 2006 Request for Additional Information, November 30, 2006). ①

basin of the Lagoon.[119] As noted previously in Section 4.4 of these Findings, sedimentation concerns will be addressed through the Regional Board's NPDES review and through ongoing Coastal Commission permit review of future dredging proposals. ②

Conclusion

Regarding entrainment and impingement, Poseidon's proposed project would use 304 MGD of estuarine waters (equal to about 932 acre-feet of water per day, which over a year would cover more than 500 square miles up to one foot deep in water). This water use~~is~~**, for purposes of analysis, is conservatively** assumed to kill all the larval and planktonic organisms in that water, which Poseidon estimates represent about 37 acres worth of wetland and open water productivity in Agua Hedionda. Poseidon has proposed a compensatory mitigation approach to mitigate these impacts.

The assessment of the impacted area due to the desalination facility operation is based on a conservative assumption that the CDP will cause 100 percent mortality to the marine organisms in the seawater diverted from Agua Hedionda Lagoon. This approach to establishing the impact of the desalination plant operation is extremely conservative in that it ignores the design and technology features that have been incorporated in the proposed project. As discussed above, the project has incorporated several technology features that will substantially lessen the impacts to marine life, including: mortality will be reduced due to the lower temperature, volume, velocity and turbulence of the desalination facility's operations compared to the power plant; and only 35 percent of the seawater in the desalination plant's intake will actually enter the desalination facility and be subject to processing that could result in entrainment mortality, while the rest of the water will be returned to the ocean. ①

As noted above, the Commission has determined that alternative intakes that might avoid or minimize environmental impacts are infeasible or would cause greater environmental damage. Therefore, to ensure Poseidon provides adequate compensatory mitigation for the proposed project's marine life impacts and to conform to Coastal Act Sections 30230 and 30231, **Special Condition 8** requires Poseidon to submit to the Commission for review and approval a marine life mitigation plan. This plan must document the project's expected impacts to marine life caused by entrainment and impingement and identify the types and amounts of mitigation best suited to address those impacts. It must also provide mitigation to the maximum extent feasible in the form of creation, enhancement, or restoration of aquatic and wetland habitat and must include standard mitigation measures, including acceptable performance standards, monitoring, contingency measures, and legal mechanisms to ensure permanent protection of the proposed

---

[119] **2006 Clean Water Act 303(d) List of Water Quality Limited Segments Requiring TMDLs, San Diego Regional Water Quality Control Board, June 28, 2007.** ②

mitigation site(s). The coastal development permit will not be issued until the Commission approves a mitigation plan meeting these requirements. Further, to ensure the identified marine life impacts do not exceed those identified through development of this mitigation plan, **Special Condition 9** requires Poseidon to obtain an amendment of its coastal development permit before any increase in its average seawater flows of 304 MGD.

Therefore, based on the studies cited and the information provided above, the Commission finds that the project, as conditioned, conforms to Coastal Act Sections 30230 and 30231.

4.5.2 Use of Wetlands and Coastal Waters (Coastal Act Section 30233)

Coastal Act Section 30233(a) states, in relevant part:

> *The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects...*

Coastal Act Section 30233(b) states:

> *Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for these purposes to appropriate beaches or into suitable longshore current systems.*

Coastal Act Section 30233(c) states:

> *"In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary. Any alteration of coastal wetlands identified by the Department of Fish and Game, including, but not limited to, the 19 coastal wetlands identified in its report entitled, "Acquisition Priorities for the Coastal Wetlands of California", shall be limited to very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego Bay, if otherwise in accordance with this division...*

Coastal Act Section 30233 requires in general that dredging in coastal wetlands and estuaries be limited to certain types of uses, that it be allowed only where there are no feasible less environmentally harmful alternatives, and that it be mitigated to the extent feasible. It also requires that dredging be implemented in a manner that avoids significant disruption to marine and wildlife habitats and to water circulation. Section 30233(c) further imposes a more limited

set of allowable uses in some wetlands, including Agua Hedionda Lagoon. Because Agua Hedionda Lagoon is one of the coastal wetlands subject to the use limitations in Coastal Act Section 30233(c), that subsection serves for this proposed project as the standard of review for allowable uses.

Description of the project's potential alteration of, and its effects on, Agua Hedionda Lagoon

Agua Hedionda Lagoon is one of 19 coastal wetlands identified in the California Department of Fish and Game report, *Acquisition Priorities for the Coastal Wetlands of California*. This report identifies high priority wetlands for acquisition, based primarily on their values for fish and wildlife habitat and threats to their continued existence as a natural resource. Areas of the ~~l~~**L**agoon where the plant and animal life is especially valuable due to its special nature in the ecosystem include the Agua Hedionda Lagoon State Marine Reserve and Ecological Reserve, which cover about 180 acres extending along about a half-mile of the ~~l~~**L**agoon's Inner Basin. The ~~l~~**L**agoon includes extensive areas of open water habitat, eelgrass beds, and various types of wetlands, and provides significant habitat benefits to a number of species, as described in previous sections of these Findings. Those Findings also show that Poseidon ~~expects its~~**'s proposed** use of estuary water would create adverse entrainment effects equal to the ~~loss of about~~**reduced productivity of no more than** 37 acres of Agua Hedionda's wetland and open water areas. ①

Agua Hedionda Lagoon as it currently exists is a highly engineered coastal lagoon. During the past half-century of power plant operations, the power plant's cooling water intake created an imbalance between tidal inflow and outflow, resulting in more sediment entering the estuary than leaving. Agua Hedionda Lagoon is on the state's list of impaired waterbodies due to high rates of sedimentation, which are caused **primarily by fine-grained sedimentation discharged by urban run-off into the Lagoon and** in part by the power plant's intake ~~and in part by urban runoff into the lagoon,~~ and would continue due to Poseidon's proposed use of the intake. As an existing coastal-dependent industrial facility operating in the ~~l~~**L**agoon since the mid 1950s, the power plant has dredged its cooling water intake channel at least 25 times over the last half-century.[~~42~~**120**] Since 1954, dredging is estimated to have removed about eleven million cubic yards of material from the ~~l~~**L**agoon. ②

Starting in 1977, the Commission has issued a number of coastal development permits to allow various amounts of dredging for one-year or multiple-year periods. During Commission review of the last several permits, there was considerable debate about where to deposit the dredged

---

[~~42~~ **120**] Poseidon's proposed project would be a new, rather than an existing, facility, and with the pending power plant shutdown, would result in new dredging-related impacts not necessary to maintain operations of an existing facility.

spoils. Much of the material was sand suitable for being placed on beaches and used for recreation; however, it was believed that material placed on some of the nearby beaches, particularly those to the north of the ~~l~~**L**agoon mouth where recreational benefits were higher, would be quickly transported by tide and currents back into the ~~l~~**L**agoon where it would need to be dredged again.

The Commission required that some material be placed at various beaches in and near the ~~l~~**L**agoon where it would serve a recreational purpose; however, the Commission also required the power plant owner to pay for an independent study to assess sediment transport conditions along the ocean shoreline in and near Agua Hedionda.[~~43~~121] That 1999 study found that, on average, about 80% of the sand trapped within the ~~l~~**L**agoon comes from longshore transport from north and the rest comes from the south. It recommended that most of the dredged spoils be placed to the south of the ~~l~~**L**agoon to reduce the need for "re-dredging" the same material. At about the same time, the San Diego Association of Governments (SANDAG) was implementing another program to increase the amount of sand on nearby beaches with a focus on providing sand to enhance recreational uses of beaches to the north (See CDP 6-06-061).

Based in part on the results of the 1999 study, and in an effort to reduce the need for dredging within the ~~l~~**L**agoon, the power plant owner in 2001 requested that the State Lands Commission allow a 200-foot extension of the north inlet jetty to reduce the amount of sand entering the ~~l~~**L**agoon. The State Lands Commission conducted environmental review of the proposal and published in January 2005 a Draft EIR that provided a comprehensive and independent assessment of the effects caused by dredging in Agua Hedionda.[122] **As detailed below, Poseidon disagrees that the Draft EIR comprehensively analyzed dredging impacts**. It evaluated not only the proposed jetty extension and associated dredging, but also assessed how best to meet related objectives, including: ②

- Mitigating the expected cumulative sedimentation impacts to the ~~l~~**L**agoon that would result from implementing the SANDAG Regional Beach Sand Project;
- Maintaining the longshore sediment transport process and increasing the amount of sand that bypasses the ~~l~~**L**agoon and is made available to downcoast beaches;
- Minimizing potential adverse effects on biological resources; and,
- Limiting the frequency of needed maintenance dredging in the ~~l~~**L**agoon.

The Draft EIR evaluated five alternatives and concluded that the environmentally superior alternative would be to significantly reduce the need for dredging within the ~~l~~**L**agoon by moving the power plant's intake offshore. The Draft EIR found that by ending the power plant's

---

[~~43~~–121] Elwany, Dr. Hany. Study *of Sediment Transport Conditions in the Vicinity of the Agua Hedionda Lagoon*, 1999.

estuarine water withdrawals, this alternative would avoid the significant adverse impacts identified for the proposed project related to aesthetic resources, recreation, hydrology, water quality, and biological resources. It also found that maintenance dredging of about 20,000 cubic yards per year from near the ~~l~~**L**agoon's mouth would be adequate to maintain tidal flows in the ~~l~~**L**agoon, which would help continue the ~~l~~**L**agoon's other existing beneficial uses. This alternative would also allow for at least partial removal of the jetties to re-establish a more natural longshore transport system. However, the State Lands Commission did not certify a Final EIR because the power plant owner withdrew its application request shortly after the ~~d~~**D**raft EIR was published in February 2005. As noted in Section 4.5.1 of these Findings, the Commission has determined **that** alternative intake locations**, including an off-shore open intake,** are infeasible.

Moreover, Poseidon has noted that this Draft EIR was withdrawn by the applicant prior to public review and comment and that the analysis of the offshore intake in the Draft EIR is minimal and would probably not pass peer review. While the executive summary gives 5 paragraphs of discussion about the environmentally preferred alternative, only two paragraphs are found in the main body and technical sections of the Draft EIR: one paragraph on page 3-6 that describes it as 30 foot diameter, 3,000-foot-long pipeline with an offshore intake structure placed at an ocean depth of 30 feet; and a second paragraph in the Hydrology and Water Quality Section on page 4.2-20 that acknowledges its construction would disturb the ocean bottom and increase turbidity. There are no references anywhere in the text of the Draft EIR to more detailed studies about the environmentally preferred alternative, and inspection of the reference list in Section 8.0 reveals no reports having anything about offshore intakes in the titles. Thus, Poseidon states, there are clearly inadequacies with the Draft EIR documentation of this alternative that preclude it from being applied to a stand alone desalination facility at Agua Hedionda. Poseidon evaluated the Draft EIR and concluded that it does not analyze the full extent of the biological impacts of installing a large diameter pipe 1000 feet offshore, which depending on placement, would potentially destroy existing rocky reef outcroppings occurring offshore.[123] In addition, the Draft EIR did not evaluate the down coast effects of an intake structure on habitat, sand flow, or sedimentation.[124] 1

Further, the Draft EIR did not adequately evaluate entrainment and impingement impacts of an offshore intake. In their analysis, Graham, Le Page and Mayer point out that an offshore intake has the potential to affect a greater diversity of adult and juvenile organisms as well as both phyto and zooplankton species than the species currently

---

[123] **See Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend An Alternative Seawater Intake for the Carlsbad Desalination Project, Graham, Le Page and Mayer, October 8, 2007.**

[124] **See *id.***

impacted by EPS's existing intake.[125] The biofouling community of organisms that will take up residence in the intake pipe will consume virtually all of the entrained plankton. According to the analysis, this has negative implications for the survival potential of organisms that can survive passage through the EPS.

The impact of an offshore intake takes on even greater significance when considered in the context of stand-alone operation of the project. Operating stand-alone, the project will draw far less water than EPS and two-thirds of the drawn volume would function for dilution of the concentrated desalinated stream and would not be otherwise affected during its circulation through the plant, an offshore intake and conduit, and the cropping mortality associated with this could have significantly greater entrainment and impingement effects than the present intake located in the Lagoon.[126]

In 2006, Poseidon provided a technical paper **authored by Dr. Scott Jenkins and Joseph Wasyl** that modeled expected differences in sand influx into Agua Hedionda under two scenarios – with the power plant operating at 530 MGD (the average from 1981 until 2000), and with the desalination facility operating at 304 MGD.[~~44~~127] It found that stand-alone desalination operations at 304 MGD would reduce sand influx by 42.5% compared to the influx caused by the power plant during those years. The paper found that during those years, power plant operations resulted in a cumulative total of about three million cubic yards of sediment staying in the ~~l~~**L**agoon (an average of about 159,000 cubic yards per year). Had the desalination facility been operating during those years at 304 MGD, the paper estimated sand influx would have been just over two million cubic yards (or about 106,000 cubic yards annually).[~~45~~128]

More recently, Poseidon provided another technical paper[~~46~~129] that modeled another two scenarios – the expected difference in sand influx into the ~~l~~**L**agoon with a stand-alone desalination plant using 304 MGD versus complete cessation of the intake use. Using similar assumptions as the previous paper, this paper concluded that had there been no flow of water from the ~~l~~**L**agoon to the power plant during the same 1981-2000 period, the net sand influx would have been about 1.7 million cubic yards, or about 316,000 cubic yards less than ~~that~~**the amount** that would have been caused by a stand-alone 304 MGD desalination facility. The

---

[125] *Id.*

[126] *Id.*

[~~44~~127] Jenkins, Dr. Scott, and Joseph Wasyl. *Coastal Processes Effects of Reduced Intake Flows at Agua Hedionda Lagoon*, December 2006.

[~~45~~128] These figures assume a 14.7% "backpassing" rate to reflect sand dredged from the lagoon and deposited on nearby beaches so that it returns to the lagoon.

[~~46~~129] ~~Jenkins, Dr. Scott, and Joseph Wasyl.~~ Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon : Low- Flow vs. No-Flow Alternatives, **Dr. Scott Jenkins**, September 28, 2007.

paper also concluded that the difference between sand influx caused by historic power plant operations and influx that would have been caused solely by desalination operations would have reduced the need to dredge from an average of every two years (which had been the pattern for the power plant during that time period) to every three years. The paper also concluded that the difference in sand influx between ~~standalone~~**standalone** desalination operations and "no flow" – i.e., about 316,000 cubic yards total, or about 16,000 cubic yards per year – would have resulted in no discernable difference between having a desalination facility use water from the ~~l~~**L**agoon and not having this water use.

Poseidon further contends that dredging of the Lagoon is a permitted use under Coastal Act Section 30233 that will serve to *benefit* the Lagoon and the marine resources, scientific research, fishing, public access and recreational activities that rely on the Lagoon. In order to protect the Lagoon in its current state, Poseidon contends that there is no feasible alternative to dredging and that dredging is a project benefit that is fully consistent with the Coastal Act. The Commission has approved dredging of the Lagoon on at least 17 separate occasions since 1977, most recently in November 2006 (see CDP 6-06-061), and on each occasion the Commission has found dredging to be fully consistent with the Coastal Act as a permitted use under Coastal Act Section 30233. Poseidon further notes that, because Cabrillo Power, the owner of the EPS, currently dredges the Lagoon on a routine basis and has done so for the past fifty years, the existing environmental baseline from which the Commission must review the project is an environment in which dredging occurs routinely.[130] Poseidon states that it would voluntarily take over this responsibility if, at some point in the future, the EPS were to shut down and Poseidon would do nothing to change this existing dredging activity other than reduce the frequency of the dredge cycle as described in Dr. Scott Jenkin's report, Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon: Low-Flow vs. No-Flow Alternatives, September 28, 2007. ②

Poseidon provided information that the Lagoon is an important location for recreation, fishing, and aquaculture. The City of Carlsbad issues about 400 recreational permits for the Lagoon per year, and data from CDFG indicate that the Lagoon attracts 79% of the local recreational fishing. The Lagoon also supports an extensive aquaculture operation, the Hubbs Seaworld White Sea Bass Fish Hatchery, and youth camps operated by California Water Sports and the YMCA. Routine dredging is required to maintain the Lagoon in its current state and prevent it from reverting to its original state: a slough comprised of shallow marsh channels filled with anaerobic hyper-saline water. The

---

[130] **See, e.g., *Fat v. County of Sacramento*, 97 Cal. App. 4th 1270 (2002) (environmental baseline consists of environmental conditions as they exist prior to the commencement of environmental review of the project).**

recreational, fishing, and aquaculture activities would halt if the EPS shut down and Poseidon did not volunteer to continue maintenance dredging of the Lagoon.[131]

In addition to maintaining the Lagoon itself, dredging provides the additional public benefit of providing sand to maintain Carlsbad State Beach, grunion spawning habitat, and a popular surfing break. Without the necessary quantities of sand, the beach would revert to its historic cobblestone condition, grunion spawning would cease, the surfing break would be substantially reduced, and the quality of the waves would diminish.[132]

Poseidon's position is that, under site-specific facts at Agua Hedionda, dredging offers myriad public and environmental benefits and is thus an allowable use under Coastal Act Section(s) 30233(a)(1) [new coastal-dependent facilities], 30233(a)(2) [maintaining existing, or restoring previously dredged depths], 30233(a)(7) [restoration purposes], 30233(a)(8) [nature study, aquaculture, or other similar resource dependent activities], 30220 [protection of water-oriented recreational activities], 30224 [recreational boating use of coastal waters], 30222.5 [coastal dependant aquaculture], 30210 [enhancing opportunities for public access], 30223 [dedication of upland area to support coastal recreational uses], 30255 [priority coastal dependent development, 30230 [preservation of marine resources], and/or Section 30233(c) [minor incidental public facilities (which the Commission deemed operation of EPS in approving CDP 6-06-061); restorative measures, and nature study]. Because one of Poseidon's project objectives is "to increase opportunities for public access to the coastal area through public enhancements and dedications of coastal property,"[133] Poseidon has proposed Lagoon-front property dedications for coastal access, fishing and recreation in furtherance of this objective. Without dredging the Lagoon will revert back to its natural state of "stinky water" and Poseidon would not be able to meet this objective.[134] ②

Poseidon states that, while dredging may have minimal short-term environmental impacts, the long-term environmental benefits that dredging provides, including protecting the valuable Lagoon in its current state, far outweigh the minimal short term impacts.[135] Poseidon relies on *Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon: Low-Flow vs. No-Flow Alternatives*, Jenkins and Wasyl, September 28,

---

[131] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 25.

[132] See *id.* at pp. 25-26.

[133] Project EIR at 3-31.

[134] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 26.

[135] See *Sierra Club v. California Coastal Commission*, 19 Cal. App. 4th 547, 562 (4th Dist. 1994) (finding that "the Commission has the power in particular cases to permit significant short-term disruption [from dredging] in order to provide long-term benefits [to coastal resources]" under Coastal Act Section 30233.)

2007, to demonstrate that there is no alternative to dredging to protect the Lagoon from returning to "stinky water." In the absence of Poseidon's operations and its assumption of the responsibility for maintenance dredging and stewardship of the Lagoon after the Encina power station is decommissioned, Lagoon sedimentation from urban run-off will result in closure of the Lagoon in five to seven years, and nearly complete loss of existing beneficial uses thereafter.[136] The project will therefore enhance marine habitat because it will preserve the Lagoon for both existing organisms and current recreational, fishing and aquaculture activities.

~~While~~**The Commission finds that, based on the evidence that has been submitted,** it is clear that continued use of the intake will require some level of dredging~~, it is unclear at this time how much dredging will be needed and whether dredging would be done just to ensure the intake channel remains open or would also be done to protect or enhance other lagoon functions. Further, it~~ **but that the project will require no more frequent dredging than has been the case under the power plant's operations. Poseidon has submitted evidence that from 1981 to the present, the average dredging frequency of the Lagoon was approximately every two years.[137] For the stand-alone desalination facility, the dredging frequency would be reduced to approximately every three years.[138] It** is expected that the power plant owner, rather than Poseidon, would be responsible for dredging during the next several years while the existing power plant continues to use its once-through cooling system. To address ~~these~~**any** uncertainties **associated with the timing or frequency of dredging**, **Special Condition 12** clarifies that the Commission's approval at this time does not authorize Poseidon to conduct any dredging and that future proposed dredging activities will require submittal of new coastal development permit applications for the Commission's further review and approval. **Thus, with the Commission's imposition of Special Condition 12 requiring Poseidon to submit separate coastal development permit applications for any proposed future dredging, the current project does not include activities that would be subject to Coastal Act Section 30233.**

②

~~***Analysis of Conformity to Coastal Act Section 30233(c)***~~

~~Coastal Act Section 30233(c) establishes that alterations to certain wetlands included in the report, *Acquisition Priorities for the Coastal Wetlands of California*, must be limited to "…very minor incidental public facilities, restorative measures, nature study, commercial fishing facilities in Bodega Bay, and development in already developed parts of south San Diego~~

---

[136] **Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.**

[137] ***Id.***

[138] ***Id.***

~~Bay…". The report lists 19 of California's most productive coastal wetlands, which include Agua Hedionda.~~

~~The proposed project would alter these wetlands in a manner not allowed by Section 30233(c). As stated in Section 30233(c), the allowable activities in Agua Hedionda are "very minor incidental public facilities, restorative measures, [and] nature study…". The project's proposed development activity – i.e., water removal – is not for a "very minor incidental public facility," and is not a restorative measure or nature study. Further, although not currently proposed, dredging may be needed in the future to allow the facility to use water from the lagoon. Therefore, the project's proposed use of these wetlands does not conform to this section of the Coastal Act.[47] The Commission further notes that Section 30233(c) does not allow other uses in exchange for offsetting mitigation; therefore, the mitigation Poseidon has offered for its entrainment impacts does not provide the needed conformity to this section.~~

~~However, because the proposed project would be considered a "coastal-dependent" industrial facility, the Commission may evaluate it under Coastal Act Section 30260, which allows such projects to be approved in some instances even when they are found to be inconsistent with other Coastal Act provisions. The analysis and findings related to Section 30260 are in Section 4.5.7 of these Findings.~~

Additional evaluation of the proposed project's dredging component

Coastal Act Section 30233 ~~also~~ includes several other provisions that are applicable to projects involving fill or dredging. These include Section 30233(a), which imposes a three-part test to

②

~~[47] Past Commission decisions have interpreted "minor" and "incidental" activities as those that are temporary in nature and for which no alternatives exist. For example, in a recent decision approving the placement of pilings within Agua Hedionda Lagoon to support an existing rail line (Consistency Certification #CC-52-05), the Commission found that determining whether to allow an "incidental" public use under Section 30233(c) should also consider whether there are feasible alternatives to the proposed wetland use. The Commission approved the project in part because there were no alternatives, because the project would not affect the functional capacity of the lagoon, and because it did not increase the capacity of the rail line.~~

~~In another example, the Court of Appeal recognized the Commission's approach as a permissible interpretation of the Coastal Act and supported the Commission's interpretation of "incidental" public service. In the case of *Bolsa Chica Land Trust et al., v. The Superior Court of San Diego County* (1999) 71 Cal.App.4th 493, 517, the court found that:~~

> ~~*… we accept Commission's interpretation of sections 30233 and 30240… In particular we note that under Commission's interpretation, incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.*~~

~~As noted above, Poseidon's proposed dredging would not be temporary, as it would occur every three or four years for 30 to 90 years.~~

determine whether proposed dredging is for an acceptable use, whether there are feasible and less damaging alternatives, and if feasible mitigation measures are included to minimize adverse environmental effects. Additionally, Coastal Act Section 30233(b) requires dredging and spoils disposal be implemented in a manner that avoids significant disruption to habitat and water circulation. Further, Coastal Act Section 30233(c)~~, in addition to the use limitations noted above,~~ includes a provision that dredging maintain or enhance the functional capacity of wetlands or estuaries. However, with the Commission's imposition of **Special Condition 12** requiring Poseidon to submit separate coastal development permit applications for any proposed future dredging, the current project does not include activities that would be subject to these provisions.~~ Further, as noted above, there is substantial uncertainty about how much dredging Poseidon would be required to perform, where the dredging would occur, its effects and the mitigation needed to address those effects, and other questions. It is therefore appropriate to conduct the necessary revew for Coastal Act conformity when these aspects of any needed dredging are better known. At that time, proposed dredging activities would be reviewed to determine their conformity to applicable Coastal Act provisions.~~

Conclusion

The ~~proposed project would represent a use of the Agua Hedionda wetlands not permitted by this~~**Commission finds that the imposition of project Special Condition 12 ensures that the Applicant will apply for a new, separate CDP for any future dredging projects that it initiates. Because the CDP for the proposed project, CDP No. E-06-013, does not authorize and dredging of the Lagoon,** Coastal Act Section 30233~~(c); therefore, based on the studies cited and the information provided above, the Commission finds that the project as proposed does not conform to this Coastal Act provision. However~~ **does not apply to the project. In addition**, because the proposed project would be considered a "coastal-dependent" industrial facility, the Commission may ~~therefore~~**also** evaluate it under Coastal Act Section 30260, which allows such projects to be approved in some instances even when they are found to be inconsistent with other Coastal Act provisions. **Although the project is found to be consistent with Section 30233, the Commission also notes that the project can be assessed under Section 30260.** The analysis and findings related to Section 30260 are in Section 4.5.7 of these Findings.

4.5.3 Public Access

Coastal Act Section 30210 states:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

Coastal Act Section 30211 states:

> *Development shall not interfere with the public~~'~~'s right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act Section 30212(a) states:

> *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

Coastal Act Section 30212.5 states:

> *Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.*

Coastal Act Section 30213 states, in relevant part:

> *Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred...*

The proposed project would be built largely on a site already occupied by industrial uses and would not ~~at that location~~ affect public access to the shoreline **at that location**. The project also includes constructing pipelines under roads within the coastal zone, although the pipeline construction would be similar to other road construction projects and its temporary impacts would likely not result in adverse effects on public access to the shoreline.

The project's proposed use of estuarine water from Agua Hedionda Lagoon, and its reliance on intake jetties and a discharge structure on State tidelands would affect public access by limiting accessibility to those areas. However, as noted previously in these Findings, no feasible alternatives exist that would allow cessation of use of these structures. Further, the project would require ongoing dredging within the ~~l~~**L**agoon and deposition of the dredged spoils **(requiring the Applicant to apply for a new, separate CDP)**, which will allow for beach nourishment along nearby beaches. While these activities would cause temporary disruptions to public access, they would have a long-term public benefit by adding sand to the beach. The alternatives determined by the Commission to be infeasible would cause impacts to public access during construction and possibly during operations. ②

To address the public access impacts of its project as proposed, Poseidon has offered to dedicate to the City **of Carlsbad** the following sites to be used for public access:

- A site of about two acres, known as the Hubbs Site, on the north side of the ~~l~~**L**agoon's Outer Basin that would include a trail system and expansion of the existing fish hatchery and aquatic research uses;

- A site of about 2.4 acres on the west shore of the ~~l~~**L**agoon's Outer Basin to be used as a fishing beach;

- A site of about 10.2 acres of bluffs west of the power plant site and adjacent to the shoreline to be used for recreation and coastal access; and,

- A parking area covering about 0.3 acres at the south end of the power plant for public parking.

These sites total about 15 acres, and are described in more detail in the City's precise development permit for the project, and Poseidon's coastal development permit application submittals. To ensure these sites are made available for public use, **Special Condition #11** requires that, prior to starting operations of the desalination facility, Poseidon ensure these parcels are dedicated for public access and recreation as described in the City's Precise Development Plan #PDP 00-02. These public access dedications provide adequate conformity to the Coastal Act's public access provisions.

Conclusion

Based on the above, the Commission finds that the project as conditioned conforms to the Coastal Act's public access provisions.

4.5.4 Scenic and Visual Resources

Coastal Act Section 30251 states:

> *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

The proposed project would be built largely within the existing developed area of the Encina power plant. The desalination facility site is currently occupied by large oil tanks that are no longer in use and that have been proposed for demolition. The desalination facility would create less of a visual impact than the currently existing tanks.

Poseidon's project plans include a number of measures to minimize any adverse visual effects of the proposed facility. The facility would be a relatively low profile building of about 44,000 square feet and reaching about 35 feet above the existing grade. Its appearance would be similar to **a** large warehouse. As part of the facility design, Poseidon has added both vegetative and architectural screening to ensure that expose~~s~~**d** pipelines, tanks, and other industrial-type equipment are screened from public view.

The Commission considered several intake alternatives, including slant wells and an intake gallery, and concluded that they are environmentally inferior to the proposed project. With respect to visual and scenic resources, each of the alternatives would require development of permanent structures on the beach that would result in a permanent impact to visual resources. The slant well alternative would require between 20 and 200 beach wells along a two mile stretch of coast, and associated access roads, parking, pipelines and electrical supply.[139] The intake gallery alternative would require 78 beach wells, each of which would require approximately 2,800 square feet of beachfront property, for a combined loss of seven acres of beachfront property.[140] Construction of the intake gallery alternative would also require trenches for collection piping and would limit access to the beach for a period of 2 to 4 years, and would require the creation of permanent access ramps from the Pacific Coast Highway to the beach to transport equipment during construction and to permit well inspection during the life of the wells.[141] Therefore, the proposed project is the environmentally superior alternative. 1

To ensure the facility conforms to the Coastal Act's scenic and visual resource policies, **Special Conditions 13 and 14** require Poseidon to submit, prior to starting construction, a Screening Plan and a Lighting Plan showing the planned appearance of the facility. The plans must describe how Poseidon will screen the facility's industrial and mechanical equipment and how the facility and surrounding area will be lighted to provide the necessary level of safety and security while minimizing offsite glare and other adverse affects. Both plans must be submitted to the Executive Director for review and approval before construction can begin.

Conclusion

---

[139] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. B at p. 16.

[140] *Id.* at 17-19.

[141] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 17-18.

Based on the above, the Commission finds that the project, as conditioned, will conform to the Coastal Act's scenic and visual resource provisions.

4.5.5 Energy Use and Greenhouse Gas Emissions (Coastal Act Section 30253(4))

Coastal Act Section 30253(4) states:

> *New development shall: … (4) Minimize energy consumption and vehicle miles traveled.*

Section 30253(4)'s requirement to minimize energy consumption reduces impacts to coastal resources caused by greenhouse gas emissions. Most of the electricity Poseidon would use would be produced by natural gas-fired power plants, with some produced by coal, hydroelectric, or renewable sources. According to methods developed by the California Climate Action Registry (CCAR), Poseidon's proposed electrical use would result in ~~approximately~~**no less than** 200,000,000 pounds (~~about~~ 90,000 metric tons) of carbon dioxide emissions per year.[~~48~~**142**] ~~Poseidon has stated, however, that it believes~~**In response to the Commissions September 28, 2006 Request for Additional Information, Poseidon submitted a study on October 9, 2007 that indicates** its net emissions will be substantially lower, about 134,400,000 pounds (~~about 60,000~~**61,000** metric tons) per year.[**143**] The difference between the Commission's conclusion and Poseidon's estimate is further described below.

> **Note:** The anticipated emissions described herein**, in the Commission staff's view,** likely represent the very low end of the range of actual greenhouse gas contributions Poseidon would generate. These analyses evaluate only those carbon emissions that would be generated by Poseidon's electrical use for pumping and desalinating water and transporting it to Maerkle Reservoir. It does not include emissions that would result from project construction, manufacture of reverse osmosis membranes, dredging needed to maintain the intake channel, etc. Also, it includes only carbon dioxide emissions, not

③

[~~48~~ **142**] Protocols developed by the California Climate Action Registry estimate carbon dioxide emissions from California's electricity sources total 804.54 pounds per megawatt-hour. Poseidon's expected electrical use of about 250,000 megawatt-hours per year would therefore total just over 200,000,000 pounds of carbon dioxide. These calculations are described in more detail below.

