CALIFORNIA COASTAL COMMISSION
CENTRAL COAST DISTRICT OFFICE
725 FRONT STREET, SUITE 300
SANTA CRUZ, CA 95060
(831) 427-4863

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Staff Report: Appeal
Substantial Issue and De Novo Staff Report

Local government.....City of Sand City

Local Decision.....Local Permit # CDP 04-08 - Approved w/ conditions.

Appeal Number.....A-3-SNC-05-010

Applicant.....City of Sand City

Agent.....Steve Matarazzo

Appellants.....Commissioners Meg Caldwell and Sara Wan

Project location.....wells and pipelines: Tioga Avenue, Vista del Mar Street, and Bay Avenue rights of way; desalination plant: 3300 block of Shasta Avenue; (APNs 011-243-002, 011-243-006); water distribution lines: Citywide.

Project description.....Construction/operation of a reverse osmosis (RO) desalination facility and potable water distribution system capable of delivering 300 acre feet per year (AF/y) of water to City residents and businesses. Project includes placement of piping and wells west of Highway One within City-owned street right-of-ways, the RO plant and storage tanks located east of Highway One on Shasta Avenue, and distribution pipes throughout the inland side of the City.

File documents.....Sand City certified Local Coastal Program; Coastal Development Permit CDP 04-08; Draft and Final EIRs *Sand City Water Supply Project*, 2004.

Staff recommendation...**Substantial Issue Raised; Approval with Conditions**

Summary: The applicant City proposes to construct and operate a 300 acre feet per year (AF/y) reverse osmosis desalination plant to supply potable water to Sand City residents and commercial / industrial establishments. The proposed site of the desalination plant and two 425,000 gallon storage tanks is located east of Highway One mostly within the Coastal Zone on the 3300 block of Shasta Avenue. The plant will be supplied with brackish water from proposed

extraction wells located 60 feet below the existing grade of the dune, near the bluff edge, within City-owned street rights-of-way (Bay and Tioga Avenues). Water will be drawn from a shallow aquifer near the freshwater -- seawater interface adjacent to Monterey Bay. The injection wells for return concentrate solution derived from the desalination process will be located near the bluff edge, generally 15 feet below mean sea level (msl). Piping to and from the wells will be installed beneath Highway One to the location of the physical plant where the reverse osmosis process will remove salt and impurities to produce drinking water. Also proposed are additional water distribution pipelines throughout the inland portion of the City that can supply adequate water flows for fire fighting.

The applicant maintains that the project will establish an independent water supply for the purposes of implementing the Sand City General Plan, Local Coastal Plan, and Redevelopment Plan. The reverse osmosis plant uses brackish water located in a shallow aquifer near the shoreline, independent of the deeper groundwater aquifer. The project is said to result in a cost-efficient, economic, and environmentally sensitive design that will supply water at a reasonable cost for water customers. The project will allow the City to retire its allocation of Cal-Am water thereby reducing use of Carmel River and Seaside Groundwater Basin water both of which are currently in overdraft. Since there is a de facto moratorium on new water connections in Sand City, by virtue of being in the Cal-Am service area, this proposed project will allow future development to proceed.

The appellants contend that the City' approval does not comply with various urban service and development accommodation, hazards, environmentally sensitive habitat (ESHA), and access policies. Several of these contentions involve the concern that the proposed project is to be located in an area threatened by coastal erosion rather than be setback beyond the 50 year erosion rate as the LCP would seem to require. Staff review of the LCP policies and the nature of the project, in that it requires a shoreline location to function, concludes that a setback is not mandatory under the LCP. Rather the proposed future relocation of the facilities that will occur is an appropriate conceptual response, but needs considerable more explanation as to how and when it will occur in order to be consistent with LCP hazard, access, and ESHA policies. Therefore, a substantial issue with conformance to the LCP exists.

The appellants also contend that there is no guarantee that the proposed desalination project will remain public as required by *Sand City Land Use Plan* policy 6.4.16. Although the City's approval indicates that it is for a public facility, the lack of any condition to guarantee this, especially over the long-term, raises a substantial issue with conformance to the LCP.
The appellants also contend that the approval is inconsistent with the LCP ESHA policies because it did not contain enough information to determine whether the project may encroach within ESHA and did not require any native landscaping/restoration of areas to be disturbed. While the permit file does contain preliminary ESHA identifications and some of the EIR recommended mitigations, at this time neither detailed preconstruction surveys nor final plans are available. Although the City approval conditioned for these, the lack of specificity at this time raises a substantial issue as to whether the ultimate project will conform to the LCP policies.

The appellants also contend that the approval is inconsistent with LCP access provisions because "there were no access improvements proposed or conditions to require the requisite access

amenities in the City approval" and because there would be likely temporary impacts to access. These contentions are true and not adequately addressed in the City's approval and thus raise a substantial issue with regard to conformance with LCP access policies.

Staff, therefore, recommends that the Commission determine that **a substantial issue** exists with respect to the grounds on which the appeal has been filed. In particular, the project raises a substantial issue with respect to conformance with the certified LCP hazard, ESHA, public services, and access provisions, as well as the access policies of the Coastal Act.

Staff notes that the conceptual project design is consistent with the City's LCP desalination provisions that are derived from the Commission's *Seawater Desalination And the California Coastal Act* 2004 report. The proposed project will extract brackish water from an untapped shallow aquifer rather than extract seawater from the ocean and it will inject the return concentrate solution into the ground rather than inject it directly into the ocean. Staff further notes that the conceptual project design, including location, elevations, and capacity is generally consistent with the intent of LCP policies, but at this time final design is not available. Thus, staff recommends that the Commission **approve** a coastal development permit for the proposed project if it is conditioned to require more detail and clarification in the following ways:

First, design level geotechnical and preconstruction biological evaluations are required to be consistent with LCP provisions and necessary commensurate project revisions need to be made;

Second, based partly on the above, final design, construction, and landscape plans are required, along with outstanding approvals from other agencies, to be consistent with LCP provisions, as to date the file material is somewhat conceptual;

Third, water conservation and public access components need to be incorporated into the project as required by the LCP;

Fourth, based on the final plan approval, clarification is required that future elements and revisions, including any tie-ins to other water systems, infrastructure extensions, changes in type of ownership (i.e., to private ownership), changes in financing parameters (e.g., to charging vacant parcels for future service), project relocations, will require separate coastal permit review in order to ensure that the project remains consistent with LCP growth-inducing and other policies;

Fifth, given that the project will most likely have to be relocated inland, on-going monitoring and preparation for such a move needs to be specified and committed to in order to ensure that the project will remain consistent with LCP hazard, habitat, and access policies;

And finally, given that the project is located in a hazardous area, an assumption of risk and waiver of liability condition is required.

As so conditioned, by incorporating most City conditions, modifying a few of them, and adding the noted clarifications, the proposed project can be approved as being consistent with the Local Coastal Program and the access and recreational policies of the Coastal Act.

Staff Report Contents

Exhibits

1. Vicinity Map
2. Parcel Map
3. Site Plan
4. Appellants' Contentions
5. City Action on CDP 04-08
6. Site Photos
7. Key Points Regarding the Sand City Water Supply Project
8. Coastal Zone Boundary and Areas of Deferred Certification

I. Local Government Action

On January 18, 2005, the City Council of Sand City took action to approve, with conditions, a Coastal Development Permit for a 300 AFY reverse osmosis desalination plant including extraction and injection wells, piping, and other related improvements along the 300 block of Shasta Avenue and within the Bay Avenue, Tioga Avenue, and Vista Del Mar Street right-of-ways. (See Exhibit 5 for the City's action).

II. Summary Of Appellants' Contentions

The appellants, Commissioners Wan and Caldwell, have appealed the final action taken by the City on the basis that approval of the project is inconsistent with the certified Local Coastal Program hazard, urban services, land use, ESHA, and access provisions, as well as the public access policies of the Coastal Act. Please see Exhibit 4 for the full text of the appeal.

III. Standard of Review for Appeals

Coastal Act Section 30603 provides for the appeal of approved coastal development permits in jurisdictions with certified local coastal programs for development that is (1) between the sea and the first public road paralleling the sea or within 300 feet of the inland extent of any beach or of the mean high tideline of the sea where there is no beach, whichever is the greater distance; (2) on tidelands, submerged lands, public trust lands, within 100 feet of any wetland, estuary, or stream, or within 300 feet of the top of the seaward face of any coastal bluff; (3) in a sensitive coastal resource area; (4) for counties, not designated as the principal permitted use under the zoning ordinance or zoning district map; and (5) any action on a major public works project or energy facility. This project is appealable to the Coastal Commission because it is located between the first public road and the sea, it is a major public works project, and is located within 300 feet of the inland extent of the beach.

The grounds for appeal under section 30603 are limited to allegations that the development does not conform to the standards set forth in the certified local coastal program or the public access policies of the Coastal Act. Section 30625(b) of the Coastal Act requires the Commission to conduct a *de novo* coastal development permit hearing on an appealed project unless a majority of the Commission finds that "no substantial issue" is raised by such allegations. Under section 30604(b), if the Commission conducts a *de novo* hearing, the Commission must find that the proposed development is in conformity with the certified local coastal program in order to issue a coastal development permit. Section 30604(c) also requires an additional specific finding that the development is in conformity with the public access and recreation policies of Chapter Three of the Coastal Act, if the project is located between the nearest public road and the sea or the shoreline of any body of water located within the coastal zone. This project is located between the first public road and the sea.

IV. Staff Recommendation

A. Staff Recommendation on Substantial Issue Determination

The staff recommends that the Commission determine that **a substantial issue exists** with respect to some of the grounds on which the appeal was filed pursuant to Coastal Act Section 30603.

MOTION: *I move that the Commission determine that Appeal No. A-3-SNC-05-010 raises **NO** substantial issue with respect to the grounds on which the appeal has been filed under § 30603 of the Coastal Act.*

STAFF RECOMMENDATION:

Staff recommends a **NO** vote. Failure of this motion will result in a de novo hearing on the application, and adoption of the following resolution and findings. Passage of this motion will result in a finding of No Substantial Issue and the local action will become final and effective. The motion passes only by an affirmative vote of the majority of the appointed Commissioners present.

RESOLUTION TO FIND SUBSTANTIAL ISSUE:

The Commission hereby finds that Appeal No. A-3-SNC-05-010 presents a substantial issue with respect to the grounds on which the appeal has been filed under § 30603 of the Coastal Act regarding consistency with the Certified Local Coastal Plan and/or the public access and recreation policies of the Coastal Act.

B. Staff Recommendation on De Novo Coastal Permit

The staff recommends that the Commission, after public hearing **approve** the coastal development permit with conditions.

