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May 8, 2003

RECEIVED
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Mr. Ricky Ramos
City of Huntington Beach Planning Department
2000 Main Street
Huntington Beach, CA 92648

VIA FACSIMILE (714) 374-1648

RE: Coastal Commission staff review of City's Response to Comments for proposed Poseidon Seawater Desalination Project Draft Environmental Impact Report.

Dear Mr. Ramos:

Thank you for providing the Responses to Comments document of March 21, 2003 for the proposed Poseidon Seawater Desalination Project. The document provides responses to comments the City received on its Draft Environmental Impact Report (EIR) for the proposed project, including comments provided by Coastal Commission staff in a letter dated November 4, 2002. The proposal involves constructing and operating a desalination facility to be located at the Huntington Beach Generating Station (HBGS) in Huntington Beach. A portion of the proposed project is within the City's Local Coastal Plan jurisdiction and will require a coastal development permit from the City. Additionally, part of the proposal is within the Coastal Commission's retained jurisdiction as well as within the Commission's appeal jurisdiction, so it will require additional review and approval by the Commission.

We have several concerns about the responses that we would like you to incorporate into the CEQA review before the City considers adopting a Final EIR for the proposed project. We understand the Planning Commission has scheduled a hearing on the matter for May 27, 2003. Our concerns are based on the level of information needed to review the proposed project's conformity to the Coastal Act as well as to provide adequate evaluation under CEQA. We are especially interested in ensuring this proposal undergoes proper review, since it represents what would be the largest coastal desalination facility in the U.S. and the first one to be reviewed in California for over a decade. To better ensure this environmental review is done comprehensively and efficiently, we recommend the comments below be incorporated into the City's EIR review before the City and the Coastal Commission start their reviews for coastal development permits.

General Comments:

The responses in several issue areas do not provide adequate information for reviewing the proposed project for conformity to the Coastal Act, and may not be adequate for review under CEQA. Our primary concerns relate to the EIR's evaluation of the proposed project's biological impacts, the alternatives analysis, growth-inducement, and cumulative impacts.

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One additional area of concern that underlies several of the comments in our November letter regards the applicability of various ordinances, regulations, and laws to this proposed project. The proposal involves using a private entity to produce potable water from a public resource (i.e., seawater), and selling that product to one or more public water districts. Providing a public water supply has, in the past, been done most commonly by public entities. Our concerns in this matter take two forms:

- Whether laws, ordinances, and regulations applicable to public entities providing a water supply apply differently, if at all, to private water suppliers. Public water districts are subject to a number of requirements that are based in part on their characteristics as public agencies. For example, rates are set for public water districts based largely on the operational and maintenance costs of providing a public service, not on profitability. Additionally, the Coastal Act includes several policies with provisions or requirements for public works facilities, but not for similar "private works facilities." We recommend the EIR provide an analysis of this issue to ensure that anticipated regulatory requirements and mitigation measures would indeed apply to this proposed project. Of course, a more fundamental question to be asked and answered outside the context of CEQA is whether privatizing water supplies is sound public policy.

- Whether international trade law adversely affects the ability of state and local jurisdictions to regulate proposals such as this. Recent decisions by international trade tribunals and other developments in international trade law raise concerns that private companies operating internationally may not be subject to state or local environmental regulations if those regulatory actions interfere with profitability. For example, a company may argue that producing and selling water in California includes restrictions, such as flow limits, mitigation requirements, or compliance with Coastal Act resource protection policies, that are not required in other countries where the company produces and sells water, and that these restrictions adversely affect profitability. Such an argument could limit or eliminate state and local environmental protection requirements, and may abrogate many of the mitigation measures identified during environmental review. We therefore recommend the City consider how international trade agreements, treaties, and laws may apply to this proposal, and whether anticipated environmental mitigation measures could be compromised.

Attached is a copy of a presentation given to the Coastal Commission in February of this year regarding Coastal Act policies that may apply differently to public and private proposals. The City may wish to evaluate its own Local Coastal Plan policies and other applicable City ordinances in a similar manner and include the evaluation as part of the EIR.