For comparison, 200,000,000 pounds of carbon dioxide is about the same amount produced during 235 million vehicle miles traveled or is the amount of carbon stored each year in 75,000 acres of growing forest (see the U.S. EPA and U.S. Agency for International Development *Climate Technology Gateway* at www.usctcgateway.net).

[**143**] **See Poseidon Resources Corporation, Updated Response to Coastal Commission's Spetember 28, 2006 Request for Additional Information, Section 13, CDP Energy Use, GHG Production & Mitigation, October 9, 2007; see also Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. D (Climate Action Plan).**

emissions of other greenhouse gases generated by power plants. ~~The~~**Commission staff's** analyses also credit Poseidon with emission reductions that may occur through its potential use of a high-efficiency energy recovery device that is still being tested and that Poseidon has not yet committed to use.

~~Emissions~~**Commission staff contends that emissions** from this facility's electrical use would be greater than those created by other water sources and would contribute to California's greenhouse gas emissions. ~~They would~~**Commission staff** also **contends that these emissions would** cause significant adverse effects to many coastal resources the Coastal Act is meant to protect. The global heating, sea level rise, and ocean acidification resulting from greenhouse gas emissions affects public access (Coastal Act Sections 30210-30214), recreation (Sections 30212.5, 30213, 30220-30222), marine resources (Sections 30230-30231), wetlands (Sections 30231, 30233), ESHA (Section 30240), agriculture (Sections 30241-30242), natural land forms (30251), and existing development (Sections 30235, 30253).

Poseidon's position is that it shares the Governor's commitment to address climate change, but disagrees with Commission staff that the project will be a contributing factor to climate change for several reasons: the project is consistent with its proposed Climate Action Plan, which will actually result in a *reduction* in regional greenhouse gas emissions, and the project includes numerous components to ensure that it will utilize only the minimum energy necessary.[144] Moreover, Poseidon argued that the Commission's authority to impose greenhouse gas emission standards or emissions related mitigation is limited.[145] Due to the importance of the project and Poseidon's stewardship of the environment, Poseidon has voluntarily proposed a precedent-setting Climate Action Plan pursuant to which Poseidon commits to measures to offset the project's minimal net carbon emissions so that the project is net carbon neutral.[146] ③

The Commission may assure compliance with CARB and air pollution control district requirements:

> ***The State Air Resources Board and air pollution control districts established pursuant to state law and consistent with requirements of federal law are the principal public agencies responsible for the establishment of ambient air quality and emission standards and air pollution control programs. The provisions of this division do not authorize the commission or any local government to establish any ambient air quality standard or emission standard, air pollution control program or facility, or to modify any ambient air quality standard, emission standard, or air***

---

[144] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 20-21**

[145] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 20-25**

[146] **See *id.***

> ***pollution control program or facility which has been established by the state board or by an air pollution control district.***

Coastal Act § 30414(a).

With regard to greenhouse gas emissions specifically, Assembly Bill 32, the California Global Warming Solutions Act of 2006, establishes a new air pollution control program that clearly places the authority to regulate and control greenhouse gas emissions, and to protect coastal resources from greenhouse gas emissions-related impacts, with CARB:

> ***Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include . . . a rise in sea levels resulting in displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment . . .***
>
> **. . .**
>
> ***The State Air Resources Board is the state agency charged with monitoring and regulating sources of emissions of greenhouse gases that cause global warming in order to reduce emissions of greenhouse gases***

③

Cal. Health & Safety Code §§ 38501(a), 38510 (emphasis added). Though primary jurisdiction over air quality and greenhouse gases rests with CARB, Poseidon is willing to address the Commission staff's concerns with a voluntary Climate Action Plan. CARB has the option to "recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs," but CARB has not imposed any greenhouse gas emission requirements applicable to the proposed project, nor has it requested that the Commission assist it in implementing greenhouse gas emissions-based standards or mitigation. There are no existing CARB promulgated greenhouse gas emissions standards that would apply to the project.

Due to the importance of the project and Poseidon's stewardship of the environment, Poseidon has voluntarily proposed a precedent-setting Climate Action Plan pursuant to which Poseidon commits to measures to offset the project's minimal net carbon emissions so that the project is net carbon neutral. Poseidon's Climate Action Plan is a voluntary project component.[147]

---

[147] See *id.* at pp. 22-25.

As described below, Poseidon will demonstrate that its proposed project will conform to the Section 30253(4) requirement to minimize energy consumption to avoid or mitigate adverse effects to coastal resources caused by energy-related greenhouse gas emissions through its conformity to Special Condition ~~10, as described below.~~**10.**

Issue Background

One of California's biggest overall energy uses, and one of its most intensive energy uses, is moving water around the state. With most of its water in the north and most of its population in the south, California has established conveyance systems to move water hundreds of miles and over hundreds of feet of elevation gain. Because water is relatively heavy, it requires significant amounts of electricity to transport – for example, the State Water Project uses up to about 5 billion kilowatt-hours each year to move millions of acre-feet of water from Northern to Southern California. Its average demand per acre-foot is about ~~3,200~~**3,400** kilowatt-hours, which is about the same as the annual residential use for each person in the U.S.

Compared to California's existing water supply systems, seawater desalination is an even more energy intensive source of water. Although desalination's energy needs have decreased significantly in the past several years, reverse osmosis facilities such as Poseidon's proposed project still require much more electricity than is needed for other water sources. For example, Poseidon's proposal is expected to require no less than about 4,400 kilowatt-hours per acre-foot, about ~~40~~**29**% more than the State Water Project. ③

In many parts of the state, the electrical grid needed to provide water is under a great deal of strain. Southern California, in particular, will be challenged to meet its energy needs due to its need to reduce its reliance on aging power plants and to develop new energy sources, developing updated transmission infrastructure, and other similar difficulties.[~~49~~**148**] Poseidon's proposal would rely on the local and regional electrical grid, which generates most of its electricity from fossil fuel-fired power plants. The proposed facility's electrical use would therefore result in substantial greenhouse gas emissions due to its use of this type of electricity.

Background of Greenhouse Gas-related Issues and Impacts: The Fourth Assessment Report of Working Group I of the Intergovernmental Panel on Climate Change (IPCC) (2007) represents the consensus of fifty top international scientists working in fields related to climate change. More than one hundred national governments, including the United States, have approved the report. The report concludes that the evidence of global climate system warming is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global mean sea level (IPCC, 2007). Further, the report concludes that "most of the observed increase in globally averaged

---

[~~49~~ –**148**] See, for example, the California Energy Commission's 2007 *Draft Integrated Energy Policy Report.*

temperatures since the mid-20th century is very likely [greater than 90% probable] due to the observed increase in anthropogenic greenhouse gas concentrations." The report cites numerous long-term changes in climate, including changes in Arctic air temperatures, decreases in the amount of Arctic sea ice, widespread changes in precipitation amounts, increase in ocean salinity, changes in wind patterns and increased incidences of extreme weather including droughts, heavy precipitation, heat waves and tropical storms.

Many studies consider a climate heating of more than 2 degrees Celsius above pre-industrial temperatures as representing "dangerous" level of climate disruptions. Based on six emissions scenarios ranging from "business as usual" to aggressive shifts to cleaner technologies, the best estimates of global average temperature increase are between 1.8 and 4.0 degrees Celsius by 2099. A more recent study has found that comparing actual "on the ground" data compiled during the last ten years shows that the model used to develop these scenarios has vastly underestimated the rate and degree of global warming effects. It suggests that limiting global heating to no more than 2 degrees Celsius will require measures that result in the equivalent of complete elimination of industrial emissions (see Weaver et. al. *Long term climate implications of 2050 emission reduction targets*, in Geophysical Research Letters, October 6, 2007).

These six emission scenarios also estimate that sea level will rise between 0.18 and 0.59 m. This amount of sea level rise does not include contributions from rapid melting of either the Greenland or Antarctic ice caps. (Bindschadler, 2006; Ekström et al., 2006; Joughin, 2006; Kerr, 2006). In addition, the ocean's absorption of carbon dioxide leads to a reduction in ocean pH with concomitant consumption of dissolved carbonate ions, which adversely affects calcite-secreting marine organisms, marine water quality and the abundance and distribution of marine species (The Royal Society, 2005).

Impacts to the California Coastal Zone: In July 2006, the California Climate Change Center released a series of reports describing ongoing and future effects of global warming on the California environment (Baldocchi and Wong, 2006; Battles et al., 2006; Cavagnaro et al., 2006; Cayan et al., 2006a; Cayan et al., 2006b; Cayan et al., 2006c; Drechsler et al., 2006; Franco and Sanstad, 2006; Fried et al., 2006; Gutierrez et al., 2006; Joyce et al., 2006; Lenihan et al., 2006; Luers et al., 2006; Luers and Moser, 2006; Medellin et al., 2006; Miller and Schlegel, 2006; Moritz and Stephens, 2006; Vicuña, 2006; Vicuña et al., 2006; Westerling and Bryant, 2006). Drawing on three projected warming scenarios (low, medium, and high), the reports projected severe impacts by the end of the century in the areas of public health, water resources, agriculture, forests and landscapes, and sea level. Many of these effects will adversely impact resources of the coastal zone. The adverse effects include worsened air quality, changes in species distribution, significant reductions in plant and animal diversity, loss of various kinds of agriculture (such as fruit trees), expansion of invasive plant and animal species, increase in plant pathogens, increase in number and severity of wildfires, rising sea level, coastal flooding, and increased coastal erosion. In addition, absorption of carbon dioxide by the ocean is causing a reduction in ocean pH with concomitant consumption of dissolved carbonate ions, which is

adversely impacting calcite-secreting marine organisms. The warming of ocean waters is also adversely affecting marine resources.

As identified in the 2006 Climate Change Center reports, air quality will be compromised by soot from wildfires, which the report predicts will increase. Coastal agriculture, already threatened by land development and habitat fragmentation, will be subject to further impacts from climate change. Impacts to coastal agricultural will include impacts to wine grapes, which will be subject to premature ripening and decreased fruit quality; adverse impacts to fruit and nut trees, many of which will no longer be able to produce once the number of "chill hours" per day drops below that necessary for proper ripening; and adverse impacts to milk production. Other threats to coastal agriculture identified by the Climate Change Center reports include the expansion of the ranges of agricultural weeds and an increase in plant pests and pathogens. Coastal forests and scrublands will be increasingly susceptible to wildfires due to longer and warmer periods of summer drying. This, together with the warmer climate itself, will lead to shifts in vegetation type, probably resulting in the loss of coastal scrub as it is converted to grasslands. Inasmuch as suitable habitat exists, species requiring cooler climates can migrate northward or to higher elevations. Their ability to do this, however, will be limited by the speed with which they are able to disperse, the suitability and interconnectivity of available habitat, and their ability to compete with non-native invasive species which, by definition, are able to disperse and exploit habitat efficiently. All of these effects will lead to a decline in forest productivity, with a concomitant loss in habitat.

The most direct impacts of global warming focused on the coastal zone are sea level rise and its associated impacts, ocean warming, and ocean acidification:

- **Sea Level Rise:** According to tide gage data, global mean sea level has been rising at the rate of approximately 1.8 mm/yr for the past century (IPCC, 2001). Although no acceleration of this rate is apparent from the tide gage data (IPCC, 2001), satellite measurements starting in the early 1990s indicate an annual rate of approximately 2.8 mm/yr (Church and White, 2006). Sea level is clearly rising, and the rate of increase may in fact be accelerating. Since land can also change elevation due to either uplift or subsidence, global sea level change affects various coastal areas differently. Much of the California coast is rising; however the rate of uplift is, everywhere except northernmost California, lower than the rate of sea level rise. The *relative* historic rate of sea level rise (relative sea level rise is global sea level minus local land uplift or plus local land subsidence) has been calculated by Commission staff to range from a high of 2.16 ± 0.11 mm/yr in San Diego to a low of 0.92 ± 0.17 mm/yr in Los Angeles. Relative sea level is actually falling at Crescent City due to the high rates of tectonic uplift at that locality. (California Coastal Commission, 2001).

  Even the 0.18 to 0.59 meter rise in sea level by 2100 predicted by the IPCC will have a large impact on the California coast. The effects of a much larger increase in sea level due to large contributions from the Greenland and/or Antarctic ice sheet would be truly catastrophic. The 2001 Coastal Commission report concluded:

> *The most obvious consequence of a large rise in sea level will be changes in areas that are submerged. Lands that now are only wet at high tide could be wet most of the day. Structures that are built above the water, like docks and piers, will be closer to the water, or eventually submerged. A second consequence will be an increase in wave energy. Wave energy is a factor of wave height. Wave heights along the California coast are influenced greatly by bottom depths and for most locations along the coast, the heights of nearshore waves are "depth limited". When the water depth increases, the wave height can be higher. Thus, higher waves impact the coast during high tide than during low tide. Wave energy increases with the square of the wave height. Thus, a 2-foot (0.6-meter) wave would have 4 times the energy of a 1-foot (0.3-meter) wave. Small changes in water level can cause significant changes in wave energy and the potential for shoreline damage from wave forces. A 1-foot to 3-foot (0.3 to 0.9 meter) rise in sea level, such as projected to occur over the next 100 years, would cause enormous changes in nearshore wave energy. The consequences of a 1-foot to 3-foot (0.3 to 0.9 meter) rise in sea level are far reaching. Along the California coast, the best analogy for sea level rise is thought to be El Niño, where a significant rise in sea level will be like El Niño on steroids. One of the factors that contributed to the amount of damage caused by the 1982/83 El Niño was that several storms coincided with high tide events and the elevated water levels (from tides and low pressure system combined) brought waves further inland than would have occurred otherwise...*
> *Beaches and Coastal Bluffs: Open coastal landforms like beaches and bluffs will be exposed to greater and more frequent wave attack. There will more potential for erosion and shoreline retreat. For gently sloping beaches, the general rule of thumb is that 50 to 100 feet of beach width will be lost from use for every foot of sea level rise... Some global circulation models predict significant increases in run-off from coastal watersheds in California (Wolock and McCabe, 1999) ...*

In general, erosion of the landward edge of a beach, dune, or coastal bluff creates additional beach area, and so even in a period of sea level rise such as the present, in which the seaward extent of the beach is reduced by flooding and erosion, new beach creation can result in a relatively constant beach width. However, when threats to existing development from erosion lead to the construction of shoreline protective devices that halt the landward migration of the back beach, continued flooding of the seaward beach results in a reduction in beach width. Thus, on beaches experiencing erosion due to rising sea level, the protection of threatened structures will result in the loss of beaches wherever property owners choose to harden the coast to prevent coastal erosion. This loss of beach has immense negative impacts, including loss of recreational value, tourism, marine mammal haul-out area, sandy beach habitat, and buffering capacity against future bluff erosion.

The 2001 Coastal Commission report goes on to indicate other potential impacts of sea level rise on the California coast:

Wetland changes also will be affected by inland development. Historically, wetland areas migrated both upward and landward as they were inundated. If the inland area has a slope and soil composition that can support a wetland and is not already developed, then inland migration may be possible. If there is a steep bluff or some type of fixed development, such as a highway or bulkhead, inland of a wetland, inland migration will not be possible and the wetland area will diminish over time.

Another physical change to wetland in response to a rise in sea level is an increase in the tidal currents, with the potential for increased scour. Also, for estuarine systems there will be a shift in the location of the salt water-freshwater interface, and an inland movement of the zone of brackish water...

Ports, Harbors and Marine Facilities: Much of the infrastructure of a port or harbor will be affected by a change in sea level. So too will marine terminals and offshore structures. All of the horizontal elements, such as the decking of wharves and piers, will be exposed more frequently to uplift forces larger than those occurring now. Compared to current conditions, ships will ride higher at the dock and cargo-handling facilities will have less access to all parts of the ship. Loading and unloading may have to be scheduled for low tide periods to allow greatest access into the ship, or else mooring and cargo handling facilities will need to be elevated.

If breakwaters or jetties protect the harbor, these structures will become less efficient as water levels increase. The breakwaters and jetties will need to be enlarged and heightened to keep up with the rise in sea level, or the harbor will have to accept a higher level of overtopping and storm surge, and a higher probability of storm damage. The increase in water level could also increase the tidal prism of the harbor, resulting in increased scour at the foundations of any structures in the harbor. So, it may also be necessary to reinforce the base of the breakwater or jetty to insure stability. Benefits that could occur from a rise in sea level would be the opportunity for harbors to accommodate deeper draught ships and a decrease in dredging to maintain necessary channel depths.

Seawalls and other engineered shoreline protection: [Seawall] foundations would be exposed to greater scour and the main structure would be exposed to greater and more frequent wave forces. As with breakwaters and jetties, these structures will need to be reinforced to withstand these greater forces, or a lower level of protection will have to be accepted for the backshore property.

- **Ocean Warming:** In December 2006, the Commission held the first in a series of workshops on global warming. One of the well-recognized connections between the atmosphere and the ocean is heat exchange. Global warming of the atmosphere is expected to cause an increase in ocean warming as the ocean absorbs greater amounts of thermal energy from the atmosphere. At the workshop, Dr. James Barry (Associate Scientist,

Monterey Bay Aquarium Research Institute) presented a summary of observed and predicted effects of ocean warming on California coastal ecosystems. Dr. Barry inventoried intertidal animals along the Monterey coast, and compared his results to a 1932 baseline inventory. He found that species that increased in abundance in southern California had increased markedly since the baseline study. Over the same time, there was a dramatic decline in species more associated with northern California. This demonstrates that the observed warming of the ocean over the past 60 years has resulted in a shift in the geographic ranges of species. With continued warming, species can be expected to continue to migrate northward as long as suitable habitat is available.

Some instances of remarkable biodiversity are due to the fortuitous combination of suitable ocean temperature and suitable geomorphic conditions. For example, one of the most diverse shallow water habitats in California is found in the rocky-bottom waters around the northern Channel Islands. This is a zone of mixing of species characteristic of a "southern California realm" and a "northern California realm." The abundant rocky bottom habitat in the shallow waters ringing the islands provides a niche in which this diversity is expressed. If, because of global warming, the suitable temperature zone migrates northward, it will be moved off of the abundant rocky bottom habitat and the diversity and ocean productivity might decrease significantly.

Declines in ocean productivity due to habitat shifts are an indirect consequence of ocean warming. Ocean warming can cause a direct loss of primary productivity as well. Warming of the surface of the ocean results in increased ocean stratification, limiting the upwelling of deep, nutrient-rich waters that are responsible for California's rich coastal productivity. Roemmich and McGowan (1995) report a 1.2 to 1.4 degree centigrade increase in ocean temperature between 1950 and 1994. This was accompanied by a 75% reduction in zooplankton biomass. Reductions in phytoplankton and zooplankton biomass have profound cascading effects throughout the food chain. Short term warming events, such as El Niño events, have resulted in abrupt decline in commercial fish species, marine mammals, and birds (Laws, 1997; Nezlin et al., 2005). Similar effects might accompany global warming on a longer time scale, vastly affecting California's coastal resources.

Ocean warming could also create a disconnect between historic feeding and breeding grounds for many species. Welch and others (1998) reported on potential changes in sockeye salmon distribution due to future global warming. Sockeye salmon, which spend 2-3 years in waters of the northern Pacific, migrate northwards to areas of high productivity, such as the Bering Sea, in the summer. Productivity decreases with temperature increase, however, and as the Bering Sea warms, migration routes would have to be longer. Eventually, the metabolic cost of migrating further northwards to feeding grounds could make the migration infeasible. When summer feeding grounds are disconnected from winter breeding grounds, a population crash may be anticipated. A population crash in such species would not only impact commercial fishing in California, but would ripple up through the food chain, impacting protected coastal resources such as marine mammals and birds.

- **Ocean Acidification:** Just as there is an exchange of thermal energy between the atmosphere and the oceans, there is an ongoing exchange of gases between the atmosphere and the ocean. Each year some 92 billion metric tonnes of CO_2 annually are directly absorbed by the ocean from the atmosphere. At the same time, approximately 90 billion metric tonnes are released back to the atmosphere (Schlesinger, 1997). The net increase in dissolved CO_2 in the ocean is a direct result of increases in the atmosphere related to changes humans are making to the carbon cycle—most notably fossil fuel burning and land use changes (deforestation, mostly in the tropics). The ocean is an enormous reservoir that can absorb a vast amount of CO_2, although the rate of ocean mixing is too slow to prevent the current buildup in the atmosphere. Without this net absorption of CO_2 by the oceans, the atmospheric buildup—and global warming—would be far greater than it is now.

  Over the past 200 years, the oceans have taken up approximately half of the industrial age CO_2 emissions, substantially reducing the net atmospheric concentrations of CO_2. This effect does not come without a cost, however. When CO_2 is absorbed by the ocean, some of it combines with water to form carbonic acid (H_2CO3). This results in only a modest decrease in ocean pH, however, because most of the carbolic acid recombines to form bicarbonate ions (HCO_3). In the process, carbonate ions (CO_3^{-2}) are consumed, with the net result being that absorption of CO_2 by the ocean consumes carbonate ions and reduces the pH of the ocean. The decrease in pH is minor because of the "buffering capacity" of these carbonate reactions, but appears to have decreased mean average surface water pH by 0.1 pH units over the past 200 years (Caldeira and Wickett, 2003). Because the pH scale is logarithmic, this decrease in ocean pH (commonly called "ocean acidification," but more properly referred to as a decrease in alkalinity) means that hydrogen ion activity (which defines acidity) has increased by some 30% in this time frame (The Royal Society, 2005).

  The effects of decreasing ocean alkalinity and carbonate ion concentration are twofold. First, many species are directly affected by the reduction in pH. In his presentation before the Commission in December 2006, Dr. Barry identified several physiologic stresses to which some species are susceptible. These stresses include respiratory stress (reduced pH limits oxygen binding and transport by respiratory proteins, such as hemoglobin, leading to reduced aerobic capacity), acidosis (disruption of acid/base balance which impairs function and requires energy to restore or maintain optimal pH balance), and metabolic depression (reduced pH associated with increased environmental CO_2 can cause some animals to enter a state of torpor or semi-hibernation). In addition to these physiologic effects, calcite-secreting organisms (including many phytoplankton, zooplankton, clams, snails, sea stars, sea urchins, crabs, shrimp, and many others) have more difficulty secreting their shells or tests under reduced carbonate ion concentrations. Deep-sea species will be particularly affected because increasing CO_2 levels in seawater decreases the saturation state of seawater with respect to calcium carbonate ($CaCO_3$) and raises the saturation horizon closer to the surface. The $CaCO_3$ saturation horizon is a depth in the ocean above which $CaCO_3$ can form, but below which $CaCO_3$ dissolves. Increasing surface CO_2 levels could have serious consequences for

organisms that make external $CaCO_3$ shells and plates (The Royal Society, 2005). The consequences of reduced calcification are not fully known, but are likely to include changes to plankton communities, higher metabolic costs for water-breathing species, resulting in lower growth, survival and reproduction, and higher metabolic costs for calcite secreting organisms. The effect on food webs is unclear, but it is very likely that these effects will result in a loss of biodiversity and complexity in California's coastal marine ecosystems.

Analysis of Poseidon's Anticipated Greenhouse Gas Emissions and Poseidon's Response

As noted above, Commission staff estimates that Poseidon's electricity use would generate no less than 200,000,000 pounds **(90,000 metric tons)** of carbon dioxide emissions each year, based on Poseidon's use of approximately 250,000 megawatt-hours per year from the San Diego Gas & Electric Company (SDG&E) energy portfolio. **On the other hand, Poseidon, relying on the California Climate Action Registry (CCAR) Protocol, estimates that its electricity use would generate approximately 61,004 metric tons of carbon dioxide emissions each year, based upon its use of 246,156 megawatt-hours per year from SDG&E, which has a CCAR certified emissions factor of 546.46 lbs of CO2/MWH. Since Poseidon intends to buy all of its energy from SDG&E system power, Poseidon states that the appropriate emission factor to use for the project's indirect carbon emissions from its electricity purchases is SDG&E's annual emission factor for delivered electricity as stated in their CCAR Annual Emissions Report.[149] SDG&E last filed an Annual Emissions Report with the CCAR on March 7, 2007, and it provides an emission rate of 546 lbs of CO2/MWH.** In October 2007, Poseidon submitted several letters and memoranda to Commission staff describing the proposed facility's expected electricity use, some possible measures that would reduce its expected use, and measures that Poseidon may use to address its greenhouse gas emissions. These are described in more detail below.

③

Poseidon's most recent estimates show that it expects the project would use 4,833 kilowatt-hours to produce each acre-foot of potable water, but that this figure would be lowered to about 4,400 kilowatt-hours by implementing measures described below. This includes using the power plant's ~~Unit 4~~ pumps to bring water into the intake channel, pumping that water into the proposed facility, ~~pretreating~~**pretreating** the water, producing desalinated water using reverse osmosis membranes, and pumping the water from the water from the facility to the ~~Maerkle Reservoir~~**delivery points** in Carlsbad **and beyond**. At 4,833 kilowatt-hours per acre-foot, Poseidon's electrical use would total 270,648 megawatt-hours per year.[~~50~~**150**] Poseidon's estimates also show that its expected continual electrical demand would be between 28.1 and 33.8 megawatts, with an average demand of about 30 megawatts. Using these figures, Poseidon's

---

[149] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 23-24.

[~~50~~ **150**] 4,833 X 56,000 acre-feet per year / 1,000 kilowatts per megawatt = 270,648.

electrical use would range from 246,156 to 296,088 megawatt-hours per year, with an average annual use of 262,800 megawatt-hours.[~~51~~151]

Poseidon~~ also described~~**'s Climate Action Plan describes** several measures that it may use to reduce its electrical use. Those measures include a high-efficiency energy recovery device that Poseidon is still testing, but which could reduce its electrical use by about 10%, to about 4400 megawatt-hours per acre-foot of production. Although Poseidon has not yet committed to using this device, the emissions analysis in these Findings credits Poseidon with the emission reductions that would occur due to its use. Using the 4400 megawatt-hour per acre-foot figure would result in Poseidon's electrical use being 246,400 megawatt-hours per year, or approximately 250,000 megawatt-hours per year, which is used as the basis for the analyses in these findings. ~~This~~**On Commission staff's calculation, this** would result in carbon dioxide emissions of about 200,000,000 pounds (~~about~~ 90,000 metric tons) per year.[~~52~~152]

As noted above, the analyses in these Findings do not include several emission sources that could add significantly to Poseidon's total. The analyses do not include emissions resulting from project construction and manufacture of materials used. ③

Recent letters and memoranda from Poseidon (see October 21 and 22, 2007) provide a much lower estimate of its anticipated greenhouse gas emissions. Poseidon **contends**, citing ~~a~~**the** CCAR- **protocol and CCAR** certified ~~emission rate for~~ SDG&E **emissions rate**, ~~contends~~ that its emission rate should be based on 546 pounds of carbon dioxide emissions per megawatt-hour, based on emissions expected from the energy sources in SDG&E's energy supply portfolio. This would result in about 134,400,000 pounds (~~about 60,000~~**61,000** metric tons) of carbon dioxide per year instead of 200,000,000 pounds **(90,000 metric tons)**. However, **in Commission staff's view,** in comparing the SDG&E portfolio with the CCAR's average California portfolio, the SDG&E portfolio appears to result in an even higher emission figure than the California average.[~~53~~153] For example, coal and natural gas, which have average emission rates much higher

---

[~~51~~ 151] At a steady rate of electrical use, 30 megawatts X 24 hours per day X 365 days per year = 262,800.

[~~52~~ 152] Based on the CCAR average rate of 804.54 pounds per megawatt-hour of carbon dioxide emissions from California's electrical sources.

[~~53~~ 153] Poseidon provided the following percentages of SDG&E's electricity sources, and the California averages are from the California Energy Commission's *2006 Gross System Power Report*:

Resource Type:	SDG&E Percent:	State Percent:
Coal	18.0	15.7
Natural Gas	50.0	41.5
Large Hydro	10.0	19.0
Nuclear	15.0	12.9
Biomass	3.0	2.1
Geothermal	2.0	4.7
Small Hydro	<1	2.1

than 804.54 pounds per megawatt-hour,[~~54~~154] make up a larger proportion of San Diego's portfolio than the state portfolio. Additionally, SDG&E testimony before the California Public Utilities Commission suggests its carbon dioxide emissions are in the range of 1100 pounds per megawatt-hour, based on an average of a range of natural gas technologies and heat rates.[~~55~~155] Elsewhere, SDG&E's emissions are cited as 915 pounds per megawatt-hour for electricity it purchases.[~~56~~156] ~~It appears~~**Commission staff**, therefore, ~~that Poseidon's calculations are~~**contends that the CCAR certified emissions rate for SDG&E may be** in error. The **CCAR certified** figure~~it uses~~ is derived from SDG&E's 2005 self-reported Annual Entity Emissions report, which states that SDG&E expects emissions of 546 pounds per megawatt-hour from owned and purchased generation sources; however, that figure is not supported by other SDG&E sources or by other agencies, including the California Energy Commission and State Lands Commission, in their determinations related to emissions from different types of electricity sources. For example, the State Lands Commission in its October 30, 2007 hearing used 815 pounds per megawatt-hour as the basis of its review, with a "best-case" low emission rate of 690 pounds and a high rate of 1100 pounds. **Poseidon submitted evidence demonstrating that the CCAR calculations of 546 pounds per megawatt-hour are not in error, however, since CCAR is the only state agency that is authorized by the California State Legislature to establish protocols for establishing carbon emission baselines, and the source of the derivation comes from SDG&E's credible self-reported Annual Entity Emissions report.**[157] ③

In selecting an appropriate rate to use for these analyses, Commission staff **states that it** used the standard figure from the Climate Action Registry~~, which is the lowest of these credible emission rates,~~ to establish Poseidon's 200 million pound contribution to greenhouse gas emissions.[~~57~~158] ~~Based on the above, the Commission believes the basis of Commission staff's calculations are an appropriate, if not a low, estimate of carbon dioxide emissions resulting from Poseidon's proposed electricity use. Even so, because SDG&E reports its overall emission rate on an annual basis and that rate changes based on the particular mix of electricity sources SDG&E uses each~~

Solar	<1	0.2
Wind	3.0	1.8

[~~54~~154] Natural gas emissions range from about 800-1200 lbs/megawatt-hour, and coal emissions are more than 2000 lbs/megawatt-hour.

[~~55~~155] See page 12 of the *Prepared Rebuttal Testimony of San Diego Gas & Electric Company – J. Strack*, in the CPUC's Application No. 06-08-010 for the Sunrise Powerlink Transmission project, June 25, 2007.

[~~56~~156] See Powers, Bill, *Assessment of Energy Intensity and CO2 Emissions Associated with Water Supply Options for San Diego County*, October 12, 2007.

157 See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 23-24.

[~~57~~158] Using the next higher credible estimate (1100 pounds per megawatt-hour) would result in Poseidon's emissions being closer to 300,000,000 pounds per year.

~~year, the rate used to determine Poseidon's greenhouse gas contributions each year is at this point unknown but will be determined through Commission review and approval of Poseidon's Energy Minimization and Greenhouse Gas Reduction Plan as described later in these Findings.~~**Poseidon disagrees, stating that Commission staff did not follow the CCAR protocol or rely on the CCAR certified SDG&E emissions factor.[159] Because CCAR is indeed the only state agency that is authorized by the California State Legislature to establish protocols for establishing carbon emission baselines, Poseidon contends that the Commission staff's analysis is in error.**

In its October 21, 2007 memorandum~~ and in~~**, Exhibit D to** its November ~~15,~~**9,** 2007 **letter to the Commission, and in its** presentation to the Commission **at the November 15, 2007 hearing**, Poseidon presented its **voluntary** proposal to offset or reduce the proposed project's energy use and greenhouse gas production so that the facility's operations would be net carbon neutral. Poseidon states that it will develop a Climate Action Plan that **(1) would ensure the project minimizes energy consumption in compliance with Coastal Act Section 30253(4), and (2) would voluntarily render the project net carbon neutral. Poseidon's Climate Action Plan** may include the following, which are described in more detail below:

Energy Minimization Measures:

- Installing a state-of-the-art high efficiency energy recovery system~~, including improved energy efficiency for the proposed project.~~ **that will decrease the amount of energy required by the facility by 10% or about 433 kWh/AF.**

- Evaluating the proposed project through a LEED-type process, and implementing as many of the LEED Checklist items as feasible ("LEED" is the "Leadership in Energy and Environmental Design" program).