MOTION: *I move that the Commission approve Coastal Development Permit No. A-3-SNC-05-010 pursuant to the staff recommendation.*

STAFF RECOMMENDATION OF APPROVAL: Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

RESOLUTION TO APPROVE THE PERMIT: The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of the certified City of Sand City Local Coastal Program. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

V. Recommended Findings and Declarations for Substantial Issue (S. I.) Determination

A. Urban Services & Development Accommodation

The appellants contend that "the proposed capacity (300 AFY) may exceed the amount necessary to serve the level of development allowed by the LCP" because the amount of water available to serve development west of Highway 1 appears to provide for a greater density than may reasonably be assumed based on LCP policies. Second, the appellants contend that "there are no conditions on the project that ensure water conservation measures or recycling will be pursued." Third, the appellants contend the approval "does not ensure that there will be a commensurate reduction in the use of Cal-Am water or that water produced by the facility will be used solely in Sand City." Finally, the appellants contend that the project does not contain the necessary findings and conditions to ensure that the desalination facilities will be publicly owned and managed, and remain a public facility over the life of the plant.

1. Relevant LCP Urban Services Provisions

Sand City Land Use Plan policy 6.4.16, quoted in the de novo findings below, requires that desalination facilities (1) be public; (2) be designed and limited to assure that any water supplies made available as a direct or indirect result of the project will accommodate needs generated by development or uses consistent with the kinds, location and densities specified in the LCP and Coastal Act, and be an element of a balanced water supply portfolio that also includes conservation and water recycling to the maximum extent practicable; and (3) be evaluated within the context of the larger regional planning efforts to bring water to the Monterey Peninsula.

2. Urban Services S.I. Analysis

The proposed project is generally consistent with the referenced policy, but lacking in an explicit guarantee of long-term public ownership. While the plant could serve development west of Highway One eventually, the City has demonstrated that its capacity could all be used on projected development east of the Highway pursuant to the City's General Plan. Factors that could lead to excess plant capacity include: not as much development or redevelopment occurring as projected, more water conservation occurring (see below), and/or redundant features of the plant being used to produce water in non-emergency situations. However, no water infrastructure exists or is proposed west of Highway One in this permit, landowners west of Highway One will not be paying for the project until they use it, the LCP does allow some development west of Highway One that would need water service, and nothing in the City's approval overrides the LCP's requirements for coastal resource protection west of Highway One.

The sizing of the plant was reduced 4% from the estimated need described above to account for water conservation. However, the Monterey Peninsula Water Management District (MPWMD) indicated that the use factor employed to calculate the projected water demand for commercial

and industrial development exceeds the limits of the District's moderate use category; thus suggesting that additional water conservation is possible and, hence, that there is excess plant capacity. Although water conservation is not explicitly built into the project, the City does require water conservation measures pursuant to Chapter 15.12 of its *Municipal Code*, which is incorporated into its Local Coastal Program. Additionally, the City pledged in the EIR for the project to encourage and recommend additional measures (Final EIR, p.26). Furthermore, the MPWMA and Cal-Am sponsor water conservation programs.

The possibility of the plant having excess capacity, a possible tie-into Marina Coast Water District shown on the plans, and the fact that the project is intended to forgo using the City's current 150 AF/y water allocation from Cal-Am all suggest that there are regional implications of the project. Regional water supply solutions are being pursued -- most notably a regional desalination facility -- independently of Sand City's proposal. The project does follow the LCP policy in that it was evaluated in the context of regional water supply planning and found to be beneficial in that it reduces reliance on the overburdened Cal-Am supplies. Further evaluation will occur when the Monterey Peninsula Water Management District considers Sand City's request to supply its own water through the proposed project. That agency, possibly in conjunction with the Public Utilities Commission and/or the State Water Resources Control Board orders, and not Sand City, will determine what happens to the water allocation that Sand City gives up The City intends to establish a City water department, although it may contract with another public or private entity to operate the desalination facility. In approving the coastal permit, the City found that the "project will be publicly owned by the City of Sand City and/or the Sand City Redevelopment Agency." However, there is no condition of approval to guarantee this, especially over the long run. The Commission is aware, through its March 2004 report *Seawater Desalination And the California Coastal Act,* that private ownership generates a series of coastal resource issues that deserves careful scrutiny thus the question regarding the long-term public ownership of this facility is of central importance.

3. Urban Services S.I. Conclusion

The appellants' contentions regarding growth-inducement west of Highway One may be true but do not demonstrate a policy conflict. The appellants' contentions regarding water conservation are also true, but do not demonstrate a policy conflict in light of other measures being taken to conserve water. The appellants' contention that there is not a guarantee of reduction in Cal-Am water usage may also be true, but is not a matter under the purview of the City and does not demonstrate a policy conflict. . While these contentions thus do not raise substantial issues, the conditions of approval can certainly be made more explicit with regard to these matters.

The appellants' contentions regarding no conditions requiring the facility to be public are true. Although the project approval clearly indicates that it is for a public facility, the lack of any condition to guarantee this, especially over the long-term, raises a substantial issue with conformance to Policy 6.4.16, giving the significance that the Commission has attached to this concern.

B. Hazards

Appellants contend that the project is inconsistent with the hazard policies of the Sand City LCP because the desalination intake and injection (outfall) wells, as approved by the City, "are in an area that may be threatened by coastal erosion within the next 50 years." Although the City's conditions of approval require further geotechnical review and re-siting of the wells as necessary to achieve a 50-year (minimum) setback, the appellants allege that "the City did not evaluate the feasibility or impacts associated with re-siting the wells." "Additionally, the City has not conditioned the project to prohibit seawalls in the future or provide clear criteria under which the wells must be relocated."

1. Relevant Local Coastal Program (LCP) Hazard Provisions

Applicable LCP provisions include *Sand City Coastal Land Use Plan* policies 4.3.8, 4.3.9 4.3.12, and 4.3.5 that are quoted below in the de novo findings. In summary these polices require siting to minimize risk from hazards; preparation of geological and soil reports that identify appropriate setbacks based on at least a 50-year economic life for the project; either mitigation for hazards or, if not possible, project denial; and geotechnical studies for any protective measures along Vista del Mar.

2. Hazards S.I. Analysis

The proposed desalination project, as conditioned, is generally consistent with the applicable policies, but lacking in necessary detail. A geologic report was prepared for the project as required, supplemented by a coastal erosion study) but at an overview, not design detail, level. The Environmental Impact Report indicates that the pipelines and wells (extraction and injection) could be threatened or damaged by coastal erosion and wave attack within 50 years, the LCP timeframe for evaluation. The permit was conditioned for a further design-level geotechnical report.

The proposed project was not conditioned to be setback beyond the 50-year erosion rate. Instead, the City approval incorporated mitigation, namely moving the wells inland and realigning the pipes, if and when necessary. At first glance this would appear to raise a policy conflict with the 50-year setback requirement. However, upon further consideration, the concept of relocation out of the hazard area could be found consistent with the LCP policy directions for minimizing risks, appropriately setting back new development, and incorporating mitigation measures. In this particular case, the concept of the proposed project is a limited, underground public works (just buried pipes and wells, not habitable buildings) that needs to be located right on the shoreline to function and will be moved inland if and when necessary. But before the project itself could be found consistent with the LCP policies, its future relocation plan mitigation (the Adaptive Water Supply Management Program, that is to date only a short narrative) would need more detail. The City's approval is deficient in several respects. First, timing of relocation, or at least the process for determining the timing, is not specified. Second, how and where relocation would occur, or at least the process for determining this, is also not specified. The erosion threat could possibly lead to the need for some protective device if the relocation could not occur in time or would have to occur in an inappropriate location; this would be inconsistent with policy 4.3.5 and/or could

cause ESHA impacts (see finding below). Third, relocation could involve abandonment of existing infrastructure that could in itself then pose a hazard or be exposed to hazardous conditions.

3. Hazards S.I. Conclusion

The appellants' contentions that the City approved placement of the extraction and injection wells within the projected 50-year erosion zone along Sand City's shoreline are true but do not represent a policy conflict.

The appellants' three other contentions (no evaluation of re-siting the wells, no criteria for relocating the wells, and no prohibition of future seawalls) are true and, when evaluated in combination, raise a substantial issue with regard to conformance with the LCP's hazards policies.

C. Environmentally Sensitive Habitat Areas (ESHA)

Appellants contend that the project is inconsistent with the ESHA policies of the Sand City LCP because the City approved project "does not include any native landscaping/ restoration of the area to be disturbed, nor does it address the potential ESHA impacts of relocation of the wells or the long-term maintenance commitment to surrounding habitat areas." The appellants also contend, "the City's approval does not contain enough information to determine whether the project may encroach within ESHA."

1. Relevant LCP ESHA Provisions

The applicable LCP provisions include *Sand City Coastal Land Use Plan* policies 4.3.20, 4.3.21, 4.3.22, and 4.3.23 that are quoted below in the de novo findings. In summary these polices require protection of environmentally sensitive habitat areas directly and indirectly by permitting only compatible adjacent uses.

2. ESHA S. I. Analysis

The proposed desalination project, as conditioned, is generally consistent with the applicable policies, but lacking in necessary detail. Environmentally sensitive habitats were generally identified in the EIR and mitigation measures were included. The actual footprints of the proposed treatment plant and tanks appear to avoid the dunes However, it appears from the file material that all or parts of up to eight of the 18 parcels that are to be purchased for these facilities may contain coastal dunes. The permit was conditioned for some more specific habitat evaluation that could result in more specific ESHA identification and thus could influence construction timing and final project design, including revegetation. However, these conditions did not cover all potential habitat impacts in that other recommended mitigation measures in the final EIR were not incorporated into the permit. The permit was also conditioned for a final landscape plan. However, landscaping solely with native coastal plants throughout all potentially disturbed areas was not explicitly incorporated, as the LCP requires.

Additionally, as noted in the above finding, this project is to be relocated inland in the future. Inland from the proposed location of the injection well is dune habitat land currently owned by Monterey Peninsula Regional Park District and partially slated for dune stabilization and/or restoration in the LCP. The proposed project's Adaptive Water Supply Management Program (the relocation program described above) does not adequately cover additional evaluation and resultant potential mitigation associated with future relocation that would likely be necessary to determine consistency with LCP provisions.

3. ESHA S. I. Conclusion

The appellants' contentions that the approval is lacking in ESHA identification and appropriate native landscaping are true and raise a substantial issue. The required mitigation falls short of ensuring that all ESHAs are identified and protected, and, if necessary, that all plant species will be replaced at the appropriate replanting ratios and that the replanting effort will be successful in the long-term.

The appellants' contentions regarding lack of evaluation of and criteria for relocating the wells are true, as noted in the above hazards finding, and also raise a substantial issue with regard to conformance with the LCP's ESHA policies, given the relocation could occur in or impact ESHA.