Please also note that at several places in our November comment letter, we requested additional information be provided in "subsequent environmental documents". This was meant to refer to subsequent CEQA-related documents to be developed as part of the City's CEQA review, such as a supplemental EIR, an addendum, or other similar documents.

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Specific Comments:

Water Quality and Marine Biological Resources: Our comment letter requested that the EIR include additional information about the proposed project's impacts on biological resources. We note that several other federal and state regulatory agencies (including the U.S. Fish and Wildlife Service, California Department of Fish and Game, the Regional Water Quality Board, and the State Lands Commission) also stated in their comment letters that the DEIR did not adequately address various aspects of the proposed project's impacts to biological resources. However, rather than make changes to the analyses based on comments from these agencies, the "Responses To Comments" document largely re-iterates what was stated in the DEIR.

There are a number of assumptions used in the EIR analysis that do not appear to accurately reflect conditions at the project site or characteristics of the existing and proposed facilities; therefore, the EIR's determination that there are no significant impacts to marine resources may not be accurate. We have provided more detailed comments on this issue below.

Entrainment: Our comment letter stated that results of the HBGS entrainment study would be needed to identify the existing level of impacts to marine biological resources and to help determine impacts of this proposed project. Our letter also cited the City's LCP Policy 6.1.19, which requires mitigation be identified before approving any new or expanded seawater pumping facilities. The City's response to our comments states that the project would not result in increased entrainment, entrapment, or impingement of marine organisms, and that results of the study would therefore not be necessary. We disagree, for several reasons:

- First, the DEIR appears to base its assumptions about entrainment impacts on the permitted water use at HBGS rather than actual use. We note that several recent CEQA-equivalent analyses by the California Energy Commission to review proposed changes to coastal power plants have used as their baseline the actual amount of water used by a power plant, rather than the maximum permitted amount. This approach provides a more accurate assessment of existing versus proposed conditions and meets the CEQA requirement to establish baseline levels by determining the actual, existing environmental conditions at the time of review. The EIR analysis should therefore be based on the actual amount of water used at the power plant during a recent representative period of time, and the analysis should compare this rate and pattern of use with the water use anticipated for the desalination facility.

- Next, the DEIR states that the desalination facility would not increase entrainment over that caused by the power plant because some of the power plant's pumps would be used to circulate water for use by the desalination facility even when the power plant was not generating electricity. While this measure might reduce the difference between the rates of entrainment caused by either process, it does not provide the level of information needed to determine entrainment impacts for either facility. Without additional detailed information about each facility's pumping rates, the relationship between water use for power generation and for desalination (e.g., the

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timing and rate of desalination operations during power plant shutdown, long-term operation of the desalination facility without power production, etc.), and the different entrainment effects that may result from power generation and desalination, we are unable to determine whether entrainment rates would increase, decrease, or remain the same.

- Additionally, the entrainment study currently underway for the power plant is meant to not only determine entrainment impacts but to identify what mitigation measures are available and necessary if the study results show significant impacts. The study could therefore result in mitigation measures that might require structural or operational changes to the once-through cooling system affecting both the power plant and the desalination facility. Since part of the purpose of CEQA review is to identify significant impacts and available mitigation, we believe it is necessary to include the results of the entrainment study as part of the review for the proposed desalination facility.

- Finally, we note that the California Energy Commission (CEC) and the Regional Water Quality Control Board (RWQCB) will use the results of the entrainment study to help determine whether alternative cooling systems may be feasible and necessary at the power plant. The CEC recently provided a 10-year certification for the power plant, and the power plant's NPDES (National Pollutant Discharge Elimination System) permit is subject to review and renewal by the RWQCB every five years. Since alternatives to the existing cooling system such as dry cooling, wet-dry cooling, and others will likely be considered during these upcoming reviews and within the approximate 20-year planning horizon of this CEQA analysis, the EIR should evaluate the effect that selecting a cooling system other than once-through cooling would have on the desalination facility, and should also evaluate the effect the presence of an existing desalination system might have on the choice of alternative cooling systems.