- Installing variable- frequency drives on the ~~desalination~~ intake water pumps **of the desalination plant** to improve the~~ir~~ energy- efficiency **of these pumps**.

- ~~Installing~~**Installation of** low-friction piping materials (~~e.g.,~~ FRP and HDPE) where**ver** possible to reduce head losses and **related** energy ~~needed to move water~~**consumption** through the ~~pipelines.~~ **piping.**

Carbon Neutrality Measures:

---

[159] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 23-24.**

- Acquiring renewable power ~~by installing solar photovoltaic~~**through installation of PV array** and other renewable ~~energy~~ sources.
- Acquiring Renewable Energy Credits (RECs) or purchasing carbon offset projects.
- Restoring and preserving coastal wetlands for carbon sequestration.
- ~~Planting~~**Providing $1million worth of** trees ~~to reforest burned areas~~**for reforestation** in the San Diego area.

As noted previously, Poseidon initially estimated that its facility would require 4,833 kilowatt-hours of electricity to produce each acre-foot of potable water (kWh/AF) and transport that water to ~~the~~**delivery points in** Carlsbad ~~reservoir~~**and elsewhere**. This figure would otherwise be somewhat higher – about 5,990 kWh/AF – however, Poseidon plans to use an energy recovery turbine to reduce electricity demand by about 1,103 kWh/AF. Poseidon is also exploring the use of a relatively new energy recovery device known as a pressure exchanger, which it expects could reduce electrical use by an additional 10%. This would result in electrical usage of about 4,400 kWh/AF and would reduce Poseidon's expected carbon dioxide emissions to somewhat greater than 200 million pounds ~~per year~~**(90,000 metric tons) per year according to Commission staff's calculations, or 134 million pounds (61,000 metric tons) per year per CCAR**. It would clearly be to Poseidon's advantage to use any cost-effective energy efficiency devices available to reduce its operating costs, and ~~although~~ Poseidon has ~~not yet~~ committed to use this device, **and** the emission estimates in these Findings ~~already~~ credit Poseidon with the emission reductions that would result from its use. ③

Poseidon is also exploring a number of other energy efficiency measures, including installing variable speed pumps, installing high efficiency lighting and motors throughout the facility, and using low-friction piping material and installing larger diameter piping where possible. It is proposing to implement as many LEED items as feasible, including providing bicycle storage, using water efficient landscaping, providing recycling capability, using low-emission adhesives and sealants, etc. It is also considering installing a rooftop solar energy system. The Commission supports Poseidon's proposed use of the LEED guidelines, as implementing LEED-related measures would likely provide numerous benefits; however, those guidelines would not result in **significantly** lower emissions from Poseidon's anticipated electrical use. Further, Poseidon has not yet committed to these measures.

Poseidon also states that it could further reduce its energy use by operating at 80% capacity during the eight hours per day of peak electricity demand and then operate at 108% of its average capacity during the remaining hours each day.[~~58~~**160**] This proposed operating scenario, however,

---

[~~58~~ – **160**] An annual daily average of 50 MGD equals 2,083,333 million gallons per hour. Operating at 80% capacity for eight hours would produce about 16.6 million gallons, and operating at 108% capacity for sixteen hours would

would not necessarily reduce energy use or emissions; it would instead shift energy use from one time of day to another. This would be beneficial in that it would lower Poseidon's electricity costs and reduce demand on the electricity grid during those peak hours, but Poseidon would still produce about the same amount of water each day requiring the same amount of electricity for each acre-foot.

Poseidon further contends it should be credited with emission reductions because its project would result in less water being transported to the San Diego region from the State Water Project. Although the State Water Project emits fewer emissions per acre-foot than Poseidon's project would, applying a credit for this foregone use would lower Poseidon's overall greenhouse gas contributions by about ~~40~~**77**% (i.e., the difference between Poseidon's 4400 kilowatt-hour per acre-foot energy use and the State Water Project's ~~3200~~**3400** kilowatt-hour per acre-foot).[161] **Poseidon states that the Carlsbad facility will supply 56,000 acre-feet of water per year to the San Diego region, water that would otherwise have to be pumped into the region through either the State Water Project or the Colorado River Aqueduct. Poseidon further provides, as stated by all Carlsbad desalination project water agency partners in letters to the State Lands Commission dated November 6 and November 7, 2007, which were also provided to the Coastal Commission, that water from the desalination plant will provide direct, one-for-one replacement of imported water to meet the requirements of their Urban Water Management Plans, thus eliminating the need to pump 56,000 acre feet of water into the region.[162] Conversely, if the project is not approved the demand for imported water by the eight public water agencies will increase by 56,000 AF/Y starting in 2010. Additionally, Metropolitan Water District of Southern California (MWD) has committed to pay Poseidon's customers $250/AF for each acre-foot of water purchased from the project that offsets a demand on MWD. The availability of MWD funding is subject to annual audit demonstrating that the desalinated water was used to offset a demand for imported water that would otherwise have to be delivered by MWD. Poseidon concludes that, if the replaced water is pumped into the region for other uses, then the associated carbon emissions from such pumping should be and is the responsibility of the proponents of those other uses. Any other result would be an unfair and unwarranted "double counting" of** ③

---

produce about 33.3 million gallons, for an overall total of about 49.9 MGD. Since the energy required to produce each acre-foot is about 4400 kilowatt-hours, the overall energy difference between continual production of 50 MGD (153.4 AF) and variable production of 49.9 MGD (153.1 AF) would be minimal.

[161] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. D (Climate Action Plan) at p. 4.**

[162] **See Poseidon Resources Corporation. Letter to Paul Thayer Re: Desalination Project's Impact on Imported Water Use, November 8, 2007, including attachments from eight water agencies.**

carbon emissions, requiring Poseidon to offset emissions caused by other activities not associated with its own operations.[163]

For several reasons, however, the Commission ~~finds~~**staff believes** this "crediting" approach is not warranted. First, Poseidon's proposed project does not ensure a decrease in imported water supplies to the San Diego Region.[~~59~~164] Other factors may contribute to such a decrease – e.g., supply cutbacks imposed by court order, a shift in water prices, etc. – but Poseidon's project itself does not include measures that would implement such a decrease, such as retiring distant water rights or assigning water rights to instream uses. Poseidon acknowledges that the State Water Project would continue to pump available water to Southern California users, but then argues that it should still be credited for what would then be a non-existent reduction in emissions. Additionally, because Poseidon's water would be more expensive than imported sources, available imported water would likely remain the water of choice for most users, and so Poseidon's project would not likely affect the cost preference for imported water (e.g., the San Diego County Water Authority has contracted with the Imperial Irrigation District for up to 200,000 acre-feet per year – about 175 MGD – at less than $300 per acre-foot). Further, much of the water imported to San Diego comes from the Colorado River, which requires about a third less electricity than water imported from the State Water Project (approximately 2,000 kilowatt-hours per acre-foot versus 3,100 kilowatt-hours per acre-foot), so even if "crediting" was appropriate, it would be at a much lower level than Poseidon proposes. ③

Poseidon further contends that its project should be seen as part of a proposed regional water supply portfolio that would result in an overall reduction of electrical use and greenhouse gas emissions from the area's water use. Poseidon states that the planned shift in the San Diego region's water portfolio – using less imported water, gaining water through conservation, recycling, and canal lining projects, using seawater desalination, etc. – will result in an overall 19% reduction in the energy use per acre-foot now used for the region's water supply. While such a shift would likely reduce overall electrical use and emissions, those measures are not a part of Poseidon's proposal and those components of the proposed future portfolio would not reduce Poseidon's ~~200 million pounds of~~ carbon dioxide emissions.

In sum, **in Commission staff's view,** the electrical demand of Poseidon's proposed project would contribute ~~approximately 200 million pounds of carbon dioxide annually. However, Poseidon states that it will develop a plan that may include three additional types of "offsets":~~**no less than 200 million pounds (90,000 metric tons) of carbon dioxide annually, and Poseidon's calculations, based on the CCAR protocol, estimate approximately 134,400,000 pounds (61,000 metric tons) of carbon dioxide emissions annually. Poseidon and the**

---

[163] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 24.**

[~~59~~ 164] We note that the San Diego County Water Authority continues to seek out additional imported water sources that would be used regardless of Poseidon's project.

Commission staff will consult with CCAR and CARB and other agencies to ensure that the carbon emissions will be neutralized regardless of the actual output, and Special Condition 10 will assure that all net greenhouse gas emissions will be offset.

As described above, Poseidon's Climate Action Plan presents a variety of measures it is exploring to reduce the plant's energy consumption, in compliance with Coastal Act Section 30253(4). Although the Plan does not currently commit to specific energy minimization measures, Poseidon is still exploring its options in regard to energy minimization, and the Plan does commit to specific energy reductions. ③

To ensure Poseidon's proposal will minimize energy consumption in conformance with Coastal Act Section 30253(4), Special Condition 10 requires Poseidon, prior to issuance of its coastal development permit, to submit to the Commission for review and approval a revised Energy Minimization and Greenhouse Gas Reduction Plan. That Plan is to be developed in conjunction with Coastal Commission staff and staff of other interested agencies and is to describe the procedures and mitigation measures that will be implemented to minimize energy consumption of the desalination facility.

As noted above, Poseidon's Climate Action Plan further voluntarily provides a commitment that Poseidon will render the project "net carbon neutral" through measures including:

- Acquiring Renewable Energy Credits (RECs)
- Purchasing carbon offset projects
- Restoring and preserving coastal wetlands for carbon sequestration
- Providing $1 million worth of trees for reforestation in the San Diego area.

Poseidon states that it would consider purchasing RECs, which are credits bought and sold in an open market and used to fund renewable energy sources. For example, a renewable energy provider can be credited with one REC for every megawatt it produces, and can sell its RECs to make up some of the difference between the generally higher-cost energy produced from the renewable source and the generally lower-cost energy produced by a conventional fossil fuel source.[~~60~~165] Carbon offsets are similar, in that they can be purchased through various market

---

[~~60~~165] Recent REC prices have ranged from about $5 to $90 per megawatt-hour, with an average cost in 2006 of about $20 (see U.S. Department of Energy, Energy Efficiency and Renewable Energy website at: http://www.eere.energy.gov/greenpower/markets/certificates.shtml?page=1). Based on the average 2006 cost, offsetting Poseidon's anticipated use of 250,000 megawatt-hours per year would require it to purchase $5 million worth of RECs, equal to about $90 for each acre-foot of water it produced.

systems – non-profit or for-profit organizations, formal trading systems, etc. – and used for projects that reduce atmospheric carbon, such as energy conservation projects, methane capture, reforestation, etc. One method of offsetting carbon emissions involves sequestering carbon in growing plants, either through reforestation, or as Poseidon describes, through restoring and preserving coastal wetlands.[~~61~~] As part of its proposal, Poseidon has committed to purchase one million dollars worth of native and non-invasive trees to be planted in areas of San Diego County that were burned during the October 2007 wildfires. However, Poseidon has not provided further details about the type or amount of emission credits it would purchase or what kinds of emission reduction projects it would undertake. An additional concern is that there are only limited methods currently available for offsetting emissions, and it may be necessary to commit those offsetting measures to existing and critically needed facilities rather than a proposed and highly energy-intensive use such as this desalination facility. ~~Further, rather than use offsets, Poseidon would be better able to conform to the Coastal Act Section 30253(4) requirement by including with its proposed project an energy conservation plan that commits to specific measures it will take to minimize energy use and its associated greenhouse gas emissions. A plan focusing on onsite and offsite energy conservation measures that result in an annual 200 million pound decrease in carbon dioxide emissions would be most closely related to Section 30253(4)'s mandate to minimize energy use. If those measures are inadequate, the plan could then provide offsets for the remaining emissions.~~

To ensure Poseidon's proposal will avoid and offset the adverse coastal resource impacts noted above ~~and will conform to applicable Coastal Act provisions~~, **Special Condition 10** requires Poseidon, prior to issuance of its coastal development permit, to submit to the Commission for review and approval a revised Energy Minimization and Greenhouse Gas Reduction Plan. That Plan is to be developed in conjunction with Coastal Commission staff and staff of other interested agencies and is to describe the procedures and mitigation measures that will be implemented to determine the amount of carbon dioxide emitted due to Poseidon's electrical use and to ensure that that project operations are "net carbon neutral". These may include measures described above and others, such as confirmed use of renewable energy sources like solar or wind power that would reduce the project's carbon footprint. ③

Conclusion

Special Condition 10 requires Poseidon to submit to the Commission for review and approval a Revised Energy Minimization and Greenhouse Gas Reduction Plan that addresses comments submitted by the staffs of the Commission, State Lands Commission and the Air Resources Board prior to issuance of the permit. The Commission finds that imposition of **Special**

[~~61~~] ~~To provide a comparison, the U.S. EPA and U.S. Agency for International Development Climate Technology website calculates that sequestering 200,000,000 pounds of annual carbon emissions each year requires about 75,000 acres of growing forest (see www.usctegateway.net).~~

Condition 10 will ensure ~~the project will minimize~~**that Poseidon minimizes** energy consumption ~~and mitigate the~~**of the project and mitigates any** effects of the project's emissions on coastal resources~~. Therefore~~ **and that**, as mitigated~~ and conditioned~~, the project is consistent with the requirements of Section ~~30253(4) and other relevant Coastal Act provisions.~~**30253.** The proposed project is meant in part to respond to the threat of drought and dwindling water supplies, and with adequate minimization and compensatory mitigation measures, the project will help achieve those goals. Poseidon's revised plan shall establish that the project will avoid, minimize, or mitigate adverse impacts to a wide range of coastal resources~~, including public access, recreation, marine resources, wetlands, ESHA, agriculture, natural land forms, and existing development associated with its minimized and mitigated energy consumption~~. Based on the above, the Commission finds that the project, as conditioned, will conform to Coastal Act provisions related to minimizing energy use and ~~mitigating the~~**any** adverse effects on coastal resources from greenhouse gas emissions.

③

4.5.6 Development and Public Services (Coastal Act Sections 30250 and 30254)

Coastal Act Section 30250(a) states:

> *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.*

Coastal Act Section 30254 states:

> *New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.*

Coastal Act Section 30250(a) generally requires that new industrial development, such as the proposed project, be sited in developed areas able to accommodate it or in areas with adequate public services and where it will not result in significant adverse effects to coastal resources. The facility would be located on an existing industrial site in an area with public services provided. Coastal Act Section 30254 requires in part that development not preclude public works facilities able to accommodate only limited new development from providing essential public services. Taken together, these policies are meant to ensure, in part, that new development not outpace the ability of communities to provide necessary public services and that development be supportive of other coastal resources.

The project's capacity of 56,000 AFY of new water supply for the San Diego region is about ten percent of 500,000 AFY of desalinated water identified by the California Department of Water Resources as needed by 2030, as stated in its 2006 Water Plan Update. This Update lists the project as a potential source of desalinated water. The Metropolitan Water District of Southern California's Integrated Water Resources Plan identified a need for 250,000 AFY of seawater desalination (including 56,000 AFY from the Carlsbad project) to ensure regional water supply reliability. In addition, the San Diego County Water Authority updated its 2005 Urban Water Management Plan in April 2007 specifically to reaffirm the need for 56,000 AFY of seawater desalination from the project by 2011. The project is a central component of state, regional and local water supply planning to meet already-identified demand.

The only city within the coastal zone that the project will serve with drinking water is Carlsbad. All other entities that have contracted to purchase water from the project will utilize the water outside of the coastal zone. The City of Carlsbad has adopted a Growth Management Plan that aggressively manages and controls growth in Carlsbad. *See* Carlsbad Municipal Code Title 21, Chapter 90, Growth Management; Carlsbad General Plan, Land Use Element. The Plan caps existing and future development and the maximum size of Carlsbad at 54,600 dwelling units. Carlsbad Municipal Code § 21.90.185. The Plan was approved by Carlsbad voters in November 1986 and cannot be revised without a new vote. Thus, the availability of water from the project cannot and will not induce growth beyond Carlsbad's and the region's limited, already planned growth and the project complies with Coastal Act Sections 30250(a) and 30254.[166] ⑤

The proposed project conforms to Sections 30250(a) and 30254 because ~~its significant~~**any** adverse effects to coastal resources will be mitigated as described in other sections of these Findings~~. These effects include the project's adverse entrainment and impingement impacts, its "take" of marine life, its discharge-related effects to coastal water quality, and the effects of its greenhouse gas emissions on coastal resources, all of which will be addressed through mitigation~~

---

[166] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 27.

~~plans that further Commission review and approval will ensure conformity to applicable Coastal Act policies~~. Regarding growth implications, the Commission finds that ~~while the project itself does not include information needed to determine the expected rate or location of growth associated with its water production,~~ the project will not induce growth since Poseidon will be selling **almost all of** its produced water to various public water districts. In this instance, ~~it is the~~ use of that water by those districts ~~that will determine growth, which~~ will be subject to the applicable current and future growth plans, allowable levels of build-out, and conservation plans adopted by those districts or by the local jurisdictions they serve. **The project provides a significant percentage of the water supply that the California Department of Water Resources has already identified as needed in the area. The project does nothing to induce growth, but rather, concentrates on providing a secure water supply for a region importing 85% of its water, and whose sources of imported water are threatened. Accordingly, the project is a needed component of and is consistent with state, regional and local water supply planning to meet an already-identified demand.** ⑤

Conclusion

Based on the above, the Commission finds that the project **will not have growth-inducing impacts in the coastal zone, and,** as proposed and conditioned conforms to Coastal Act Sections 30250 and 30254.

4.5.7 Coastal-Dependent "Override" (Coastal Act Section 30260)

Coastal Act Section 30101 states:

> *"Coastal-dependent development or use" means any development or use which requires a site on, or adjacent to, the sea to be able to function at all.*

Coastal Act Section 30260 states:

> *Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division. However, where new or expanded coastal-dependent industrial facilities cannot feasibly be accommodated consistent with other policies of this division, they may nonetheless be permitted in accordance with this section and Sections 30261 and 30262 if (1) alternative locations are infeasible or more environmentally damaging; (2) to do otherwise would adversely affect the public welfare; and (3) adverse environmental effects are mitigated to the maximum extent feasible.*

Coastal Act Section 30260 provides for special consideration of coastal-dependent industrial facilities that may otherwise be found inconsistent with the Coastal Act's Chapter 3 policies. Such coastal-dependent proposals must first be evaluated for consistency to all other applicable

policies and standards contained in Chapter 3. If a proposal is found to be inconsistent with any Chapter 3 policy, Section 30260 provides that it may be approved, notwithstanding its inconsistencies with those other policies, but only upon application of a three-part test – (1) that alternative locations are infeasible or more environmentally damaging; (2) that adverse environmental effects are mitigated to the maximum extent feasible; and (3) that to do otherwise (i.e., to deny the project) would adversely affect the public welfare.

Poseidon's proposed seawater desalination facility would be a coastal-dependent industrial facility, as it would need to be sited on or adjacent to the sea in order to function at all. ~~Additionally, as~~**As** determined previously in these findings, the Commission has found that the proposed project would ~~not~~ conform to **all applicable policies in** the ~~allowable use criteria of Coastal Act Section 30233(c). Because~~**Coastal Act. Thus, the Commission may approve the CDP without reaching the Coastal Act "override" section, Section 30260. Nonetheless, even if the project were not consistent with all relevant Coastal Act policies, because** the proposal would be a coastal-dependent industrial facility, the Commission may apply Section 30260 to "override" ~~those~~**any** inconsistencies and nonetheless approve the project if the three tests of Section 30260 can be met. Each of the three tests is applied below.

Test 1 – Alternative Locations are Infeasible or More Environmentally Damaging

Under Section 30260, the project can be approved if the Commission finds there are no alternative locations that would lessen the project's environmental impacts ~~caused by the project's nonconformity to the use prohibitions of Section 30233(c)~~. Previously in Section 4.5.1 of these Findings, the Commission found that there are no feasible alternative locations that would significantly reduce **any** impacts of the proposed intake and the outfall. 4

Based on the analysis provided previously in these Findings, the Commission finds that there are no feasible and less environmentally damaging alternative locations available for the project's seawater intake and discharge components and that the proposed project meets the first test of Section 30260.

Test 2 – Adverse environmental effects are minimized to the maximum extent feasible

Section 30260's second test requires that a proposed project include maximum feasible mitigation measures ~~to address its nonconformity to the use limitations of Section 30233(c)~~. Poseidon's proposal meets this test of Section 30260 through imposition of ~~several **Special Conditions** meant to protect marine life and water quality and to minimize the project's effects of coastal resources due to its contributions to global warming, including **Special Conditions 8, 9, 10, 12, 15, 16, and 17**. These conditions – which include, for example, a requirement that Poseidon submit for Commission review and~~**Special Conditions 4 (Other Agency Approvals),**

8 (Marine Life Mitigation Plan), 9 (Seawater Withdrawal), 10 (Energy Minimization and Greenhouse Gas Reduction Plan); 11 (Public Access), 12 (Dredging), 13 (Visual Resources), 15 (Construction Plan), 16 (Storm Water Pollution Prevention Plan) and 17 (Water Quality), which, among other protections, impose requirements that Poseidon implement mitigation measures that will minimize potential adverse environmental effects to the maximum extent feasible. Those conditions will, among other things, require Poseidon to: (1) submit to and obtain from the Commission approval **of** a Marine Life Mitigation Plan ~~to mitigate to the extent feasible its impacts to marine life, submit separate coastal development permit applications for any future proposed dredging activities, submit for Commission review and~~**in the form of an amendment to the CDP that will not only fully mitigate project-impacts, which were conservatively estimated and did not take into account the persistence of abundant and diverse marine life in Agua Hedionda after 50 years of EPS intake operations, but will also significantly enhance the marine environment by creating habitats for species unaffected in any manner by intake flows; (2) submit to and obtain from the Commission** approval ~~an~~**of a revised** Energy Minimization and Greenhouse Gas Reduction Plan ~~that results in reduction of the project's effects on coastal resources, submit for Executive Director review and approval a construction plan, stormwater control plan, and water quality technical report that specify measures that will be implemented to avoid or minimize adverse water quality and marine life impacts – will ensure that~~**, which will reduce the project's green house gas emissions to the maximum extent feasible through Poseidon's voluntary agreement that the project will be net carbon neutral; and (3) submit a separate CDP to the Commission for future dredging of the Lagoon so that the Commission can ensure that future dredging is consistent with the Coastal Act. Poseidon contends that any maintenance dredging in the Lagoon will prevent the Lagoon from closing due to sedimentation from urban run-off. Thus, future maintenance dredging of the Lagoon will serve to enhance the marine environment and is consistent with Coastal Act Section 30233(c). Together, the Special Conditions mitigate to the maximum extent feasible the project's impacts to marine life, and will mitigate the impacts resulting from** Poseidon's nonconformity to Coastal Act Section 30233(c)~~ is mitigated to the maximum extent feasible~~**, which requires that activities "maintain or enhance the functional capacity" of wetlands and estuaries**.

④

Based on the above and on the previous Findings herein, the Commission finds that the proposed project as conditioned mitigates its impacts to the maximum extent feasible and that it meets the second test of Section 30260.

Test 3 – To not permit the development would adversely affect public welfare

Section 30260's final test provides that coastal-dependent industrial development may be permitted if to do otherwise would adversely affect the public welfare. This test requires more than a finding that, on balance, a project as proposed is in the interest of the public. It requires that the Commission find that there would be a detriment to the public welfare were the

Commission to deny the project. The Commission recognizes that it is clearly in the interest of the San Diego region to develop local and reliable water sources and that seawater desalination is a part of this portfolio.

For the reasons below, the Commission finds that denial of the proposed project is not in the public interest.

- **Effects of environmental impacts on public welfare:** As shown previously in Section ~~4.5.2 of these Findings, use of the intake is not an allowable use of~~**4.5.2, use of the intake and any maintenance dredging will serve to benefit** Agua Hedionda Lagoon and would ~~not~~ conform to Section 30233(c). ~~However, through~~

  Through imposition of **Special Conditions 8 and 10**, the Commission finds that the project as mitigated will address the need to improve marine life productivity and will therefore be consistent with the goals of Section 30233(c) to maintain and enhance productivity. ~~The lagoon~~**In addition, the imposition of Special Condition 12 requires Poseidon to obtain separate coastal development permits for any proposed future dredging activities in the Lagoon. The Lagoon** also provides many beneficial uses to the public that this project will support through continued and increased opportunities for public access, ongoing use for marine life science and research, and others. ~~Additionally, **Special Condition 12** requires Poseidon to obtain separate coastal development permits for any proposed future dredging activities in the lagoon, which will ensure those activities conform to applicable Coastal Act provisions.~~

④

- **Public welfare as applied to public or private water supplies:** As noted in the Commission's 2004 report, Seawater Desalination and the California Coastal Act:

  A fundamental Coastal Act principle is that many coastal resources are imbued with a public interest and value that must be vigorously protected for the benefit of current and future generations. Unlike many coastal resources that are privately owned, ocean water, and the uses and values it embodies, constitute a public trust resource held in common for public use and enjoyment. This principle is codified in numerous federal and state laws and regulations, including the Coastal Act... Notwithstanding the public nature of coastal ocean waters, use of such waters and of living and non-living resources in and under them have historically been allowed for non-public purposes.

  Ocean water serves a number of beneficial uses and vital environmental, social, and economic functions. It is part of the shared public "commons", it serves as habitat for a multitude of species, it is a source of food and livelihood for society, and it is used to support transportation, commerce, recreation, and other important societal uses. For the most part, these uses are non-consumptive and sustainable, in that

using ocean water for one of these purposes does not necessarily impair its ability to be used for others.

Privatization of water supplies, in and of itself, may not cause effects on coastal resources different than those caused by a public agency. Most differences would be due to how each type of entity implements its water use. Both public and private projects may include particular characteristics that change how they affect resources and how they meet the public interest. Further, California has recognized there is a role for private water purveyors and for providers of other basic utilities such as gas and electricity. The state has a system to regulate public and private utilities to ensure that public interests are being met.

Private entities can clearly bring benefits to public agencies. One of the benefits stated by the public agencies involved with Poseidon's proposed project is that Poseidon is willing to provide the initial capital investment and obtain the approvals needed to build and operate the facility, which can represent a significant savings to public agencies. However, this benefit comes with risks and costs, as noted by the Commission in previous decisions.

The Commission in the past has both approved and denied proposed private desalination facilities. For example, it approved a privately-owned facility on Catalina Island in part because there were no feasible alternatives for the proposal. In 1994, the Commission denied construction of a private desalination facility (A-3-SNC-94-008-E2, Sterling Center in the City of Sand City) based in part that it would result in fragmentation of public works facilities. In 1995, the Commission's Findings for an adopted LCP amendment to the Santa Barbara Coastal Program stated: "Private desalination facilities also raise the basic policy question of the effect of allowing the proliferation of privately owned and operated water supply facilities on the ability to comprehensively plan for the provision of essential public services". Those Findings go on to express concerns about the abilities of private owners to operate and be accountable for desalination operations, to mitigate associated impacts, to maintain the facility in a manner necessary for public health and environmental safety, and other issues. The Findings also state that proliferation of private desalination facilities could fragment public utility services.[~~62~~**167**] They conclude by stating that proliferation of such facilities where consolidation is feasible is inconsistent with the Coastal Act. In 1997, the Commission found in its consideration of a LUP update in San Luis Obispo County that a proposed desalination facility would be inconsistent

---

~~62 Poseidon's proposed project has already affected the ability of the regional public water agency to provide public services. At about the time Poseidon had proposed its facility~~[167] **However**, the San Diego County Water Authority ~~proposed a similar desalination facility at the same site as Poseidon proposal; however, after several months of attempted collaboration, the Authority was unable to reach agreement with Poseidon and ended its attempt to construct a publicly-owned facility. Absent Poseidon's proposal, or possibly with Poseidon's cooperation, the site may have served as a publicly-owned facility.~~**supports the desalination facility and passed a resolution on June 28, 2007 in support of the Project finding that "The Carlsbad Desalination Project is essential to the Water Authority's ability to achieve the supply diversification goals contained in the 2005 UWMP [Urban Water Management Plan]."**

4

with Coastal Act policies because it would provide for continued urban development that could not be supported by existing water supplies.

The recent history of privatizing water services has identified some of these risks and has resulted in some key questions about such proposals: Will there be adequate public oversight and monitoring, and transparency in decision-making and financial issues?; What measures will ensure that ecosystem values are protected?; How will privatization affect initiatives related to water-use efficiency and conservation?; and, What happens if it doesn't work?[~~63~~**168**]

Regarding transparency in decision-making and financial issues, both the State Desalination Task Force and the California Resources Agency have recognized that private desalination proponents should disclose the same information as that disclosed by public entities.[~~64~~**169**] Public water districts are required by law to publish financial statements that disclose the basis of a district's revenues, costs, cash flow, and other basic economic data that describe the financial health of the district. These statements are public documents and serve to inform the public about the basis for a district's rates, the need for additional funding for various projects, etc. Many districts provide this information on their websites, along with meeting agendas, meeting minutes, information about health and safety-related characteristics of their water supplies, and other information useful to the public to find out about its water and about the important decisions to be made about its water supply. **Poseidon's water purchase agreements with the eight municipal water agencies who will be purchasing water from the project are public documents, which provide the public with transparency regarding the project's financial relationships with the agencies.**[**170**]

~~Poseidon, as a private entity, is not required to disclose nearly that amount of information, and it has not disclosed requested information relevant to determining its expected costs for providing water or its ongoing capability to provide a reliable source of water. Although various public entities reviewing the proposed project have requested this information, Poseidon has not provided it for public review. As noted previously in these Findings, Poseidon provided only a minimal and inadequate response to Commission staff's request for some of this information, thus limiting the ability to fully evaluate the proposed project. As recently as October 2007, one of the water agencies that agreed to purchase water from~~

④

[~~63~~ **168**] See the Pacific Institute's report, *The New Economy of Water: The Risks and Benefits of Globalization and Privatization of Fresh Water*, February 2002.

[~~64~~ **169**] See State Desalination Task Force recommendations and March 15, 2004 letter from Resources Secretary Mike Chrisman to Coastal Commission.