To the extent that the appellants' contention that long-term commitment to surrounding habitats is lacking relates to either mitigation from current construction or the possibility for future disturbance, then it is true and is part of the reason for the above noted substantial issue determinations. To the extent that the appellants' contention that long-term commitment to surrounding habitats is lacking relates to a desire for the applicant to actually permanently protect surrounding habitats, that would go beyond the requirements of the LCP with one exception. Since portions of the parcels that the applicant is acquiring for the treatment plant appears to contain environmentally sensitive dune habitat, they deserve permanent protection. However, this does not raise a substantial issue because the LCP does not explicitly include such a requirement.

D. Public Access and Recreation

Appellants contend that the project is inconsistent with the access policies of the Sand City LCP because "there were no access improvements proposed or conditions to require the requisite access amenities in the City approval." Appellants also contend, "the initial construction of the desalination facility is likely to result in temporary impacts to public access." Additionally, appellants contend that if the project requires shoreline armoring in the future, then public access and recreational opportunities could be impacted.

1. Relevant LCP and Coastal Act Provisions

The applicable LCP provisions include *Sand City Coastal Land Use Plan* policies 2.3.1, 2.3.2, 2.3.4, and 2.3.15 that are quoted below in the de novo findings. In summary these polices require that access be provided as part of new shorefront developments and list specific improvements in

to install in the vicinity of the project. Also applicable are Coastal Act policies 30210, 30211, 30212, and 30221 that are also quoted below in the de novo findings.

2. Public Access S.I. Analysis

Although the proposed project may not have much of an effect on public access, likely just short-term limitations when construction is occurring, nevertheless the project is located in the area targeted for access improvements in the LCP. All the City's coastal permit concluded was that the project will not ultimately preclude nor limit public access to the shoreline from Bay Street or Tioga Avenue. No access enhancements were incorporated into the project, neither were measures to limit the short-term construction impediments to access.

As discussed above in the Hazard and EHSA findings, the proposed project includes a future relocation component, the Adaptive Water Supply Management Program, which is lacking in detail. If, as a result, relocation did not occur in a timely manner, there could be direct or indirect adverse impacts on public access from the need to maintain, repair, and/or remove project wells and/or pipelines. On the other hand, relocation may pose public access or recreational impacts because the likely areas to relocate the wells and pipelines have access and recreational opportunities. The coastal dunes inland of the injection wells are mostly publicly owned and could become a public park. Bay and Tioga Avenue provide shoreline access and beach parking opportunities. Sand Dunes Drive (inland and parallel to Vista del Mar) provides lateral public access with an adjacent bicycle path.

3. Public Access S.I. Conclusion

The appellants' contentions that the project did not incorporate any access improvements as specified in the LCP are true and hence raise a substantial issue with regard to conformance with LCP access policies.

The appellants' contentions that there may be temporary access impacts from constructing the project are true and hence raise a substantial issue with regard to conformance with LCP access policies.

The appellants' contentions about long-term potential public access issues associated with relocating or not relocating the wells are true and for the same reasons as stated above under the Hazards and ESHA findings (lack of detail about relocation) raise a substantial issue with LCP access policies.

VI. Conditions of Approval for De Novo Coastal Permit

A. Standard Conditions

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the Permittee or authorized agent,

acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the Permittee to bind all future owners and possessors of the subject property to the terms and conditions.

B. Special Conditions

1. Limits of Development. This permit authorizes the construction and operation of a 300 AF/y reverse osmosis desalination plant and associated infrastructure as described in de novo finding #A2-4, as clarified and modified by these conditions, for those portions of the project within the Coastal Zone under the jurisdiction of the certified Sand City Local Coastal Program. Those portions of the project in the Coastal Zone in the uncertified area (generally along and south of Bay Avenue seaward of Highway One) are not authorized by this permit; a separate coastal development permit authorized by the Coastal Commission will be required.

#2. Final Plans.

a. PRIOR TO ISSUANCE OF THE PERMIT, the Applicant shall submit final plans for the project components shown on Exhibit 3 for Executive Director review and approval of those components located in the coastal zone. The final plans (1) must incorporate any requirements necessary to address the findings of preconstruction biological surveys; (2) must incorporate any requirements from the design level geotechnical report (pursuant to Special Condition #13.5); (3) may show the storage tanks placed underground; and (4) must show an improved vertical access at or near the end of Tioga Avenue or another comparable access improvement in the project vicinity, specified in or similar to one in the LCP, to be installed concurrently with the project.

b. The Permittee shall undertake development in accordance with the approved plans and any changes shall be reported to the Executive Director. No changes within the coastal zone shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Changes to the project requiring review for amendment would include but not be limited to changes in the method of financing the project (see Special Condition #6), changes in ownership (see Special Condition #8), physical, operational, or delivery capacity increases (i.e., beyond 300 AF/y), relocation of the wells (see Special Condition #5), or extension of water supply distribution pipelines (not individual

connections from existing or approved lines) in the coastal zone beyond those shown on the final plans.

2. Construction Plan. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Applicant shall submit the Spill Prevention and Response Plan and a Construction Plan to the Executive Director for review and approval. In addition to the measures specified under Conditions #13.7, 13.8, 13.10, 13.11, 13.12, and 13.13 below, the Construction Plan shall identify the specific location of all construction areas, all staging areas, and all construction access corridors in site plan view in the coastal zone. Construction and staging zones shall be limited to the minimum area required to implement the approved project, and shall minimize encroachment onto the dunes, bluff, and beach by using, for example, existing paved areas for staging and storing construction equipment and materials. Consistent with these restrictions, public access shall be disrupted as little as possible, and corridors or detours to allow beach and bicycle access during construction shall be identified by the construction plan and maintained by the permittee throughout the construction period.

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

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

b. All construction materials and equipment shall be removed in their entirety from the dune and beach area by sunset each day that work occurs. The only exception shall be for the temporary erosion and sediment controls required above.

c. Grading and alteration of the dunes and beach intertidal area outside of the approved construction zone is prohibited with one exception as follows: the existing asphalt and rock debris in the vicinity of Vista del Mar Street and Tioga Avenue may be removed in accordance with the final approved plans, using excavation equipment positioned landward of the waterline (i.e., excavator equipment with mechanical extension arms).

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

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

f. All erosion and sediment controls shall be in place prior to the commencement of construction as well as at the end of each workday.

A copy of the approved Construction Plan shall be kept at the construction job site at all times and all persons involved with the construction shall be briefed on its content and meaning prior to commencement of construction. The Permittee shall notify planning staff of the Coastal Commission's Central Coast District Office at least 3 working days in advance of commencement of construction, and immediately upon completion of construction.

The Permittee shall undertake construction in accordance with the approved Construction Plan. Any proposed changes to the approved Construction Plan shall be reported to the Executive Director. No changes to the approved Construction Plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

4. Sensitive Habitat Surveys, Protection, and Mitigation. PRIOR TO COMMENCEMENT OF CONSTRUCTION, the Permittee shall submit the results of the preconstruction biological surveys required by Special Condition #13.10 below or by this condition, accompanied by revised final design (Special Condition #1a), construction (Special Condition #3), and/or landscape plans (Special Condition #13.2) for the coastal zone for Executive Director review and approval. Any portions of the parcels to be acquired for the desalination plant and water tanks that contain coastal dune habitat shall be permanently protected. Implementation of the mitigation measures required below shall be accompanied by the submittal of a letter report prepared by a qualified biologist, detailing the success of the mitigation and any necessary follow-up, for Executive Director review and approval within 30 days of commencement. In addition to the measures specified under Conditions #13.10 and #13.13 below, the following are required (pursuant to the *Final EIR*):

a. Surveys for listed species shall be consistent with the protocols established by the US Fish and Wildlife Service and California Department of Fish and Game;

b. Surveys for Monterey spineflower, sand gilia, coast wallflower, and Monterey Indian paintbrush along the pipeline alignment and at the plant site shall be prepared during the April to September flowering season immediately prior to project construction;

c. In the event that any Monterey spineflower, sand gilia, coast wallflower, or Monterey Indian paintbrush are found, construction methods will be modified to include directional drilling under the under the plant colony, with bore pits to be installed within currently paved areas of roadway;

d. Protocol surveys will also be prepared for the two species of buckwheat (*Eriogonum latifolium and Eriogonum parvifolium*) that are the host plants for the federally endangered Smith's blue butterfly;

e. In the event that any *Eriogonum latifolium or Eriogonum parvifolium* are found, construction shall not occur in areas adjacent to those populations during the period of June through September;

f. In the event installation of pipelines and/or plant construction will directly impact any *Eriogonum latifolium or Eriogonum parvifolium*, damaged or removed buckwheat plants will be replaced at a 3:1 ratio in accordance with a Butterfly Habitat Restoration Plan submitted for Executive Director review and approval prior to the removal of the plants. At least 70% of these

plantings shall survive for 5 years and be monitored annually. If this goal has not been met at 5 years, then planting will continue until compliance is achieved;

g. Surveys for black legless lizards will be conducted no more than 24 hours prior to commencement of construction pursuant to a letter report detailing plans for locating and, if necessary, capturing legless lizards and relocating them (including relocation methods and release sites) provided to the California Department of Fish and Game for approval prior to conducting the surveys;

h. In the event that any black legless lizards are found in the work area they are to be moved to suitable areas away from the construction zone, pursuant to the letter report described above;

i. Surveys for the burrowing owls shall be conducted no more than 30 days prior to commencement of ground disturbing activities.

