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To: Coastal Commissioners and Interested Public

From: Jaime Kooser, Deputy Director
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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.

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 companies¹. 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

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).

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 partnerships².

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.

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.

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 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.

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.

- 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 source³. 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

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.

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.

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.

IV. Priority Development

Several sections of the Coastal Act⁴ mandate that certain types of development, such as lower-cost visitor and recreation facilities, coastal agriculture, upland coastal recreation, coastal-dependent facilities, and others, receive priority over other types.

Analysis: The Coastal Act's identification of the types of development to prioritize in the coastal zone raises at least three distinct issues related to whether a water supply is public or private:

- First, whether non-priority development that includes its own water supply might be able to proceed at the expense of priority development that may not be able to provide its own supply;
- Second, whether locating a desalination facility in a coastal area might preclude or adversely affect the use of the site or adjacent sites by priority uses; and,
- Third, whether a private desalination facility would allocate water in a manner reflecting the same priorities as a public facility.

Regarding the first issue, the types of development prioritized in the Coastal Act do not necessarily come with their own water supply. In areas where development is limited by the available water, private facilities that provide their own water might be able to proceed while other higher priority developments that do not have the ability to provide their own water might not. A private, non-priority development could therefore override Coastal Act preferences for priority coastal uses or might not be subject to water allocation decisions made by a local public water purveyor. Because desalination remains a relatively costly process, a development's ability to provide its own desalinated water may be largely based on financial considerations rather than whether the proposed development is recognized as a priority development for coastal areas. A lower-cost visitor and recreation facility, for instance, may not be able to compete with the ability of a higher-cost facility to provide its own water, and so a coastal site suitable for either type of development may end up used by the latter at the expense of the former. One other consequence of this issue could show up during difficult financial times, in that a private development dependent on its own water supply may, for various reasons, no longer be able to afford the costs of desalination and instead increase the burden on the local public water purveyor. This additional burden could further limit the ability of public agencies to allocate water or land to priority coastal uses. [This issue is also discussed later in Section VI

⁴ These sections include:

- Section 30213 – lower-cost visitor and recreation facilities.
- Section 30222 – visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation. This section also prioritizes those facilities over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.
- Section 30222.5 – aquaculture facilities.
- Section 30223 – upland areas for coastal recreation.
- Section 30224 – recreational boating and associated facilities.
- Section 30234 – commercial fishing and recreational boating facilities.
- Section 30241 – prime agricultural land.
- Section 30255 – coastal-dependent development.
- Section 30254 – priority developments must not be precluded by other development due to the limited capacity of public works facilities.

of this briefing.] A similar resource-allocation issue may arise due to the relatively high electrical demand associated with desalination, in that the demand from a desalination facility used by a non-priority development could limit or preclude the ability of local electrical supplies to support priority developments.

Regarding the second issue, a desalination facility located on or adjacent to coastal sites suitable for higher-priority developments could remove or reduce land available for such developments. Desalination facilities may result in several types of adverse effects on coastal resources – visual, noise, public access, water quality, etc. – any of which, even if mitigated, could reduce the ability of priority developments to be sited nearby. This would in turn diminish the coastal uses associated with these priority developments, and may therefore be inconsistent with Coastal Act goals. As an example, in Consistency Determination #CD-16-94 (U.S. Army, Fort Ord), the Commission determined that a desalination facility being considered in the coastal zone near the cities of Marina and Seaside would diminish public access and recreational opportunities in that area, and further concluded that a feasible, less environmentally damaging alternative site was available east of Highway 1 away from the shoreline area.

Regarding the third issue, public ownership and oversight of desalination facilities, especially in areas with certified LCPs, is more likely to ensure that water allocations will occur in a manner consistent with the priority developments identified in the Coastal Act and in the LCP. Allocations from public facilities are likely to be subject to more ongoing public review, whereas allocations from private facilities may be primarily market driven and might not adequately reflect Coastal Act priorities. This difference in how public or private entities might allocate water is likely to be moderated in areas where the state Public Utility Commission has provided exclusive retail rights to a municipal water district. In these areas, a private desalination facility would be able to act only as a water wholesaler and sell only to the water district where the allocation decisions would be made.