[**170**] **See Reporter's Transcript of Proceedings, Application No. E-06-013, November 15, 2007, Agenda Item No. 7.a., at p. 275-276.**

~~Poseidon asked for Poseidon's financial information but was refused.[65] Further, as described previously in these Findings, much of the information Poseidon has provided does not appear to accurately account for project costs.~~

~~Poseidon's non-disclosure raises significant concerns about the known and potential burdens this proposed project would create for public agencies and ratepayers. Its non-disclosure also goes against the guidance provided by the numerous public agencies and water-focused interest groups that were a part of the State's Desalination Task Force. As shown earlier in these Findings, those cost estimates Poseidon has made available show that its expectation of providing water at or below the cost of imported water is not likely to be met any time in the near future. Unless there is a drastic and unexpected increase in the cost of imported water or a similarly drastic decrease in the cost of seawater desalination, public agencies wishing to buy Poseidon's water will need to pay more than anticipated and may likely need to raise their rates significantly.~~

~~In a recent news article (November 11, 2007, in the North County Times), Poseidon stated that it will operate at a loss until the cost of imported water exceeds that of its desalinated water, which it now believes will cost up to $1050 per acre-foot. Given the cost trends and concerns identified previously in Section 2.2 of these Findings, it is not apparent that the cost of imported water and desalinated water will converge any time soon.~~ However, as noted previously in Section 4.2 of these Findings, Poseidon's contracts with the ~~City of~~ Carlsbad **Municipal Water District** provide that the ~~City~~**Water District** could assume operation or ownership of the facility if necessary, and Poseidon is required to post securities to ensure site remediation or removal of the facility, if warranted. Additionally, Poseidon's water purchase agreements with the various public water districts primarily obligate the purchasers to buy up to a certain amount of water at a specified price. Decisions about use and distribution of that water will remain the purview of these public water districts. ~~Further, because those water purchase agreements are public documents, the interested public may obtain information about the project's financial relationship with those public agencies.~~

Overall, however, the Commission recognizes the importance and the urgency in providing a reliable water supply in the San Diego region during a time of declining availability of imported water and a time of significant fiscal constraints on public water agencies. Even with regional initiatives to emphasize water conservation and to reuse existing supplies, the population and economy of the San Diego area is heavily reliant on maintaining and creating an adequate water suppl~~ies~~y such as the supply created by this facility. Further, this facility's initial development and construction costs, which are expected to exceed $300 million, will be borne directly by a willing private entity rather than by the water districts that have agreed to purchase the water produced at the facility. ~~Even with the expected purchase prices at over $1400 per~~

~~[65] See October 12, 2007 minutes of the Olivenhain Municipal Water District.~~

~~acre-foot,~~ **and** the districts' ratepayers will benefit from this water supply at a lower cost than had the districts needed to pay directly for the facility's development and construction. Further, as noted above, the San Diego County Water Authority withdrew its proposal to construct a desalination facility at this site, leaving Poseidon as the only entity willing to undertake construction and operation. The Commission therefore finds in this case that it is in the public interest to allow private development of a portion of the region's water supply.

- **The combination of this facility and other alternatives provide for the public welfare:** The Commission also believes that in combination with a well-designed desalination facility that conforms to Coastal Act provisions, other water sources are available to provide a local and reliable water supply. These other sources, including conservation, recycling, and others, are feasible, less environmentally damaging, and are already being done to some degree in the San Diego area and elsewhere.

  Regarding conservation, it is considered the least expensive and often the least environmentally damaging type of local water supply. Water users and providers in the San Diego region have already implemented a number of effective conservation measures to increase the local water supply and have recognized it as a necessary part of the regional water portfolio. For example, the San Diego County Water Authority's May 2007 draft *Blueprint for Water Conservation* states that conservation is the cheapest form of new water supplies and shows that it expects conservation to go from providing about seven percent of the region's supply (about 51,000 acre-feet per year) to about twelve percent (100,000 acre-feet per year) by 2030. As noted previously in these Findings, the Blueprint also shows that seawater desalination is expected to provide about ten percent (89,000 acre-feet per year) of the regional supply by 2030. Similarly, in March 2002, the San Diego County Board of Supervisors adopted Policy No. A-106, which emphasizes the need for water conservation as a significant part of the County's water portfolio.

  The region could develop even more new water through conservation, similar to other coastal areas in California with limited local water supplies but with ongoing growth. For example, in Long Beach, conservation is expected to provide 15 percent of the water supply by 2015, and in the Monterey County area, conservation accounts for about twenty percent of the supply. Applying those percentages to San Diego's total expected water use in 2030 would result in conservation supplies of about 125,000 to 160,000 acre-feet per year.

  Although many of the region's water districts have developed effective conservation programs, there are still a substantial number of conservation measures and initiatives that could provide significant amounts of water. For example, many of the agencies that have agreed to purchase water from Poseidon are members of the California Urban Water Conservation Council, which has developed a menu of cost-effective Best Management Practices (BMPs) to reduce urban water use. These member agencies are implementing some, but not all, of the Council's fourteen adopted BMPs, suggesting that there is an as-of-yet untapped source of conservation water available. Other sources include recycling and

even indirect potable reuse. Carlsbad recently reported that it is using less than half the recycled water it has available to it, which suggests it has an underused local and reliable option.[~~66~~171] We note, too, for example, that the same treatment system Poseidon proposes for its facility is used in indirect potable reuse applications. The Commission expects that the use of these and other conservation measures will continue and will increase, with or without the proposed project.

Even with these conservation measures in place and with other conservation measures still available, the Commission finds that it is in the public interest for this desalination facility to provide water that augments these other sources~~.~~**: The project would provide an important and much-needed source of potable water for Southern California. Since Poseidon filed its CDP application, the water supply situation in the State of California – already bad – has substantially deteriorated. Poseidon has previously provided the Commission with newspaper reports that recognize a looming water crisis and clearly identify the need for California, and more specifically San Diego County, to lessen its demand on the State Water Project and Colorado River watersheds, which were critically dry in 2007.**[172]

State, regional, and local water plans all have confirmed that the immediate and pressing water needs are so great, that they cannot be met by conservation and recycled water alone and that a substantial investment in seawater desalination, including the project, is required. The project's capacity of 56,000 AFY of new water supply for the San Diego region is about ten percent of 500,000 AFY of desalinated water identified by the California Department of Water Resources as needed by 2030, as stated in its 2006 Water Plan Update. This Update lists the project as a potential source of desalinated water. The Metropolitan Water District of Southern California's Integrated Water Resources Plan identified a need for 150,000 AFY of seawater desalination (including 56,000 AFY from the Carlsbad project) to ensure regional water supply reliability. In addition, the San Diego County Water Authority updated its 2005 Urban Water Management Plan in April 2007 specifically to reaffirm the need for 56,000 AFY of seawater desalination from the project by 2011. The project is a central component of state, regional and local water supply planning to meet already-identified demand.[173] 4

Eight public water agencies have already entered into long-term agreements with Poseidon to receive 100% of the supply of desalinated water from the project. These agencies have some of the most aggressive water recycling programs in the region, but they have stressed the need for desalinated water to ensure regional water supply reliability and to meet

---

[~~66~~171] See Carlsbad's 2007 *State of Effectiveness Report.*

[172] **See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 5.**

[173] **See *id.* at p. 6.**

existing demands and planned-for future growth, and they have identified the project's water supply as a component of their water plans.[174]

The entire plant's output will be put to public use by these public agency partners, ensuring that the water will remain in the public domain. Public agencies will continue to control the allocation and use of the water, so local government oversight will be preserved. Under Poseidon's contracts with each public water agency, the customers' price of water will not exceed the price that the customer would have paid for the imported water supply from the San Diego County Water Authority. Thus, any rate increases determined by the public agency partners would have occurred in the absence of the project.

The region expects further restrictions in the amount of water being imported to the area. If the restrictions are as severe as expected – i.e., reductions of up to about 30% -- it will need to rely on conservation, desalination, and other means to make up the water deficit. This facility is therefore a necessary and integral part of the region's water portfolio.

~~•~~ **Public benefits resulting from increased shoreline access opportunities:** In addition to the above public welfare benefits, the project will result in increased access to the shoreline of both Agua Hedionda ~~l~~Lagoon and the Pacific Ocean. As part of its project, Poseidon has offered to dedicate for public use four sites totaling about ~~16.5~~15 acres on or near the shore of both the ~~l~~Lagoon and the ocean.

The dedicated area will not only provide greater public access to formerly private ocean and Lagoon front property, but it will provide additional opportunities for recreation, fishing and marine research and restoration.[175] Specifically, the dedicated area would be used for expansion of the existing fish hatchery and aquatic research uses, a fishing beach, recreation and coastal access, and public parking. To ensure the sites are made available for public use, Special Condition #11 requires that, prior to starting operations of the desalination facility, Poseidon ensure these parcels are dedicated for public access and recreation as described in the City's Precise Development Plan #PDP 00-02. These public access dedications provide adequate conformity to the Coastal Act's public access provisions.

In addition, Poseidon's operations and its assumption of the responsibility for maintenance dredging and stewardship of the Lagoon after the Encina power station is decommissioned will prevent Lagoon sedimentation from urban run-off from closing-off the Lagoon in five

---

[174] See Poseidon Resources Corporation, Letter to State Lands Commission Executive Director re: Desalination Project's Impact on Imported Water Use, November 8, 2007 (including attachments from water districts); Poseidon Resources Corporation, Carlsbad Desalination Project Briefing Package, CDP Application No. E-06-013, November 2007.

[175] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 4, 26.

to seven years, and the nearly complete loss of existing beneficial uses thereafter.[176] Thus, the project preserves access to the Lagoon, which would be lost in the project's absence.

One of the Coastal Act's primary goals is to maximize public access and recreational opportunities along the coast[177],[67] and the ~~p~~**P**roject's public access aspects support that goal~~.~~ ~~These dedicated areas will provide greater public access and recreation opportunities to the shoreline of both the lagoon and the ocean. Through the imposition of Special Condition 11, which requires Poseidon to dedicate these areas prior to starting facility operations, the Commission ensures these access improvements will be implemented~~.

Based on the above, the Commission finds that the proposed project meets the final test of Section 30260.

Conclusion

The Commission recognizes that the San Diego region is clearly in need of reliable and local water sources. Although ~~this coastal-dependent industrial facility does not conform to the use prohibitions of~~**the Commission has found that the project, as conditioned, conforms with all applicable** Coastal Act ~~Section 30233(c)~~**policies**, the Commission has determined through applying the three tests above that the project **also** conforms to the ~~"override" provisions provided for such projects by~~**requirements of** Coastal Act Section 30260. The Commission therefore finds that by meeting the requirements of these three tests and with imposition of the Special Conditions described previously in these Findings, the project conform~~s~~ to **all** applicable Coastal Act policies.

5.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT

On June 13, 2006, the City of Carlsbad certified an Environmental Impact Report for the proposed project. In addition, Section 13096 of the Commission's administrative regulations requires Commission approval of CDP applications to be supported by a finding showing the application, as modified by any conditions of approval, to be consistent with any applicable

---

[176] **Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon :Low Flow vs. No-Flow Alternatives, Dr. Scott Jenkins, September 28, 2007.**

[177] **See, for example, Coastal Act Section 30001.5, which states in relevant part: "The Legislature further finds and declares that the basic goals of the state for the coastal zone are to… (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of property owners."**

[67] ~~See, for example, Coastal Act Section 30001.5, which states in relevant part: "The Legislature further finds and declares that the basic goals of the state for the coastal zone are to… (c) Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resources conservation principles and constitutionally protected rights of property owners."~~

requirements of the California Environmental Quality Act (CEQA). Public Resources Code Section 21080.5(d)(2)(A) prohibits approval of a proposed development if there are feasible alternatives or feasible mitigation measures available that would substantially lessen any significant impacts that the activity may have on the environment.

As discussed above, the proposed project is consistent with ~~the~~**all applicable** policies of the Coastal Act. Pursuant to these Findings and the review conducted ~~by~~**in** the City of Carlsbad**'s EIR**, the project includes all available and feasible measures to avoid or minimize significant adverse environmental impacts. There are no feasible alternatives or feasible mitigation measures available that would substantially lessen any significant adverse impact that the activity would have on the environment. **Also, there are no new significant adverse effects of the project, and no new information involving new significant adverse effects has been presented.** Therefore, the Commission finds that the proposed project, as conditioned, is consistent with the requirements of CEQA. 5

APPENDIX A: SUBSTANTIAL FILE DOCUMENTS E-06-013

Alpert, H., Borrowman, C., and B. Haddad. *Evaluating Environmental Impacts of Desalination in California*, Center for Integrated Water Research, at http://ciwr.ucsc.edu/desalplanning/workshops.html, July 27, 2007.

Bay, Steven, and Darrin Greenstein. *Toxic effects of elevated salinity and desalination waste brine*, Southern California Coastal Water Research Project, 1994.

Cabrillo Power I LLC. *Proposal for Information Collection Clean Water Act Section 316(b) Encina Power Station*, April 1, 2006.

Cabrillo Power I LLC. Letter to Coastal Commission staff regarding current and anticipated future conditions at Encina Power Station, July 12, 2007.

California Coastal Commission. Approved coastal development permits and mitigation plans for San Onofre Nuclear Generating Station (SONGS), including CDP #6-81-330A (1974) and #06-04-88 (2005).

California Coastal Commission. *Seawater Desalination and the California Coastal Act*, March 2004.

California Department of Water Resources. *California Water Plan Update*, 2005.

California Energy Commission. *Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants*, June 2005.

California Public Utilities Commission. *San Diego Gas and Electric Company's Divesture of Electric Generating Assets – Environmental Review* (No. 97-12-039).

California Public Utilities Commission. *Initial Study for San Diego Gas & Electric Company's Application No. 97-12-039*, October 13, 1998.

California State Desalination Task Force. *Draft Desalination Task Force Report*, September 2003.

California State Lands Commission staff report for Poseidon Resources Channelside LLC State Lands Lease Application, October 30, 2007.

California State Lands Commission and U.S. Army Corps of Engineers. *Draft Environmental Impact Report / Environmental Assessment – Agua Hedionda Northern Inlet Jetty Restoration*, January 2005.

California State Water Resources Control Board. *California Ocean Plan*, 2005.

Carlsbad Watershed Management Plan, 2002.

City of Carlsbad. *Certified Land Use Plan*, adopted August 27, 1982.

City of Carlsbad. *Final Environmental Impact Report for Precise Development Plan and Desalination Plant, EIR 03-05 – SCH #2004041081.*

City of Carlsbad. Additional Responses to Comments on the Final EIR 03-05 for the Precise Development Plan and Desalination Plant Project #2004041081, June 13, 2006.

City of Carlsbad. *Master Water Plan Update*, March 2003.

Clean Air, Cool Planet. *A Consumer's Guide to Retail Carbon Offset Providers*, December 2006.

Coast Law Group. June 4, 2007 letter to California State Water Resources Control Board re: Seawater Desalination Intakes and Once-Through Cooling Regulations.

Coast Law Group, letter to State Lands Commission re: Carlsbad/Poseidon Ocean Desalination Project, October 29, 2007

Coast Law Group. Issue papers on *Coastal Dependent Use Exceptions (Coastal Act Section 30260), Failure to Adequately Consider and Minimize Energy Use, Failure to Adequately Consider Discharge-Related Impacts, Failure to Adequately Consider Intake Alternatives, Lagoon Sedimentation Impacts, and Marine Life Mortality From Entrainment*, provided November 13, 2007.

Collector Wells International, Inc. *Collector Wells for Filtered Seawater, n.d.; and Filtered Seawater Supply for Desalination*, 2001.

Cooley, Heather, Dr. Peter Gleick, and Gary Wolff. *Desalination, With a Grain of Salt*, Pacific Institute, June 2006.

Dale, Larry, Camilla Dunham Whitehead, and Andre Fargeix. *Electricity Price and Southern California's Water Supply Options*, in *Resources, Conservation and Recycling*, Volume 42, Issue 4, November 2004.

Del Bene, J.V., Gerhard Jirka, and John Largier. *Ocean brine disposal*, in *Desalination*, Volume 97, 1994.

Dickie, Phil. *Desalination: Option or Distraction for a Thirsty World*, World Wildlife Fund, June 2007.

Gleick, Dr. Peter H., Heather Cooley, and David Groves. *California Water 2030: An Efficient Future*, Pacific Institute, September 2005

Hunt, Henry. *Filtered Seawater Supplies – Naturally*, in Desalination and Water Reuse, Volume 6, No. 2.

Imam, Dr. Abdelghani, Samir Dweiri, Diego Fernandez & Dr. Paul Kent. *Annex III: Desalination Costs*, for the United States Agency for International Development, March 2007

Jenkins, Logan. *Desalination is key to water self-reliance*, Union-Tribune, November 15, 2007.

Latham & Watkins. Letter to State Lands Commission Re: CEQA Issues Raised for Poseidon Project By Coastal Commission Staff, October 31, 2007.

Latham & Watkins. Letter to Chair**man** Kruer and **Honorable** Commissioners transmitting ~~Poseidon's~~ Proposed Special Conditions and Proposed Instructions to Staff Regarding Preparation of Revised Findings, November 15, 2007.

Latham & Watkins. Letter to Chair**man** Kruer and **Honorable** Commissioners transmitting ~~Poseidon~~**Applicant**'s Suggested Basis for Findings and Updated Requested Additions to List of Substantive File Documents, November 15, 2007.

Lilien, Ben. *Public Versus Private Ownership of Seawater Desalination Facilities*, Stanford Environmental Law Clinic, June 2005.

McRae, Timothy. *Coastal Desalination, "Coastal-Dependency" and the California Coast: How today's desalination proposals could affect tomorrow's coastline*, publ. In prep. 2007.

Metropolitan Water District of Orange County. *Dana Point Ocean Desalination Project*, April 2007.

Miri, Rachid, and Abdelwahab Chouikhi. *Ecotoxicological marine impacts from seawater desalination plants*, in Desalination 182, 2005.

National Marine Fisheries Service and U.S. Fish and Wildlife Service. *Recovery Plan for U.S. Pacific Populations of the East Pacific Green Turtle (Chelonia mydas)*, 1998.

Peters, Thomas, Domenec Pinto, and Esteve Pinto. *Improved seawater intake and pre-treatment system based on Neodren technology*, in *Desalination* #203, 2007.

Planning and Conservation League. *Investment Strategy for California Water*, 2004.

Perata, Senator D. Letter to P. Kruer re: Carlsbad Desalination Project, November 13, 2007.

Poseidon Resources Corporation. Application for Coastal Development Permit, August 28, 2006, including (but not limited to) attachments:

- Final Environmental Impact Report
- Verification of All Other Permits or Approvals Applied for by Public Agencies
- City of Carlsbad Resolution No. 2006-156 - EIR 03-05
- City of Carlsbad Resolution No. 420 - RP 05-12
- City of Carlsbad Ordinance No. NS-805 - SP 144 (H)
- City of Carlsbad Ordinance No. NS-806 - PDP 00-02
- Planning Commission Resolution No. 6093 - SUP 05-04
- Planning Commission Resolution No. 6092 - CDP 04-41
- Planning Commission Resolution No. 6090 - DA 05-01 / Development Agreement, Finding of Fact
- CEQA Mitigation Monitoring and Reporting Program for the FEIR
- Planning Commission Resolution No. 6094 - HMPP 05-08
- Planning Commission Resolution No. 6088 - PDP 00-02
- Planning Commission Resolution No. 6091 - RP 05-12
- Planning Commission Resolution No. 6089 - SP 144 (H)

Poseidon Resources Corporation. Response to California Coastal Commission's September 28, 2006 Request for Additional Information, November 30, 2006, including (but not limited to) attachments:

- San Diego Regional Water Quality Control Board, Order No. R9-2006-0065 ("NPDES Permit")

Poseidon Resources Corporation. Response to California Coastal Commission's December 28, 2006 Request for Additional Information (including attachments), January 19, 2006.

•——Poseidon Resources Corporation. Transmittal of Analysis of Alternative Subsurface Seawater Intake Structures, Proposed Desalination Plant, Carlsbad, CA, Wiedlin & Associates (January 30, 2007), sent February 2, 2007.

•——Poseidon Resources Corporation. Response to California Coastal Commission's February 20, 2007 Request for Additional Information (including attachments), June 1, 2007.

•——Poseidon Resources Corporation. Appeal of California Coastal Commission's July 3, 2007 Notice of Incomplete, July 6, 2007.

•——Poseidon Resources Corporation. Response to California Coastal Commission's July 3, 2007 Request for Additional Information (including attachments), July 16, 2007.

•——Poseidon Resources Corporation. Additional Analysis of Submerged Seabed Intake Gallery (including attachments), October 8, 2007.

•——Poseidon Resources Corporation. Analysis of Offshore Intakes, October 8, 2007, including attachments:

- Scott A. Jenkins, Ph.D. and Joseph Wasyl. Comparative Analysis of Intake Flow Rate on Sand Influx Rates at Agua Hedionda Lagoon: Low-Flow vs No-Flow Alternatives, September 28, 2007.
- J.B. Graham, S. Le Page and D. Mayer. Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend An Alternative Seawater Intake for the Carlsbad Desalination Project, October 8, 2007.

•——Poseidon Resources Corporation. Coastal Habitat Restoration and Enhancement Plan (including attachments), October 9, 2007.

•——Poseidon Resources Corporation. Updated Response to Coastal Commission's September 28, 2006 Request for Additional Information, Section 13, CDP Energy Use, GHG Production & Mitigation, October 9, 2007.

•——Poseidon Resources Corporation. Transmittal of Intake Cost Estimates, October 17, 2007.

•——Poseidon Resources Corporation. Climate Action Registry CO2 Conversion Calculation, October 18, 2007.

•——Poseidon Resources Corporation. Updated Response to Coastal Commission's September 28, 2006 Request for Additional Information, Section 13, CDP Energy Use, GHG Production & Mitigation, October 21, 2007.

•———Poseidon Resources Corporation. Transmittal of GHG Emission Baseline Protocol, October 22, 2007.

•———Poseidon Resources Corporation. Transmittal of SDG&E GHG CCAR Report 2005, October 22, 2007.

•———Poseidon Resources Corporation. Carlsbad Desalination Project Briefing Package, CDP Application No. E-06-013, November 2007.

•———Poseidon Resources Corporation. Transmittal of Garibaldi Study and Coastal Development Permit for Southern California Edison and San Dieguito River Valley Joint Powers Authority's San Dieguito Wetland Restoration Plan, November 7, 2007.

•———Poseidon Resources Corporation. Letter to Chairman Kruer and Honorable Commissioners Attaching Draft Proposed Conditions of Approval, November 7, 2007.

•———Poseidon Resources Corporation. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use, November 8, 2007, including the following attachments:

- Carlsbad Municipal Water District. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 7, 2007.

- Valley Center Municipal Water District. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 6, 2007.

- Rincon del Diablo Municipal Water District. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 6, 2007.

- Rainbow Municipal Water District. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 6, 2007.

- Sweetwater Authority. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 6, 2007.

- Vallecitos Water District. Letter to State Lands Commission Executive Director Re: Desalination Project's Impact on Imported Water Use (including attachments), November 6, 2007.

- Santa Fe Irrigation District. Letter to State Lands Commission Executive Director Re: Desalination Project~~'~~'s Impact on Imported Water Use (including attachments), November 7, 2007.

- Olivenhain Municipal Water District. Letter to State Lands Commission Executive Director Re: Desalination Project~~'~~'s Impact on Imported Water Use (including attachments), November 6, 2007.

~~•~~ Poseidon Resources Corporation. Letter to T. Luster Transmitting State Lands Commission Hearing Presentation, November 8, 2007.

Poseidon Resources Corporation. Letter to Chair**man** Kruer and **Honorable** Commissioners~~,~~**;** Response to Staff Report, November 9, 2007, including the following exhibits:

- ~~•~~Exhibit A: Response to Staff Report
- ~~•~~Exhibit B: Correction of Staff Report Misstatements, Inaccuracies and Omissions
- ~~•~~Exhibit C: Draft Proposed Conditions of Approval
- ~~•~~Exhibit D: Climate Action Plan, November **,** 2007
- ~~•~~Exhibit E: Requested Additions to Substantive File Documents

Poseidon Resources Corporation. ~~Updated~~**Email to T. Luster transmitting updated** Climate Action Plan~~ (via e-mail)~~, November 11, ~~2007.~~ **2007**

Poseidon Resources Corporation. **Hardcopy Printout of** PowerPoint ~~Presentation to Commission~~**presentation prepared prior to November 15, 2007 hearing**, submitted **at** November 15, ~~2007.~~ **2007 hearing.**

Poseidon Resources Corporation. Revised ~~electronic version of~~**Electronic Version of PowerPoint presentation presented at** November 15, 2007 ~~PowerPoint Presentation to Commission~~**hearing**, submitted **electronically at** November 15, ~~2007.~~ **2007 hearing.**

Poseidon Resources Corporation. Bound compilation of 72 supporter letters, ~~submitted to Commission at hearing,~~ November 15, 2007.

Powers, Bill, P.E. *Assessment of Energy Intensity and CO2 Emissions Associated with Water Supply Options for San Diego County*, October 12, 2007.

San Diego County Water Authority. *2006-2007 Annual Report.*

San Diego County Water Authority. *Draft Integrated Regional Water Management Plan.*

San Luis Rey Municipal Water District. *Final Programmatic Environmental Impact Report – Master Water Plan*, August 2007.

Soil/Water/Air Protection Enterprise, LLC. *Desalination White Paper: Reverse Osmosis Product Water Quality Issues and Present Regulatory Status*, prepared for Environment Now, August 24, 2006.

Southern California Edison. San Onofre Nuclear Generating Station (SONGS) Mitigation Documents, including *San Dieguito Lagoon Final Restoration Plan*, 2005, and as referenced at http://www.sce.com/PowerandEnvironment/PowerGeneration/MarineMitigation/Background.~~ht m~~**ht m**.

Steinbeck, John, John Hedgepeth, Peter Raimondi, Gregor Cailliet, and David Mayer. *Assessing Power Plant Cooling Water Intake System Entrainment Impacts*, prepared for the California Energy Commission, October 2007.

U.S. EPA. *Water Quality Standards Handbook* (Publication EPA-823-B-94-005), August 1994 as revised June 2007.

Valley Center Municipal Water District. *Comprehensive Annual Financial Report Fiscal Year Ended June 30, 2006.*

Voutchkov, Nikolay. *Challenges and Considerations when Using Coastal Aquifers for Seawater Desalination*, in *Ultrapure Water*, Volume 23:6, September 2006.

Voutchkov, Nikolay. *The "Inconvenient Truth" About Desalination*, in *American Membrane Technology Associates Newsletter*, Summer 2007

Wolff, Gary. *The Economics of Desalination*, Pacific Institute, September 9, 2006.

World Health Organization. Desalination for Safe Water Supply: Guidance for the Health and Environmental Aspects Applicable to Desalination, 2007.

EXHIBIT B

Rick Zbur
Direct Dial: (213) 891-8722
rick.zbur@lw.com

633 West Fifth Street, Suite 4000
Los Angeles, California 90071-2007
Tel: +213.485.1234 Fax: +213.891.8763
www.lw.com

LATHAM & WATKINS LLP

FIRM / AFFILIATE OFFICES
Barcelona, Brussels, Chicago, Frankfurt, Hamburg, Hong Kong, London, Los Angeles, Madrid, Milan, Moscow, Munich, New Jersey, New York, Northern Virginia, Orange County, Paris, San Diego, San Francisco, Shanghai, Silicon Valley, Singapore, Tokyo, Washington, D.C.

RECEIVED
MAY 01 2008
CALIFORNIA COASTAL COMMISSION

April 30, 2008

File No. 036182-0006

VIA EMAIL AND FEDEX

Mr. Tom Luster
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

Agenda Item Th13a

Re: Carlsbad Desalination Project Coastal Development Permit Application No. E-06-013, May 8, 2008
Applicant's Response to April 14, 2008 Comments from Surfrider Foundation and San Diego Coastkeeper

Dear Tom:

On behalf of our client, Poseidon Resources (Channelside) LLC (the "Applicant") we are writing to respond to Surfrider Foundation's and San Diego Coastkeeper's ("Opponents") comments to Coastal Commission Staff's Recommended Revised Findings, which Opponents submitted to you on April 14, 2008 (the "Findings Submittal"). In sum, the Findings Submittal rehashes Opponents' arguments from the November 15, 2007 meeting and their prior submittals, which the Commission already considered and rejected before it approved the Coastal Development Permit (the "Permit") for the Carlsbad Desalination Project (the "Project"). Moreover, the Findings Submittal misrepresents the Commissioners' testimony at the November meeting and mischaracterizes the law and Coastal Commission practice.

As demonstrated more fully below, substantial evidence exists in the administrative record to support the Commission's finding that the Project is consistent with the Coastal Act and its approval of the Permit. Both the Commission's direction to Staff to prepare revised findings reflecting its approval, and the manner in which Staff has prepared its proposed revised findings, comply with the Commission's regulations and are wholly consistent with Commission practice. It is therefore appropriate for the Commission to adopt Staff's proposed revised findings, subject to incorporation of the requested revisions to those findings jointly submitted by the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District on April 30, 2008.

These materials have been provided to the Coastal Commission Staff

The purpose of administrative findings is to reflect the basis and rationale of an agency's decision.[1] To that end, findings must be supported by substantial evidence *in light of the whole record.*[2] Here, there was substantial evidence presented to the Commission both at and prior to the November hearing by the Applicant, the City of Carlsbad, the Applicant's public water district partners, and numerous experts, all of which provides an indisputable basis for the Commission's determination that the Project is consistent with the Coastal Act. Based on that evidence, it was wholly within the Commission's statutory authority to approve the Permit and to request that Staff prepare revised findings reflecting the Commission's action.[3]

Moreover, and contrary to Opponents' contentions, there is ample basis in the record to guide the preparation of revised findings to reflect the Permit approval. If anything, the Commission's findings and the administrative record in this case are clearer than is typical in other Coastal Commission approvals in which the Commission agreed with an applicant's position and directed Staff to adjust its recommendation in accordance with revised findings, which supported that position. Indeed, unlike in other actions where the Commission has rejected Staff's recommendation with little explanation, in this case, the Commission approved the Permit after reviewing an exhaustive administrative record, including competing legal theories and bodies of evidence – those of Commission Staff, as presented in the Staff Report, and those of the Applicant, as presented at the November hearing and in the various submittals by the Applicant, the City of Carlsbad, and the Applicant's public water district partners.

A. The Commission's Approval of the Coastal Development Permit was Proper

1. The Commission Is Required to Adopt Written Findings that Contain the Basis for its Decision

Opponents first incorrectly conclude that the Commission's action was unlawful because the Commissioners did not orally state on the record every single basis for their Permit approval, but there is no such requirement in the law. The Coastal Act regulations only compel the prevailing Commissioners to provide sufficient detail of the basis of their decision to enable Commission Staff to prepare "proposed revised findings" for the Commission's review.[4] That is an obligation to aid Staff in revising the findings, and not a precondition to a Coastal Development Permit approval. Moreover, Opponents' argument is wrong and misleading for the following four reasons:

---

[1] See *Topanga Ass'n for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 516 ["Among other functions, a findings requirement serves to conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision . . ."].

[2] See Cal. Code Civ. Proc. § 1094.5, subd. (c).

[3] See Cal. Code Regs., tit. 14, § 13096, subd. (b) [requiring staff to prepare revised findings consistent with the Commission's decision if the Commission's action is substantially different from that recommended in the staff report].

[4] See *id.*

- First, the November meeting transcript is replete with comments by the Commissioners explaining why they supported the Permit approval and discussing the Special Conditions they imposed to ensure that the Project will comply with the Coastal Act. On November 15, 2007, the Applicant provided the Commission with two documents setting forth the basis for findings consistent with a CDP approval, and proposed instructions to Staff as to how they could revise the findings to make them consistent with an approval.[5] When Commissioner Hueso made the motion to approve the Permit, he specifically referenced and incorporated the Applicant's instructions to Staff as the basis for why the Project should be approved.[6] Although the Commission did not formally adopt those directions, it is clear from the record that the Commissioners directed Staff to use the Applicant's proposed findings to bring Staff's findings into conformance with the Commission's action.[7] Opponents' self-serving citations to various Commissioners' comments are taken out of context and do not accurately reflect the Commissioners' statements concerning the basis of their decision. The record speaks for itself.

- Second, Staff presented the Commission with proposed conditions of approval to consider should the Commission decide to approve the Permit. Staff's conditions were proposed to ensure the Project, if approved, would be consistent with the Coastal Act. Accordingly, because the Commission approved the Permit and incorporated many of Staff's conditions in the approval (along with several conditions proposed by the Applicant) the Commission's discussion and approval of those conditions provided clear direction to Staff regarding the rationale for its findings.