5. Relocation / Removal of Wells. PRIOR TO ISSUANCE OF THE PERMIT, the Applicant shall submit a final Adaptive Water Supply Management Program, for Executive Director review and approval. Upon approval, Applicant shall implement the program for the life of the project. The Program shall have monitoring, relocation, and update components that expand on the narrative on page 14 of the *Draft EIR* as follows:

a. The **monitoring** component shall assure that the relocation component can be implemented in a timely manner to avoid (i.), creating or being materially adversely impacted by hazardous conditions (ii.) unpermitted or emergency permitted work and (iii.) the installation of shoreline protection measures. The monitoring component shall detail the frequency, methods, staffing, locations, and other specific aspects of the noted observations to be made (including beach profile and well water quality). This component shall be prepared by a licensed geologist, or civil or geotechnical engineer. It shall be sufficient to assess all potential erosion threats to the proposed development and shall include at a minimum: (iv.) provisions for taking measurements of the distance between the proposed surface level and buried development and the bluff face and beach features, including identification of exactly where such three-dimensional measurements will be taken, e.g. by reference to benchmarks, survey positions, points shown on an exhibit, etc. and the frequency with which such measurements will be taken; (v.) provisions for submission of "as-built" plans, showing the permitted development in relation to the existing topography and showing the bluff and beach conditions that would constitute the onset of a threat to the approved development ("onset of risk condition"); (vi.) provisions for inspection of the condition of the proposed development and project shoreline by a licensed geologist, or civil or geotechnical engineer, including the scope and frequency of such inspections.

b. The **relocation** component shall address methods and proposed locations for potentially threatened portions of the project, and how the abandoned portions of the project will be addressed, consistent with at a minimum (i.) avoidance of sensitive habitat disturbance and consistency with City LCP ESHA protection policies; (ii.) avoidance of public access disturbance, incorporation of access improvements, and consistency with City LCP access policies and (iii.) avoidance of hazardous locations, the need to install shoreline protective devices, and consistency with City LCP hazard policies. The relocation component shall contain a process to ensure timely success including, but not limited to ensuring that (iv.) financing will

be available; (v.) potential relocation sites will be acquired; (vi.) all permits and other permissions will be secured and (vii.) construction will take place.

c. The **update** components shall be prepared, and submitted to the Executive Director for review and approval, at least once every five years. Each update shall contain the monitoring results to date, with a conclusion as to what they mean for the timing of when the need for relocation is expected. The update shall include (i.) an evaluation of the condition and performance of the approved development, including an assessment of whether any erosion or bluff retreat has occurred that could adversely impact future performance of the device, (ii.) all measurements taken in conformance with the approved monitoring process, (iii.) an analysis of erosion trends, annual retreat, or rate of retreat of the beach and bluff, based upon the measurements and in conformance with the approved monitoring process, (iv.) an analysis of the stability of the approved development, an estimate of the foreseeable conditions that would modify the bluff or beach to an "onset of risk condition" as identified by the permittee on the "as-built" plans; and the anticipated life of development, based on the conditions of current site and the "onset of threat" conditions.

Each update shall also contain a relocation plan indicting what the results of the relocation analysis have been or are likely to be. The default first relocation site for the injection wells shall be Sand Dunes Drive, unless and until superseded by an approved update. The level of specificity of the relocation plan shall be commensurate with the monitoring conclusions; i.e., when monitoring indicates that relocation will not be necessary for several years, the relocation plan can be conceptual, schematic, and contain alternatives; when monitoring indicates that relocation will likely be necessary within the following three years, the relocation plan shall show an actual relocation site, evidence of approvals, and actual construction plans. As specified in Special Condition #2, an amendment to this Coastal Development Permit shall be required for relocation or removal of the permitted facilities. The application for the amendment shall include an assessment of existing conditions and an evaluation of the potential habitat or other coastal resource impacts associated with re-siting the wells. In addition, the amendment shall include a description of the method to be used for relocating facilities, whether or not existing facilities will be abandoned or removed, and include all mitigation measures necessary to avoid impacts on coastal resources.

6. Financing Plan/Growth Inducement. This permit authorizes operation of the desalination plant in accordance with the financial parameters contained in the Memorandum from the City Engineer and Exhibits Re: Draft Business Plan and Rate Payer Analysis dated January 13, 2005. Only existing users will be assessed for the project, based on actual water use, including payment of higher per unit charges for higher water use. No changes in these parameters (e.g., to charge non-users; to charge by other than water use; to not encourage conservation) as they would affect the coastal zone shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary.

6. Water Conservation Plan. PRIOR TO ISSUANCE OF THE PERMIT, the Applicant shall submit a Water Conservation Plan for Executive Director review and approval. Upon approval, applicant shall implement the plan for the life of the project. The Plan shall include measures to encourage customers to conserve water, recycle water, and use reclaimed water, if available, such as those listed on page 26 of the final EIR (i.e., water efficient washers and dishwashers,

landscaping with natives and minimized turf areas, professionally designed lawn sprinkler systems, gray water irrigation, water efficient commercial and industrial processes; free leak detection equipment). The Plan shall include an update component. The Plan shall be consistent with and coordinated other regional or state water conservation programs.

8. Public Ownership. The proposed water system is to be owned by the City of Sand City or the City of Sand City Redevelopment Agency. No changes in ownership (other than between the City and the City Redevelopment Agency) shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is necessary. Any other party that the City or the Redevelopment Agency contracts with to operate the system shall abide by all these permit conditions.

9. Regional Cooperation. The Applicant shall continue its cooperation with regional water supply planning programs. In its negotiations with, and through its membership in, the Monterey Peninsula Water Management District, the City shall remain committed to planning for and operating its desalination water system in a manner that can maximize regional environmental benefits (e.g., reducing dependence on Carmel River withdrawals).

10. Emergency Tie-in to Other Systems: PRIOR TO INSTALLATION OF THE 8" EMERGENCY CONNECTION TO MARINA OR ANY ALTERNATIVE CONNECTIONS TO ANOTHER WATER PURVEYOR, the Permittee submit for Executive Director review and approval:

a. Evidence that coastal development permits (and/or Federal Consistency) have been obtained for the entire route of the pipeline that falls within the coastal zone;

b. Legally binding agreements on how water will be shared among Sand City and the other water purveyor(s) consistent with this and any other coastal development permits and consistent with *Sand City Land Use Plan* policy 6.4.16 and any other similar LCP or Coastal Act policies applicable to the other water purveyors.

11. Evidence of Other Agency Approvals. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the Applicant shall submit to the Executive Director for review and approval, evidence that approvals have been obtained from the Monterey Peninsula Water Management District, Regional Water Quality Control Board, National Marine Sanctuary, and U.S. Fish & Wildlife Service or that these approvals are not necessary.

12. Assumption of Risk, Waiver of Liability and Indemnity Agreement. The Permittee acknowledges and agrees, on behalf of itself and all successors and assigns: (i) that the site is subject to hazards from episodic and long-term bluff retreat and coastal erosion, stream erosion and scour, wave and storm events, bluff and other geologic instability, and the interaction of same; (ii) to assume the risks to the Permittee and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including

costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards; and (v) that any adverse effects to property caused by the permitted project shall be fully the responsibility of the landowner.

13. City Conditions. The following conditions of the City of Sand City's approval of the Project become conditions of this coastal development permit and the City shall submit evidence of compliance with each of them for Executive Director review and approval. Other conditions of Sand City's approval pursuant to any planning authority other than the Coastal Act continue to apply (e.g., conditions #9 and #17).

2. Prior to issuance of building permit(s) for the desalination plant, a final landscape plan and architectural drawings shall be reviewed and approved by the Design Review Committee (DRC). The final landscape plan shall (a) be in accordance with Section 18.62.050 of the Municipal Code; (b) utilize native, non-invasive coastal plants to the extent feasible; and (c) provide for the use of drought tolerant plants in accordance with Chapter 15.12 of the Municipal Code.

3. Prior to public distribution of water, the City and/or the Redevelopment Agency shall obtain a final design permit from the DRC in accordance with Chapter 18.58 of the Municipal Code. The final design shall be consistent with the requirements of Chapter 18.64 of the Municipal Code and shall include a lighting plan which provides for the illumination of the desalination facility site for security purposes. The final design for the building(s) shall include plans for the design and screening of mechanical equipment proposed to be located on the building(s).

4. Prior to the issuance of building permits, the City and/or the Redevelopment agency shall obtain approval for operation of a water system from the California Department of Health Services (DHS) and the Monterey County Department of Environmental Health.

5. Prior to the issuance of building permits, a design-level geotechnical report shall be completed to recommend specific design criteria for the pipelines, wells, and foundations of structures at the desalination facility. The geotechnical report shall include site-specific evaluation of soils conditions, slope stability, ground-shaking and the potential for liquefaction, lateral spreading and seismically induced dry sand settlement. The report shall also address design criteria for avoiding impacts of coastal recession, erosion, and coastal bluff slope stability on the operation of the water supply system. At a minimum, design criteria shall include horizontal and vertical setbacks or safety factors for wells and pipelines within the area subject to coastal recession during the next 50 years. These criteria and recommendations shall be required conditions of the building and grading permits issued for the project.

All geotechnical reports shall be submitted to the Sand City Community Development Department and shall be peer-reviewed by a certified geotechnical engineer.

A design-level geotechnical study shall be required and peer reviewed prior to issuance of building permit(s).

Said study shall address design criteria for avoiding impacts of coastal recession, erosion and coastal bluff slope instability on the operation of the water supply system. At a minimum, design

criteria shall include horizontal and vertical setbacks or factors of safety for wells and pipelines within the area subject to coastal recession during the next 50 years. Recommended factors of safety will be required conditions attached to the building permit(s) and will be part of the "adaptive water supply management program". Furthermore, the adaptive water supply management program, as proposed on page 14 of the Draft EIR is hereby incorporated by reference into this condition of project approval.

6. The RO/desalination facility on Shasta Avenue and its associated components shall be designed and constructed in accordance with the 1997 Uniform Building Code guidelines for Seismic Zone 4.

7. A final grading and erosion control plan for all applicable project components shall be submitted to, and approved by the City Engineer prior to issuance of a final grading permit. The plan shall provide that any grading between October 1 and April 15 will require approval of the City Engineer and shall be consistent with said plan. Implementation of the final grading plan shall also be consistent with habitat protection measures of these permit conditions.

8. All construction contracts shall require watering of exposed earth surfaces in the late morning and at the end of the day; frequency of watering shall be increased if wind speeds exceed 15 miles per hour.

10. A preconstruction biological survey shall be required for potential burrowing owls, Western snowy plover, black legless lizards and all sensitive plant species identified in the project environmental impact report (EIR). If construction is to occur between March and September, a qualified ornithologist will conduct a pre-construction survey for nesting snowy plovers within 500 feet of construction activity. If nesting snowy plovers are identified within 500 feet, the ornithologist will, in consultation with the U.S. Fish & Wildlife Service determine a construction-free setback around the nest. The setback shall be fenced and construction equipment and workers will not be allowed to enter the enclosed setback until the conclusion of the breeding season.

For construction activities proposed during the nesting season of the burrowing owl (February 1 through August), a construction-free buffer will be established around any active burrowing owl nest. Once the young have fledged, construction activity can occur within close proximity of the former nest. Construction activities shall be monitored by a qualified ornithologist to insure that construction activities do not result in harm or injury to resident owls.

11. Spoils piles generated during trenching and installation of temporary bore pits for the installation of pipelines and wells shall only be placed on existing pavement or in designated storage areas. The placement of trenching spoils within coastal dune habitat or in areas supporting buckwheat plants shall be prohibited. These requirements shall be conditions of all grading permits issued for the project.