The issues and concerns above regarding marine biological resources and entrainment should also be incorporated into the EIR's cumulative impacts analysis. This issue is of particular concern because the offshore waters that would serve as both source and receiving waters for the facility are subject to significant ongoing stresses that adversely affect water quality and biological resources. Additional adverse effects related to entrainment or brine discharges may exacerbate these existing adverse conditions.

Modeling water quality and biological impacts: The EIR needs to include more detailed information about the modeling and assumptions used to develop and evaluate the "worst-case" scenario for impacts to water quality and marine biological resources. The modeling results provided show increased salinity extending over up to several hundred acres of water surface and benthic habitat. While the EIR points out that part of this increase is within the natural range of variability in seawater, it does not describe how that variation correlates seasonally or with ambient ocean conditions in the vicinity of the discharge, and does not describe the effect an ongoing increased salinity discharge would have on marine organisms that would otherwise experience seasonal or ambient conditions. Additionally, the modeling identifies an impact that may be significant and that would occur over a relatively large area, but does not evaluate mitigation measures to avoid or minimize that impact, such as structural or operational changes to the facility's outfall. We recommend these be included in the EIR.

Lack of site-specific or general information: We also requested that the EIR include information about the impacts of other similar desalination facilities and mitigation measures used at those facilities. We believe this would help determine whether there were issues or knowledge gained elsewhere that might be applicable to the proposed project. The City's response states that this information is not necessary. However, we refer back to our concerns mentioned above about another of the City's responses, which stated that the findings of the current entrainment study are not needed, either. We are therefore left with no recent, applicable data about the effects of desalination facilities in general, or about this proposed facility in particular. The absence of one set of these data may be acceptable, but the absence of both provides very little credible information on which to base the CEQA analysis.

Inadequate Alternatives Analysis: There are likely several reasonable and feasible alternatives that have not yet been incorporated into review of the proposed project, and that will be needed both for completeness under CEQA and for conformity to Coastal Act policies. In our November comment letter, we requested additional alternatives analyses be done that identified other sources of water that might be used to provide drinking water. In its response, the City stated that alternatives were not needed because the use of ocean water would not cause significant impacts. However, based on our concerns about entrainment and water quality mentioned above, we believe the City should reconsider this position, since the proposal may indeed result in significant entrainment impacts.

The City also stated that other water sources were not being considered because part of the project purpose is to provide a reliable local source of drinking water, and that sources such as reclaimed or recycled water were not considered local since they were derived from imported water or groundwater. We note, however, that the recent Metropolitan Water District (MWD) document, "Report on Metropolitan's Water Supplies" (March 25, 2003) considers recycled water as a local water source. Since the proposed facility is within the MWD service area, and is subject in part to MWD planning projections, we believe it would be reasonable to define the sources of supply consistent with the definitions used by MWD. This approach would allow for an adequate alternatives analysis under CEQA and would also allow for consideration of recycled or reclaimed water sources that may have fewer adverse environmental impacts. Even if seawater were to be the only water source evaluated, there are several methods of using seawater, such as beach wells, covered intakes, etc., that would avoid or reduce what may be significant levels of entrainment caused by using a once-through ocean water cooling system. While these alternatives may require that new structures be built or existing structures be modified, the construction-related impacts may be relatively short-term and minimal compared to the ongoing adverse entrainment effects that may occur. We therefore recommend the EIR provide additional evaluation of these or other similar alternatives.

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- Inadequate Analysis of Growth-Inducement: The EIR does not provide adequate information about the known or likely use of the water to be produced by the proposed facility; therefore, it is not possible to adequately evaluate the growth-related or cumulative impacts of that use. Regarding growth-inducement, CEQA requires a discussion of how the proposed project could foster growth. The analysis should, at the very least, include information about where the produced water is either known to be going (due to existing contracts to purchase the water) or is likely to go (based on the economics of producing and transporting water from coastal, low-elevation Huntington Beach to other locations in the water supply service area). The analysis should also evaluate effects of the potential growth on the resources of the surrounding area, pursuant to the CEQA guidelines, and should also address the impacts of that growth on coastal resources, as required by the Coastal Act.