- Third, the Commission's regulations require Staff to prepare "proposed" revised findings, but the Commission is required to vote on those findings at a later public hearing and has the authority to reject the revised findings and request further revisions

---

[5] See Latham & Watkins, *Letter to Chairman Kruer and Honorable Commissioners transmitting Proposed Special Conditions and Proposed Instructions to Staff Regarding Preparation of Revised Findings*, November 15, 2007; Latham & Watkins, *Letter to Chairman Kruer and Honorable Commissioners transmitting Applicant's Suggested Basis for Findings and Updated Requested Additions to List of Substantive File Documents*, November 15, 2007.

[6] See Coastal Commission Reporter's Transcript of Proceedings, November 15, 2007, Agenda Item No. 7.a., at 257: 18-21 ["Commissioner Hueso: I want to add to the record the applicant's proposed instructions to staff regarding the preparation of revised findings, or Exhibit B, because they get to some of the points that I made . . ."].

[7] See Coastal Commission Reporter's Transcript of Proceedings, November 15, 2007, Agenda Item No. 7.a., at 319: 2-4 ["Commissioner Reilly: But, staff may need to look at [Applicant's] findings, and bring them into conformance with what we did, too."].

if they do not accurately reflect the basis for its decision.[8] Accordingly, it is up to the prevailing Commissioners to determine if the revised findings contain the basis for their decision, and the Commissioners are not limited to adopting findings that contain only their oral statements from the Project hearing.

- Fourth, and as mentioned above, it is the administrative findings and not Commissioners' oral comments and deliberations that are the legal tool agencies must use to set forth the rationale behind their decisions, and those findings must bridge the analytic gap between raw evidence and the ultimate decision.[9] Opponents imply that the Supreme Court's decision in *Topanga Ass'n for a Scenic Community v. County of Los Angeles* supports their argument that Commissioners' oral statements on the record must "bridge the analytic gap," but *Topanga* does not stand for that premise. Instead, *Topanga* sets forth the requirements for *written* administrative findings so that a reviewing court can examine the agency's mode of analysis based on the *whole* of the administrative record, not just hearing testimony.[10]

Here, the Commission approved the Permit after reviewing an exhaustive administrative record, including competing legal theories and bodies of evidence – those of Commission Staff, as presented in the Staff Report, and those of the Applicant, as presented at the November hearing and in the various submittals by the Applicant, the City of Carlsbad, and the Applicant's public water district partners. The evidence in the submittals by the Applicant, the City of Carlsbad, and the Applicant's public water district partners provided clearly articulated and independent bases that support the Commission's action of approving the Permit. To assist Staff with their efforts to revise the findings, the Applicant, the City of Carlsbad, Carlsbad Municipal Water District and Vallecitos Water District have jointly submitted additional recommendations to the revised findings that demonstrate further evidentiary support provided to the Commissioners before and during the November meeting that underlies the Commission's ultimate decision to approve the Permit. As previously discussed, the prevailing Commissioners have the authority to adopt revised findings that contain the rationale for their decision, and it is within their discretion to adopt the joint recommendations if the Commissioners determine that those recommendations more accurately reflect the basis for the Commission's decision than the findings proposed by Staff.

2. <u>The Regional Water Quality Control Board Has Ensured the Project is Consistent with Porter-Cologne Act Section 13142.5</u>

Opponents once again reargue their position that the Commission cannot approve the Permit without determining whether the Project will be consistent with Porter-Cologne Act Section 13142.5, but the Commission is under no legal obligation to make such a determination. The

---

[8] See *id.* at subd. (c) ["The commission vote taken on proposed revised findings . . . shall occur after a public hearing . . . The public hearing shall solely address whether the proposed revised findings reflect the action of the commission."]

[9] *Topanga*, 11 Cal.3d at 516.

[10] *Id.*; Cal. Code Civ. Proc. § 1094.5.

Commission is only required to find that the Permit is consistent with the Coastal Act, which it did. The Commission ensured that the Project's intake-related impacts will be consistent with Coastal Act Sections 30230 and 30231 by requiring the Applicant to submit to the Commission for approval a revised Marine Life Mitigation Plan.

On the other hand, the Regional Water Quality Control Board is required to find consistency with the Porter-Cologne Act. As the Commission is aware from evidence in the record and testimony at the November hearing, the State and Regional Water Quality Control Boards have primary authority over water quality related marine life issues, and the Commission "shall not ... modify, adopt conditions or take any action in conflict with any determination . . . [by those Boards] in matters relating to water quality . . ."[11] The San Diego Regional Water Quality Control Board has already reviewed the Project's intake-related impacts pursuant to the Porter-Cologne Act, and has approved the Project and imposed its own conditions to ensure the Project is consistent with the Porter-Cologne Act.

By requiring the Applicant to submit a revised Marine Life Mitigation Plan for Commission approval, the Commission will be able to review that Plan for consistency with the Project's NPDES permit and the Regional Board's conditions before rendering a decision on the Plan. Accordingly, the Project, as conditioned, is consistent with both the Coastal Act and the Porter-Cologne Act, and Opponents' redundant arguments to the contrary are without merit.

3. <u>The Approved Permit Does Not Defer Mitigation</u>

Opponents also claim that the Commission's Permit approval was invalid "deferred mitigation," because the Commission's Special Conditions require Applicant to obtain Commission approval of certain mitigation plans before the Permit will issue. The only case Opponents cite for this premise is *Sundstrom v. County of Mendocino*, which concerned the adequacy of a negative declaration under CEQA, and has nothing to do with the Commission's approval of a CDP under the Coastal Act. Moreover, and as discussed below, the Commission has not improperly deferred mitigation even if *Sundstrom* were applicable to these facts (which it is not).

In *Sundstrom,* the court found that a negative declaration violated CEQA because it did not specify all required mitigation measures before it was circulated to the public (as required by the CEQA guidelines), and because it improperly delegated the authority to assess future environmental impacts to planning commission staff.[12] *Sundstrom* is inapplicable here because the lead agency under CEQA (the City of Carlsbad) already determined that the Project would not have project-specific significant impacts on marine habitat or air quality, and the Commission's Special Conditions are not mitigation measures under CEQA. Rather, the Special Conditions were imposed by the Commission to ensure the Project is consistent with the Coastal Act. The Commission has the authority to impose conditions that require review and approval prior to issuance of a CDP. Conditions like Special Conditions 8, 10 and 12 are specifically contemplated in the Coastal Act's

---

[11] Coastal Act § 30412(b).

[12] *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306-307.

implementing regulations, and are consistent with Coastal Commission practice. Coastal staff may recommend "as to whether the commission should grant the application, with our without conditions, or deny the application."[13] Accordingly, a CDP may be conditioned, and the regulations do not otherwise limit how the Commission may choose to enforce those conditions.[14]

What's more, it is common practice for the Commission to require subsequent review and approval of a mitigation plan by the Commission before a Permit will issue. At the November hearing, Executive Director Douglass explained that the Commission has previously required mitigation plans to come back to the Commission for approval before the Commission issued a CDP.[15] One such example occurred on June 16, 2006, when the Commission approved the California Department of Transportation's ("Caltrans") application to construct a new State Highway Route 1 bridge over the Ten Mile River in Mendocino County (CDP 1-06-022). As explained in that project's Condition Compliance Memorandum, set forth as Exhibit 1 hereto, five of the Commission's special conditions required Caltrans to obtain subsequent commission approval regarding various mitigation and compliance plans pertaining to acoustic monitoring during construction, fisheries conservation/mitigation, marine mammal monitoring, and bird/bat habitat preservation. Accordingly, the Commission has an established practice of reviewing and considering mitigation plans after it has approved a CDP and before the permit issues.

However, even if *Sundstrom* were to apply to Commission approvals of CDPs, the Commission's approval of the Permit is not deferred mitigation. Opponents object to Special Conditions 8 (Marine Life Mitigation Plan), 10 (Energy Minimization and Greenhouse Gas Reduction Plan)[16] and 12 (Dredging), because each condition requires a subsequent Commission approval, and Conditions 8 and 10 require the Applicant to prepare more detailed mitigation plans to address the Commission's concerns. In *Defend the Bay v. City of Irvine*, the court held that an agency may defer defining the specifics of mitigation measures if the agency has committed to the

---

[13] See Cal. Code Regs., tit. 14, § 13057, subds. (c)(4), (5).

[14] See also *id.* at § 13158, subd. (e) [For administrative permits under the Coastal Act, a CDP "shall not be issued . . . unless the applicant has satisfied all prior to issuance conditions. Prior to issuance conditions are those conditions that are identified in the permit as conditions that must be complied with prior to issuance of the permit."].

[15] See Coastal Commission Reporter's Transcript of Proceedings, November 15, 2007, Agenda Item No. 7.a., at 236:18 – 237:6 ["Executive Director Douglas: And, I might add, too, that this Commission has, in the past . . . imposed conditions that require a plan for mitigation, and even though you didn't know it at the time that you approved it, at least you had the certainty that the plan would come back to you for approval before you issue the permit, and we think that is the minimum required by the law."].

[16] The Applicant continues to maintain that its commitment that the Project will be net carbon neutral is voluntary, and that the Commission only has the authority under Coastal Act Section 30253(4) to impose conditions to minimize energy consumption and vehicle miles traveled.

mitigation and specified the criteria to be met.[17] Special Conditions 8 and 10 comply with *Defend the Bay*'s requirements, because each condition sets forth the Commission's commitment to the mitigation and the specific criteria that must be met in order for the Commission to approve the mitigation and issue the Permit. Contrary to Opponents' contention, Special Condition 12 has nothing to do with mitigation for this Permit, because it only explains that the Permit does not authorize dredging, and requires the Applicant to apply for an entirely new CDP if it wants to dredge the Agua Hedionda Lagoon. Accordingly, Special Condition 12 requires a completely new CDP process, and the Commission's review of that CDP application will ensure that any impacts from dredging are addressed adequately.

In addition, the Commission has not improperly delegated the assessment of environmental impacts or mitigation measures to Staff as *Sundstrom* prohibits. To the contrary, the Commission has required the Applicant to present mitigation plans addressing specific requirements to the Commission itself for review and approval – a process that could not be more open and transparent because it will allow additional public participation when the Commission considers those measures.

B. The Revised Findings are Supported by Substantial Evidence

Opponents also claim that, because the original staff report recommended against Permit approval, there cannot be substantial evidence in the record to support the Commission's decision and the revised findings in support of the approval. As demonstrated more fully below, Opponents' position is untrue, untenable, and contrary to the voluminous evidence in the record supporting the Commission's action. The Applicant, the City of Carlsbad, the Applicant's public water district partners and others submitted substantial evidence into the record that provided several clearly articulated, independent bases that support the Commission's Permit approval.

1. The Record Supports the Project's Consistency with Coastal Act Sections 30233

As set forth in the administrative record and in Staff's revised findings, the Permit does not allow dredging of Agua Hedionda Lagoon. Instead, and as required by Special Condition 12, Applicant must apply for an entirely new CDP to dredge the Lagoon. Opponents argue that requiring a second CDP for dredging is deferred mitigation, and that the Commissioners who approved the Permit failed to consider dredging and the Project's compliance with Coastal Act Section 30233(c). Opponents are wrong.

Evidence in the administrative record shows that dredging of the Lagoon is the responsibility of the power plant owner for the foreseeable future, and the Commission has approved the dredging of the Lagoon on 17 separate occasions – each time finding it consistent with

---

[17] *Defend the Bay v. City of Irvine* (2004) 119 Cal.App.4th 1261, 1275-76 [EIR did not improperly defer mitigation where developer was required to consult with environmental agencies and adopt avoidance measures in consultation with those agencies prior to approval of tentative tract map].

Coastal Act Section 30233.[18] By requiring the Applicant to obtain a separate CDP for any future dredging, the Commission has ensured that the Project is consistent with Coastal Act Section 30233. This is neither defered mitigation nor inconsistent with the Coastal Act, because there is no allowed dredging activity to mitigate now.

2. The Record Supports the Project's Consistency with Coastal Act Section 30260

Opponents also claim that the record does not support the finding that the Project, as conditioned, will conform to the Coastal Act's "override" provision, Section 30260. But Opponents ignore the substantial evidence in the record that provided a basis for the Commission to find that the Project meets the override provision's three-part test. As an initial matter, the original staff report concluded that the Project is a seawater desalination facility that needs to be sited near the sea in order to function, which makes the Project a "coastal dependent development" subject to Coastal Act Section 30260.[19] In addition, abundant information was presented into the record by Staff, the Applicant, the City of Carlsbad, and the Applicant's public water district partners providing a basis for the Commission to find that the Project satisfies Section 30260's three-part test as follows:

- Alternative Locations are Infeasible or More Environmentally Damaging: First, the Project's potential environmental impacts relate to its discharge and intake activities with ocean water, and do not relate to its location at the site of an existing power plant. The Project's alternative analyses and the Commission's findings therefore examine alternatives to the Project's use of the power plant's intake system. Opponents argue that the Commission should have considered alternative locations away from Agua Hedionda Lagoon, but Opponents ignore the fact that there is substantial evidence in the record both analyzing alternative intakes at the power plant site that do not involve the Lagoon and evaluating the feasibility of alternative sites. Specifically, the Commission analyzed slant wells, an infiltration gallery, and an offshore intake, and each time concluded based on substantial evidence that each of these alternatives would be environmentally inferior to the Project and infeasible.[20] There is also abundant evidence

---

[18] See Poseidon Resources Corporation Response to California Coastal Commission's February 20 Request for Additional Information, June 1, 2007, at p. 20.

[19] Staff Report, Coastal Development Permit Application E-06-013, November 2, 2007, at p. 3.

[20] See, e.g., Poseidon Resources Corporation Response to California Coastal Commission's Letter of September 28, 2006, November 30, 2006, at pp. 24-51; Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 16-20; Poseidon Resources Corporation, Additional Analysis of Submerged Seabed Intake Gallery, October 8, 2007; Issues Related to the Use of the Agua Hedionda Inlet Jetty Extension EIR to Recommend An Alternative Seawater Intake for the Carlsbad Desalination Project, Graham, LePage and Mayer, October 8, 2007.

in the record concerning alternative locations that demonstrates that alternative sites would be environmentally inferior and infeasible compared to the Project.[21]

- Adverse Environmental Effects are Minimized to the Maximum Extent Feasible: Second, the Commission has ensured that the Project's potential adverse environmental effects are minimized to the maximum extent feasible by imposing Special Conditions that require the Applicant to implement numerous mitigation measures. Special Conditions 8 and 10 further ensure that the Applicant will more than fully mitigate potential impacts to marine life and air quality because those conditions require the Applicant to develop mitigation plans that satisfy the Commission's specific criteria before the Permit can issue. If the Applicant does not satisfy those criteria, then the Commission will not approve the mitigation plans, and the Project cannot proceed.

- To not permit the development would adversely affect public welfare: Third, voluminous evidence exists in the record showing that the public would be adversely affected without the Project, and several Commissioners explained the need for the Project at the November hearing.[22] The State Water Project and Colorado River watersheds were critically dry in 2007, and State and local water agencies have identified the Project as a needed resource to meet existing demands on water supply in the region.[23] Opponents argue that conservation and reclamation efforts are sufficient to meet water supply needs, but the eight public water agencies who have contracted to purchase water from the Project (some of whom have the most aggressive water recycling programs in the region), have identified the Project as a central component of their water plans.[24] Opponents also claim that the Project will burden taxpayers because it will not provide water at economically competitive rates, but they provide no evidence to support that claim, and their argument contradicts substantial evidence in the record supporting the fact that the Project will provide water to water districts at or below the costs of imported water.[25] Simply put, without the Project the public will be deprived of

---

[21] Poseidon Resources Corporation Response to California Coastal Commission's February 20 Request for Additional Information, June 1, 2007, at pp. 3-7.

[22] See, e.g., Coastal Commission Reporter's Transcript of Proceedings, November 15, 2007, Agenda Item No. 7.a., at 252:11 – 253:24.

[23] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at pp. 5-6.

[24] See Poseidon Resources Corporation, Letter to State Lands Commission Executive Director re: Desalination Project's Impact on Imported Water Use, November 8, 2007 (including attachments from water districts); Poseidon Resources Corporation, Carlsbad Desalination Project Briefing Package, CDP Application No. E-06-013, November 2007.

[25] See Poseidon Resources Corporation, Response to California Coastal Commission's September 28 Request for Additional Information, November 30, 2006 pp. 46-51; Poseidon Resources Corporation, Response to California Coastal Commission's July 3 Request for Additional

a needed source of potable water that will be provided at no additional cost to what the public water districts are paying to import water.

Accordingly, there was substantial evidence in the record for the Commission to find that the Project will be consistent with Coastal Act Section 30260.

3. The Record Demonstrates the Project Will Not Have Growth Inducing Impacts

The record is clear that the only city within the coastal zone the Project will serve with drinking water is the City of Carlsbad, and all other entities that have contracted to purchase water from the Project will use the water outside of the coastal zone. The City of Carlsbad has adopted a Growth Management Plan that limits Carlsbad to 54,600 dwelling units and caps existing and future development.[26] The Plan was approved by Carlsbad voters in November 1986 and cannot be revised without a new vote. Therefore, water from the Project cannot and will not induce growth beyond Carlsbad's already planned growth. Accordingly, there was substantial evidence in the record for the Commission to find that the Project complies with Coastal Act Sections 30250(a) and 30254 requirements concerning coastal zone development.

4. The Regional Water Quality Control Board Will Ensure Compliance with Porter-Cologne Section 13142.5

As discussed above, the Regional Board has primary jurisdiction concerning the Project's compliance with the Porter-Cologne Act, and has imposed conditions that will ensure the Project complies with Section 13142.5 in conjunction with the Project's NPDES permit. Accordingly, there was substantial evidence in the record to support the Commission's finding that the Project, as conditioned, complies with Coastal Act Sections 30230 and 30231.

5. The Record Supports the Commission's Finding that Alternative Intakes are Infeasible

Opponents argue that the Commission's Permit approval was based on the region's need for water, and not upon their consideration of the feasibility of the Project's alternatives, but Opponents cannot articulate the basis of the Commission's determination – that is the Commission's job. Applicant previously demonstrated that substantial evidence was provided to the Commission both prior to and at the November meeting that shows the Project alternatives are environmentally inferior to the Project and infeasible. The proper place for the Commission to articulate its consideration of this evidence, and its ultimate conclusions, is in the findings. Accordingly, Opponents must wait for the Commission to actually adopt its findings before speculating that the Commission approved the Project on inadequate grounds.

Information, July 16 2007, at pp. 11-13; Poseidon Resources Corporation, Transmittal of Intake Cost Estimates, October 17, 2007.

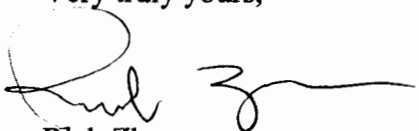
[26] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 27; Carlsbad Municipal Code §21.90, et seq.; Carlsbad General Plan, Land Use Element.

6. The Commission Did Not Find Any Superior Alternative Discharge Strategies

As set forth in Staff's Recommended Revised Findings, and as supported by substantial evidence in the administrative record,[27] the Commission did consider alternative discharge strategies and concluded through its Permit approval that there were not feasible alternative discharges that would minimize impacts. Opponents argue that because the staff report discussed the benefits of alternative wastewater strategies, the Commission cannot "override" the staff report by adopting findings that are inconsistent with that discussion. Opponents are wrong for three fundamental reasons. First, the Commission never adopted the staff report, so it is not required to accept the staff report's contents when making the findings that support its decision. Second, neither the Coastal Act nor the Act's implementing regulations require the Commission to expressly "override" any comments in the staff report when the Commission reaches a different conclusion. The Commission has the authority to adopt findings that provide the basis for its decision, and Opponents cannot impose an "override" obligation on the Commission that does not exist in the law. Third, in issuing the project's NPDES permit, the Regional Water Quality Control Board confirmed that the Project will not have any discharge-related impacts,[28] and the discharge alternatives therefore cannot be less environmentally damaging than the Project (which has no such impacts).

As demonstrated throughout this letter, Opponents' arguments concerning the record and the Recommended Revised Findings are without merit. Further, and as the Commission is aware, the record contains substantial evidence supporting the Commission's Permit approval. Accordingly, Applicant requests that Staff review and incorporate Applicant's requested revisions to Staff's Recommended Revised Findings, which further support the Commission's basis and rationale for approving the Permit.

Very truly yours,



Rick Zbur
of LATHAM & WATKINS LLP

Attachment

cc: Jan Driscoll, Esq.
Peter MacLaggan

---

[27] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. B at p. 39 (#50).

[28] See Poseidon Resources Corporation, Response to Staff Report, November 9, 2007, Exh. A at p. 8.

These materials have been provided to the Coastal Commission Staff

EXHIBIT 1

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CALIFORNIA COASTAL COMMISSION
NORTH COAST DISTRICT OFFICE
710 E STREET • SUITE 200
EUREKA, CA 95501-1865
VOICE (707) 445-7833
FACSIMILE (707) 445-7877

MAILING ADDRESS:
P. O. BOX 4908
EUREKA, CA 95502-4908

F10a

CDP 1-06-022, Approved June 16, 2006

CONDITION COMPLIANCE

Memorandum: To Commissioners and Interested Parties

From: Peter Douglas, Executive Director
Robert Merrill, District Manager, North Coast District
Mark Delaplaine, Supervisor, Federal Consistency
Melanie Faust, Sr. Coastal Planner, North Coast District

Date: January 25, 2007

Regarding: **CONDITION COMPLIANCE, CDP No. 1-06-022, California Department of Transportation (Caltrans District 1, Eureka), Ten Mile River Bridge, Highway 1, unincorporated Mendocino County**

1.0 STAFF RECOMMENDATION

Staff recommends that the Commission **approve** the compliance plans as outlined in the series of **four motions & resolutions** commencing on page two.

The Commission conditionally approved CDP 1-06-022 on June 16, 2006, for construction of a new State Highway Route 1 bridge over the Ten Mile River, north of Fort Bragg, in rural Mendocino County (Adopted findings, Exhibit 6). Five of the special conditions imposed by the Commission required the permittee (Caltrans) to submit for subsequent Commission approval various compliance plans pertaining to acoustic monitoring during pile driving activities in the river, fisheries conservation/mitigation, marine mammal monitoring, and bird/bat habit preservation. In addition, final plans for bridge rails and other features of the project must be submitted by June, 2007 for subsequent Commission review in the form of a permit amendment (the Commission's Road's Edge subcommittee continues to evaluate design options) in accordance with the requirements of Special Condition 18.

The compliance plans have been evaluated by the Commission's staff expert in the area of hydroacoustics/marine mammal trauma-- Mark Delaplaine, Federal Consistency, in consultation with senior staff ecologist John Dixon, Ph.D. Mr. Delaplaine's memorandum summarizing the results of his technical review, dated January 24, 2007 is attached as Exhibit 6. Throughout the review, staff has conferred extensively with Caltrans staff and with Caltrans' consultants and other state and federal agencies with authority over the project (see also Exhibits 8-11). Caltrans

has incorporated the changes requested by Commission staff and the final plans are attached as Exhibits 1-4. In addition, a memorandum in partial conformance to Special Condition 2 submitted by the Department of Transportation, dated January 25, 2007, clarifying the permittee's commitment to undertake fish passage mitigation management at Dunn Creek as a conservation measure that would not replace the requirement for future fisheries mitigation if in-water sound impacts exceed the adopted thresholds, is attached as Exhibit 5.

2.0 STANDARD OF REVIEW

The Commission must determine whether the subject plans comply with the requirements of the applicable special conditions. The Commission's actions are limited to approving or denying the plans. The plans are not submitted as amendments to the permit, therefore the Commission cannot impose conditions in approving any of the plans. If the Commission determines that one or more of the plans does not comply with the requirements of the applicable special condition, the Commission must deny the non-compliant plan(s).

3.0 MOTIONS & RESOLUTIONS

MOTION & RESOLUTION No. 1: Regarding compliance of plans titled "Hydroacoustic Monitoring Plan for the Ten Mile River Bridge Replacement Project" and "Biological Monitoring Plan – Ten Mile River Bridge Replacement Project" with Special Condition 1 (Fish Injury & Acoustic Monitoring) of CDP 1-06-022:

MOTION: "I move that the Commission approve as submitted the "Hydroacoustic Monitoring Plan" and "Biological Monitoring Plan" attached to the staff recommendation as Exhibit 1, Parts 1 and 2, as compliant with Special Condition 1 of CDP 1-06-022."

STAFF RECOMMENDATION

Staff recommends a "YES" vote, which will result in the approval of the plans as compliant with Special Condition 1 and adoption of the following findings and resolution. The motion passes only by an affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE

The Commission hereby finds that the compliance plan titled "Hydroacoustic Monitoring Plan for the Ten Mile River Bridge Replacement Project" prepared by Illingworth & Rodkin, Inc., for, and submitted by the permittee, the California Department of Transportation, dated September 27, 2006 and revised on January 22, 2007, attached as Exhibit 1, Part 1, and the compliance plan titled "Biological Monitoring Plan – Ten Mile River Bridge Replacement Project" prepared and submitted by the permittee, the California Department of Transportation, dated January 22, 2007, attached as Exhibit 1,

Part 2, are appropriately prepared and adequate, if fully implemented, to comply with the requirements of Special Condition 1 of CDP 1-06-022.

MOTION & RESOLUTION No. 2: Regarding Compliance of plan titled "Fish Passage Enhancement/Mitigation Site Assessment and Proposal for the Ten Mile River Bridge Replacement Project" as modified by memorandum from the Department of Transportation dated January 24, 2006 with Special Condition 2 (Fisheries Habitat Mitigation/Enhancement Plan) of CDP 1-06-022:

MOTION: "I move that the Commission approve as submitted the Fish Passage Enhancement/Mitigation Site Assessment and Proposal for the Ten Mile River Bridge Replacement Project" as modified by memorandum from the Department of Transportation dated January 24, 2006 attached to the staff recommendation as Exhibits 2 and 5, respectively, as compliant with Special Condition 2 of CDP 1-06-022."

STAFF RECOMMENDATION

Staff recommends a "YES" vote, which will result in the approval of the plan as compliant with Special Condition 2 and adoption of the following findings and resolution. The motion passes only by an affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE

The Commission hereby finds that the compliance plan titled "Fish Passage Enhancement/Mitigation Site Assessment and Proposal for the Ten Mile River Bridge Replacement Project" prepared and submitted by the permittee, the California Department of Transportation, dated September 28, 2006, attached as Exhibit 2, as modified by the memorandum from the Department of Transportation dated January 24, 2007, attached as Exhibit 5, is appropriately prepared and adequate, if fully implemented, to comply with the requirements of Special Condition 2 of CDP 1-06-022.

MOTION & RESOLUTION No. 3: Regarding compliance of plan titled "Marine Mammal Monitoring Plan for the Ten Mile River Bridge Replacement Project" with Special Condition 4 (Marine Mammal Monitoring Plan) of CDP 1-06-022:

MOTION: "I move that the Commission approve as submitted the "Marine Mammal Monitoring Plan for the Ten Mile River Bridge Replacement Project" attached to the staff recommendation as Exhibit 3 as compliant with Special Condition 4 of CDP 1-06-022."

STAFF RECOMMENDATION

Staff recommends a "YES" vote, which will result in the approval of the plan as compliant with Special Condition 4 and adoption of the following findings and

resolution. The motion passes only by an affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE

The Commission hereby finds that the compliance plan titled "Marine Mammal Monitoring Plan for the Ten Mile River Bridge Replacement Project" prepared and submitted by the permittee, the California Department of Transportation, dated March 3, 2006 and revised September 29, 2006, attached as Exhibit 3, is appropriately prepared and adequate, if fully implemented, to comply with the requirements of Special Condition 4 of CDP 1-06-022.

MOTION & RESOLUTION No. 4: Regarding compliance of plan titled "Bird and Bat Nesting/Roosting Plan for the Ten Mile River Bridge Replacement Project" with Special Condition 27 (Bird & Bat Nesting/Roosting Plan) of CDP 1-06-022:

MOTION: "I move that the Commission approve as submitted the Bird & Bat Nesting/Roosting Plan for the Ten Mile River Bridge Replacement Project attached to the staff recommendation as Exhibit 4 as compliant with Special Condition 27 of CDP 1-06-022."

STAFF RECOMMENDATION

Staff recommends a "YES" vote, which will result in the approval of the plan as compliant with Special Condition 27 and adoption of the following findings and resolution. The motion passes only by an affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE

The Commission hereby finds that the compliance plan titled "Bird & Bat Nesting/Roosting Plan for the Ten Mile River Bridge Replacement Project" prepared and submitted by the permittee, the California Department of Transportation, dated September 29, 2006, including attachments thereto dated June 21, September 11, and December 4 of 2006, attached as Exhibit 4, is appropriately prepared and adequate, if fully implemented, to comply with the requirements of Special Condition 27 of CDP 1-06-022.

4.0 BACKGROUND

On June 16, 2006, the Commission approved CDP No. 1-06-022 for Caltrans' proposal to replace the Ten Mile River Bridge on Highway 1, approximately seven miles north of Fort Bragg, Mendocino County, and demolish & remove the existing bridge after the new bridge is constructed, including a separate pedestrian corridor on the bridge to provide an all-weather

accessible segment of the Coastal Trail. Commission staff subsequently prepared Adopted Findings, dated August 7, 2006 (provided in pertinent part, without exhibits to the staff report, in Exhibit 7).

The Commission also certified a Public Works Plan (1-06-PWP) and a Specific Public Works Plan Project (1-06-001-PWP) for the off-bridge components of the project, including public parking, on June 16, 2006. The Commission previously reviewed the project and conditionally concurred with Federal Consistency Compliance Certification (CC-074-05) in November 2005 (revised findings adopted March 2006).

The Commission imposed numerous special conditions in approving CDP 1-06-022. Among these special conditions, the Commission required four conditions that required that the responsive compliance plans be submitted to the Commission for final approval. Caltrans has submitted these four plans, in compliance with:

- Special Condition 1 (Acoustic Monitoring Plan) (Exhibit 1);
- Special Condition 2 (Fisheries Habitat Mitigation/Enhancement Plan) (Exhibit 2);
- Special Condition 4 (Marine Mammal Monitoring Plan) (Exhibit 3); and
- Special Condition 27 (Bird and Bat Nesting/Roosting Features on Bridge) (Exhibit 4).

The Commission also imposed Special Condition 18 (Bridge Rail Design) requiring Caltrans to submit the final design plan for various bridge features, including rails, in the form of a permit amendment for Commission approval within one year of the date of approval of CDP 1-06-022, that is, by June 16, 2007. Caltrans continues to participate in the Commission's Road's Edge Subcommittee (coordinated by the Commission's statewide planning & transportation liaison, Tami Grove).

The Commission staff review of the hydroacoustic, fisheries, and marine mammal-related compliance plans was coordinated by Mark Delaplaine, who supervised the preparation of the staff report and revised findings for Federal Consistency Compliance Certification CC-074-05 (the earliest staff review of the Ten Mile Bridge project) and is the statewide lead staff for matters pertaining to hydroacoustic impacts on fish and marine mammals. Mr. Delaplaine's memorandum summarizing the staff review of the subject compliance plans, prepared in consultation with Commission staff ecologist John Dixon, Ph.D., is attached as Exhibit 6. In addition, Dr. Dixon reviewed the bat/bird plan required by Special Condition 27 and verified that the plan is compliant with Special Condition 27.

5.0 SPECIAL CONDITIONS of CDP 1-06-022

This section sets forth the applicable special conditions of CDP 1-06-022 that require Coastal Commission compliance review at this time. The pertinent special conditions are 1, 2, 4, and 27, are also contained in the adopted findings (Exhibit 7).