12. A construction worker awareness program shall be required for all personnel working near coastal dune habitat prior to the initiation of work. The program shall include the general

habits of special status species that could be present in the area, a discussion of dune erosion factors, legal requirements and protections that apply, and measures to be used by project personnel to minimize the risk of impacts to coastal dune habitat or special status plant or animal species during project implementation. This construction awareness program shall be a required part of all appropriate bid requirements issued by the City Engineer.

13. Exclusionary fencing shall be provided in areas identified as being necessary for such restrictions as determined by the preconstruction biological survey of areas to be disturbed by the project.

14. The discharge of concentrate (byproduct water of the desalination process) through subsurface injection well(s) shall have a total dissolved solids (TDS) content limited to a maximum of 35,000 mg/L.

15. If cultural resources are uncovered during site preparation or construction, work shall be halted in the immediate area of the find and the regional office of the California State Archeological Survey and the City of Sand City planning department shall be notified so that suitable mitigation measures can be implemented, if necessary. Potential mitigation measures, as applicable, are described on pages 136, 137 of the Draft EIR for the project, and are incorporated herein by reference.

16. To the extent feasible, the RO/desalination facility shall be operated as needed to maintain adequate water supply for water users and for fire flows. The design of the RO/desalination facility shall require, in contract documents that state-of-the-art membrane technology be used and that an energy recovery system for the high pressure pumps be installed.

VII. De Novo Coastal Development Permit Findings and Declarations

By finding substantial issue in terms of the project's conformance with the certified LCP, the California Coastal Commission takes jurisdiction over the coastal development permit for the proposed project. The standard of review remains the certified LCP and public access policies of the Coastal Act. The substantial issue findings above are incorporated herein.

The Commission notes that some of the project in the coastal zone is in an area that has not been certified (see Exhibit 8, "Areas Excluded from Approval"). The following findings do not distinguish those locations. A separate coastal development permit application for these areas will have to be submitted by the City. The following findings and the above conditions provide guidance on how the portion of the project within the uncertified area should be designed and conditioned. However, since the standard of review will be the Coastal Act, not the Local Coastal Program, the Commission has the authority to modify these requirements when it acts on the companion coastal permit for the uncertified area.

A. Project Description and Location

1. Project Objectives

The proposed project is intended to establish an independent water supply for the purposes of implementing the Sand City General Plan, Local Coastal Plan, and Redevelopment Plan, and further city goals of eliminating urban blight (see Exhibit 7). With conservation measures, the project could theoretically serve 1,029 City residents and roughly 3 million square feet of commercial / industrial development. The project is intended to be a cost-efficient, economic, and environmentally sensitive design that will supply water at a reasonable cost for water customers. The project will allow the City to retire its allocation of Cal-Am water and thus make it available for a reduction in the use of water from the Carmel River water, which is currently being overdrawn.

2. Physical Description of Project

The City approved project is for the construction and operation of a 300 AF/y reverse osmosis desalination facility and potable water distribution system to serve residential and commercial customers in Sand City. The proposed site of the desalination plant is located east of Highway One. Two aboveground circular steel water storage tanks, with a total capacity of 850,000 gallons will be installed to the west of the RO plant building on Shasta Avenue. The storage tanks will be adequately sized to meet projected maximum daily water demand plus a fireflow demand of 3,000 gallons per minute for three hours. A 1,000 kW electrical power generator will be installed at the RO facility to provide emergency power for all infrastructure during a power outage. The generator will have the capacity to operate on either propane or natural gas, with natural gas being the primary fuel source. An 800-gallon propone fuel tank will be installed adjacent to the pump station at the RO facility site and contain a 3-day supply of fuel.

The plant will be supplied brackish water drawn from the shallow aquifer near the freshwater and seawater interface adjacent to Monterey Bay. A total of four wells will be installed at two locations west of Highway One within the Bay and Tioga Avenues street right-of-ways. Wells will be located between 125 and 165 feet landward from the bluff edge and be a minimum of 20' apart. Each well will be 12" in diameter and approximately 60' deep (roughly 40' below mean sea level). Feed water pipelines, 8" in diameter, will extend from each of the extraction well pairs. They will be installed within the road rights-of-way by excavating trenches approximately 3 feet in width to and then southerly along Sand Dunes Drive. The feedwater pipelines will continue under Highway One on to the proposed location of the reverse osmosis (RO) desalination facility. Installation under the Highway will be by directional drilling with a 10'x 20' bore [access] pit for the drilling to be excavated near Ortiz Street, a paper street. [1]

[1] Directional drilling is a "trenchless" construction technique used to install pipe underneath a roadway or other feature without disturbing the ground surface.

The concentrate solution derived from the desalination process will flow back under Highway One to the injection wells located along Vista del Mar Street through a single 6" diameter pipe. A 500' long screened section of pipe installed approximately 50' below the existing grade of the bluff (15' below msl) will be used for discharge of the concentrate. The horizontal injection well will be installed by directional drilling near the existing bluff edge. The concentrate would contain salts at roughly the same concentration as seawater and will be discharged into the naturally occurring seawater wedge. Brackish water from the extraction wells will be mixed with the concentrate at a blending station on Sand Dunes Drive prior to disposal to ensure that the salinity of the discharge concentrate is not higher than seawater.

The project also includes installation of 8,800 linear feet of 8" to 16" water main pipes in existing streets throughout the City that can supply adequate water flows for fire fighting.

With exception of most of these water distribution pipelines, almost the entire project is within the Coastal Zone in Sand City. Most of these water pipelines are to be located in the developed portion of Sand City east of Highway One that is outside of the coastal zone. The proposed desalination plant site is bisected by the coastal zone boundary.

The service area and financing for the project are described in the following Urban Services Finding #B. Financial parameters are described in a "Memorandum from the City Engineer and Exhibits Re: Draft Business Plan and Rate Payer Analysis" dated January 13, 2005 and included in a staff report to the City Council when the City approved the coastal permit. However, a final financial plan awaits more clearly defined capital costs, which will ultimately depend on whether the State (Proposition 50) will fund any of the project and what type of back-up emergency components (and their costs) will be required.

3. Operation and Maintenance

Once the wells, piping, and related infrastructure are in place and the plant is operating, ongoing maintenance will be mainly limited to cleaning of the reverse osmosis membranes at the main facility. There is very little maintenance required of the wells themselves because there are few moving parts and the well casings are made of a non-corrosive material. What little maintenance of the wells that will be needed is the occasional clean-out of the well casings which can be accomplished by running water backwards through the system (i.e., back-flow cleaning). The extraction well casings will be made of polyvinyl chloride (PVC) or fiber reinforced polymer (FRP) pipe to resist corrosion and will thus need very little attention once they are in place. Similarly the injection well will be made of a perforated high-density polyethylene (HDPE) casing within a geotextile sock to resist corrosion.

4. Future Relocation

The project includes an Adaptive Water Supply Management Program. Beach profiles will be routinely observed and extracted water quality will be continuously monitored.

Relocation of extraction wells and piping will be considered when erosion causes the beach profile to encroach within approximately 50' of the well and piping or when the salinity of water from the extraction wells, as measured by TDS [total dissolved solids], exceeds 28,000 mg/L. The exact inland distance for extraction well relocation will be determined in response to then-current conditions including the location of the seawater-freshwater interface. The access point or connection of the horizontal injection wells to the discharge water pipeline at Bay Street and Vista del Mar would likely be relocated at the same time the extraction wells near that location are moved. (p. 14 of Draft EIR)

5. Other Related Governmental Actions

Approval of this coastal permit will not trigger immediate project construction. In addition to obtaining the necessary permits required to abandon Cal-Am service, the City will need to obtain approvals from several other local, state, and federal agencies. Installation of the wells, construction and operation of a desalination plant, as well as storage of chemicals and other hazardous materials requires permits from Monterey County and the State Department of Health Services. Discharge of the concentrated saline solution will require permits from both the Regional Water Quality Control Board and the National Marine Sanctuary. Any development that could result in take of federally listed plant or animal species requires a permit from the U.S. Fish and Wildlife Service. It will be the applicant's responsibility to obtain permission to relocate facilities onto adjacent property not owned by the City. In the event the City and Cal-Am are unsuccessful in negotiating the sale of the existing water infrastructure currently owned by Cal-Am, the matter would need to be settled in court. Special conditions of this permit approval require the City to obtain necessary permits and authorizations prior to issuance of the coastal development permit.

In order for the City to be in compliance with this coastal development, the above listed conditions must be followed. These conditions would override Sand City's conditions #1 and #18, and Condition #19 would be redundant Hence, Sand City should revise its permit correspondingly if it is to remain in effect pursuant to a planning authority other than the Coastal Act. Other conditions of Sand City's approval pursuant to any planning authority other than the Coastal Act (e.g., conditions #9 and #17) continue to apply.[2]

[2] The referenced conditions are: 9. Construction activities within 300 feet of residential uses shall be limited to 7:00 a.m. to 6:00 p.m. on weekdays, including Saturdays, with no construction activities on Sundays or holidays. All construction equipment shall be adequately maintained and muffled. Advanced written notification of planned construction activities shall be provided to residents within 300 feet of the construction zone and 17.The Sand City Water Supply System shall satisfy fire flows required by the Monterey Fire Department (contract fire department of Sand City).