V. Projects Involving Fill in Coastal Waters

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, and shall be limited to the following:

- (1) *New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*
- (2) *Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.*
- (3) *In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is*

restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.

- (4) *In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*
- (5) *Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*
- (6) *Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*
- (7) *Restoration purposes.*
- (8) *Nature study, aquaculture, or similar resource dependent activities.*

Analysis: Section 30233(a) of the Coastal Act applies to proposed projects involving diking, dredging, or filling in coastal waters, and contains strict limits on desalination facilities, public or private, that would require new inwater structures. This section identifies eight types of development under which fill may be permitted. Of these eight, coastal desalination facilities are likely to fall under, at most, two of these types – coastal-dependent industrial facilities, or incidental public service purposes. Some desalination facilities may fall under neither.

Fill for coastal-dependent industrial facilities: Regarding the first of these two types, desalination, as stated in the previous section, is not in and of itself a coastal-dependent use. Again, this will require case-by-case review and may depend, in part, on the different opportunities that may be available to public or private entities as described above.

Fill for incidental public purposes: The type of allowable fill makes a clear distinction between public and private purposes. By definition, a public facility is likely to include a greater presumption that it is for a public purpose than is a private facility. This Coastal Act provision further defines the type of fill allowed as an incidental public purpose as "...including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines". The element common to these examples, and the interpretation provided by past Commission findings, is that this type of fill involves only temporary impacts. For instance, the impacts associated with burying a cable or pipe are generally limited to the immediate effects associated with construction, such as turbidity, short-term disturbance to marine organisms, and the like. The type of fill allowed under this provision does not include new open intakes and outfalls (unless they are considered coastal-dependent and therefore allowable under the other fill provision), and does not provide for the types of ongoing adverse environmental effects associated with such structures, such as entrainment of marine organisms, discharges of various contaminants or increased brine concentrations, or other similar impacts. This interpretation is strengthened by the policy specifically mentioning maintenance of existing intakes and outfalls, which presumably have impacts considered part of a site's baseline conditions, versus constructing new intakes or outfalls, which would result in new and ongoing impacts.

VI. Capacity of Public Works Facilities

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.

Analysis: This section of the Act ties development to the capabilities of public works facilities. Such facilities are protected from failure, bankruptcy, or other economic difficulties differently than are private facilities. If a private desalination facility ceases operations, the burden of supporting the developments using water from that facility may suddenly shift to a nearby public water supply. This public system may not have the capacity to serve these developments, and perhaps more importantly for purposes of the Coastal Act, the capacity that may be diverted to users previously supplied by a private facility may limit the ability of the public system to provide for the priority developments discussed in a previous section above.

VII. The Public Trust Doctrine

The Public Trust Doctrine is a long-held legal construct of American property law. The doctrine as applied in the U.S. is an expanded version of the form contained in English Common Law dating from the era of the Magna Carta in the 13th Century.

The essence of the Public Trust Doctrine is that the public has the right to use and enjoy lands underlying navigable waterbodies. Its most common uses have been to ensure the public has access to navigable waters and tidelands for navigation, commerce, fishing, and shellfish harvest. The flexibility inherent in the doctrine has resulted in each state applying it differently. In California, the doctrine is invoked in portions of the state Constitution⁵. California courts have recognized it as being sufficiently flexible to encompass changing public needs, and over time have determined the doctrine applies to not only to the land underlying the water but also to the

⁵ California Constitution, Article 1, Section 25: "The people shall have the right to fish upon and from the public lands of the State and in the waters thereof, excepting upon lands set aside for fish hatcheries, and no land owned by the State shall ever be sold or transferred without reserving in the people the absolute right to fish thereupon; and no law shall ever be passed making it a crime for the people to enter upon the public lands within this State for the purpose of fishing in any water containing fish that have been planted therein by the State; provided, that the legislature may by statute, provide for the season when and the conditions under which the different species of fish may be taken."