In closing, we recommend that these concerns be incorporated into either a Final or Supplemental Draft EIR before review begins to determine the proposed project's conformity to the Coastal Act. Thank you for the opportunity to comment, and please feel free to contact me at (415) 904-5248 or tluster@coastal.ca.gov if you have any questions.

Sincerely,

Tom Luster

Tom Luster
Energy and Ocean Resources Unit

Cc: Poseidon Resources – Billy Owens
U.S. Fish & Wildlife Service – Jonathan Snyder
CA Dept. of Fish & Game – William Paznokas
Regional Water Quality Control Board, Santa Ana Region – Mark Adelson
State Lands Commission – Jane Smith

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February 20, 2003

To: Coastal Commissioners and Interested Public

From: Jaime Kooser, Deputy Director
Alison Dettmer, Manager, Energy and Ocean Resources Unit
Tom Luster, Energy and Ocean Resources Unit

Re: Briefing on the Applicability of Coastal Act Policies to Public and Private Desalination Facilities

INFORMATIONAL ITEM ONLY

Summary: This briefing summarizes Coastal Act policies that may apply differently to desalination facilities proposed by public or private entities. The briefing provides only a conceptual level review of how these policies are likely to apply differently to public or private proposals, as each proposed facility will require case-by-case review to determine how and whether a particular policy applies. It identifies many of the questions and concerns that the Commission may consider when reviewing a proposed desalination facility for Coastal Act conformity.

The briefing is being provided based on interest recently expressed by the Commission and due to staff anticipating that several large-scale desalination facilities requiring review under the Coastal Act will soon be proposed by both public and private entities. It is also offered in advance of a more comprehensive report on coastal desalination in California being prepared by staff in conjunction with the Monterey Bay National Marine Sanctuary. That report is intended to provide the Commission, staff, applicants, and the public guidance on how Coastal Act policies may apply to a much wider range of issues associated with desalination, and will identify the types of information likely to be needed to review proposed facilities for conformity to the Coastal Act. The report will also support the work of the California Department of Water Resources Task Force on Desalination, which is charged with determining opportunities for, and constraints on, desalination in the state.

This briefing groups the various applicable Coastal Act policies into several categories – growth-inducement, alternatives analysis, coastal-dependency, priority development, placing fill in coastal waters, and the capacity of public works facilities – and provides an analysis of each category. The briefing also includes a discussion of the Public Trust Doctrine as it may apply differently to public or private proposals. Finally, it includes a list of existing and proposed desalination facilities along the California coast.

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INTRODUCTION

Development along the California coast has long been either accommodated or limited by the amount of fresh water available. Past efforts to provide adequate water have included importing water from other areas, increasing water availability through storage projects, using groundwater, and promoting conservation. Efforts to provide water through seawater desalination have generally been limited in both size and number due to technological or economic constraints and its effects on coastal resources.

Recent changes in desalination technology, along with a growing interest by state and local governments, water districts, and private entities to increase and diversify sources of potable water along the coast, have led to a number of proposed projects that would significantly increase the amount of water provided through desalination. There are currently about a dozen desalination facilities along the California coast, none capable of producing more than several hundred thousand gallons of potable water per day. Over the past two years, there have been about 20 proposals for desalination facilities along the coast, including several with an anticipated capacity of 30 to 50 million gallons per day. [A list of existing and proposed coastal desalination projects in California is provided at the end of this briefing.] These proposed facilities are largely at the conceptual or design levels; it is likely, however, that several will be subject to review for coastal development permits in the near future.