B. Urban Services

1. Relevant Urban Services Policies

The relevant policies in *Sand City Local Coastal Program Land Use Plan* include:

Policy 6.4.1: *... The described [LCP development] densities, both above and below, represent a maximum. As required by applicable policies of the LCP, permitted development intensities shall be limited to those which adequately address constraints including, but not limited to: public access and recreation needs (including adequate public access and recreation facilities inland of the 50-year erosion setback line); natural hazards; dune habitats and their appropriate buffers; and natural landforms and views to the Bay.*

Policy 6.4.11: *New development shall be approved only where water and sewer services are available and adequate; and where adequate circulation and parking has been provided for.*

Policy 6.4.16: *Desalination facilities must: a) Be public; b) Avoid or fully mitigate any adverse environmental impacts to coastal resources; c) Be consistent with all LCP and Coastal Act policies, including those for concentrating development, supporting priority coastal uses, and protecting significant scenic and habitat resources; d) Be evaluated based upon adopted community planning documents, which may include General Plans, Urban Water Management Plans, Regional Water Supply Plans, Local Coastal Programs, and other approved plans that integrate local or regional planning, growth, and water supply/demand projections; ... h) Be designed and limited to assure that any water supplies made available as a direct or indirect result of the project will accommodate needs generated by development or uses consistent with the kinds, location and densities specified in the LCP and Coastal Act, including priority uses as required by PRC 30254, and; i) Be an element (where economically and environmentally appropriate) of a balanced water supply portfolio that also includes conservation and water recycling to the maximum extent practicable.*

Policy 6.4.13 *Within the Coastal Zone, permit only new development whose demand for water use is consistent with available water supply and the water allocation presented in Appendix F.*

Policy 6.4.14 *Require all new developments to utilize water conservation fixtures (such as flow restrictions, low-flow toilets, et cetera).*

Policy 6.4.15 *Require water reclamation or recycling within large industrial uses and encourage water reuse for landscaping wherever possible and economically feasible.*

Policy 6.4.16 *Require that landscaping in new developments and public open space areas maximize use of low water requirement/drought resistant species.*

Policy 6.4.17 *If dune management programs are implemented on State owned properties or other Areas within the City, investigate the feasibility of using reclaimed water for irrigation.*

Policy 6.4.18 *To ensure that the demands of new development do not exceed the City's allocation, develop a water monitoring program to gauge the water use of the new development.*

Policy 6.4.19 *If an additional water supply becomes available, consider density changes commensurate with the amount of additional water found, if consistent with LUP policies.*

Policy 6.4.21 *Adopt requirements for the provision of adequately sized sewer and water lines for development within the coastal zone.*

The *Sand City Local Coastal Program Land Use Plan* also includes projected water use in the Coastal Zone under Section 6.3.1 and a narrative about its water service under Section 6.2.2

These policies are based on the following Coastal Act policies that are included in Section 6.1 of the *Sand City Local Coastal Program Land Use Plan*:

Coastal Act Policy 30250: *a) 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...*

Coastal Act Policy 30254: *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.*

2. Urban Services Coastal Permit Analysis

Urban Services Background: The City of Sand City is a relatively small city comprised of approximately 3.16 square miles. The Coastal Zone in Sand City includes an approximately 1.5-mile long coastal frontage, as well as some inland parcels east of Highway One. With the exception of one parkland parcel west of Highway One and Habitat Preserve east of the highway, the entire City is zoned at urban densities, though a significant portion of it is currently undeveloped. Sand City currently has 270 residents and approximately 1.27 million square feet of commercial and industrial development, all located east of Highway One.

In 2002 the City approved a new General Plan. The City has projected that the General Plan will ultimately allow for 1,029 residents and 4.1 million square feet of commercial and industrial development. Most of the City is designated for such development, with the remainder reserved for habitat restoration and preservation.

Currently, the California-American Water Company (Cal-Am), a private purveyor, operates and maintains the City's water supply and serves as the primary water purveyor. The majority of Sand City is within the Cal-Am Service Area, with the exception of one 40-acre holding located in the northwest portion of the City. However, only a portion of the service area has the requisite infrastructure (i.e., water main and distribution lines) to actually serve water. Sand City has no water infrastructure in its coastal zone west of Highway One. Estimated current water use in the City is 135 AF/y.

Sand City is located on the Monterey Peninsula and is within the jurisdiction of the Monterey Peninsula Water Management District. Water supplied within the MPWMD is obtained from reservoirs on the Carmel River and from existing groundwater wells in Carmel Valley and Seaside. The California American Water Company (Cal-Am) serves as the primary water purveyor. There is a critical shortage of water and groundwater on the Monterey Peninsula, which will continue until a long-term source of water is developed for the region. In response to complaints filed against Cal-Am for its diversions of water from the Carmel River, the State Water Resources Control Board issued Order No. 95-10 requiring Cal-Am to limit diversions of water from the Carmel River, implement water conservation measures, and make one-for-one reductions in diversions from the Carmel River. Cal-Am currently diverts close to the maximum allowed from the Carmel River (11,285 AF/y), with the consequence being a de facto moratorium on new water connections. Furthermore, Cal-Am is under order to reduce its withdrawal of water from the Carmel River and the Seaside aquifer. As a result of this order, any new water project that Cal-Am proposes would have to go towards reducing diversions from the Carmel River.

Current regional water planning is focused on two projects. The Seaside Basin Storage and Recovery project, which would store excess water diverted from the Carmel River during winter months, and a desalination plant at Moss Landing.

Given the water supply problem, water conservation measures have been implemented on the Monterey Peninsula at least since 1978. The Monterey Peninsula Water Management District (MPWMD) and Cal-Am offer rebates for water-saving toilets and washing machines, free low-flow showerheads, leak detection, and audits of large water users. Water use on the Peninsula exhibits some of the lowest per capita rates in the County. On average, residential water users in Sand City only consume 44 gallons per person per day. The City attributes this very low rate of consumption to small average household sizes (2.5 persons per household), small lot size for residential development, and the District's water conservation program. Also, the City participates in water recycling efforts. All wastewater originating in Sand City is presently directed to the regional wastewater treatment plant located 10 miles north of Sand City. The treatment plant currently recycles wastewater for use in irrigating agricultural fields in Castroville.

Project's Relationship to Urban Services: The proposed project is intended to be a public project serving existing and new development within Sand City's city limits in a manner that improves the regional water supply.

Sizing: The proposed project is sized to accommodate anticipated water use in the City. The stated size of 300 AF/y would cover current use of 135 acre-feet per year supplied by Cal-Am and produce an addition 165 AF/y for planned growth in residential and commercial development. Sand City has provided projections demonstrating that the 300 AF/y plant would be what is needed at full buildout to accommodate likely projected development *east* of Highway One, based on its 2002 General Plan. The City anticipates that 240 homes will ultimately be constructed in the East Dune planning area and 214 homes in the Mixed Use planning area east of Highway One. Based on an average of 2.5 persons per dwelling in the East Dunes planning area and 2 persons per dwelling in the Mixed Use planning area, the City derived its estimate for a residential build-out population of 1,029 residents. It then applied a use figure of 43.8 gallons per person per day to estimate 45,072 gallons per day or 50 AF/y of residential demand. The City anticipates the amount of commercial and industrial development ultimately to be constructed to be 3.1 million square feet in the East Dunes planning area and 1 million square feet in the Mixed Use planning area for a total of 4.1 million square feet of total development. Of this amount, the City estimated that approximately 25% would be dedicated to parking for employees and customers of the business and thus concluded that there would be roughly 3 million square feet of commercial and industrial development that would require water service at full build-out. It then applied a use figure of 28.4 gallons per square foot per year to estimate 233,425 gallons per year, or 261 AF/y, of commercial and industrial demand. The total projected demand of 311 AF/y was then reduced to account for water conservation. According to the Final EIR (p. 46), "It is assumed that incorporation of water conservation measures in future projects, especially commercial and industrials uses could lower use rates and the resulting water demand by a minimum of 11 acre feet per year (approximately 4%)." The result is 300 AF/y, which is the proposed plant's stated capacity. Table 1 of the Final EIR summarizes this projected water use by user class:

Table 1 Projected Water Demand					
Water User(s)	**Population**	**Building Square Feet**	**Rate***	**Projected Avg. Use per day (gallons)**	**Projected Use per Yr. (acre-feet)**
Residential	1,029		43.8 gals. per person per day	45,072	50
Commercial Industrial		3.0 million	28.4 gals. per square foot per year	233, 425	261
			Total	278,495	311
* Note: Residential and Commercial/Industrial use rates are based on a three year average of actual water use for these uses in Sand City and are based on Cal-Am data for the 2001, 2002, and 2003 water years.					

The City acknowledges that it is unlikely that all 300 AF/y will be needed to serve development east of Highway One. There are at least three reasons why. First, full buildout may never happen; as not all property owners chose to build to the maximum allowed. Much of the area is already developed at lower than maximum densities; thus, it would take redevelopment to higher intensities. Second, full buildout may not be permitted due to resource constraints. Third, water use projections may prove too high. For example, the Monterey Peninsula Water Management District indicated that the water use factor used to establish the projected water demand for commercial and industrial development exceeds the limits of the District's moderate use category. Rather than applying the District's recommended factor for low to moderate water use, the City estimated water demand based on a 3-year average from existing commercial / industrial water users. Existing water users might not currently employ the best available technologies for saving / conserving water and as a consequence using this measure may overstate the amount of water that will be needed to accommodate future commercial development. Particularly since much of the proposed development represents redevelopment of existing industrial manufacturing. Employing the MPWMD low to moderate water use factor for new commercial and industrial development would lower the overall projected water demand for the City by 50 acre-feet per year.[3] The City has indicated that it will continue to implement the water

[3] The Monterey Peninsula Water Management District value for projecting water use for non-residential commercial and industrial projects in the low – moderate use category is 0.00007 acre feet per year per square foot of building floor space. The three year average use value used by the City to estimate projected water demand for commercial and industrial projects is 0.0000872 acre feet per year per square foot of building floor space.

conservation measures already in-place and expand on them by requiring native drought-tolerant landscaping, professionally designed irrigation systems, and gray water systems for residential customers. Commercial and industrial water users will be required to make use of water efficient appliances and more efficient industrial processes.

Although the stated capacity of the proposed water supply system is 300 AF/y, under direction from the California Department of Health Services and Monterey County Department of Environmental Health, the City is required to install additional plant infrastructure to ensure there is adequate capacity to meet water demand during normal maintenance and repair of the plant as well as during emergency shut down operations. These agencies have indicated that 100% plant redundancy is necessary. Accordingly, the City is required to construct double the number of wells (4) and twice the filtering capacity (600 AF/y) than it projects is needed. Part of the City's proposal includes construction of two large storage water tanks capable of supplying projected maximum daily water demand plus a fire flow demand of 3,000 gallons per minute for three hours and securing a back-up water supply to be used in emergencies. The City is negotiating with the Marina Coast Water District and Cal-Am to provide backup water though any agreements have yet to be codified. If a back-up supply is secured, then the redundant capacity may not have to be installed.

If the redundant facilities are included in the project, there remain physical and institutional impediments to prevent over-pumping of the wells and over-producing potable water. First, the water itself will provide somewhat of a limitation to over-production. The source water that will be pumped from the wells originates in the seawater wedge –the confluence of freshwater and seawater. Test pumping of the wells indicates that pumping of the wells at the proposed rate coincides with the natural sustainable yield (equilibrium) of the seawater wedge. Any additional pumping beyond that rate will likely upset the balance of freshwater and seawater at this location and result in an increase in seawater intrusion. Second, the pipelines that will carry the brackish water from the wells to the desalting plant are sized to carry only the amount of water needed to produce water for desalting and to dilute the concentrate (discharge) produced by the desalination process. This too provides a physical barrier to over-production. Third, production of the wells and water produced will be subject to permits from several agencies including the Monterey Peninsula Water Management District. MPWMD regulates the total amount of water produced and the number of water connections allowed within any particular service area. It is unlikely that the MPWMD would grant a permit for an allocation that exceeds the amount approved by this or any other agency without first requiring an amendment or similar action from those agencies.

Infrastructure: The project's distribution infrastructure is located where service currently exists. As noted in the project description, the proposed project includes some new and replacement water distribution pipelines. None are shown west of Highway One.