water itself⁶, and applies not only to navigation and commerce but also to water quality⁷. Courts in this state have also recognized that the doctrine allows the public to use navigable waters for "...boating, swimming, fishing, hunting, and all recreational purposes"⁸, "preservation"⁹, and other "ecological and aesthetic values"¹⁰. While private uses are allowed, they are generally limited to those that would not harm public trust values, including the uses identified above. Review of proposed coastal desalination facilities using seawater from either the open ocean or estuaries may need to include evaluations as to whether the proposal will fully support these public trust values. Some of these evaluations may be already included in other elements of the review – for example, determining whether the volume and rate of a facility's intake and discharge adversely affects marine organisms is generally done as part of review for conformity to the Coastal Act's policies on marine biological resources – however, the review may also need to determine whether other "ecological and aesthetic values" incorporated into the Public Trust Doctrine are supported.

Importantly, approval of a private desalination facility would result in the use of a public trust resource for private benefit. To ensure the Public Trust Doctrine is supported, project review should evaluate whether the proposed use for private benefit would allow continuation of the other public uses.

CONCLUSION

This briefing has provided only a conceptual level review of how various Coastal Act policies are likely to apply differently to public or private desalination proposals. Given the complexities of the issue and site-specific characteristics, each proposal will require case-by-case review to determine whether and how each of these policies applies.

⁶ *National Audubon Society v. Superior Court*, (1983) 33 Cal.3d 419

⁷ *People v. Gold Run Ditch and Mining Co.* (1884) 66 Cal. 138

⁸ *People v. Mack*, 19 Cal. App. 3d 1040, 1045, 97 Cal. Rptr. 448 (1971)

⁹ *Marks v. Whitney*, 6 Cal.3d 251, 259, 491 p.2d 374, 98 Cal. Rptr. 790 (1971) – "[O]ne of the most important public uses of the tidelands... is the preservation of these lands in their natural state..."

¹⁰ *National Audubon Society v. Superior Ct.*, 33 Cal.3d 419, 435, 658 p.2d 709, 189 Cal. Rptr. 49 (1983) – "The principle values the plaintiff seeks to protect, however, are recreational and ecological – the scenic views of the lake and its shore, the purity of the air, and the use of the lake for the nesting and feeding by birds. Under *Marks v. Whitney*, 6 Cal. 3d 251 [491 P.2d 374, 98 Cal. Rptr. 790] (1971), it is clear that protection of these things is among the purposes of the public trust." Also *City of Berkeley v. Superior Court*, 26 Cal.3d 515, 521, 606 P.2d 362, 162 Cal. Rptr. 327 (1980) – "Although early cases expressed the scope of the public's rights in tidelands as encompassing navigation, commerce and fishing, the permissible range of public uses is far broader, including the right to ...preserve the tidelands in their natural state as ecological units for scientific study."

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EXISTING DESALINATION FACILITIES ALONG THE CALIFORNIA COAST

Operator / Location:	Public/ Private:	Purpose:	Maximum Capacity:	Source Water:	Discharge:	Status:
Chevron / Gaviota	Private	Processing	410,800 gpd, 460 AF/yr.	Ocean	Ocean	Active
City of Morro Bay	Public	Domestic	600,000 gpd, 672 AF/yr.	Seawater wells	Not known	Not known
City of Santa Barbara	Public	Domestic		Ocean	Not known	Inactive
Duke Energy / Morro Bay Power Plant	Private	Power plant	430,000 gpd, 482 AF/yr.	Ocean	Blend w/cooling water	Not known
Duke Energy / Moss Landing Power Plant	Private	Power plant	480,000 gpd, 537 AF/yr.	Ocean	Blend w/cooling water	Active
Marina Coast Water District	Public	Domestic	45,000 gpd, 50 AF/yr.	Seawater wells	Injection well	Active
Monterey Bay Aquarium	Private	Aquarium visitor use	40,000 gpd, 45 AF/yr.	Ocean	Combined w/other seawater discharges	Active
PG&E, Diablo Canyon / San Luis Obispo County	Private	Power plant	576,000 gpd, 645 AF/yr.	Ocean	Blend w/cooling water	Not known
San Simeon / San Luis Obispo County	Public	Visitor center	10,000 gpd 11 AF/yr.	Ocean	Not known	Inactive
Santa Catalina Island	Public	Domestic	132,000 gpd 148 AF/yr.	Seawater wells	Not known	Not known
U.S. Navy / San Nicolas Island	Public (Military)	Domestic	24,000 gpd 27 AF/yr.	Seawater wells	Not known	Not known
Various offshore oil & gas platforms	Private	Platform uses	2,000 – 34,000 gpd, 2 – 38 AF/yr.	Ocean	Ocean	Active

