

**ADDITIONAL RESPONSES TO COMMENTS ON THE  
FINAL EIR-03-05 FOR  
THE PRECISE DEVELOPMENT PLAN AND DESALINATION  
PLANT PROJECT  
SCH #2004041081  
June 13, 2006**

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**1.0 INTRODUCTION**

The Final EIR for the Precise Development Plan and Desalination Plant project contains a comprehensive disclosure and analysis of potential environmental effects associated with the implementation of the Precise Development Plan and Desalination Plant project. In addition, the Final EIR contains responses to public comments received during the public review period held on the Draft EIR. Following publication of the Final EIR and distribution of responses to commenting parties, certain parties continued to submit comments up to and including testimony given at the project's public hearing held by the City of Carlsbad Planning Commission on the project on May 3, 2006. In order to address all issues raised by the public on the proposed project and provide comprehensive disclosure and documentation of environmental issues associated with the project, the following additional responses to comments are provided and are hereby incorporated into the Final EIR for consideration by the Carlsbad City Council.

A review of the materials submitted to the City and of the draft minutes of the May 3, 2006, Planning Commission Hearing, identified two primary issues that would benefit from additional clarification:

- 1) Operation of the desalination plant independent of the Encina Power Station (EPS); and,
- 2) Water conservation as an "alternative" to the proposed project.

**2.0 BACKGROUND**

**Issue 1:        Operation of the Desalination Plant as a stand alone facility – separate from the EPS**

The description of baseline conditions and the basis for the analysis in the Final EIR assumes the continued operation of the Encina Power Station (EPS) within the parameters of its historical operating conditions. This approach is based on a determination by the City that such a baseline condition reflects reasonably foreseeable circumstances, and therefore appropriately characterizes existing baseline conditions, in accordance with guidance provided by CEQA. Moreover, all relevant city permits

The most frequently entrained species are very abundant in the area of EPS intake, Agua Hedionda Lagoon, and the Southern California Bight so that the actual ecological effects due to any additional entrainment from the project at either level of plant operations are insignificant. Species of direct recreational and commercial value constitute less than 1 percent of the entrained organisms, and considering the fact that in general, less than one percent of all fish larvae become reproductive adults, the operation of the desalination plant would not result in significant impacts on those species. California Department of Fish and Game (2002) in their Nearshore Fishery Management Plan provides for sustainable populations with harvests of up to 60 percent of unfished adult stocks. The incremental entrainment ("harvest") effect of larval fishes from the desalination facilities operations at 106 or 306 MGD is approximately 1 to 34 percent (depending on the species); losses that would have no significant effect on the source water populations to sustain themselves. Additionally, entrainment mortality losses are not harvests in the common sense, because the larval fish are not removed from the ocean, but are returned to supply the ocean's food webs – the natural fate of at least 99 percent of larvae whether entrained or not. Generally less than one percent of all fish larvae become reproductive adults.

*The following text replaces text that appears in Section 6.0 of the EIR (Starting on Page 6-1):*

## SECTION 6.0 ALTERNATIVES TO THE PROPOSED ACTION

In order to fully evaluate proposed projects, CEQA requires that alternatives be discussed. Section 15126.6 of the State CEQA Guidelines requires the discussion of "a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The alternatives discussion is intended to "focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives as listed in Section 3.0 of this EIR. The alternatives discussion focuses on the desalination plant aspect of the PDP.

The Alternatives discussion in this EIR focuses on four project alternatives: a No Project/No Development Alternative, an Alternative Site Location Alternative, a Modified Intake Design Alternative, and a Reduced Project Capacity Alternative.

Along with the Alternatives identified in this Section, previous consideration has been given to policy options that are discussed as alternatives that have been considered and rejected for the purposes of this EIR. These alternatives include the Recycled Water Only Alternative and Increased Water Conservation/Recycled Water Alternative. These alternatives are not currently considered to be feasible project alternatives, and for that reason, are not put forward as alternatives that the City Council may select as alternatives actions to project approval. However, based on comments received on the EIR, the City of Carlsbad believes it important to emphasize and clarify past policy decisions relative to water recycling and conservation, and how those water management strategies relate to the proposed project.