Ownership: The proposed project is to be owned by either the City of Sand City or its Redevelopment Agency. Since Cal-Am currently serves the City and owns the infrastructure, the process of withdrawing from the service area will involve purchase of the water lines and service

connections through either direct negotiation with Cal-Am or condemnation hearings. If the parties are not able to agree on a price for the water supply system [within Sand City], then the courts will establish the market price for the infrastructure. Both the City and Cal-Am will need to obtain permits from MPWMD to transfer the water distribution system authority. The City will need to obtain a water distribution system permit that authorizes the number of connections, the service area coverage, and the amount of water to be produced. Cal-Am needs to file an application to amend its existing water distribution system permit to exclude the City of Sand City from its service area. Additionally, because Cal-Am is a public water utility, it will need permission from the California Public Utilities Commission to de-annex Sand City from its service area.

Financing: The proposed project is to be financed by existing users and new users when they begin service. Existing customers with an established connection to the Cal-Am water distribution system will not be required to pay a hook-up fee, only the appropriate usage rate for water consumption. The proposed rate structure will require new development or users to pay a fee at the time of hook-up plus a usage rate for water. The City anticipates that there will be enough new development, from locations slated for development, each year over the life of the plant to pay for the construction and operation of the water supply system.

Regional Relationship: The City's findings include as one of the benefits of the project the retirement of its 135 AF/y water allocation from Cal-Am and the Carmel River basin. As noted, the Plans show possible routes to Marina Coast Water District Emergency Connection (8"). What type of back-up supply in the event that the desalination plant is inoperable has not been determined to date, and could alternatively involve a continued tie-in with Cal-Am.

Project's Consistency with Public Service Policies Regarding Growth Inducement: The proposed project could serve areas or facilitate other service where development is or may be problematic; however, the project does not need to be revised to be consistent with the LCP, as there are more direct ways to address any problematic development as discussed by area below and in the next subsection regarding regional water supply. Nevertheless, of concern, is that if appropriate new development does not occur as projected, there will be a funding gap that the City will have to make up. This could induce the City to encourage and accommodate inappropriate growth to obtain revenue. Thus, it is necessary to ensure that the City does not revise its financing plan in such a manner (see Special Condition #6).

Also, of concern, is that the proposed redundant components could result in up to twice the stated amount of water (i.e., 600 AF/y rather than 300 AF/y) being produced. As noted above, there are several constraints to that happening. Nevertheless, since the stated project capacity is 300 AF/y and additional capacity could be growth-inducing, it is necessary to ensure that additional plant capacity is reviewed (see Special Condition #1b).

East Dunes: The proposed project is designed and anticipated to serve the East Dunes, which are partly in the coastal zone. Approximately 20% of the total available land in the East Dunes

planning area is already developed; the remaining 80% of the planning area is comprised of undeveloped coastal sand dunes. The City's General Plan calls for 240 homes and roughly 1 million square feet of commercial and industrial development to occur there. The special status species habitat map provided on page 70 of the draft EIR indicates that nearly the entire undeveloped area (80% of planning area) supports sensitive species and/or habitat for the federally endangered Smith's blue butterfly. Given its widespread occurrence and distribution, it is more than likely that construction of 240 homes and 1 million square feet of commercial space and parking lots would result in a significant impact on this species. To address this concern the City is preparing a Habitat Conservation Plan. Also, a required Specific Plan for this area will provide that new development be clustered to minimize impacts on habitat.

Coastal Dunes West of Highway One: The proposed project could supply water to serve future development in the coastal dunes west of Highway One, which are entirely within the coastal zone, if water distribution lines are extended from inland. Currently there are about 160 acres of undeveloped land west of Highway One. The General Plan identifies another 178 residential homes and 5 million square feet of commercial and visitor-serving development that could potentially be constructed in the sand dunes west of Highway One based strictly on the existing land use designations. Development of the sand dunes has not occurred in part due to the unavailability of water, though equally important impediments stem from the natural resource constraints of the site. Proposed development within any of the dune complex west of Highway One is likely to involve disturbance and/or disruption of environmentally sensitive habitat resources. In past actions the Commission has found the sand dunes as environmentally sensitive habitat that should be afforded protection. A summary of the habitat values provided in a report to the Commission for one site (A-3-SNC-98-114, Monterey Bay Shores Resort, Denied) in indicative of the nature of the dunes west of Highway One in general:

> *Although the contours of the project area have been substantially altered by past sand mining activities, the site currently supports rare and important native dune habitats. This includes the significant extent of bare sand habitat, which provide nesting areas for the federally threatened Western snowy plover. Bare sand areas will also support the natural and human induced recurrence of rare native plant and animal species, as will areas of the site where habitat values have been diminished by the presence of non-native species. Given the rarity, sensitivity, and historic decline of the dune habitats native to the Monterey Bay dunes, successful recovery of this habitat is dependent upon the protection and biological enhancement of existing and disturbed yet restorable dune areas alike.*

Approval of the desalination project will also result in an expansion of the public services boundary. After withdrawing from Cal-Am and establishing itself as a water purveyor, the City intends to serve all areas within its jurisdictional boundaries (city limits). This would result in a public services area boundary expansion of roughly 40 acres to cover the site subject to the above quote. This land is zoned for visitor serving and residential uses, though there are significant environmental and coastal resource constraints that may restrict it from being developed at urban densities.

In December 2000, the Commission denied a proposed project on the 40-acre site because in addition to the lack of water, there were significant environmental and coastal resource constraints. A 217-room hotel, 100-unit Vacation Ownership Resort (timeshare), 45 visitor serving (rental pool) condominium units, and 133 residential units were all proposed on the site. The Commission concluded that the entire parcel was part of the larger Monterey Dune complex and therefore ESHA. Inadequate water supplies played a role in the Commission's decision to deny the project, but a number of other, compelling findings also formed the basis for denial that included unavoidable / unmitigable impacts to environmentally sensitive habitat, significant shoreline hazards, and adverse visual impacts associated with the development. The Commission found that the action taken by the City to approve development within the dunes did not contain the necessary measures to adequately protect environmentally sensitive habitat, or address other coastal related resource issues such as public access, shoreline hazards, and coastal views as required by the LCP.

While the proposed desalination project will remove this one constraint to development, it is not inconsistent with LCP provisions to prevent inappropriate growth-inducement for the following reasons:

-the proposed project does not include any water distribution lines west of Highway One;
-the proposed project does not charge landowners west of Highway One prior to them receiving service;
-the proposed project is sized so that potentially all of the water produced could be used elsewhere;
-any development west of Highway One will need to be evaluated for consistency with all other LCP policies prior to being permitted.

Conditions can be placed on this coastal permit approval to ensure that any extension of water lines west of Highway One will require a separate coastal permit as will any attempt to assess owners of the land prematurely (see Special Conditions #1b and #6).

Project's Consistency with Public Service Policies Regarding Regional Planning: The City maintains that approval of the desalination (water supply) project will benefit Cal-Am and the Carmel River environs by creating a new water supply independent of the Carmel River and Seaside Basins –the primary sources of potable water on the Monterey Peninsula. As noted, the City plans to retire its Cal-Am allocation and there will be a corresponding 135 AF/y reduction in the use of Cal-Am water, which is primarily obtained from the Carmel River Basin.
One potential outcome would be that the MPWMD or SWRCB mandates this reduction. However, another possibility is that the Monterey Peninsula Water Management District (MPWMD) or SWRCB does not require a commensurate reduction in withdrawal of Carmel River water and the 135 AF/y is redistributed within Cal-Am's remaining service area. Thus, although, the City framed the retirement of its water allocation as a benefit of the project, there is no guarantee yet that abandoning Cal-Am service will actually result in a reduction of water drawn from the Carmel River. The only ways to ensure that the water allocation will be retired is

for the SWRCB to so order it or for MPWMD to hold in reserve the 135 AF/y of water as opposed to reallocating to other users. Sand City has little influence on how its water allocation, once retired, will be used. The City is required, however, to file an application with MPWMD for a permit to abandon Cal-Am service and it can request that its water allocation be retired and returned to the Carmel River, which is one intent of Special Condition #9.

If the allocation is allowed to be redistributed, water produced by Sand City does have the potential to be used elsewhere, within the coastal zone or outside of the coastal zone or both. Also, if the City produces more water than it needs there could be an available surplus. Furthermore, as noted Sand City may make an agreement with Cal-Am or another water district (Marina Coast Water District is the one indicated in the file material to date) for back-up water supply. If Sand City's water system is tied into another one, then Sand City could share any extra water as well. These potentialities are not inconsistent with LCP provisions to prevent inappropriate growth-inducement for the following reasons:

-the Monterey Peninsula Water Management District is legally charged with deciding how and where to allocate such water under State law;

-there are many sites both in and out of the coastal zone that are designated for development and could be developed consistent with local coastal programs and/or other land use regulations, that currently only lack a water source;

-use of freed-up Sand City water may be preferable to using water from other sources, such as unreliable or threatened groundwater basins or rivers.

It is important, however, to ensure that any tie-in agreements in no way promise water (either to or from Sand City) beyond emergency replacements that would be inconsistent with the policies discussed herein or with similar policies that have been applied to the Marina or other systems (see Special Condition #10). Similarly, to be consistent with its LCP policies, it is important for Sand City in its negotiations with, and through its membership in, the Monterey Peninsula Water Management District, to remain committed to continue to planning for and operating its desalination water system in a manner that can maximize regional environmental benefits, such as reducing dependence on Carmel River withdrawals (see Special Condition #9).

Project's Consistency with Public Service Policies Regarding Water Conservation / Recycling: The proposed project is generally consistent with the LCP provision to be an element of a balanced water supply portfolio, in that water conservation and water recycling are and will continue to occur. It is possible that the project could be a disincentive to conserve because its financing is from rate payers. Since the project can produce a substantial amount of water beyond what may be needed at least in the near term, patrons may actually be encouraged to use more water so the project can be financed. Thus, possible methods to encourage water conservation would be to either require a smaller capacity or to require modular construction (commensurate with demand). However, these are not necessary to achieve policy consistency because water conservations measures are in place, because customers are being charged a

higher unit rate for the more water they use (which should encourage conservation), and because excess water that the City might produce could be used to reduce reliance on the Carmel River (see regional consistency finding below). Nevertheless, because water conservation measures to date focus on efficient fixtures, it is necessary to also encourage judicious use of water in light of the above discussion, Sand City's LCP policies, and the possibility that the City will not be under the same conservation requirements as it is now under Cal-Am. Page 26 of the final EIR commits the City to furthering water conservation through such measures as encouraging water efficient washers and dishwashers, landscaping with natives and minimized turf areas, professionally designed lawn sprinkler systems, gray water irrigation, water efficient commercial and industrial processes, and free leak detection equipment and this commitment should be memorialized in this coastal permit through a City water conservation plan (see Special Condition #7). Also, should the City decide to revise its rate structure in a manner that does not reward conservation, that decision would need to be reviewed as a permit amendment (see Special Condition #6).