PROPOSED DESALINATION FACILITIES ALONG THE CALIFORNIA COAST

Proponent / Location:	Public/ Private:	Purpose:	Maximum Capacity:	Source Water:	Discharge:	Status:
Cambria Community Services District	Public	Domestic	430,000 gpd, 481 AF/yr.	Ocean	Pipeline to ocean	Planning
Cannery Row Marketplace / Monterey	Private	Domestic	5,000 gpd. 6 AF/yr.	Ocean	Pipeline to ocean	Planning
Carmel Area Wastewater District	Public		Not known	Not known	Not known	Not known
City of San Buenaventura	Public	Not known	Not known	Not known	Not known	Not known
City of Sand City	Public	Domestic	45,000 gpd, 50 AF/yr.	Seawater wells	Injection well	Planning
East-West Ranch / Cambria	Private	Domestic	Not known	Not known	Not known	Withdrawn
Fort Ord State Park / Monterey County	Public	Domestic	Not known	Not known	Not known	Not known
Metropolitan Water District of Southern California		Domestic	5 mgd, 5600 AF/yr.	Ocean	Not known	Not known
Monterey Bay Shores / Monterey County	Private	Private development	20,000 gpd	Seawater wells	Injection well	Not known
Monterey Peninsula Water Management District, Carmel River / Sand City	Public	Domestic	3-4 mgd	Seawater wells	Injection well	Planning
Poseidon Resources / Huntington Beach	Private	Not known	30-50 mgd	Ocean	Blend w/cooling water	DEIR
Poseidon Resources / Long Beach	Public/ private partnership	Not known	40 mgd	Ocean	Blend w/cooling water	Planning
San Diego County Water Authority & Poseidon	Public/ private	Domestic	50 mgd, 56,000 AF/yr.	Ocean	Not known	

Proponent / Location:	Public/ Private:	Purpose:	Maximum Capacity:	Source Water:	Discharge:	Status:
Resources / Encina	partnership					
Sand City	Public	Domestic	450,000	Seawater wells	Injection well	Planning
Sterling Hotel / Sand City	Private	Private development	20 AF/yr.	Seawater wells	Not known	Not known
Santa Cruz County Sanitation District	Public	Domestic	3-14 mgd	Not known	Not known	Planning
U.S. Navy, North Island Naval Air Station / San Diego	Public (Military)	Power plant	700,000 gpd	Seawater wells	Not known	Not known
Orange County Metropolitan Water District / Dana Point	Public	Domestic	27 mgd, 30,240 AF/yr.			Applicant for MWD subsidy
San Diego Water District & Poseidon Resources / Carlsbad	Public/ private partnership	Domestic	50 mgd, 56,000 AF/yr.			Applicant for MWD subsidy
West Basin Municipal Water District	Public	Domestic	20 mgd, 22, 400 AF/yr.			Applicant for MWD subsidy
Long Beach	Public	Domestic	8-10 mgd, 9-11,000 AF/yr.			Applicant for MWD subsidy
Los Angeles	Public	Domestic	10 mgd, 11,000 AF/yr.			Applicant for MWD subsidy