### **Alternatives Considered but Rejected as Infeasible**

Section 15126.6(c) of the CEQA Guidelines provides for discussion of any alternatives that were considered by the lead agency but were rejected as infeasible. The alternatives, identified as the Recycled Water Only Alternative and Increased Water Conservation/Recycled Water Alternative, have been considered in past decision making by the City and both have been determined to be infeasible, because they require recycling and conservation practices that go beyond what is considered to be acceptable from a public policy perspective. The following discussion provides information that explains how water recycling and conservation have and will continue to play an important role in local and regional water management. This discussion is also intended to provide a framework for understanding past policy decisions that limit the extent to which recycling and conservation can be taken without causing unacceptable social and economic effects.

Water conservation and recycling has long been a part of local and regional water supply strategies. Conservation and recycling involve social and economic impacts that are given consideration by policy makers in terms of how much these strategies are feasibly able to contribute to reducing and/or satisfying demand.

The Department of Water Resources' draft California Water Plan Update 2005 acknowledges that local efforts to conserve and reuse water must continue to be implemented and new water supplies must be developed (including up to 500,000 acre-feet of desalination) to ensure an adequate water supply for California's future. (California Water Plan Highlights, page 15.) Update 2005 states that if recent growth trends continue, water conservation and reuse alone will not be adequate to meet Southern California's future needs. More than 600,000 acre-feet of new supply will be needed to meet the South Coast region's needs by the year 2030.

The San Diego County Water Authority's Regional Water Facilities Master Plan has projected that an additional one million people will be added to the county over the next three decades. To keep up with this growth, it is expected that by 2020 water demands will grow by 107,000 acre feet (AF) over 2005 total projected demands to 813,000 acre feet per year (AFY). The contribution from water conservation efforts account for 54,900 AFY of estimated reduced demand today and is expected to grow by nearly 75% to a potential 93,200 AFY in reduced demand over the next 15 years. The increased demand projection of 107,000 AFY is net of the 93,200 AFY of projected savings due to ongoing and planned water conservation efforts, but still requires additional supply to meet the demands of growth in the region.

The City of Carlsbad currently imports 100% of its potable water supply. The City of Carlsbad's pursuit of seawater desalination is in direct response to growing concern over water supply reliability. This concern is driven by several factors, including climate, limited surface and groundwater supplies, expected population growth, and decreasing reliability of imported water resources stemming from the Colorado River 4.4 Plan and QSA, Sacramento-San Joaquin Bay-Delta Accord, and other regional, state and federal water issues. Conservation programs defer or limit the rate of demand for water; however, these programs cannot reliably address the City's long-term water supply needs.

The Carlsbad Municipal Water District ("CMWD") considered a variety of actions to improve its water supply reliability, diversify supplies, and reduce dependence on imported water. These actions include a commitment to implement all cost-effective water conservation and recycling opportunities. Today, CMWD has one of the most aggressive conservation and recycling programs in the San Diego region.

CMWD is also a signatory to the California Urban Water Conservation Council Memorandum of Understanding ("MOU"). Signatories to the MOU implement 14 Best Management Practices that have received a consensus among water agencies and conservation advocates as the best and most realistic methods to produce significant water savings from conservation.

Conservation on a local level is implemented through strategies identified in the Urban Water Management Plan (UWMP). The goals of the City's water conservation program are to: reduce demand for more expensive, imported water; demonstrate continued commitment to the Urban Best Management Practices (BMPs); and to ensure a reliable

future water supply. The UWMP includes water demand management measures, consisting of:

- Best Management Practices / Audits
- Low consumption toilets / showerheads / faucets
- Leak detection / Metering
- Landscape programs / Drought tolerant plantings
- Public information / School education
- Commercial & Industrial conservation measures
- Water waste prohibitions

In 1991, Carlsbad adopted a five-phase Recycled Water Master Plan designed to save potable water. The result is that CMWD has the most aggressive water recycling program in the region when measured in terms of percent of supply derived from recycled water. The Recycled Water Master Plan is referenced herein.