In anticipation of reviewing these proposed facilities, Commission staff is updating a report prepared in 1993, "Seawater Desalination in California". The updated report will identify Coastal Act policies that apply to proposed desalination facilities and is intended to provide general guidance on the types of information needed and considerations to be addressed during review of these proposals for conformity to the Coastal Act. Proposed facilities need to conform to a range of Coastal Act policies, such as those related to water quality, protection of marine organisms, visual resources, and will be subject to other applicable federal, state, and local requirements. Today's briefing, however, focuses on only one element – how policies of the Coastal Act might apply differently to public or private proposals to provide desalinated seawater.

Why is this an issue? Interest in "public vs. private" aspects of desalination has been generated in part by recent changes in the way water is being provided to the public. Until recently, public water supplies in California have most commonly been provided by some type of community service or municipal water district, with a smaller number provided by investor-owned utilities or privately-held mutual water companies[1]. Recent trends towards utility deregulation and interest by various government entities to privatize some services are creating opportunities for private entities to take on some of the risks and responsibilities of providing water to the public. Additionally, water is increasingly being seen as a commodity rather than a public resource or public good, and is being produced, transported, and used increasingly based on market forces rather than on non-market public interests. As public entities face growing budget constraints, they may be less able or willing to make significant infrastructure improvements or increase their service areas, and may chose to turn over all or some of their water supply duties to private entities. Conversely, public entities may choose to take on some characteristics of private entities in the way they market their water supplies or expand the area in which they provide water through various forms of public-private partnerships[2].

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[1] The Department of Water Resources reports that in 1994-96, of the 2850 water agencies in California, 195 (or about 7%) were private investor-owned facilities (Source: California Water Plan Update: Bulletin 160-98).

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These changes are occurring at the same time that technological and economic changes in desalination make it increasingly feasible for entities along the California coast to tap into the Pacific Ocean and provide large amounts of water at economic costs approaching the costs of other more commonly available sources, such as water imported from the Central Valley or Colorado River. While a number of issues associated with these changes will be under the purview of other government bodies, such as the state's Public Utilities Commission or State Water Resources Control Board, the Coastal Commission has an important role in determining whether such changes conform to the policies of the Coastal Act and result in the necessary protection of coastal resources.

Coastal Act Policies Applicable to Public/Private Water Supplies

The Coastal Act includes a number of policies that may apply differently to public or private water purveyors. In general, the Act emphasizes coastal resources as public resources subject to public oversight and the capacity of public infrastructure. Specific Coastal Act policies evaluated in this briefing are grouped in the following categories:

- Growth-inducing Impacts
- Alternatives Analysis
- Coastal Dependency
- Priority Development
- Fill in Coastal Waters
- Capabilities of Public Works Facilities

This briefing evaluates each of the above policy issues separately and describes how each could apply to public or private entities, and in some cases public-private partnerships. The review of a specific proposed facility for conformity to Coastal Act policies, however, will require case-by-case analysis of how these policies apply.

In addition to evaluating the policies listed above, the briefing includes a description of the Public Trust Doctrine, a legal construct that underlies many of the provisions of the Coastal Act, and how it may apply to some aspects of the use of ocean water for desalination.

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[2] Rates established by the state Public Utilities Commission for water sales do not allow public agencies to profit from their water sales, but allow private entities a regulated amount of profit based on elements such as delivery costs, characteristics of the service area, and other considerations.

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ANALYSIS OF APPLICABLE COASTAL ACT POLICIES

I. Growth-inducing Impacts

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…"*

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 l 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.*

Analysis: In some areas along the California coast, desalination could remove what may be the single largest constraint to growth, a limited supply of potable water. Constructing new desalination facilities, especially large-scale facilities, is likely to lead to new development and population increases in some coastal areas. Without adequately evaluating these facilities, the increased development and population could expand beyond the rate and direction of growth anticipated in local or regional growth management plans, could result in new and unanticipated pressures on local populations and infrastructure, and could have significant adverse effects on coastal resources.