Special Condition 1:

1. COMMISSION REVIEW OF FISH INJURY AND ACOUSTIC MONITORING

A. WITHIN NINETY (90) DAYS AFTER COMMISSION APPROVAL OF COASTAL DEVELOPMENT PERMIT 1-06-022, or within such additional time as the Executive Director may grant for good cause, Caltrans shall submit a copy of the final acoustic monitoring plan to the Commission for review and approval at a regularly scheduled public hearing; and

B. The plan shall include a description of how the acoustic footprint will be determined, what equipment/personnel efforts to observe or detect fish reactions to pile driving are proposed, the length of time and number of sound measurement replicates that will be consecutively collected to adequately characterize the sound footprint and maximum hydroacoustic impact generated by project activities, how Caltrans proposes to adequately monitor hydroacoustic affects on fish if visibility is impaired (such as by weather, available light, or turbidity), what criteria will be used for fish injury thresholds, and how such criteria, and fish injury, will be measured. The acoustic footprint monitoring shall provide adequate data point locations (including several hydrophone locations between the proposed 10 meter and 100 meter locations) sufficient to adequately characterize the acoustic footprint. In addition, if sonar monitoring of fish behavior during pile-driving is required by state and/or federal agencies, the method and equipment used to conduct such monitoring, and the means of describing and reporting the results shall be included in the Acoustic Monitoring Plan. The plan shall additionally include any recommendation for species conservation or protection, and any specific requirements or conditions imposed by NOAA National Marine Fisheries Service, U.S. Fish & Wildlife Service, or California Department of Fish & Game; and

C. Project activities that may result in hydroacoustic impacts shall not commence until the Commission has considered the proposed final plan at a regularly scheduled public hearing, which shall be scheduled as soon as practicable after Caltrans submits the final plan. The Commission may require additional measures for the purpose of collecting sufficient information about the affects of pile driving on the fish that inhabit the Ten Mile River.

Special Condition 2:

2. COMMISSION REVIEW OF FISHERIES HABITAT MITIGATION/ ENHANCEMENT PLAN

A. WITHIN NINETY (90) DAYS AFTER COMMISSION APPROVAL OF COASTAL DEVELOPMENT PERMIT 1-06-022, or within such additional time as the Executive Director may grant for good cause, Caltrans shall submit to the Commission a preliminary plan for compensatory mitigation of adverse impacts to fish in the Ten Mile River that are reasonably anticipated through the assessments of state and federal agencies in rendering "Biological Opinions"(or other analyses) applicable to the proposed project. The plan shall include details of the proposed mitigation, including the location, scope of work, objectives, cooperating partners, timeline for completion, and means of verifying project success. The Commission shall consider

the preliminary mitigation plan at the earliest practicable hearing following submittal of the plan by Caltrans; and

B. To the extent that fish habitat enhancement project(s) are proposed to satisfy mitigation obligations, the projects shall benefit the habitat of the affected species proportionally to the impacts sustained by each; and

C. The Plan shall require mitigation of coho and chinook salmon, northern California steelhead trout, and tidewater goby habitat commensurate with the level of unmitigated residual adverse impact on these species determined likely at the anticipated impact threshold (the impacts that would occur if the project does not exceed the expected peak sound pressure threshold); and

D. The Plan shall include a further requirement that if the acoustic footprint monitoring establishes that, or ongoing monitoring document that adverse effects would be more extensive than predicted, additional mitigation commensurate with the level of additional impact shall be required. For example, if the initial assumption will be a defined estimate of numbers of fish exposed to a particular decibel level, and the actual acoustic footprint monitoring shows the footprint exceeds the predicted footprint, additional noise reduction strategies and/or offsite mitigation may be required; and

E. Upon completion of all project activities that may generate hydroacoustic impacts, Caltrans shall submit to the Commission a final report (together with the final acoustic monitoring report required by Special Condition 3 below), estimating the extent of adverse impacts of project activities deemed to have exceeded the levels originally predicted on the four fish species listed above, at any life stage of these species present during pertinent project activities. Caltrans shall describe proposed mitigation in the form of specific habitat improvement projects for the affected species in a manner reasonably proportionate by species and degree of adverse effects sustained, including a timeline to accomplish the proposed mitigation, and the method of verifying successful completion. Alternatively, Caltrans may propose payment of compensatory fees commensurate with the level of impact to some or all of these species, in an amount deemed reasonable by the Commission. Such fees, if required, shall be collected and distributed in accordance with the Commission's direction for projects that would provide direct benefits to the habitat of the affected species within or as close as is feasible to the Ten Mile River or its watershed. In reviewing the proposed mitigation, the Commission shall assign the greatest benefit to projects that provide in-kind, in-location habitat mitigation that benefits the species affected by the Ten Mile River Bridge construction, in preference to projects that provide in-kind but offsite mitigation, with declining value based on increasing distance from the impact site, and shall finally assign the least value to out of kind mitigation; and

F. Caltrans shall submit the final mitigation proposal not later than sixty (60) days after project completion, and the Commission shall consider the final mitigation proposal at the earliest practicable hearing following submittal of the plan by Caltrans.

Special Condition 3:

3. REVISED MARINE MAMMAL MONITORING PLAN.

WITHIN 90 DAYS AFTER COMMISSION APPROVAL OF CDP 1-06-022, Caltrans shall submit for the review and approval of the Commission, a revised Marine Mammal Monitoring Plan that provides that the Executive Director shall receive timely copies of all pertinent reports generated, and prohibits construction during periods of reduced visibility (i.e., the observer must be able to see the required distance, or pile driving may not commence until visibility has improved and the observer can verify that the area is clear of marine mammals).

Special Condition 27:

27. FINAL PLAN FOR INCLUSION OF BIRD AND BAT NESTING/ROOSTING FEATURES ON BRIDGE

Within one year following Commission approval of CDP 1-06-022, and by the time the final bridge rail design is submitted for final Commission review and approval, Caltrans shall submit for the Commission's review and approval a plan, including applicable revised project plans and/or construction drawings to scale, to incorporate bird and bat nesting and roosting habitat into the final bridge plan. The plan and supporting documents shall show features of the project that have been designed in consultation with a qualified biologist with expertise in the subject area, to ensure that the new bridge provides extensive and species-appropriate, permanent nesting and roosting habitat designed to attract and support bridge-nesting or roosting birds and bats. The plans shall include an attached explanation prepared by the consulting biologist of the selection and extent of design features and identification of the target species for which the habitat features have been designed, with annotated citations of supporting research and reference literature.

6.0 COMPLIANCE

The Commission's permit conditions adopted on June 16, 2006 (and set forth above in Section 4.0 and in the adopted findings attached as Exhibit 7), included requirements that Caltrans submit, for Commission review, revised monitoring and mitigation plans, including:

(1) a final fish injury and acoustic monitoring plan, which includes predator monitoring plans;

(2) a final fish habitat enhancement/mitigation plan

(3) a final marine mammal monitoring plan; and

(4) a final bird/bat nesting/roosting plan.

The conditions also required Caltrans to commit to providing ongoing monitoring reports to the Commission staff, as well as to coordinate, and to submit for Commission staff review and approval, any future changes to the monitoring protocols.

Commission staff has reviewed the pertinent compliance plans submitted by the permittee (California Department of Transportation) and determined that the plans comply with the requirements of Special Conditions 1, 2, 4, and 27. The memorandum of review prepared by Federal Consistency Supervisor Mark Delaplaine in consultation with Commission staff ecologist John Dixon, Ph.D., is attached hereto as Exhibit 6. Staff has also consulted with California Department of Fish & Game (CDFG), NOAA Fisheries, US Fish & Wildlife Service, and with technical consultants retained by the Caltrans, as well as with biologists from various Caltrans departments with special expertise in construction and related hydroacoustic concerns. In addition, Dr. Dixon specifically reviewed the bird/bat nesting/roosting plan and conferred with Humboldt State University staff with special knowledge of northern California bat ecology.

The Commission's conditions and findings associated with fish injury and acoustic monitoring, and marine mammal monitoring, include the following:

> *The plan shall include a description of how the acoustic footprint will be determined, what equipment/personnel efforts to observe or detect fish reactions to pile driving are proposed, the length of time and number of sound measurement replicates that will be consecutively collected to adequately characterize the sound footprint and maximum hydroacoustic impact generated by project activities, how Caltrans proposes to adequately monitor hydroacoustic affects on fish if visibility is impaired (such as by weather, available light, or turbidity), what criteria will be used for fish injury thresholds, and how such criteria, and fish injury, will be measured. The acoustic footprint monitoring shall provide adequate data point locations (including several hydrophone locations between the proposed 10 meter and 100 meter locations) sufficient to adequately characterize the acoustic footprint. In addition, if sonar monitoring of fish behavior during pile-driving is required by state and/or federal agencies, the method and equipment used to conduct such monitoring, and the means of describing and reporting the results shall be included in the Acoustic Monitoring Plan; ...*

The Commission's conditions and findings specified that the marine mammal monitoring plan include:

> *the requirement that construction may not commence in the event of reduced visibility (i.e., the observer must be able to see the required distance, or pile driving may not commence until visibility has improved and the observer can verify that the area is clear of marine mammals). Caltrans shall submit a copy of the revised plan to the Executive Director prior to commencement of in-water construction activities.*

Since the Commission's decision, Caltrans has revised and updated its monitoring plans and commitments and met with the Commission and other agency staffs to discuss the revisions. Based on the most recent of these meetings, Caltrans has submitted a revised Hydroacoustic Monitoring Plan for the Ten Mile River Bridge Replacement Project, dated January 19, 2006 (copy attached), which contains modifications Caltrans has agreed to incorporate based on the discussions with the Commission and other agency staffs, including detailing how and where the monitors will take measurements of the pile driving sounds and how they will characterize the acoustic footprint from the pile driving. The hydroacoustic monitoring will be supplemented by monitoring unusual predation, as discussed in Caltrans' "Fish Relocation, Avian and Marine

Predation, and Water Temperature Monitoring Plans for the Ten Mile River Bridge Replacement Project," (dated September 28, 2006), and by the Marine Mammal Monitoring Plan (dated March 3, 2006). These latter two plans are supplemented by additional commitments and clarifications contained in Caltrans' December 8, 2006, Memo entitled "Response to the California Coastal Commission memo of 10-25-06" (copy attached).

Among other measures, the revised Hydroacoustic Monitoring Plan specifies that:

1) monitors will take fixed measurements at 10 and 100 meters (m);

2) where feasible, monitors will take measurements closer than 10 m;

3) using a boat monitors will take various other (i.e., drifting) measurements, including attempting to locate the loudest noise levels, and including at least measurements at 25 m and 50 m (and using accurate GPS data to identify all distances); and

4) Caltrans will submit for Commission staff review and approval any changes to the monitoring, including but not limited to any request to discontinue or reduce levels of acoustic monitoring once Caltrans believes it has adequately characterized the sound footprint.

The plan also reiterates:

a) that all feasible physical measures have been incorporated that would reduce sound levels;

b) the goal is that sound levels will not exceed 190 dB at 10 meters;

c) that Caltrans will measure sound exposure levels (SELs), in addition to instantaneous peak and RMS sound pressure levels;

The plan includes the following discussion:

There will be up to four hydrophones deployed around the cofferdam. The hydrophones will be located 10m from the center of each side of the cofferdam where the water depth is greater than 1m. These measurements will then be compared to the project's threshold of 190 dB Peak. Measurements at the stationary positions will be conducted with the instrumentation located on small rafts that would be tethered to a buoy or anchored to the bottom. This is a proven method of deploying hydrophones on marine construction projects, utilized on numerous projects previously. There will be one stationary measurement site located 100 meters from the cofferdam. The direction and location will depend upon where the cofferdam is located in the river. For the two piers located near the shore, the stationary location would be located 100 meters normal to the shore towards the center of the estuary. During the driving of the pier located near the middle of the channel, the 100 meter stationary position would be selected based on hydroacoustic monitoring results previously obtained on the project. In addition, there will be a monitor in a boat drifting outward from the source taking

> *hydroacoustic measurements. There will be observations of peak noise levels at increasing distances up to at least 100 meters from the source, to characterize the noise field and determine locations of maximum noise levels. Measurements from the boat will be made at intermediate distances of 25 meters and 50 meters from the cofferdam in directions upstream, downstream, and normal to the cofferdam. Additional drift measurements will be used to determine if there are any isolated areas of higher-than-expected sound pressure in between the defined monitoring distances. As stated in the previous section changes to this monitoring process may be necessary to fit site conditions. Underwater sound levels would also be measured any time a change in hammer type or size occurs. Additionally, as described in the "Data Reporting" section of this plan, if underwater SPLs for each pile type and size do not vary to a large degree, then, pursuant to CDFG 2081 Incidental Take Permit Section 4.3.12, Caltrans will provide a written request to the CDFG to discontinue hydroacoustic monitoring. Caltrans will also provide a written request to the Coastal Commission Executive Director to discontinue hydroacoustic monitoring.*

For these reasons, and as further stated below, the compliance plans for hydroacoustic & predation monitoring, and the marine mammal monitoring plan, as revised and submitted by Caltrans (attached as Exhibits 1 and 3) are compliant with the requirements of Special Conditions 1 and 4 of CDP 1-06-022.

<u>Fish Habitat Enhancement/Mitigation - Special Condition 2</u>:

After the Commission approved CDP 1-06-022 in June, 2006 Caltrans completed negotiations with the California Department of Fish and Game and other federal agencies concerning the project's potential impacts on fish. As memorialized in Caltrans' memorandum to CDFG (Exhibit 8, Part 1), Caltrans agreed to accept a restriction on underwater sound pressure levels during pile driving as the key means of avoiding significant impacts on the fisheries of the Ten Mile River. The limit Caltrans accepted is described above, in the discussion of the hydroacoustics monitoring plan, and is set at 190 decibels (dB) at 10 meters from the pile being driven. This limit also applies to potential exceedances of the 190-decibel limit in locations further than 10 meters from the pile being driven, as sound pressure levels may be higher in some cases further from the source.

The agencies have agreed that if the underwater noise levels do not exceed this limit, significant impacts to fisheries are unlikely. As a result, specific mitigation for adverse impacts to fish are not proposed in the plan submitted to satisfy Special Condition 2, although Caltrans has included as a conservation measure recommended by CDFG, a fish passage enhancement project along Dunn Creek, north of Westport, just inland from the coastal zone. However, Special Condition 2 requires, and Caltrans has agreed, that if the 190-decibel-limit is exceeded and the increased sound pressure measured above the 190-decibel-limit is determined to be biologically significant by the Executive Director, additional mitigation will be required. In that case, Special Condition 2 (E) requires Caltrans to submit a final report for review by the Commission that addresses the impact of fisheries and proposes mitigation. Specifically, Caltrans has provided a memorandum dated January 24, 2006 (Exhibit 5) which states in pertinent part:

> "...For clarification, the fish passage enhancement project located at Dunn Creek (SR1, Post Mile 92.83) and referenced in the (Fish Passage Enhancement/Mitigation Site and Proposal) will act as a conservation measure (pursuant to CDP 1-06-022, Special Condition 2). Monitoring reports containing the decibel levels measured in the field during pile driving will be submitted to the Coastal Commission, NOAA Fisheries, CDFG, and USFWS as required in the permits and authorizations of the respective agencies. If the decibel levels exceed 190 dB (decibel) peak at 10 meters from the pile being installed, Caltrans will confer with the agencies to determine whether the increased decibel levels are significant and/or warrant remedial action. Caltrans hereby confirms that for the purpose of continuing compliance with Special Condition 2 of CDP 1-06-022, if the Executive Director, after consultation with NOAA Fisheries, CDFG, USFWS, and Caltrans biologists, determines that the exceedance of the 190 decibel level (at 10 meters) limit is of biological significance, additional mitigation may be required pursuant to the requirements of CDP 1-06-022."

In summary, Caltrans has submitted a fisheries habitat enhancement/mitigation plan (Exhibit 2). The plan proposes the implementation of fish passage improvements of particular benefit to coho, including, as stated above, a proposal for improvements at a location known as Dunn Creek (discussion commences on page 4 of Exhibit 2). Caltrans proposes to construct improvements to fish passage as a conservation measure for coho, pursuant to requirements imposed by CDFG, and to avoid impacts to fisheries by restricting the peak sound pressure levels as stated above. Caltrans has clarified that the agency is committed to providing further mitigation consistent with the requirements of Special Condition 2 if the acoustic limits are exceeded in a manner deemed biologically significant by the Executive Director as noted above .

For these reasons, and as further stated below, the compliance plan for fisheries habitat enhancement/mitigation, as submitted and as clarified by Caltrans (Exhibits 1 and 5) is compliant with the requirements of Special Condition 2 of CDP 1-06-022.

<u>Bird/Bat Nesting/Roosting Plan: Special Condition 27</u>

Caltrans has submitted a bird and bat nesting/roosting plan (Exhibit 4) based on further field surveys completed by Caltrans biologists with specific expertise in bat ecology and bat survey techniques after the June 16, 2006 Commission hearing. The surveys, documented in Exhibit 4, concluded that only a small number of bats utilize the existing bridge, and only for occasional night roosting. Caltrans biologists further concluded that no maternity use of the bridge occurs by bats because ambient temperatures in the Ten Mile River area are too cold for this purpose. The Caltrans biologists also reviewed the new bridge plans and concluded that the openings into the extensive network of bridge cavities suitable for use by bats would be increased in the new bridge, and that no aspect of the bridge design would create a barrier for bats, or limit nesting use of the bridge by birds.

Caltrans has additionally committed to leaving the existing bridge fully in place until the end of the swallow nesting season of the year that demolition is scheduled (which will not occur until after the new bridge is completed). Thus, continuously available nesting/roosting habitat will be provided for bat and bird species using the bridge. Caltrans biologists have additionally

confirmed that the new bridge design includes the same ledge features that attract swallow nesting presently. The new bridge will be longer and wider than the existing bridge, increasing the total amount of internal and external nesting/roosting habitat available for bridge-nesting birds and roosting bats after construction is completed. At the request of Commission staff, Commission ecologist John Dixon, Ph.D., additionally reviewed the plan and also consulted with Humboldt State University staff with expertise in bat biology. Dr. Dixon concluded that the plan is compliant with the requirements of Special Condition 27.

For these reasons, and as further stated below, the compliance plan for bird/bat roosting/fisheries habitat enhancement/mitigation, as submitted and supplemented by Caltrans (Exhibit 4), is compliant with the requirements of Special Condition 27 of CDP 1-06-022.

Commission Conclusion:

The Commission agrees that with the revisions included in the current hydroacoustic monitoring plan and other above-described commitments, the plan is consistent with the Commission's conditions because it contains sufficient data points and appropriate methodology adequate to characterize the acoustic footprint, describes the criteria used for fish injury thresholds, sufficient to enable a determination of maximum sound levels, will report results to the Commission staff, and will seek Commission staff authorization for any changes to the plan. The Commission also agrees that with the additional commitments on the marine mammal monitoring and avian predation plans, these plans are also adequate to comply with the Commission's conditions. However, the Commission also finds that in the event the monitoring results establish that the acoustic thresholds are being exceeded (i.e., in the event Caltrans' pile driving exceeds 190 dB, as defined by NMFS' BO, Condition 19 [under which an exceedance would occur "If underwater sound produced during five or more strikes on a single day exceeds the anticipated level of 190 dB peak at 10 meters from the pile being installed]), the Commission retains the authority to "reopen" its federal consistency authorization (CC-74-05) under 15 CFR Sections 930.65 and 930.66). In addition, Condition 2 of the Commission's permit (CDP No. 1-06-022) also triggers additional mitigation requirements in the event sound levels exceed the predicted 190 dB limit (at 10 meters).

The Commission further concludes that the fish habitat enhancement/mitigation plan is sufficient to achieve compliance with Special Condition 2, given that the plan provides that as stated above, exceedance of the applicable noise thresholds will be evaluated for biological significance, and if deemed warranted by the Executive Director, additional fisheries mitigation measures will be implemented by the permittee.

Finally, the Commission agrees, in light of the further evaluation provided in the bird/bat nesting and roosting plan, that the plan confirms that adequate bird/bat nesting/roosting habitat will be supplied by the new bridge design. The new bridge design, combined with the permittee's commitment to preserve and make continuously available the old bridge until the new bridge is completed, and to demolish the old bridge only after the pertinent nesting season is completed further ensures that nesting/roosting habitat is available at all times during and after project construction.

For all of these reasons, therefore, the Commission finds that the plans attached in Exhibits 1, 2, 3, and 4 are compliant as revised and submitted, with the requirements of Special Conditions 1, 2, 4, and 27 of CDP 1-06-022.

Click Here to See the exhibits.

Item Th17a
Recommended Revised Findings for Coastal Development Permit E-06-013
Poseidon Resources (Channelside), LLC

ATTACHMENT 5:
April 14, 2008 letter from Coast Law Group regarding Recommended Revised Findings

COAST LAW GROUP LLP

169 Saxony Road
Suite 204
Encinitas, CA 92024

Tel 760-942-8505
Fax 760-942-8515
www.coastlawgroup.com

April 14, 2008

Mr. Tom Luster
California Coastal Commission
25 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Via Electronic Mail
tluster@coastal.ca.gov

Re: Recommended Revised Findings: Carlsbad/Poseidon CDP
No. E-06-013, May 2008 Meeting
Comments from Surfrider Foundation and San Diego Coastkeeper

Dear Mr. Luster:

Please accept the following comments on behalf of the Surfrider Foundation and San Diego Coastkeeper ("Environmental Groups") regarding the Recommended Revised Findings on Coastal Development Permit Application for the Poseidon Resources (Channelside) LLC proposed desalination facility in Carlsbad, California. The Environmental Groups would like to make absolutely clear that they are not opposed to desalination projects *per se*. Even within the environmental community, we recognize and appreciate the undeniable need to develop local water sources, and believe it likely that the San Diego region's future water supply portfolio will include one or more *responsibly designed and sited* desalination facilities.

Nonetheless, upon review of the Recommended Revised Findings and the transcript of Commissioners' discussions, it is clear the Commission's decision to conditionally approve the Poseidon Resources Carlsbad proposal ("the Project") was based entirely upon the perceived urgent need for new water, and not upon careful consideration of Coastal Act mandates. The Revised Findings, like the project itself, suffer from significant fatal flaws, detailed further below. Because those Commissioners approving the project failed to sufficiently bridge the gap between the evidence presented and their decision to approve the Coastal Development Permit over staff's objections, the Recommended Revised Findings are beyond the scope of the approval and must be rejected.

After review of the record of proceedings thus far on the Project, the only legally viable findings in support of the Project that can be made by the Commission at its upcoming May hearing are:

A. San Diego is in need of new water supply options; and,

B. Insufficient information exists regarding project impacts and future mitigation measures such that the Commission cannot determine whether the Project can or will comply with the Coastal Act.

Forcing staff to bring back its report with significant redactions and conclusions opposite to those originally reached is offensive to the process, as well as to the coastal resource protection mandates of the Coastal Act. There exists no legal rationale under the Act to conditionally approve a project simply because a majority of the Commission considers it necessary, but for which there is insufficient information and analysis with respect to impacts and mitigation. This Commission "approval" turns the Coastal Act on its head, and sets an

extremely dangerous and illegal precedent.

At the hearing on the Project, there were two broad categories of issues with which the Commission struggled – energy consumption, and marine life impacts mitigation. The result of the so-called "approval" was to find insufficient evidence in the record upon which to make a final decision, and to direct Poseidon to return to the Commission for approval of a Climate Action Plan and a comprehensive marine life impacts and mitigation plan. Thus, the public has been left wondering "what did the Commission actually approve?"

1. Conditional Approval of the Coastal Development Permit was Illegal, and therefore the Revised Findings Are Inadequate as a Matter of Law.

The Commission failed in its basic duties under the Coastal Act when it voted to conditionally approve the Project. Without sufficient information in the record upon which to make the most critical determinations required of it – namely that the Project would be consistent with numerous substantive coastal resource protection mandates in Chapter 3 of the Act – the Commission's decision as a whole was arbitrary and capricious, an abuse of discretion, and not supported by substantial evidence in the record.[1] The Commission's regulations require:

> If the commission action is substantially different than that recommended in the staff report, *the prevailing commissioners shall state the basis for their action* in sufficient detail to allow staff to prepare a revised staff report with proposed revised findings that reflect the action of the commission.

(Cal. Code Regs. tit. 14, § 13096(b), emphasis added). There is no disputing the Commission action to conditionally approve the Project was directly contrary to the staff's recommendation of denial. As such, the Commissioners were *required* to state on the record the factual basis for voting in favor of approval and against the recommendation of staff. Necessarily then, at least one prevailing Commissioner had to include in his/her stated rationale some discussion of how the numerous project impacts noted in the original staff report could be construed differently and the Project found consistent with the Coastal Act. Yet, this never happened.

California case law requires the agency to "bridge the analytic gap" between the raw evidence and the ultimate decision or order.[2] Notwithstanding the so-called "approval" of the Project, the

---

[1] California Code of Civil Procedure section 1094.5 mandates that findings be supported by the evidence in the record, and that abuse of discretion exists when findings are not supported by substantial evidence in light of the whole record. Where, admittedly insufficient evidence exists to assess the breadth of expected impacts and required mitigation, abuse of discretion is all but ensured.

[2] From case law, "We further conclude that implicit in section 1094.5 is a requirement that the agency which renders the challenged decision must set forth findings to bridge the analytic gap between the raw evidence and ultimate decision or order... By focusing, ... upon the relationships between evidence and findings and between findings and ultimate action, the

ultimate decision of the Commission was to require additional information from the Applicant. As such, the insufficiency of raw evidence in the record is admitted and the analytic gap is an un-bridgeable canyon. Legally, therefore, the Commission is not justified in now making the bulk of the findings in the Recommended Revised Findings document.

Because the "approval" was in truth little more than a statement of support for the Project, with the bulk of necessary information to be produced at some later date, the Revised findings cannot be considered adequate under the Commission's regulations or the Coastal Act. Careful review of the hearing transcript shows that none of the "prevailing commissioners" provided any meaningful direction as to how they reached their decision to approve the Project, other than to express comfort with the fact that mitigation plans would return to the Commission for consideration and approval before the Coastal Development Permit ultimately is issued. There certainly was not enough information proffered to support legally adequate Recommended Revised Findings.

The following summarizes comments made by prevailing commissioners, and includes the Environmental Groups' responses (in *italics*) as to why the comments are insufficient to justify the Recommended Revised Findings.:

- **Commissioner Hueso**

  - Discussed the difference between staff proposed condition and those of the applicant.

    - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

  - Made the motion to approve.

    - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

  - Discussed reforestation with the applicant.

    - Does not speak to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The Commission's decision to require applicant to return when the Climate Action Plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

Legislature sought to direct the reviewing court's attention to the analytic route the administrative agency traveled from evidence to action. In so doing, we believe that the Legislature must have contemplated that the agency would reveal this route. " (*Topanga Ass'n for a Scenic Community v. County of Los Angeles*, 11 Cal.3d 506,515 (1974))

- Praised and thanked the environmental community.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

- Thanked his staff for helping him "balance the benefits and detriments of this project, as they apply to our coastline."

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

- Thanked the City of Carlsbad for its leadership.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

- Provided background information about San Diego's need for water that admittedly "might not be relevant to the Coastal Act...".

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The region's need for water could be an appropriate finding of the Commission, but this has no bearing on a determination of consistency with the Coastal Act.

- Discussed the benefits of offsetting Carbon emissions.

  - While relevant to the underlying need for a Climate Action Plan, the discussion does not justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The Commission's decision to require applicant to return when the Climate Action Plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- Lauded the water needs of the defense, tourism, and biotechnology industries.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The region's need for water could be an appropriate finding of the Commission, but this has no bearing on a determination of consistency with the Coastal Act.

- Posited that protecting business, including those highly dependent on reliable water sources, is necessary to generate funds for coastline improvements.

- No evidence exists in the record to support the notion that Coastal Commission decisions affect the economy of San Diego. No evidence exists to suggest supporting business interests will result in additional funding for coastal protection. The statement is irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The region's need for water could be an appropriate finding of the Commission, but this has no bearing on a determination of consistency with the Coastal Act.

- Talked about the lack of affordable housing and increasing population.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. To the extent the statement is intended to support a "balancing" analysis of Coastal Act policies, the record fails to establish a conflict in such policies necessary to invoke the balancing provisions of Coastal Act section 30007.5 in the first place.

- Mentioned the "delta smelt" decision from Northern California and noted that, along with historic drought conditions throughout California, San Diego would surely face restrictions on its ability to continue to secure water as it has in the past.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The region's need for water could be an appropriate finding of the Commission, but this has no bearing on a determination of consistency with the Coastal Act.

- Noted that recent water supply conditions might limit growth, but that build-out of community plans would stress existing water supplies nonetheless.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. The region's need for water could be an appropriate finding of the Commission, but this has no bearing on a determination of consistency with the Coastal Act.

- Recounted efforts by the City of San Diego to support water conservation and reclamation for irrigation, but maintained opposition to indirect potable reuse of treated sewage.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

- Stated that "the project will advance the goals of the Coastal Act to

maintain, restore and enhance public access, and recreation, and maintain, restore and enhance marine environment through the dedication of more than 15 acres of lagoon and ocean front land for public purposes.

- While the comment provides the Commissioner's reasons for supporting the dedication of "more than 15 acres of lagoon and ocean front land for public purposes," it does not indicate how the provision of this land will offset the marine life impacts of impingement and entrainment. To the extent the statement is intended to support a "balancing" analysis of Coastal Act policies, the record fails to establish a conflict in such policies necessary to invoke the balancing provisions of Coastal Act section 30007.5 in the first place.

- Admitted that "there are impacts, but they are offset by the benefits, by the huge efforts to assist those impacted endangered species."

  - To the extent the statement is intended to support a "balancing" analysis of Coastal Act policies, the record fails to establish a conflict in such policies necessary to invoke the balancing provisions of Coastal Act section 30007.5 in the first place. It is wholly unclear from the record which endangered species are being referred to by the Commissioner. To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- Explained that alternatives to desalination are extremely costly and possibly more polluting than desalination.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. There did not exist sufficient evidence in the record to deduce that conservation or water reclamation (including indirect potable reuse) would be more expensive than desalination. In fact, the record supported the opposite conclusion.

- Noted that a larger project which might be able to employ environmentally sensitive technologies could have greater air quality and viewshed impacts.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act. To the extent the statement is intended to support a "balancing" analysis of Coastal Act policies, the record fails to establish a conflict in such policies necessary to invoke the balancing provisions of Coastal Act

section 30007.5 in the first place. Porter-Cologne section 13142.5 requires minimization of marine life intake, which may require implementation of a smaller project. No evidence in the record supports the Commissioner's conclusion.

- Claimed that wildlife at issue with the Project was thriving under the existing power plant intake conditions due to "the dredging of the salt marsh."

  - No dredging of salt marsh habitat in Agua Hedionda lagoon is conducted as part of the Power Plant's efforts to ameliorate sedimentation impacts to the lagoon's outer basin from the cooling water intake practices. Insufficient evidence in the record exists to establish a baseline condition for a healthy Agua Hedionda Lagoon. Hence, it cannot be claimed that marine life in the lagoon is "thriving." To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- Stated that water used for cooling the power plant would be used for drinking water, and "again, there will be increases in adverse effects to the marine biology."

  - Comment improperly ignores the fact that the Project must be assessed as a stand-alone facility given that cessation of the power plant's use of its intake structures is foreseeable in the very near future. The statement correctly, though likely inadvertently, notes that operation of the Project will increase adverse effects to the marine environment.

- Reflected his belief that all present concurred that "subsea water intake facilities are infeasible and not the way to go".

  - Testimony and substantial evidence in the record indicates that the Environmental Groups do not agree with the Commissioner's statement, and in fact, sub-seafloor intakes are "best technology available" for purposes of compliance with Porter-Cologne. Substantial evidence in the record does not support the notion that such intakes are infeasible or undesirable. The Commissioner's failure to cite to any evidence in the record does not bridge the analytical gap between the evidence and his decision.

- Felt the Project would maintain the lagoon, and claims that the power plant owner would continue to do so was not appropriately before the Commission.