The implementation of the water conservation and water recycling elements included in CMWD's UWMP are on schedule and are achieving the desired reduction in potable water use. These programs are designed to work in tandem with the proposed seawater desalination project to accomplish the City Council's water supply reliability goal of 90 percent water availability during a severe drought. This goal could not be met through conservation and recycling alone.

The CMWD's current UWMP, approved in 2005 and referenced herein, projects that in the year 2020 the City of Carlsbad will have 102,536 residents in the CMWD Service Area, an increase of almost 22,000 people from the 2005 Service Area population estimate. The projected water demand for the Service Area in 2020 is 28,907 acre feet (AF) per year. The UWMP has projected that 1,945 AF, or approximately 7% of the demand, will be met by conservation, a 500 AF increase over 2005 projected conservation savings. Further, recycled water is estimated to constitute 6,300 AF, or 21%, of CMWD water demand in 2020. This represents a 6% increase over recycled water supplies in 2020 estimated by the 2000 UWMP.

As an alternative to use of desalinated water for the 72% of the City's water needs that would not be supplied by conservation (7%) and recycled water (21%) in 2020, certain commentors have claimed that it is possible for the City to increase conservation or use of recycled water in a manner which eliminates the need for desalinated water from the desalination facility.

The Recycled Water Only Alternative would involve a situation where the City of Carlsbad would not utilize any external source of potable water. Under this scenario, the residents and businesses in the City would reduce their consumption of water, and only utilize water which is recycled from the City's wastewater system. The current water supply projection for 2020 – 21% recycled water and 7% conservation – would increase by some combination to 100% under this alternative. A variety of different combination of conservation and use of recycled water could be imagined under this alternative.

With this alternative, there would be no need for the desalination facility. The significant effects of the desalination facility related to air quality and growth inducement would be avoided.

Under the Recycled Water Only and Increased Conservation/Recycled Water alternatives, the City would implement more aggressive conservation measures that go beyond current BMPs as a means to meet future water demands. The City would more aggressively apply BMPs going beyond what is locally cost-effective and implement new restrictions on water use, such as limitations on residential landscape irrigating, washing vehicles, irrigating golf courses and parks and other uses, and have appropriate penalties for failure to comply with restrictions.

To more aggressively implement conservation measures beyond the current industry standard, the City would have to implement non-cost-effective BMPs, non-proven potential BMPs, and would have to enforce restrictions that could harm the City's economy and result in a drastic change in life styles. Even with the aggressive conservation measures the City has taken, coupled with planned future conservation projects, the savings would not be sufficient to offset the estimated demand forecast for 2020.

The Recycled Water Only Alternative appears to be infeasible as it does not take into account water loss and replacement. Inevitably, some water will be lost through evaporation, transportation, leaks, application to soil, and water treatment processes in industrial and public utility uses, such as waste treatment systems. Eventually, this lost water will require replacement from another water source "outside" the recycled water system. Accordingly, an argument could be made that this replacement could come from sources other than imported and desalinated water, such as stormwater. However, the City has no way of capturing stormwater for use as a potable supply as the City does not have any stormwater impoundment reservoirs.

No community in the world has achieved the level of recycling and conservation presented in the Recycled Water Only Alternative. Furthermore, the California

Department of Health Services has health based restrictions on the use of recycled water which prevent its use as a complete replacement for potable water. In addition, the general public is unwilling to use recycled water as a complete replacement for water used in cooking, bathing, washing and drinking.

The City has also previously analyzed the Increased Conservation/Recycled Water Alternative, whereby the combined level of conservation and recycled water supply would total somewhere between UWMP projections as used as the baseline assumption in this FEIR and a level of 100%, which is the level analyzed in the Recycled Water Only Alternative discussed above. (The 2000 UWMP estimates 15% of the City's water demand in 2020 would be met by recycled water; an estimate is not provided for conservation, although the 2000 UMWP discusses conservation, the components to achieve it, and recognizes conservation as a critical part of CMWD's long term water supply needs.) A variety of different combinations of increased use of recycled water and increased conservation are covered within this alternative. Commentors did not describe a specific level of conservation or use of recycled water that they felt the City could achieve.