The Coastal Act addresses the growth-inducing effects of proposed development from two somewhat different perspectives. The first focuses on whether proposed development can be supported by available public services; the second focuses on whether public facilities can adequately support proposed development:

- Section 30250(a): Review under this section requires, in part, that new development be in or near existing developed areas able to accommodate it or in areas with adequate public services. This section is meant to prevent new development from outpacing the ability of local communities to provide necessary services and to promote concentrated development patterns.

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- Section 30254: As in section 30250(a) above, this section establishes that the permitted level of development be tied to the capabilities of local services, but also establishes that the capacity of existing or expanded public works facilities and service districts be based on the level of development an area can accommodate in a manner consistent with the policies of Chapter 3 of the Coastal Act. It also provides that certain types of development – coastal-dependent, essential public services and industries, recreation, and visitor-serving land uses – not be precluded by other development, and that new development conform to the policies and standards contained in any applicable Commission-certified local coastal plans (LCPs). These policies may relate to regional water and growth management goals or how limited water resources are allocated.

Both sections emphasize that new development be tied to the capabilities of public services and public works facilities. Public control of these facilities generally provides mechanisms such as public hearings, public election or appointment of officers, and other forms of public oversight, that better ensure such developments are linked to local growth management plans and allow the public to be involved in decision-making. Public ownership is also likely to allow for a more comprehensive approach to resolving issues related to local and regional growth, the types of development to be considered, and the directions in which it occurs. The ongoing public review or oversight provided by a public rather than private entity is also likely to allow more complete consideration of other specific aspects of growth-inducing impacts such as those below:

- Is the water meant to provide a new supply, or is it proposed to replace an existing supply? If a facility is meant to provide a new supply, the review of growth-inducing impacts may need to consider how allocation of that new supply will be subject to growth-related goals contained in LCPs or other local or regional planning efforts. Such a review is also likely to involve a more far-reaching evaluation of cumulative impacts. If a facility is meant to instead provide a replacement source – for instance, to reduce or eliminate withdrawals from a surface water body affecting fish or wildlife habitat or to replace groundwater withdrawals causing subsidence – there may be few, if any growth-inducing effects associated with such a facility, and the review of growth-inducing impacts would likely be more limited. A coastal development permit issued for such a facility may need to include a condition requiring additional review and permit amendment if the water use is later proposed to go beyond replacement of an existing source[3]. In either case, ongoing public oversight is likely to better ensure that the supply is used as proposed.

- Is the facility meant to provide a baseline supply of water, or is it to be used only during droughts or emergencies? Similar to the above, some desalination facilities have been proposed to provide water only during drought or emergency situations rather than provide a continuous, baseline water supply. Such facilities are less likely to result in growth-inducing impacts. Again, however, publicly-owned facilities are likely to have

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[3] As an example, the California-American Water Company (Cal-Am), which supplies water to much of the Monterey Peninsula, is proposing a desalination facility to replace a portion of its water supply currently being withdrawn from the Carmel River. Other entities are considering whether the proposed facility might also be used to provide a new and increased source of water for other areas nearby.

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better oversight mechanisms to ensure that any changes that may result in growth-related impacts are adequately reviewed. Additionally, private facilities intended to operate only during severe situations may not be able to generate the necessary revenues, and may need to provide additional supplies to remain solvent. For proposed projects intended to provide only emergency or drought-related water supplies, the Commission may opt to include a condition requiring additional review and a permit amendment if the project intent changes.

- Is the service area for the water defined? A desalination facility may be proposed to serve a specific service area or provide water to a specific set of users, or it may be intended to serve a less well-defined and possibly more extensive area or unspecified set of users. It is easier to determine growth-inducing impacts when the water supply area is specifically defined, through identifying growth or infrastructure limits in the service area, long-term contracts with users, or other similar methods. This aspect of review is specifically addressed in section 30254, which states that special districts shall not be formed or expanded where the resulting development would be inconsistent with Coastal Act policies.