- An email from the current power plant operator to Commission staff is substantial evidence upon which it can be concluded the lagoon would be maintained at least as well as it is today despite the eventual cessation of power plant operations.

- Stated, "we can study this to death, and sometimes those studies are not as accurate as you would like, in terms of meeting perfection. Perfection is very , very hard to achieve, and I don't think that there is no true perfect desalination project. Too big, it affects air quality. Too small and it incorporates the technologies that make people less comfortable. This project is absolutely not precedent setting, and should not be judged on its merits in relation to size, location. It is not precedent setting, and should be judged on its merits in relation to size, location, and mitigation program."

  - "Perfection" is different from compliance with the Coastal Act. The Commissioner's contradictory statement is likely the result of accidentally, and tellingly, including the word "not" in the second to last sentence. The record does not support a finding that the Project is consistent with the Coastal Act with respect to the its size, location, and mitigation program. To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- Stated that the Project was a coastal dependent industrial facility.

  - Evidence in the record indicates the desalination facility could be constructed outside of the coastal zone, but that the seawater intake infrastructure (pumps and pipes) are the only part of the project that are truly coastal dependent.

- Ultimately agreed the marine life mitigation plan and climate action plan should be brought back to the full Commission for consideration.

  - Therefore, the Project "approval" is meaningless beyond a mere statement of support and cannot be supported upon the Recommended Revised Findings, or any other findings, until the impacts assessments and mitigation plans are considered and approved by the Commission.

- **Commissioner Burke**

  - Expressed disappointment with the Staff for failing to utilize other agency expertise when considering carbon footprint of Poseidon's energy consumption.

- Substantial evidence exists in the record to support staff's calculations of energy consumption and carbon footprint for the Project. The Commissioner did not advocate acceptance of the applicant's calculations, nor provide instruction on where else in the record such calculations could be found. Nonetheless, the Commission's decision to require applicant to return when the Climate Action Plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- Seconded the motion to approve.

  - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

- Demanded $1M of reforestation from the applicant, instead of the $500k offered.

  -The Commission's decision to require applicant to return when the Climate Action Plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- **Commissioner Blank**

  - Questioned whether the project was consistent with Coastal Act mandates.

    - Does not support approval of the Project.

  - Expressed support for public-private partnerships, but questioned privatization of water supplies.

    - Does not support approval of the Project.

  - Questioned the applicant regarding problems with its Tampa Bay project.

    - Does not support approval of the Project.

  - Analyzed the economics and issues associated with the water purchase contracts.

    - Does not indicate support for approval of the Project though it may be relevant to ultimate long term viability of the Project.

  - Requested clarification from the applicant regarding its position regarding the need for a new coastal development permit when the power plant shuts down.

- Does not support approval of the Project, but rather seeks to ensure additional consideration of impacts at some point in the future.

- **Commissioner Clark**

  - Generally supported desalination as a positive move for the region.

    - Irrelevant as to the Commission's obligation to justify approval of the Project pursuant to the policies contained in Chapter 3 of the Coastal Act.

  - Expressed concern that the applicants proposed conditions on energy consumption and marine life mitigation would take away authority from the Commission and put it with the Executive Director.

    - Does not support approval of the Project.

  - Advocated for a continuance so that staff and the applicant could resolve discrepancies with proposed special conditions.

    - Does not support approval of the Project. Comment supports notion that Commission did not have sufficient information to justify conditional approval of the Project.

- **Commissioner Potter**

  - Noted his desire that special conditions be amended to require subsequent approval by the full Commission, and not just the Executive Director.

    - Does not support approval of the Project.

  - Stated, "I see significant lack of detail" with respect to the marine life mitigation proposals.

    - Does not support approval of the Project.

  - Reflected on what the Commission learned with the SONGS mitigation program.

    - To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

  - Explained that the focus should be on the sufficiency of the mitigation,

not the general benefits of desalination to the greater San Diego area.

- Does not support approval of the Project.

- Questioned the likelihood of, and impacts from power plant closure.

  -To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

- **Commissioner Neely**

  - Acknowledged the need for water, but supported return of the mitigation plans to the full Commission.

    - Does not support approval of the Project. To the extent the statement is intended to address the adequacy of the proposed marine life impacts mitigation plan, the Commission's decision to require applicant to return when the mitigation plan is complete indicates it did not have enough information at the time of the hearing such that it could deem the Project compliant with the Coastal Act.

The Commissioners' statements do not provide adequate justification for approval of the Project over staff's recommendation of denial. The need for water in San Diego is undisputed, but is insufficient as an overarching rationale to ignore Project impacts. Repeatedly, the Commissioners who voted to approve the Project did so with the belief that such conditional approval would be appropriate so long as future impacts assessment and mitigation plans were returned to the full Commission prior to issuance of the Coastal Development Permit. Hence, it is unclear from the record what exactly was approved, if anything.

Nowhere in the Coastal Act or the Commission's Regulations can such a process for piece-mealing approvals be found. Inasmuch as the Commissioners disagreed with the bulk of staff's analysis upon which it based the recommendation for denial, the Commissioners failed utterly to provide "sufficient detail to allow staff to prepare a revised staff report with proposed revised findings that reflect the action of the commission." (Cal. Code Regs. tit. 14, § 13096(b)) The Recommended Revised Findings do not reflect the Commission's actions at the approval hearing, and therefore cannot now be legally adopted. The public hearing should be reopened, additional information considered, and comprehensive direction given to staff regarding the Commissioners' rationale for Project approval.

A. Because the Commission Failed to Appropriately Consider the Project Pursuant to Porter-Cologne Section §13142.5, Legally Adequate Findings of Approval Cannot Now Be Made.

Porter-Cologne section 13142.5(b) states:

> For each new or expanded coastal powerplant or other industrial installation using seawater for cooling, heating, or industrial processing, the best available site, design, technology, and mitigation measures feasible **shall be used to minimize the intake and mortality of all forms of marine life**." (Emphasis added)

During their consideration of Project approval, none of the "prevailing" Commissioners addressed the subject of how Porter-Cologne section 13142.5 should be interpreted with respect to desalination facilities. Instead, the Commissioners impliedly adopted the applicant's interpretation regarding the appropriateness of compensatory mitigation as a means for achieving compliance with the statute. As a matter of law, the Commission's interpretation was incorrect, and therefore, the entire framework under which the Project was analyzed and approved must fail. No findings can now be made such that the Project would comply with Porter-Cologne section 13142.5. Hence, adoption of revised findings to perfect the approval as contemplated would be *ultra vires*.

The implications of the *Riverkeeper II decision (Riverkeeper, Inc. v. United States EPA, 475 F.3d 83, 97 (2d Cir. 2007))* to Porter-Cologne section 13142.5 were extensively covered in the Environmental Groups' prior submissions to the Commission, but were ignored. Nonetheless, recent activity by the State Water Resources Control Board ("State Water Board") should cause the Commission significant concern regarding its failure to address this misinterpretation.

Recently, the State Water Board articulated an interpretation of the statute's meaning, and did so in a way inconsistent with that put forward by Poseidon in its submissions both to the Coastal Commission and the Regional Water Board. The State Water Board Scoping Document on its "Water Quality Control Policy on the Use of Coastal and Estuarine Waters For Power Plant Cooling" (dated March, 2008) states:

> Finally, the Water Boards must also consider the legislative directive in Water Code §13142.5 when regulating cooling water intake structures. Under the Clean Water Act, facilities must, at a minimum, comply with section 316(b) requirements and any more stringent applicable requirements necessary to comply with state law. Section 13142.5 has a more limited coverage than section 316(b) in that the former covers only new and expanded coastal facilities. However, section 13142.5 appears to be more stringent than section 316(b) in one respect. **Section 13142.5 requires use of the best available technology feasible "to minimize the intake and mortality of all forms of marine life", without regard to whether these impacts are adverse, in contrast to section 316(b) which focuses on "minimizing adverse environmental impact."**

(OTC Scoping Document, p. 31, emphasis added)

While Poseidon consistently argues that federal Clean Water Act section 316(b) regulations and policies do not apply to its desalination project proposal, there can be no dispute that Porter Cologne section 13142.5 does govern the design of the Project's seawater intake structures. Pursuant to the State Board's interpretation noted above, regardless of whether applied to power plants or desalination plants, Project design must be considered independently and separately from the impacts of impingement and entrainment and resulting mitigation. By failing to even consider how and whether the Project is minimizing the intake of all forms of marine life, the entire legal and scientific framework under which the Commission has analyzed and approved the Project is just plain wrong. No Revised Findings can cure this legal inadequacy.

Poseidon's response on the subject in its March 7, 2008 letter to the Regional Board shows that Poseidon considered compliance with section 13142.5 to require **minimization of project related impacts to marine life, not minimization of intake and mortality of all forms of marine life** in the first instance. (See Poseidon's March 7, 2008 Response Letter, attached, at response to question no. 1). The notion that Poseidon can focus solely on the extent of impacts and subsequent compensatory mitigation ignores the express mandate that the Project's intake be designed at the outset to minimize intake and mortality of all forms of marine life. Mitigation of impacts comes only after implementation of best technology available to minimize intake is proven.

The State Board's interpretation of the statute could not be more clear or contrary to that of Poseidon:

> Finally, section 316(b) requires that the technology be the best available for "minimizing adverse environmental impact." Water Code section 13142.5, in contrast, requires that new and expanded industrial facilities using seawater for cooling employ the best available technology feasible "to minimize the intake and mortality of all forms of marine life," irrespective of whether these impacts are adverse.

(OTC Scoping Document, p. 42) Given Poseidon's desire to distance itself from Riverkeeper II on an argument that cooling water intake regulations do not apply to desalination plants, it is rather ironic that the company in this instance seeks to interpret 13142.5 in the more limited manner expressed in CWA section 316(b). While it is true that 316(b) does not apply to desalination plants, there exists no basis whatsoever in Porter-Cologne to interpret 13142.5 differently for cooling water than for desalination source-water intake infrastructure.[3]

Unless the Commission believes it is entitled to interpret Porter-Cologne in a manner inconsistent with the State Board, and we do not believe this to be so, there is no legal option but to demand reconsideration of Poseidon's project and postpone approval until compliance with Porter-Cologne can be established. Otherwise, the Project cannot meet the mandates of Coastal Act sections 30230 and 30231 with regard to the mandatory protection of marine life

[3] Porter-Cologne section 13142.5 expressly applies to industrial facilities using seawater for any "industrial processing."

and water quality.

B. The Commission Cannot Approve the Project with Deferred Mitigation.

The Coastal Act, like the California Environmental Quality Act (CEQA), is expected to inform decision makers of expected project impacts on environmental resources prior to agency approval. In addition, the process is expected to ensure that such impacts will be sufficiently mitigated as required by law. The notion that impacts cannot be deduced without significant post-approval technical investigation is anathema to a meaningful environmental review process. Similarly, the deferral of mitigation until some time after project approval makes it unlikely, if not impossible, for an agency to change its position should impacts prove to great and/or mitigation measures infeasible.

These issues were squarely addressed in *Sundstrom v. County of Mendocino*, 202 Cal.App.3d 296 (1988). There, the court determined that a County had violated CEQA in approving a project with a condition that a hydrology study be produced to analyze the impacts of the project and to propose sufficient mitigation for such impacts. The Court held that deferral of environmental assessment until after approval was inappropriate because of CEQA's requirement that environmental review take place at the earliest feasible stage in the planning process:

> Environmental problems should be considered at a point in the planning process where genuine flexibility remains. A study conducted after approval of a project will inevitably have a diminished influence on decisionmaking. Even if the study is subject to administrative approval, it is analogous to the sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA.

(*Id.* at p.307, with internal citations omitted) The same policies are applicable to considerations of project approval under the Coastal Act.

The Commission's decision to approve the Project with Special Conditions 8, 10, and 12 runs afoul of the policies and legal mandates expressed in *Sundstrom*. In essence, the cart has been put before the horse, the Commission's flexibility compromised, and its decision will be rationalized post hoc. No findings could rectify this critical failure in planning process. The public deserves better.

2. Numerous Recommended Revised Findings Are Not Supported By Substantial Evidence in the Record.

While the original staff report was grounded in evidence in the record, the revised document reflects the Commission's arbitrary support for the Project regardless of the record (and lack thereof). As a result of such blind direction to staff, the Revised Findings fail in numerous regards.

A. Coastal Act Sections 30233 and 30260

Coastal Act section 30233(c) requires that dredging in the Agua Hedionda Lagoon be limited to certain types of uses, and that it be allowed only where there are no feasible less environmentally harmful alternatives, and that it be mitigated to the extent feasible. The Commissioners who voted to approve the Project did not address the dredging issue, and hence no revised findings can be made in this regard. Further, Special Condition 12, which is intended to yet again defer consideration of Project impacts (from dredging) and mitigation requirements until a future date, violates the mandates of *Sundstrom* noted above.

The Revised Findings purport to justify an override of section 30233 requirements pursuant to section 30260. The proposed findings are not supported by evidence in the record, and the original staff conclusions regarding the Project's failure to conform to section 30260 remain true. Section 30260 allows for the override of other Coastal Act policies when the proposed project is a coastal dependent industrial facility[4], and the facility meets a three-part test – (1) alternative locations are infeasible or more environmentally damaging; (2) adverse environmental impacts are mitigated to the maximum extent feasible; and (3) that to do otherwise would adversely affect the public welfare.

The record does not support a finding of compliance with section 30260. First, there has been no consideration of alternative location for the facility. Because the facility is intended to be co-located with the existing power plant (regardless of the plant's plans to shut down), no other site along the coast was considered. The burden is on the Coastal Commission and applicant to show that the project would not be feasible at some other location away from the highly sensitive and protected Agua Hedionda Lagoon. This was not done. The analysis in the staff report instead focuses on the viability of alternative seawater intake technologies, without any discussion whatsoever regarding alternative locations for the facility itself.

Second, a finding cannot be made that adverse impacts are mitigated when the approval is expressly conditioned upon approval of future impacts assessments and mitigation plans. This amounts to a conditional approval contingent upon yet another conditional approval.

Third, the revised findings discussion regarding the public welfare are misplaced. Just because the plant should not be located on the edge of a sensitive lagoon and use an outdated technology for seawater intake does not mean that an appropriately sited and designed facility could not, and would not, be built. Evidence in the record suggests that enhanced reclamation and conservation efforts would sufficiently accommodate the public's need for additional local water supply. Finally, the fact that the Project will not be able to supply water at economically competitive rates suggests that, in the event of a takeover of the plant by the City of Carlsbad, such water would only be provided at great taxpayer subsidy. Hence, the public welfare may be adversely affected if the Project is approved.

---

[4] As noted above, the Environmental Groups do not agree that the desalination facility is coastal dependent. While certain pumps and pipes may be necessary to facilitate intake and conveyance of seawater, the actual facility structure could be located outside of the Costal Zone.

To the extent the Project is described as offsetting import of water from other sources, and that this would be a public benefit, the record is woefully inadequate to make such a finding.

B. Growth Inducing Impacts

The Revised Findings purport to reflect a decision by the Commissioners that the Project will not induce growth because the desalinated water will be sold to water districts and the water districts' use of such water will be according to approved land use plans. The record does not reflect these finding by the Commissioners, nor is there a basis for asserting the Project will not induce growth or that any growth should not be attributed to the Project itself. To the extent the Project will ameliorate construction moratoriums likely to occur without the Commission's approval, the decision will be growth inducing and the Project therefore inconsistent with Coastal Act sections 30250(a) and 30254. Because the record does not reflect Commissioners' consideration of the growth inducing aspect of the Project or a determination as to the use of the desalinated water, the Revised Findings do not reflect the basis for the Commissioners' decision.

C. Regional Board Consideration of Porter-Cologne 13142.5

The Revised Findings purport to rely upon the Regional Board's consideration and approval of Poseidon's *Flow, Entrainment and Impingement Minimization Plan* as the means to ensure compliance with Porter-Cologne section 13142.5. The Commission should note that the Regional Board recently considered the matter and provided a conditional approval much like the Commission's. Thus, rather than ensuring compliance, the Regional Board is perpetuating Poseidon's claim that it has met all regulatory requirements when in fact no California agency has yet approved the impacts assessment and mitigation plans for the Project. Therefore, any purported compliance with Commission mandates by deferral to the Regional Board action is insufficient.

D. Cost Considerations for Alternative Intake Strategies

The Coastal Act and Porter-Cologne together require the consideration and implementation of best available alternative intake strategies. The original staff report contained substantial evidence regarding staff's expert opinion divergent with submissions by Poseidon. The wholesale strikeout of this evidence in the Revised Findings was not discussed by the Commissioners, and is not warranted. The Commission decision was based upon the region's need for water, not upon consideration of technical or economic feasibility of alternative intake options. Hence, a finding cannot be made that the proposed open ocean intake is best technology available for the Project to acquire its source water.

E. Consideration of Alternative Discharge Strategies

The Commissioners failed to address why alternative discharge strategies, such as combining brine discharges with treated wastewater, would not be feasible. As such, findings in the original staff report noting the benefits of such an alternative cannot be overridden. The record contains substantial evidence that brine commingled with treated wastewater would allow for the reduction in seawater intake, thus minimizing the intake of marine life as required by Porter-

Cologne 13142.5. Such an alternative would further allow for the dilution of the hyper-saline brine prior to discharge, thus minimizing salinity impacts under the currently approved Project paradigm.

3. Conclusion

Given the foregoing, the Environmental Groups respectfully request that the "prevailing Commissioners" refrain from adoption of the Recommended Revised Findings until such time that Coastal Act and Porter-Cologne compliance can be ensured.

If Poseidon is precluded from moving forward with the Project until a Climate Action Plan and Marine Life Impacts Mitigation Plan are produced and approved by the Commission, then it make no sense whatsoever to grant the Project conditional approval now.

Sincerely,

COAST LAW GROUP LLP

Marco A. Gonzalez

For the Surfrider Foundation
And San Diego Coastkeeper

cc: Clients
State Lands Commission
Regional Board

enclosures

MAG/ms

P O S E I D O N R E S O U R C E S

SAN DIEGO REGIONAL
WATER QUALITY
CONTROL BOARD

2008 MAR -7 A 11:45

March 7, 2008

Mr. Eric Becker
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123-4353

RE: NCR: 02-1429.02:ebecker

Dear Mr. Becker:

Enclosed are the Carlsbad Desalination Project revised Flow, Entrainment and Impingement Minimization Plan (Plan) dated March 6, 2008, as well as Poseidon's detailed responses to your comment letter dated February 19, 2008. Poseidon respectfully requests that the Regional Board review and approve the revised Plan pursuant to Order R9-2006-0065.

If you have any questions please feel free to contact me at (619) 595-7802.

Sincerely,

Peter M. MacLaggan
Senior Vice President

Poseidon Resources Corporation
501 West Broadway, Suite 840, San Diego, CA 92101, USA
619-595-7802 Fax: 619-595-7892

Project Office: 4600 Carlsbad Boulevard, Carlsbad, CA 92008

Poseidon Resources March 7, 2008 Response
San Diego Regional Water Quality Control Board Letter dated February 19, 2008 (NCR: 02-1429.02ebecker

1. The Plan does not yet integrate all the elements of the statutory requirements of California Water Code (CWC) Section 13142. The proposed project only includes "mitigation", while the statute CWC Section 13142.5(b) also requires that dischargers implement best available technology and mitigation measures. The Plan does not appear to include technology measures for the intake structure to reduce impingement and entrainment (I&E).

Response: Water Code Section 13142.5(b) requires industrial facilities using seawater for processing to use the best available site, design, technology, *and* mitigation feasible to minimize impacts to marine life. The Plan has been reorganized so to sequentially analyze the steps that have been take by Poseidon to address each of these provisions:

- Chapter 2 identifies best available site feasible to minimize Project related impacts to marine life;
- Chapter 3 identifies best available design feasible to minimize Project related impacts to marine life;
- Chapter 4 evaluates identifies best available technology feasible to minimize Project related impacts to marine life;
- Chapter 5 quantifies the unavoidable impacts to marine life; and
- Chapter 6 identifies best available mitigation feasible to minimize Project related impacts to marine life

2. The Plan provides an evaluation of impacts based upon one year of data, 2004-05 with record rainfall, but does not explicitly evaluate the on-going impacts from Poseidon's operations.

Response: As described in Chapter 5 of the Plan, the potential entrainment impacts from Poseidon's seawater intake were explicitly assessed using the facility's permitted intake flows of 304 MGD and the potential impingement impacts were assessed assuming these reduced flows and discontinued power plant heat treatment effects.

3. The Carlsbad desalination project's (CDP) listing of impacts appears to omit specific impacts to target invertebrates.

Response: The requested information has been included in Chapter 5 and Attachments 2 and 5 of the revised Plan.

SAN DIEGO REGIO
WATER QUALIT
CONTROL BOAR
2008 MAR -7 A

4. The proposed mitigation project does not appear to account for all pertinent impacts resulting from impingement of invertebrates, entrainment of invertebrates, discharges of brine, etc.

Response: Poseidon is using all feasible methods to minimize or reduce its entrainment and impingement impacts. These methods are likely to reduce the Project related impacts to marine life well below the levels identified in Chapter 5 of the Plan. To minimize unavoidable Project related impacts to marine life, Poseidon has voluntarily committed to a state-agency coordinated process to identify the best available mitigation feasible. The objective of the mitigation portion of this plan is to identify mitigation needs, set forth mitigation goals, and present a plan and approach for achieving the goals.

As shown in Chapter 6, the proposed mitigation strategy includes the implementation of project a coastal wetlands restoration plan that will be developed pursuant to the state-agency coordinated process; long-term preservation of Agua Hedionda Lagoon; and/or other activities which will benefit the coastal environment in San Diego County. The proposed restoration plan will be enforceable through conditions of approval of the project and the program's success will be monitored through performance standards, monitoring and reporting.

5. The CHREP did not identify and evaluate the possible mitigation projects located within the same watershed, prior to proposing the out of watershed mitigation in San Dieguito Lagoon. The best mitigation for impacting the lagoon would be to replace lost functions by restoring current upland acreage to the historic wetland condition, or by creating new wetlands where there were none historically.

Response: Investigations to date have not identified any mitigation opportunities within Agua Hedionda Lagoon (see Section 6.5) that meet the goals of the program. As a result, the proposed mitigation plan includes a core offsite mitigation program that meets the plan goals and objectives that is being developed in parallel with Poseidon's continued effort to identify feasible mitigation opportunities in Agua Hedionda Lagoon.

Poseidon recognizes the Regional Board would prefer to see mitigation in Agua Hedionda Lagoon if feasible. Accordingly, while Section 6.6 of this plan identifies a core offsite mitigation project, the mitigation plan also presents an implementation action schedule that includes additional coordination activities to either (1) confirm the lack of opportunities, or (2) identify if new mitigation options exist within Agua Hedionda Lagoon.

Poseidon and will be contacting the Department of Fish & Game to more fully assess the potential for restoration opportunities in Agua Hedionda Lagoon. If subsequent Agua Hedionda Lagoon mitigation is determined to be feasible, Poseidon will coordinate with

regulatory agencies to implement such mitigation. If Agua Hedionda Lagoon mitigation is confirmed as infeasible, Poseidon will implement the proposed offsite mitigation project.

6. The proposed mitigation ratio of 1:1 isn't fully supported. The Plan should be revised to include an evaluation of other mitigation options that may be available within the watershed. The proposed mitigation ratio appears inadequate in light of several factors generally considered by the Regional Board:

Response: See the response to the previous comment regarding Poseidon's plans to further investigation restoration opportunities in the Agua Hedionda Lagoon watershed. Poseidon recognizes that the degree of mitigation required will be dependent on mitigation ratio requirements of the various regulatory agencies. As a result the proposed Plan (Chapter 6) provides for additional coordination with the regulatory agencies to finalize agency-mandated acreage requirements. Poseidon intends to prepare and submit a restoration project implementation plan to the Executive Director of the Regional Board: for review and approval which will contain the following:

- Goals, objectives, performance criteria and maintenance and monitoring to ensure the success of the proposed Restoration Plan.
- Identification of specific creation, restoration, or enhancement measures that will be used at each site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance criteria.
- Identification of contingency measures that will be implemented should any of the mitigation sites not meet performance criteria.
- As-built plans for each site included in the Restoration Project.
- Annual monitoring reports for no less than five years or until the sites meet performance criteria.
- Legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.

6. a - The proposed mitigation project is located within a different watershed (the San Dieguito Lagoon) instead of the Agua Hedionda Lagoon. A higher ratio may be appropriate for this project because the referenced mitigation project is out-of-kind (i.e., discharger is not actually replacing the lost resources and functions).

Response: See responses 5 and 6 above.

6.b It is not clear that the proposed one-time mitigation is adequate to compensate for the long-term ongoing impacts to beneficial uses, resources, and functions present in Agua Hedionda Lagoon.

Response: As described in Chapter 6, the primary objective of the restoration plan is to create or restore coastal habitat similar to that of Agua Hedionda Lagoon, which will provide measurable long term environmental benefits adequate to fully mitigate unavoidable impingement and entrainment impacts associated with CDP operations. The restoration plan will rely on well-established methods, techniques and technologies for development and nurturing of coastal habitat of high productivity and long-term sustainability. The restoration plan will target coastal restoration and enhancement activities with clearly defined methodology to measure performance and success.

6.c The mitigation project is for restoration of coastal wetland habitat, rather than the lagoon habitat impacted by the operation of the CDP.

Response: As indicated previously, the intent of the restoration plan is to create habitat comparable to that in Agua Hedionda Lagoon.

7. Poseidon might benefit from convening a joint meeting with the resources agencies (including California Dept Fish and Game, US Fish and Wildlife Service, Army Corps of Engineers, National Marine Fisheries) to discuss the impacts to beneficial uses, resources, and functions by the proposed project, and on the preferred mitigation project so they can discuss agency concerns/comments.

Response: Chapter 6 of the revised Plan includes an action plan and schedule for coordinating with regulatory and resource agencies to finalize locations and acreages selected for the proposed mitigation. Additionally, Poseidon intends to prepare and submit a restoration project implementation plan to the Executive Director of the Regional Board and the Coastal Commission for review and approval which will contain the following:

- Goals, objectives, performance criteria and maintenance and monitoring to ensure the success of the proposed Restoration Plan.
- Identification of specific creation, restoration, or enhancement measures that will be used at each site, including grading and planting plans, the timing of the mitigation measures, monitoring that will be implemented to establish baseline conditions and to determine whether the sites are meeting performance criteria.
- Identification of contingency measures that will be implemented should any of the mitigation sites not meet performance criteria.

- As-built plans for each site included in the Restoration Project.
- Annual monitoring reports for no less than five years or until the sites meet performance criteria.
- Legal mechanism(s) proposed to ensure permanent protection of each site – e.g., conservation easements, deed restriction, or other methods.

Specific Comments on the Plan

8. The assessment should address the seasonal and/or daily variations in impingement impacts.

Response: The results of impingement surveys are summarized in Table 5-1 and the weekly sampling data has been included in Attachment 2 of the revised Plan. These survey data are used in conjunction with intake flows coincident with each that is recorded by the power plant in order to interpolate impingement effects between each of the weekly surveys. These weekly totals are summarized for the annual totals by species including impinged invertebrate species of a size that could be identified in the field. Samples of unknown or unrecognizable impinged species were collected for laboratory verification.

Impingement survey results not only reflect the presence of impingeable fish and invertebrates in the area of the intake screens, but also reflect the variability in their susceptibility to impingement. Many factors, such as debris on the intake screens, turbidity and local currents influence the potential impingement of each species. The majority of these factors have little or no weekly periodicity only a mild seasonality.

9. The assessment needs to include results of an impingement study for target invertebrates. Table 3.2 includes only results for fish during 2004-05.

Response: Attachment 2 contains all impingement data for invertebrates collected during the 2004/2005 impingement study. Review of the this data indicates that bothe the number and the total weight of impinged invertebrates was less than 0.1 kgs/day.

10. The assessment states that: "The total amount of impinged organisms for the individual sampling events is presented in Table 3-2" (p.19). The Plan, however, does not clearly identify individual sampling events. The interpretation of the results is hampered by the absence of a presentation of results for impinged organisms (including invertebrates) with dates, times, and flow rates of sampling events.

Response: Attachment 2 of the Plan includes the requested information.

11. The assessment states that, "The daily biomass of impinged fish during normal operations is 0.96 kgs/day (1.92 lbs/day) for an intake flow of 304 MGD" (p.19). The text discussion should clarify how this figure is determined and how the total conversion discrepancy since 0.96 kgs converts to 2.12 1bs, not 1.92 lbs as indicated in the Plan.

Response: The Plan has been revised to reflect that 0.96 kgs converts to 2.12 1bs, not 1.92 lbs as previously indicated.

The daily biomass of impinged fish, sharks and rays during normal operations of 0.96 kgs/day was calculated by dividing the total annual sample weight of 351,672 grams (see last row of the second column of the Table 5-1 summarizing all impingement data) by the total number of days per year (i.e., 351,672 grams/365 days = 963.48 grams/day = 0.96 kgs/day.

The total annual sample weight of 351,672 grams of all fish was determined based on 24-hr composite samples collected each week during the sampling period of June 2004 of June 2005. The sample accounted for all fish captured at the intake screens over 24-hr period of plant operations during the day of sampling. During each sampling event, the actual amount of the impinged fish contained in the daily sample was counted and weighted as reported in Attachment 2. In addition, the actual power plant flow during the 24-hr sampling period was noted. Than the total sample count and weight for fish of given taxon was calculated as a sum of the individual sample counts of this taxon for all sampling events. Similarly, the total flow for the sampling period was calculated as the sum of the power plant intake flows of each of the sampling events. The unit number and weight of each taxon was calculated by dividing the total number and weight of fish of a given taxon by the power plant intake flow on the day of the sample was collected. Than the unit number and weight for a given taxon was multiplied by the desalination plant intake flow of 304 MGD to calculate the projected number and weight of impinged marine organisms under the stand-alone desalination facility operation. These values are presented in Table 5-1 by taxon.

12. The assessment of impacts from entrainment assessment appears to include larval fish but does not clearly include impacts to fish eggs and invertebrates. It is the understanding of the Regional Board that the 2004-05 study was to include monitoring of (at least) entrained Cancer crab megalops and lobster larvae, but the assessment does not appear to include these data. Also, it is unclear that sampling followed a protocol approved by the Regional Board as stated (p.22).

Response: The study was conducted according to sampling a protocol reviewed and approved by the Regional Board. Prior to approving the study plan, the Board engaged an outside, independent consultant under contract and funded by the EPA, to review and

comment on the plan. The Board's consultant suggested a number of changes that were accepted and incorporated in the final Board approved study plan and protocol. The approved protocol, including sampling and sample processing methods and techniques of data analysis and modeling to assess intake effects were followed as described in the final protocol. A copy of the final protocol has been included as Attachment 3 of the Plan. Attachment 5 provides the monthly entrainment survey results of fish and target invertebrate larvae.

13. The Plan does not clearly identify the supporting data or an explanation of underlying assumptions and calculations that were used to estimate proportional mortality values for larval fish as presented (p.23) in the Plan. Therefore, the Regional Board could not objectively evaluate the validity of the estimated proportional entrainment mortality (12.2%) presented in the Plan.

Response: Section 5.3 of the revised Plan provides a detailed explanation of the underlying assumptions, methodology and supporting data used to estimate the entrainment impact of this study.

14. Impacts are based upon the few most commonly entrained (most abundant) species. It is unclear how much more severe impacts may be when populations are small.

Response: In most cases, the more abundant a species of larvae is in an entrainment sample, the closer the intake is to the species' habitat or a center of its spawning population(s). Many of the larval fish species occurring in low numbers in the Poseidon study entrainment samples are ocean species, and conversely larval fish entrained in the highest number were lagoon species.