The Increased Conservation/Recycled Water Alternative was not presented as an actual alternative to the proposed project. No matter what level of conservation or recycled water is proposed below 100%, the City and other jurisdictions in San Diego County still face a need for potable water from some source. As a result, this is not a feasible alternative to the proposed project. For example, reaching a theoretical goal of supplying water needs through conservation and use of recycled water to meet 50% of the City's water needs still requires a source of water for the remaining 50% of the water needs. The desalination facility is still needed to supply that remaining 50%, even under this type of Conservation/Recycled Water Alternative. Thus, this Alternative would not eliminate the need for the desalination facility, nor would it eliminate the potential adverse effects of the desalination facility related to a contribution to cumulative air quality or a contribution to regional growth inducement.

An Increased Conservation/Recycled Water Alternative would permit the City to purchase less desalinated water from the desalination facility. If Carlsbad were the only customer for the desalination facility, this could result in a reduced capacity desalination facility. The impacts of a Reduced Project Capacity Alternative are analyzed in Section 6.4 of the EIR. As noted in Section 6.4 of the EIR, a Reduced Project Capacity Alternative would reduce but not eliminate the project's contribution to a cumulative air quality and cumulative regional growth inducing impacts.

In summary, the City concludes that the Increased Conservation/Recycled Water Alternative also appears to be infeasible for public policy reasons because it would require a level of conservation and use of recycled water that is unacceptable as a matter of public policy. The City previously determined the maximum acceptable levels of conservation and recycled water use that should be mandated by the City in the approval of the UWMP and the Recycled Water Master Plan, and does not believe these levels can or should be increased for many reasons, as set forth in the record before the City Council when those plans were approved. For example, due to current legal restrictions, recycled water cannot be used for bathing, cooking and other household domestic needs. Current mandated low flow toilets, showerheads and other plumbing fixtures represent the maximum feasible level of conservation from these fixtures, and at this time it is infeasible to mandate fixtures which provide higher levels of conservation.

Single family residential households use a large portion of the CMWD water supply. The 2005 UWMP estimates that in 2020, 38% of the total water supply, or 11,013 AF, can be attributed to use by these households. Single family residential water demand includes both indoor and outdoor water usage with 60% of the water usage attributed to outdoor use, primarily for landscaping. Increasing the percentage of water supply available through conservation, above the 7% conservation projection in 2020, would require an equal reduction in demand.

While reduction of water demand could occur through use of recycled water for landscape irrigation for single-family residences, this would present concerns. Installing the public infrastructure and retrofitting all single-family residences to enable use of reclaimed water for irrigation purposes would be economically infeasible. Moreover, use of reclaimed water for irrigation by private residences is also discouraged by some county health officials.

Further restrictions on outdoor water use, such as a ban on all outdoor water usage, are not acceptable as a matter of public policy. If all outdoor water usage from single family residences were prohibited, for example, a conservation of approximately 6,607 AF of water (60% of 11,013 AF) or 22% of total 2020 demand would be achieved, enhancing the total conservation supply for the City of Carlsbad in 2020 to 29% (7% + 22%). However, among other things, this alternative would require the City of Carlsbad to enact ordinances that allow only non-irrigated landscaping within the City of Carlsbad, and ordinances that ban the use of outdoor irrigation for single family residences.

The City of Carlsbad has determined that prohibition of single family residential outdoor irrigation and most outdoor landscaping is not a desired public policy goal of the City of

Carlsbad, and the City Council does not believe that this action would be in the best interest of the quality of life, or health and well being of the residents of Carlsbad.

## 5.5 Alternatives Considered and Rejected for the Purposes of this EIR

### 5.5.1 Description

Along with the Alternatives identified in this Section 5.0, previous consideration has been given to policy options that are discussed as alternatives that have been considered and rejected as infeasible for the purposes of this EIR. These alternatives include the Recycled Water Only Alternative and Increased Water Conservation/Recycled Water Alternative. These alternatives are not considered to be feasible project alternatives because they require recycling and conservation practices that go beyond what is considered to be acceptable from a public policy perspective. However, based on comments received on the EIR, the City of Carlsbad believes it important to emphasize and clarify past policy decisions relative to water recycling and conservation, and how those water management strategies relate to the proposed project. Section 15126.6(c) of the CEQA Guidelines provides for discussion of any alternatives that were considered by the lead agency but were rejected as infeasible.