  As trends towards water marketing increase and the potential for interbasin or even international water transfers occurs, any difference in public oversight over public or private facilities is likely to have more far-reaching growth-inducing consequences. Longer distance transfers also raise issues associated with determining whether local impacts to coastal resources are worth benefits that may accrue elsewhere.

II. Alternatives Analysis

The Coastal Act requires in some instances that proposed development undergo an alternatives analysis to determine whether there are feasible, less environmentally damaging alternatives to the proposed action. Applicable sections include:

Section 30233(a) states:

> *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...*

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.*

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Analysis: Section 30233(a) requires in part that projects involving fill in coastal waters be allowed only under particular conditions, including a determination that there is no feasible, less environmentally damaging alternative. Section 30260 states that coastal-dependent facilities may be permitted even if they do not fully comply with other Coastal Act policies, but only if there are no feasible, less environmentally damaging alternative locations. One primary purpose of an alternatives analysis is to determine whether there are alternatives that would avoid or substantially reduce any significant adverse effects of a proposed project.

In either case, a public entity proposing a project is likely to have a greater number of alternative locations available than a private proponent. A city or water district, for example, may own or control a larger land base from which to choose sites for a proposed facility. Similarly, a public entity may, in many cases, have greater control over available resources or infrastructure needed to support a desalination facility. For example, a municipal utility may have electrical power plants that can provide both a site and power for desalination, or it may have available amounts of stormwater or wastewater that can serve as a less environmentally damaging alternative to using seawater as the water source. Public entities may also be able to invoke eminent domain in determining whether various sites are feasible. For proposed private facilities, the alternatives analysis may, in some cases, need to evaluate whether using or providing a public water source is a feasible option and whether such a source would result in fewer adverse impacts.

Feasibility: The Coastal Act requires the alternatives considered to be feasible. Section 30108 of the Act defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors". These factors will likely be weighed differently in reviewing a given public or private proposal, as the range of options available to either type of entity may differ significantly – for example, as mentioned above, a public entity may have a greater number of feasible locations available to it due to having a larger land base or having power of eminent domain. Cost is another feasibility factor that may apply differently to public and private proposals. Because desalination is still a relatively costly form of providing a water supply, it is likely that the alternatives deemed feasible will include some that are relatively costly. These costs are likely to be borne differently by public or private facilities due to the funding mechanisms imposed on or provided by each.

III. Coastal Dependency

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.*

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.*

Analysis: Desalination, in and of itself, is not coastal-dependent. Many desalination facilities are located at inland sites and are used to desalt groundwater, irrigation water, or other water sources. Even desalination facilities using seawater as their source water might not be coastal-dependent, as they may need only to be located close to the coast, and not necessarily adjacent to the ocean.

Section 30260 of the Coastal Act recognizes that some types of facilities must be located on or adjacent to the ocean, even if they do not fully conform to all applicable Coastal Act policies. Such "coastal-dependent" facilities may be permitted, however, only if alternative locations are infeasible or more environmentally damaging, if to do otherwise would adversely affect public welfare, and if adverse environmental effects are mitigated to the maximum extent feasible. Therefore, desalination facilities that do not conform to all applicable policies of the Act and proposed to be located on or adjacent to the ocean must be reviewed individually to determine whether they are coastal-dependent. If this case-by-case review determines a particular facility is coastal-dependent, the facility can be reviewed for conformity to section 30260:

- Are there available alternative locations for the facility that would have fewer adverse effects on coastal resources?
- Are the adverse environmental effects of the proposal mitigated to the maximum extent feasible?
- Is denying the proposed project inconsistent with the public welfare?

In reviewing whether a facility is consistent with the public welfare, it is likely that there will be significant differences between public and private proposals. A review of a proposal's effects on public welfare may include evaluation of whether the water will be used solely by a private entity or provided to the public, comparison of private versus public benefits that may accrue from the proposal, along with the degree of adverse impacts to public resources. It could also include a review of whether the type of public or private development that may benefit from a facility is a priority development identified in the Coastal Act as described in the section below.