15. The Regional Board has the following comments regarding the estimated number of lagoon acres impacted, as presented in the plan since:

a. The estimate of the number of lagoon acres used by the three most commonly entrained species is based on a 2000 Coastal Conservancy Inventory (Table 4-2, p.23). It is unclear if this document is accurate or appropriate for the purpose of determining such an important component of the area of habitat production forgone (APF). The reference document (Attachment 4, Table 2), includes the footnote caveat "...This information is not suitable for any regulatory purpose and should not be the basis for any determination relating to impact assessment or mitigation." An accurate delineation of lagoon habitats should be used for this critical component of the APF.

Response: In order to calculate the APF, the number of lagoon habitat acreage occupied by the three most commonly entrained lagoon fish larvae[1] was multiplied by the average Proportional Entrainment Mortality (PM) for the three lagoon species. The estimated acres of lagoon habitat for these species are based on a 2000 Coastal Conservancy Inventory of Agua Hedionda Lagoon habitat shown in Table 5-5. The actual acreage will be confirmed through a survey of the lagoon habitats that will be conducted during the final design of Poseidon's restoration plan. To the extent that the lagoon habitat acreage established in the survey is higher or lower than that included in the 2000 Inventory, Poseidon's wetlands restoration plan will be proportional adjusted to account for the actual acreage identified in the survey.

b. The estimate of the number of lagoon acres used by the three most commonly entrained species appears to exclude salt marsh and brackish freshwater acreage (p.23). Excluding these intertidal habitats may result in the analysis underestimating this component of the APF.

Response: The areas of Agua Hedionda Lagoon that have potential to be impacted by the CDP operations are those habitats occupied by the three most commonly entrained lagoon fish larvae.[2] These habitats include 49 acres of mudflat/tidal channel and 253 acres of open water. It is not appropriate to include the other lagoon habitats in the APF calculation, such as brackish/freshwater, riparian, salt marsh or upland habitats, that are not occupied by the impacted species.

c. The calculation of the APF (p.23) appears to use values for mortality and lagoon acreage that are not fully supported.

Response: Section 5.3 of the revised Plan includes the calculations in support of the estimate of APF.

d. The text should be revised to include a clear explanation of how the estimated lagoon acreage for commonly entrained species was adjusted to include only impacts associated with operations of CDP, rather than impacts from operation of the Encina Power Station.

Response: Section 5.3 of the revised Plan includes an explanation of how the estimated lagoon acreage for commonly entrained species was adjusted to reflect stand-alone operations of CDP

---

[1] Ninety-eight percent of the fish larvae that would be entrained by the CDP stand-alone operations are gobies, blennies and hypsopops.
[2] Ninety-eight percent of the fish larvae that would be entrained by the CDP stand-alone operations are gobies, blennies and hypsopops.

16. The evaluation concludes that the small fraction of marine organisms lost to entrainment would have "no effect on the species' ability to sustain their population" and goes on to describe the natural rates of high mortality (p. 24). But the argument that that there are "excess" larvae appears to omit an important consideration. Besides contributing to marine food webs, the naturally high production of larvae serves as a buffer against catastrophic and cumulative impacts to populations. These are important 'ecological services' that must not be taken lightly or given away without adequate mitigation.

Response: Comment noted.

17. The Regional Board prefers that the evaluation of the impact be presented as a rate (loss of x-amount of organisms per year, or impact/year). The proposed mitigation is a fixed amount ($3 to $4 million). It seems unlikely that a fixed amount would adequately compensate for a loss that is a rate over multiple, future years. It appears more likely that a proposed fixed amount really only accounts for mitigation for just one year of operation. The Regional Board may find a fixed amount to be acceptable, provided that:

a. The average annual impact could be reasonably determined and reasonably translated into a dollar amount, and that amount (or correct share) is paid every year of operation - but that is not what is proposed in the Plan or the CHREP.

Response: Attachments 2 and 5 of the revised Plan includes the requested presentation of the impingement and entrainment data, respectively.

To minimize the unavoidable Project related impacts to marine life, Poseidon has voluntarily committed to a state-agency coordinated process to identify the best available mitigation feasible. The objective of the mitigation portion of the Plan is to identify mitigation needs, set forth mitigation goals, and present a plan and approach for achieving these goals.

As described in Chapter 6 of the revised Plan, the proposed mitigation strategy includes the implementation of project a coastal wetlands restoration plan that will be developed pursuant to a state-agency coordinated process; long-term preservation of Agua Hedionda Lagoon; and/or other activities which will benefit the coastal environment in San Diego County. The proposed restoration plan will be enforceable through conditions of approval of the project and the program's success will be monitored through performance standards, monitoring and reporting. The Regional Board, Coastal Commission and State Lands Commission have ongoing jurisdiction over the proposed Project to insure the adequacy of the proposed restoration plan.

Additionally, ten years after the lease is issued, that the CDP will be subject to further environmental review by the State Lands Commission (SLC) to analyze all environmental effects of facility operations and alternative technologies that may reduce any impacts found. SLC may require additional requirements as are reasonable and as are consistent with applicable state and federal laws and regulations.

This approach will insure that the stand-alone CDP operations continue to use the best available site, design, technology and mitigation feasible to minimize Project related impacts to marine life.

b. A fixed amount might also be reasonable if the CDP mitigates its share by increasing lagoon acreage via restoration or creation. Such in-kind mitigation would (if functional) replace the productivity lost to the operation of the CDP, and the impact would be fully mitigated.

Response: See previous response.

CALIFORNIA COASTAL COMMISSION
45 FREMONT, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200
FAX (415) 904-5400

Th17a

Date Filed:	July 25, 2007
49th Day:	Waived
180th Day:	January 21, 2008
Staff:	Tom Luster-SF
Hearing Date:	November 15, 2007
Approved:	November 15, 2007
Revised Findings:	May 22, 2008
Hearing Date:	June 12, 2008

RECOMMENDED REVISED FINDINGS
COASTAL DEVELOPMENT PERMIT APPLICATION

APPLICATION FILE NO.:	E-06-013
APPLICANT/ SITE OWNER:	Poseidon Resources (Channelside) LLC / Cabrillo Power II LLC
PROJECT LOCATION:	On the Encina Power Plant site, adjacent to Agua Hedionda Lagoon, in the City of Carlsbad, San Diego County.
PROJECT DESCRIPTION:	Construction and operation of a 50 million gallon per day seawater desalination facility.
COMMISSIONERS ON PREVAILING SIDE:	Commissioners Blank, Burke, Clark, Firestone, Hueso, Neely, Potter, Secord, and Chair Kruer

---

ATTACHMENT 6: May 6, 2008 letter from Coast Law Group

Note: This attachment was inadvertently left off the above staff report mailed on May 23, 2008. Please include it with the staff report.

COAST LAW GROUP LLP

169 Saxony Road
Suite 204
Encinitas, CA 92024

Tel 760-942-8505
Fax 760-942-8515
www.coastlawgroup.com

May 6, 2008

Mr. Tom Luster
California Coastal Commission
25 Fremont Street, Suite 2000
San Francisco, California 94105-2219

Via Electronic Mail
tluster@coastal.ca.gov

Re: Proposed Revised Findings: Carlsbad/Poseidon CDP
No. E-06-013, Item TH13a, May 8, 2008
Second Comments from Surfrider Foundation and San Diego Coastkeeper

Dear Mr. Luster:

On behalf of the Surfrider Foundation and San Diego Coastkeeper, Coast Law Group LLP has reviewed and offers the following comments regarding the Applicant's April 14, 2008 *Requested Revisions to Staff's Recommended Revised Findings* (Poseidon's Findings) and Coastal Commission's staff's revised findings dated April 24, 2008 (Final Revised Findings).

In general, none of the comments submitted in our prior correspondence have been addressed, and hence the Commission is not positioned to legally approve any of the versions of the proposed revised findings. The practical implication of the Commission's majority decision on November 15, 2007 was to approve Poseidon's project concept, but to defer final approval until further information regarding environmental impacts of the project, proposed mitigation measures to address such impacts, and a Climate Action Plan could be brought back for consideration. As noted in our prior letter, the only appropriate findings that can be made at this time are: (a) the San Diego region is experiencing drought condition and is in need of additional local water supplies; and (b) additional information is necessary before the project can be deemed compliant with various provisions of the Coastal Act.

Regarding Poseidon's Findings, the Coastal Commissioners voting in favor of the project did not discuss nor evaluate any of the revisions proposed by the Applicant in this document. As such, it would be improper to now amend the public hearing findings as they request. Such *post hoc* rationalization does not serve the purpose of the findings requirement in statute, regulation, and case law. Should the Commissioners believe such findings are necessary to render a conditional approval at this time, they must notice and reopen the public hearing, take evidence, and put on the record their reasons for accepting or denying the evidence submitted prior to and during the public hearing(s). The Commission cannot now adopt Poseidon's words as their own after the hearing is closed.

Notwithstanding the foregoing, there are various problems with specific points raised in Poseidon's Findings, including:

A. EIR references: Poseidon repeatedly seeks to bootstrap the findings of the CEQA review process at the City of Carlsbad into the findings for compliance with the Coastal Act. The fact that the City certified an EIR is irrelevant to the Commission's obligation to independently assess consistency with the Coastal Act. The City's determinations regarding the presence or absence of environmental impacts, or the significance thereof, are not controlling on the Commission, and were not grounds for the Commissioners' decision on November 15, 2007.

Further, and most importantly, it is logically impossible to on the one hand admit there is insufficient evidence from which to assess impacts and mitigation, while on the other hand do what Poseidon requests in adopting the findings of no significant impact from the EIR. Put another way, if the Commission were to adopt Poseidon's Findings with respect to conclusions in the EIR, there would be no need for Special Condition 8. Because the record and transcript clearly reflect Commissioners were unsatisfied with the information presented through conclusion of the public hearing, Poseidon's Findings with regard to the sufficiency of prior environmental review cannot be adopted. [1]

B. Compliance with Coastal Act Policies: Poseidon refuses to acknowledge that its project is inconsistent with Coastal Act section 30233(a-c), and that approval of the project, if at all, could only be had via the analysis required in section 30260. As stated in the immediately preceding paragraph, if all Coastal Act policies had been complied with as stated by Poseidon in its Findings, Special Condition 8 would not have been required. The Commission's imposition of the impacts and mitigation assessment condition on the approval render a finding of Coastal Act compliance arbitrary and capricious as a matter of law.

C. Role of the Regional Board: Poseidon's Findings, to the extent they support abrogation of review authority to the Regional Board, would drastically reduce the ability of the Coastal Commission to accomplish its Coastal Act mandates. Staff, in its original findings, appropriately and legally rebutted Poseidon's claims of jurisdictional division. The Commission should not now take an action that would severely handcuff it in the future. In particular, Poseidon's argument regarding the scope and applicability of Coastal Act section 30412 should be expressly rejected or, at the very least, ignored.

D. Lagoon Dredging: Poseidon repeatedly seeks to import a finding that should the EPS close down, Agua Hedionda Lagoon would revert to its pre-developed state without ongoing maintenance by Poseidon. Poseidon seeks to have its maintenance obligation characterized as an environmental benefit of the proposed project. The evidence before the Commission in November included an email from the current power plant operators indicating their belief that they would be obligated to continue maintenance dredging in perpetuity regardless of power plant operations. This is understandable because the original manipulation of the natural condition occurred expressly to support the power plant land use, and therefore assignment of ongoing responsibility after having already manipulated the existing setting would be expected. Further, there is no evidence in the record to suggest that other entities, such as the State of California or a lagoon foundation, would not step into ensure vitality of this valuable resource just as occurs with every other coastal lagoon in San Diego County. Maintenance of the status quo is no benefit of the proposed project, and credit as such cannot be given based upon the comments of Commissioners at the November hearing.

E. New versus Replacement Water: The Commission cannot, based upon any evidence in the record, find that the project will in any measurable way decrease the demand on State Water

[1] This concept is applicable to the Commission's findings in general. Project approval can only be had upon a finding of consistency with all applicable Coastal Act sections. Deferral of consideration of impacts and mitigation cannot result in a finding of consistency at the time the project was "approved." Hence, the failure to make such a finding at the time of "approval" renders the entire November action illegal.

Project and Colorado River watersheds without admitting that the provision of new water would be growth inducing. The evidence in the record suggests San Diego's water supply from the aforementioned sources is diminishing. Hence, without some new local water source, additional development would not be possible. This is true irrespective of growth anticipated in existing land use plans. In other words, given the findings of water shortage and need, there would eventually result a moratorium on development due to lack of water. The availability of desalinated water in such circumstances would preclude the otherwise required moratorium, and thereby be growth inducing.

Given that the findings contemplate the project's water as supportive of existing land use plans, one can only conclude that it will be "new" water, and not "replacement" water. As such, Poseidon cannot claim any environmental benefit from its creation, must address growth inducing impacts in the coastal zone, and cannot achieve carbon footprint neutrality as an offset from imported water.

F. Desalination Source Water Pumping in Excess of EPS: Poseidon's findings, and to a lesser extent the Commission staff's revised findings, address implications of continued operation of a portion of the EPS at the same time as the project. With regard to pumping volumes, however, the record is woefully deficient to support a finding that continued operation of the two remaining generating units will result in the full capacity of source water intake required by Poseidon. There is no evidence to suggest, as Poseidon proffers, that these two units will require a consistent 528 MGD of water. Rather, the record reflects that the remainder EPS units will likely not run the majority of the time. Further, declining pumping volumes at the EPS over the last number of years render it unlikely the EPS baseline would ever average the 300MGD required by the project. Hence, the project and its impacts must be considered standing alone.

Poseidon's proposed finding that "the EPS once-through-cooling system is expected to continue operating indefinitely" is contrary to the record and must not be adopted.

G. Intake Structure Permitting: Poseidon's findings distort facts and law with regard to the applicability of 316(b) policies to its intake. First, no one contends that 316(b) directly applies to Poseidon's intake of water for the desalination industrial process. At every stage the environmental groups have taken care to explain that the interrelationship between federal law and state law requires a more strict application of policies to the desalination intake than applied to strictly cooling-water intakes under federal law. Porter-Cologne section 13142.5 *requires the minimization of intake and mortality* of all forms of marine life, whereas Clean Water Act section 316(b) *allows minimization of impacts* from source water intake. The findings should reflect that the Commission has never assessed the project pursuant to the appropriate legal standard, and hence the minimization of intake and mortality of marine life has never been part of its consideration thus far.

In order for the findings to be valid under Porter-Cologne section 13142.5, the Commission must show that the desalination facility, including its source water intake strategy, would be considered the:

i. best available *site* in the region to minimize intake and mortality of all forms of marine life;

ii. best available *design* for the facility to minimize intake and mortality of all forms of marine life;

iii. best available *technology* to minimize intake and mortality of all forms of marine life;; and,

iv. best available *mitigation measures* to minimize intake and mortality of all forms of marine life;.

Because such analysis has yet to be done, these findings cannot expressly nor impliedly be made.

The findings should further reflect that when the project was conditionally approved, as well as when the revised findings were considered, the Regional Water Quality Control Board had not yet acted on any of Poseidon's impingement and entrainment studies. The final resolution of the Board conditionally (and illegally) approved the project subject to further investigation and consideration, just as the Commission has done. See RWQCB final Resolution, attached.

H. Garibaldi: Contrary to Poseidon's interpretation, the destruction of significant numbers of Garibaldi larvae would be illegal. Special Condition 8 cannot ameliorate this project deficiency.

I. Carbon Neutrality: As noted prior, the project will create a new source of water, and hence would have to offset its entire carbon footprint to meet its claims of total carbon neutrality. Poseidon's proposal to offset the difference between the carbon footprint of State Water Project and Colorado River Water production and delivery to North San Diego County assumes that its water will replace otherwise available sources. Since the record is replete with evidence that such water sources will not be available in the near future, Poseidon cannot have it both ways. Either we really need the desalinated water as new water, or the supply would constitute a convenient source of replacement water. As proposed, the findings would not comply with Coastal Act section 30253.

Conclusion

In conclusion, the revised findings should reflect that until the final assessment of impingement and entrainment impacts is considered and an appropriate project design and mitigation package is approved, the project cannot be found compliant with Coastal Act sections 30230, 30231, 30233, 30260, and 30253.

Sincerely,

COAST LAW GROUP LLP

Marco A. Gonzalez

CC: Clients
Attachment

California Regional Water Quality Control Board

San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Dan Skopec
Acting Secretary

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4353
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

April 17, 2008

CERTIFIED – REGISTERED MAIL
7007 3020 0001 0040 7096

Mr. Peter M. MacLaggan
Senior Vice President
Poseidon Resources Corporation
501 W. Broadway, Suite 840
San Diego, CA 92101

In reply refer to:
CRU: 02-1429.02:bkelley

Dear Mr. MacLaggan:

ADOPTED ORDER NO. R9-2008-0039, AN ORDER CONDITIONALY APPROVING REVISED FLOW, ENTRAINMENT, AND IMPINGEMENT MINIMIZATION PLAN, POSEIDON RESOURCES CORPORATION, CARLSBAD DESALINATION PROJECT

Enclosed is Order No. R9-2008-0039, which was adopted by the Regional Board at their April 9, 2008 meeting and provides conditional approval of Poseidon's Flow, Entrainment, and Impingement Minimization Plan (Plan) dated March 6, 2008. Within six months of adoption of Order No. R9-2008-0039, Poseidon is required to submit an amendment to the Plan that includes a specific proposal for mitigation of the impacts, by impingement and entrainment upon marine organisms resulting from the intake of seawater from Agua Hedionda Lagoon.

The heading portion of this letter includes a Regional Board code number noted after "In reply refer to:" In order to assist us in the processing of your correspondence please include this code number in the heading or subject line portion of all correspondence and reports to the Regional Board pertaining to this matter.

If you have any questions regarding the above, please contact Mr. Brian Kelley at (858) 467-4254, or at bkelley@waterboards.ca.gov.

Respectfully,

John H. Robertus
Executive Officer

cc:

State Water Resources Control Board
Division of Water Quality
P.O. Box 944213
Sacramento, CA 94244-2130
Attn: James Maughan

U.S. Environmental Protection Agency, Region IX
75 Hawthorne Street
San Francisco, CA 94105
Attn: Douglas Eberhardt

Bill Paznokas
California Department of Fish & Game
4949 Viewridge Road
San Diego, CA 92123

Mr. Tom Luster
California Coastal Commission
Energy and Ocean Resources Unit
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

Judy Brown
Public Land Management Specialist
CA State Lands Commission
100 Howe Ave., Suite 100-South
Sacramento, CA 95825-8202

Sharon Taylor
Division Chief
United States Fish & Wildlife Services
6010 Hidden Valley Road
Carlsbad, CA 92011

cc : (See Enclosed Interested Parties List)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

RESOLUTION NO. R9-2008-0039

CONDITIONAL APPROVAL OF
REVISED FLOW, ENTRAINMENT, AND IMPINGEMENT MINIMIZATION PLAN
FOR
POSEIDON RESOURCES CORPORATION
CARLSBAD DESALINATION PROJECT

WHEREAS, the California Regional Water Quality Control Board, San Diego Region (hereinafter San Diego Water Board), finds that:

1. On August 11, 2006, the Regional Board adopted Order R9-2006-0065 NPDES No. CA0109223 (Order No. R9-2006-0065) establishing waste discharge requirements for Poseidon Resources Corporation (Poseidon) to discharge up to 57 million gallons per day (MGD) of a combined waste stream comprised of concentrated saline waste seawater and filter backwash wastewater from the Carlsbad Desalination Project (CDP) into the Pacific Ocean via the Encina Power Station's (EPS) cooling water discharge channel.

2. As proposed in Poseidon's Report of Waste Discharge for Order No. R9-2006-0065, the CDP will operate in conjunction with the EPS and will draw upon cooling water discharges by EPS for its intake requirements in the production of fresh potable water. As recognized in Section VI.C.2(e) of Order No. R9-2006-0065, CDP's intake requirements may, at times, exceed the volume of seawater being discharged by the EPS during times when EPS temporarily ceases operating to generate electricity. During these periods, EPS will operate its intake structures to produce intake water sufficient to meet CDP's intake needs.

3. The operations at the CDP are not subject to the statutory requirements of section 316(b) of the Clean Water Act as that section pertains only to impacts from intake of seawater for the purpose of power generation.

4. CDP is, however, a new industrial installation that is subject to California Water Code Section 13142.5 which requires use of best available site design, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.

5. Section VI.C.2(e) of Order No. R9-2006-0065 requires Poseidon to submit (within 180 days of adoption), a Flow, Entrainment and Impingement Minimization Plan ("Plan") that "shall assess the feasibility of site-specific plans, procedures, and practices to be implemented and/or mitigation measures to minimize the impacts to marine organisms when the CDP intake requirements exceed the volume of water

being discharged by the EPS." Thus, Poseidon is required to submit a plan to minimize these impacts to marine organisms under conditions of operation in conjunction with the Encina Power Station (EPS), as described in Finding II.B of Order No. R9-2006-0065. Approval of the Plan is currently not a condition for commencement of the discharge from the CDP.

6. On March 7, 2008, Poseidon submitted an updated Revised Flow, Entrainment, and Impingement Minimization Plan (Plan) to address best available site design, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life and Order No. R9-2006-0065 Section VI.C.2(e) requirements.

7. As submitted, the Plan does not include a specific mitigation alternative but instead sets forth a process to be used for evaluating and selecting a specific mitigation alternative that will compensate for impacts, to beneficial uses of Agua Hedionda Lagoon, from entrainment and impingement of marine organisms by operations at the CDP. An amendment to the Plan containing a specific mitigation alternative must be submitted to the Regional Board for approval.

8. The Plan, including any amendments subsequently approved by the Regional Board, is of limited duration and is applicable only to Poseidon's current cooperative operation with EPS. Upon Poseidon's proposal to operate CDP independent of EPS or when EPS permanently ceases power generation operations, it may be necessary to further evaluate appropriate mitigation and/or minimization of impacts to marine organisms of CDP's operations.

9. This action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Water Code section 13389 (see *County of Los Angeles v. California State Water Resources Control Board,* (2006) 143 Cal.App.4th 985, 50 Cal.Rptr. 3d 619), and this action of the Regional Board does not have the potential to cause a significant effect on the environment. (See Title 14, California Code of Regulations, section 15061.)

THEREFORE, BE IT RESOLVED THAT:

1. The Plan, dated March 6, 2008, does not include specific implementation provisions as required in Section VI.C.2.(e) of Order No. R9-2006-0065 and does not as yet resolve the concerns noted in the Regional Board's February 19, 2008 letter to Poseidon Resources.

2. The San Diego Water Board hereby conditionally approves the Plan.

3. Within six months of adoption of this resolution, Poseidon shall submit to the Regional Board Executive Officer, for approval by the Regional Board, an amendment to the Plan that includes a specific proposal for mitigation of the impacts, by impingement and entrainment upon marine organisms resulting from the

intake of seawater from Agua Hedionda Lagoon, as required by Section VI.C.2(e) of Order No. R9-2006-0065; and shall resolve the concerns identified in the Regional Board's February 19, 2008 letter to Poseidon Resources, and the following additional concerns:

a) Identification of impacts from impingement and entrainment;
b) Adequate monitoring data to determine the impacts from impingement and entrainment;
c) Coordination among participating agencies for the amendment of the Plan as required by Section 13225 of the California Water Code;
d) Adequacy of mitigation; and
e) Commitment to fully implement the amendment to the Plan.

4. Poseidon's Plan, including any amendments that are subsequently approved by the Regional Board, are of limited duration and are applicable only to CDP's current cooperative operation with EPS. When Poseidon proposes to operate independent of EPS or EPS permanently ceases power generation operations, EPS's cessation of power generation operations, would be necessary to further evaluate appropriate mitigation and/or minimization of impacts to marine organisms of CDP's operations.

I, John H. Robertus, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the California Regional Water Quality Control Board, San Diego Region, on April 9, 2008.

JOHN H. ROBERTUS
Executive Officer

Interested Parties
Order No. R9-2006-0065
NPDES Permit No. CA0109223

Ms. Mary Salas
Assemblymember, 79th District
Assembly California Legislature
678 Third Avenue, Suite 105
Chula Vista, CA 91910

Mr. Bill Horn
Supervisor, Fifth District
San Diego County Board of Supervisors
1600 Pacific Highway, Room 335
San Diego, CA 92101

Ms. Denise Moreno Ducheny
Senator, 40th District
California State Senate
637 3rd Avenue, Suite A-1
Chula Vista, Ca 91910

Mr. Mark Wyland
Senator, 38th District
California State Senate
1910 Palomar Point Way, Suite 105
Carlsbad, CA 92008

Mr. Martin Garrick
Assemblymember, 74th District
Assembly California Legislature
P.O. Box 942849
Sacramento, CA 94249-074

Ms. Shirley Horton
Assemblymember, 78th District
Assembly California Legislature
7144 Broadway Avenue
Lemon Grove, CA 91945

Christine Kehoe
Senator, 39th District
California State Senate
2445 5th Avenue, Suite 200
San Diego, CA 92101

Honorable Claude A. "Bud" Lewis, Mayor
City of Carlsbad
1200 Carlsbad Village Drive
Carlsbad,CA 92008

Gary Broomell, President
Valley Center Municipal Water District
29300 Valley Center Road
Valley Center, CA 92082

R. Mitchel Beauchamp, Board Chairman
Sweetwater Authority
P.O. Box 2328
Chula Vista, CA 91912-2328

Robert M. "Bud" Irvin, President
Santa Fe Irrigation District
5920 Linea del Cielo
Rancho Santa Fe, CA 92067

Honorable Jim Wood, Mayor
City of Oceanside
300 North Coast Hwy
Oceanside, CA 92054

Diana L. Towne, President
Rincon del Diablo Municipal Water District
1920 North Iris Lane
Escondido, CA 92026-1399

Susan J. Varty, President
Olivenhain Municipal Water District
1966 Olivenhain Road
Encinitas, CA. 92024

Rua M. Petty, President
Rainbow Municipal Water District
3707 Old Highway 395
Fallbrook, CA 92028

Interested Parties
Order No. R9-2006-0065
NPDES Permit No. CA0109223

Timothy M. Shell
President, Vallecitos Water District
201 Vallecitos de Oro
San Marcos, CA 92069

Stephen N. Arakawa
Manager, Water Resources Management
MWD
700 N. Alameda Street
Los Angeles, CA 90012

Maureen Stapleton
General Manager
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123

Ted Owen
President & CEO
Carlsbad Chamber of Commerce
5934 Priestly Dr
Carlsbad, CA 92008

Scott D. Alevy
Vice President
San Diego Chamber of Commerce
402 West Broadway, Suite 1000
San Diego, CA 92101

Eric Munoz, President
Agua Hedionda Lagoon Foundation
1580 Cannon Road
Carlsbad, CA 92008

Rick Polischuk
Shapery Enterprises
402 West Braodway, Suite 1220
San Diego, CA 92101

Dick Bobertz
Executive Director
San Dieguito River Valley Regional Open Space Park
18372 Sycamore Creek Road
Escondido, CA 92025

Steve Aceti
California Coastal Coalition
1133 Second Street, Suite G
Encinitas, CA 92024

Julie Meier Wright
President & CEO
San Diego Regional Economic Development Corporation
530 B Street, Seventh Floor
San Diego, CA 92101

Tom Lemmon
San Diego County Building & Construction Trades Council, AFL-CIO
3737 Camino del Rio South, Suite 202
San Diego, CA 92108

Robert Simmons, Esq.
P.O. Box 19932
San Diego, CA 92519

Gary Knight
President & CEO
San Diego North Economic Development Council
100 N. Rancho Santa Fe Road, Suite 124
San Marcos, CA 92069

Patti Krebs
Executive Director
Industrial Environmental Association
701 B Street, Suite 1040
San Diego, CA 92101

Andrew Davis
Carlsbad Aquafarm
4600 Carlsbad Blvd.
Carlsbad, CA 9208

Interested Parties
Order No. R9-2006-0065
NPDES Permit No. CA0109223

Gabriel Solmer
SD Coast Keeper
2924 Emerson Street, Suite 220
San Diego, CA 92106

Ms. Valerie L. Chambers
Assistant Regional Administrator
for Habitat Conservation
United State Department of
Commerce
National Marine Fisheries
Service
Southwest Region
501 West Ocean Boulevard,
Suite 4200
Long Beach, CA 90802-4213

Mr. Benjamin Frater
U.S. Fish and Wildlife Service
6010 Hidden Valley Road
Carlsbad, CA 92009

Mr. Stephen L. Jenkins
Assistant Chief
Division of Environmental Planning and
Management
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

Mr. David Lloyd
Secretary
Cabrillo Power I LLC
4600 Carlsbad Blvd.
Carlsbad, CA 92008

Mr. Steven Aceti, J.D.
Executive Director
California Coastal Coalition
1133 Second Street, Suite G
Encinitas, CA 92024

Mr. Mark McCabe
Environmental Health Specialist III
Department of Environmental
Health
Hazardous Material Division
P.O. Box 129261
San Diego, CA 92112-9261

Mr. Joseph D. Panetta
President and CEO
BIOCOM
4510 Executive Drive, Plaza One
San Diego, CA 92121

Sarah Abramson
Heal the Bay
1444 9th Street
Santa Monica, CA 90401

Mr. Donald B. Kent
President
Hubbs-Sea World Research
Institute
2595 Ingraham Street
San Diego, CA 92109

Mr. Robert Hawkins
Law Offices of Robert C.
Hawkins
110 Newport Center Drive, Suite
200
Newport Beach, CA 92660

Leslie Mintz
Legislative Director
Heal the Bay
3220 Nebraska Avenue
Santa Monica, CA 90404

Carey L. Cooper, Esq.
Klinedinst Attorneys at Law
501 W. Broadway, Suite 600
San Diego, CA 92101

Mr. Mark Chomyn, AICP
Land Planning Supervisor
San Diego Gas and Electric
8315 Century Park Court
San Diego, CA 92123-1548

Marco A. Gonzalez
Coast Law Group
169 Saxony Road
Suite 204
Encinitas, CA 92024

Interested Parties
Order No. R9-2006-0065
NPDES Permit No. CA0109223

Southern California Watershed Alliance
C/O Mr. Conner Everts
Environment Now
2515 Wilshire Blvd
Santa Monica, CA 90403

Mr. James Peugh
Conservation Chair
San Diego Audubon Society
4891 Pacific Highway, Suite #112
San Diego, CA 92110

Ms. Heather Allen
Policy Director
Friends of the Sea Otter
125 Ocean View Blvd. #204
Pacific Grove, CA 93950

California Coastal Protection Network
906 Garden Street
Santa Barbara, CA 93101

Mr. David Hogan
Desert Rivers Coordinator
Center for Biological Diversity
P.O. Box 7745
San Diego, CA 92167

Mr. Bruce Reznik
Executive Director
San Diego Baykeeper
2924 Emerson Street, Suite 220
San Diego, CA 92106

Ms. Jane DeLay
Executive Director
Save Our Shores
345 Lake Ave Suite A
Santa Cruz, CA 95062

Mr. Christopher Garrett
Latham & Watkins
600 W. Broadway
San Diego, CA 92101

Mr. Ed Kimura
Sierra Club, San Diego Chapter
6995 Camino Amero
San Diego, CA 92111-7667

Kevin Thomas, CEP
Environmental Services Manager
RBF CONSULTING
40810 County Center Drive, Suite 100
Temecula, CA 92591-6022

Deborah Sivas
Stanford Legal Clinics
559 Nathan Abbott Way
Stanford, CA 94305-8610

Josh Basofin
Environment Now
2515 Wilshire Blvd.
Santa Monica, CA 90403

National Marine Fisheries Service
501 W. Ocean Blvd.
Long Beach, CA 90802-4213

Joe Geever
Surfrider Foundation
8117 W. Manchester Ave #297
Playa del Rey, CA 90293

RECEIVED
APR 21 2008
COAST LAW GROUP, LLP