Under the Recycled Water Only Alternative, the City would not utilize an external source of portable water. Residents and business would reduce their water consumption and would only utilize water recycled from the City's wastewater system.

Under the Increased Water Conservation/Recycled Water Alternative, which the City has previously analyzed, the City would increase its level of water conservation and use of recycled water whereby the combined level of conservation and use of recycled water would total somewhere between the figures stated in the City's 2000 Urban Water Management Plan as used as the baseline assumption in the FEIR, and a level of 100%, which is the level analyzed in the Recycled Water Only Alternative described above. In the year 2020, for example, the 2000 UWMP estimates 15% of the City's water demand would be met by recycled water; an estimate is not provided for conservation, although the 2000 UMWP discusses conservation, the components to achieve it, and recognizes conservation as a critical part of CMWD's long term water supply needs. The update to the 2000 UWMP, approved in 2005 following the release of the FEIR, revises the water supply numbers and notes that in 2020, 21% of the CMWD water supply will be met by recycled water and 7% of the water supply will be met through conservation.

### 5.5.2 Supporting Explanation

The City finds both the Recycled Water Only Alternative and the Increased Water Conservation/Recycled Water Alternative are infeasible for public policy reasons because they would require a level of conservation and use of recycled water that is unacceptable as a matter of public policy (see FEIR Section 6.0). The City previously determined the maximum acceptable levels of conservation and recycled water use that should be mandated by the City in the adoption of the Urban Water Master Plan and the Recycled Water Master Plan, and does not believe these levels can or should be increased for many reasons, as set forth in the record before the City Council when those plans were adopted.

*CEQA Findings of Fact and Statement of Overriding Considerations  
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Amendment to add Section 5.5*

For example, due to current legal restrictions, recycled water cannot be used for bathing, cooking and other household domestic needs. Current mandated low flow toilets, showerheads and other plumbing fixtures represent the maximum feasible level of conservation from these fixtures, and at this time it is infeasible to mandate fixtures which provide higher levels of conservation. Further, use of recycled water by single family homeowners for irrigation would necessitate installing the public infrastructure and retrofitting all single-family residences to enable use of reclaimed water for irrigation purposes. This likely would prove to be economically infeasible and use of reclaimed water for irrigation by private residences is also discouraged by some county health officials.

It would also be infeasible and undesirable to achieve increased conservation through a ban on all outdoor water usage by single family residences. Under this scenario, a conservation of approximately 6,607 AF of water or 22% of total 2020 demand would be achieved, enhancing the total conservation supply for the City of Carlsbad in 2020 to 29% (7% achieved through already projected conservation + 22%). However, the additional 22% of supply conservation would require that no water be used outdoors in single family residential dwellings. Among other things, this alternative would require the City of Carlsbad to enact ordinances that allow only non-irrigated landscaping within the City of Carlsbad, and ordinances that ban the use of outdoor irrigation for single family residences.

The City of Carlsbad finds and has determined that prohibition of single family residential outdoor irrigation and most outdoor landscaping is not a desired public policy goal of the City of Carlsbad, and the City Council does not believe that this action would be in the best interest of the quality of life, or health and well being of the residents of Carlsbad.

The City also finds that, under the Increased Conservation/Recycled Water Alternative, no matter what level of conservation or recycled water is proposed below 100%, the City and other jurisdictions in San Diego County would still face a need for potable water from some source. As a result, this is not a feasible alternative to the proposed project. For example, reaching a theoretical goal of supplying water needs through conservation and use of recycled water to meet 50% of the City's water needs would still require a source of water for the remaining 50% of the water needs. Thus, this Alternative would not eliminate the need for the desalination facility nor would it eliminate the potential adverse effects of the desalination facility related to a contribution to cumulative air quality or a contribution to regional growth inducement.

The City also finds, with regards to the Recycled Water Only Alternative, that it is infeasible as it does not take into water loss and replacement. Inevitably, some water will be lost through evaporation, transportation, leaks, application to soil, and water treatment processes in industrial and public utility uses, such as waste treatment systems. Eventually, this lost water will require replacement from another water source "outside"