With regard to water recycling, the City has identified that some of its water supply (i.e., up to 13 AF/y) could be provided by reclaimed wastewater including irrigating residential landscaping and Calabrese Park and supplying the Graniterock ready-mix concrete plant. However, reclaimed wastewater is already being used elsewhere and there are no current reclaimed water pipelines near Sand City. Therefore, requiring use of reclaimed water to substitute for using desalinated water is not necessary to be in compliance with the LCP, but should remain an option of the required water conservation plan (see Special Condition #7).

Project's Consistency with Public Service Policies Regarding Ownership: The City's approval indicates that it intends to own and manage the proposed desalination facility and related infrastructure, but did not take any formal action to ensure that it will be public or remain a public facility over the life of the project. Once the City has successfully obtained permits to abandon Cal-Am service, it intends on establishing its own water department and contracting out operation and maintenance of the desalination facility to a third party. The City has entered into discussion with both Cal-Am and the Marina Coast Water District to oversee operations but is still several months away from obtaining all other necessary permits to move forward with a contractual agreement. The *Draft EIR* and City staff report both indicate that the City will own the facility, although there is no assurance that it always remain in public ownership. Accordingly, the Commission imposes Special Condition #8 that requires the desalination plant and related infrastructure will remain in the public domain for the life of the project. Any changes to this arrangement will require an amendment to this permit.

3. Urban Services Coastal Permit Conclusion

The proposed project is generally consistent with the LCP's urban services policies, but lacking in an explicit guarantee of long-term public ownership and some other necessary clarifications and commitments. The project is proposed to be public, serve existing and planned development, provide relief from tight regional supplies, and not be financed through assessing undeveloped

land. However, some of these concepts are not explicitly guaranteed. As conditioned to require additional permits or permit amendments to extend the system, to ensure that it remains public, to ensure that resource lands are not prematurely assessed, to ensure that any emergency tie-ins are not growth-inducing, to remain committed to helping alleviate regional water supply deficiencies, and to require on-going water conservation, the desalination project is consistent with the urban services policies of the certified LCP.

C. Hazards

1. Relevant Hazard Provisions

The relevant policies in *Sand City Local Coastal Program Land Use Plan* include:

> ***Policy 4.3.5:*** *Permit construction and maintenance of all shoreline protection devices (including seawalls) in situations where they are necessary to protect existing structures, coastal-dependent uses, public beaches and recreational areas, and public works. In the area south of Tioga Avenue, permit repair and expansion of a shoreline protective device only to protect Vista del Mar Street, an existing structure and major shoreline access route.*
>
> ***Policy 4.3.8:*** *All development shall be sited and designed to minimize risk from geologic, flood or fire hazard.*
>
> ***Policy 4.3.9:*** *Require preparation of geologic and soils reports for all new developments located in the coastal zone. The report should address existing and potential impacts, including ground shaking from earthquakes, direct fault offset, liquefaction, landslides, slope stability, coastal bluff and beach erosion, and storm wave and tsunami inundation. The report shall identify appropriate hazard setbacks or identify the need for shoreline protective devices to secure long-term protection of Sand City's shoreline, and shall recommend mitigation measures to minimize identified impacts. The reports shall be prepared by qualified individuals in accordance with guidelines of the California Division of Mines and Geology, the California Coastal Commission, and the City of Sand City. Geologic reports shall include the following:*
>
> *a) setback measurements that are determined from the most inland extent of wave erosion, i.e., blufftop or dune or beach scarp; if no such feature is identifiable, determine setback from the point of maximum expected design storm wave run-up;*
> *b) setbacks based on at least a 50-year economic life for the project;*
> *c) the California Division of Mines and Geology criteria for reports, as well as the following:*
> *1. description of site topography;*

2. *test soil borings and evaluation of suitability of the land for the proposed use;*
3. *evaluation of historic, current and forseeable cliff and beach erosion, utilizing available data;*
4. *discussion of impacts of construction activities on the stability of site and adjacent area;*
5. *analysis of ground and surface water conditions, including any hydrologic changes caused by the development;*
6. *indication of potential erodibility of site and recommended mitigation measures;*
7. *potential effects of seismic impacts resulting from a maximum credible earthquake and recommended building design factors and mitigation measures;*
8. *evaluation of off-site impacts; and*
9. *alternatives (including non-structural) to the project.*

Policy 4.3.10: *Encourage the clustering of developments away from potentially hazardous areas and condition project permits based upon recommendations presented in the geologic report .in part*

Policy 4.3.11: *No development will be allowed in the tsunami run-up zone, unless adequately mitigated. The tsunami run-up zone and appropriate mitigations, if necessary, will be determined by the required site-specific geologic investigation.*

Policy 4.3.12: *Deny a proposed development if it is found that natural hazards cannot be mitigated as recommended in the geologic report, and approve proposed developments only if the project's density reflects consideration of the degree of the on-site hazard, as determined by available geotechnical data.*

Policy 4.3.15: *Require the developer of a parcel in an area of known geologic hazards to record a deed restriction with the County Recorder indicating the hazards on the parcel and the level of geotechnical investigations that have been conducted.*

It is noted, on page 14 of the *Sand City Local Coastal Program Implementation Plan* that:

Geologic reports prepared for other projects in the area may be consulted if the material is pertinent to the project proposal and the level of detail in the report is adequate to meet all City requirements.

2. Hazards Coastal Permit Analysis

Hazards Background: Coastal erosion is a dynamic and episodic process that poses significant hazards for new development. Combined with storm-wave run-up, tsunamis, sea level rise, and

earthquakes, these natural hazards are critically important considerations in the design and location of new development. By virtue of its exposure to ocean waves and high winds, and its make-up of unconsolidated sandy soils, the shoreline of the Monterey Dune system is extremely susceptible to such hazards. Regarding tsunamis, the Draft EIR prepared for the nearby proposed Monterey Bay Shores project noted:

> *The project's Pacific Coast location presents the potential for a tidal wave, or tsunami, caused by an earthquake to cause higher than normal shoreline flooding. A distant-source tsunami predicted for a 100-year recurrence interval could cause a wave 11.5 feet in height or 14.8 feet if the tsunami wave coincided with a once a year storm [citation: 1987 Geoconsultants report]. ...The available data indicate that the project site could be inundated up to a level of 26 feet MSL. …*

The analysis of shoreline recession on the project site, based on the 2003 Haro & Kasunich Associates (HKA) study, is summarized on page 99 of the Draft EIR as follows:

> *The shoreline and bluffs in Sand City are receding landward at an average long-term annual rate of approximately 2.4 feet per year. Short-term extreme storm events can result in erosion and bluff recession of up to 50 feet. In the long-term, this may be offset by beach recovery in the dry season after severe storms. Historic grading, mining, and bluff or dune face armoring has made coastal recession difficult to measure and estimate in some areas of the Sand City coastline. The lack of coastal bluff armoring and filling between Bay Street and Tioga Avenue improves the confidence level (by reducing the possible variability) of coastal erosion estimates in this area.*

Additional information provided in the 2003 HKA report more fully illustrates the method for establishing the long-term average rate of retreat and indicate that the rate of retreat may be as much as 3.1 feet per year:

> *Measurements of the 1933 USCGS map shoreline position and the 2003 wetted bound shoreline position were made. The measurements allow calculation of an average long-term annual rate of shoreline recession of 3.1 feet per year. Measurements of 1933 and 2003 coastal bluff and dune positions were made between Bay Street and Tioga Avenue at locations where grading, mining, and erosion control do not appear to have affected the bluff and dune recession rate, in order to calculate an average long-term annual rate of coastal bluff and dune recession. These calculations show that the shoreline and bluffs are receding landward along this stretch of coastline at an average long-term annual rate of approximately 2.4 feet per year (170 feet in 70 years), based on analysis of the position of the bottom of the dunes identified on the 1933 USCGS map and the 2003 aerial photograph. This rate correlates well with the calculated shoreline recession rate, (220 feet in 70 years), which includes the effects of the extreme short-term seasonal shoreline inland fluctuation from December 2002, but almost certainly includes an average shoreline position from 1933 (since average shorelines predominate in the non-rainy season and that is the likeliest time that the 1933 map was made). If similar*

shoreline positions could have been measured in 1933 and 2003, then the shoreline recession measured from 1933 to 2003 would probably be 50 feet less (170 feet in 70 years).

Project's Relationship to Hazards: Several components of the proposed project would be within areas likely to eroded in the near future: the injection wells, the extraction wells, and portions of the pipelines to and from these wells.

The horizontal injection well would be installed within the Vista del Mar Street right-of-way directly adjacent to the beach (within 100 feet or less of bluff edge). To avoid possible impacts from beach scour, the injection well and related pipeline will be placed at a depth of 15' below mean sea level (at least 7 feet below the predicted beach elevations in the year 2054). The pipeline from the desalination plant would descend to this depth from a point near the corner of Bay Street and Vista del Mar. The injection well would be replaced at a deeper location in the event the beach profile was reduced to a level within approximately 7 to 10 feet of the well.

Similarly, two extraction wells would be installed at Bay Avenue approximately 125 feet landward of the existing bluff edge and two extraction wells would be installed in Tioga Avenue approximately 165 feet landward of the existing bluff edge. It is anticipated that these wells and associated pipelines could be damaged by coastal erosion during the operational life of the project. For example, based on an average rate of retreat of 2.4 feet per year, the coastal bluff would erode inland to the Bay Avenue wells within 53 years and to the Tioga Avenue wells within 69 years. At the 3.1 feet per year erosion rate, the wells could be impacted with 41 and 54 years, respectively.

Project's Consistency with Hazards Policies: The proposed desalination project, as conditioned by the City, is generally consistent with the applicable policies, but lacking in necessary detail. Although potentially threatened by erosion, it is appropriate to site the project where proposed and not to mandate setbacks outside of the 50 year projected erosion line. This is because the extraction wells are specifically designed to mine the brackish water along the toe of the seawater wedge –the interface between freshwater and salt water, which extends landward up to 200 feet from the mean high tide. It is at this point where the water from the shallow aquifer is in direct hydraulic communication with the ocean so that there is enough saturation for mining water. Similarly, discharge of the concentrate solution is returned to the sea at salinity levels that are similar to seawater. Thus, location of the injection wells is also reliant on close proximity to the sea. Overall, it is imperative for optimum plant operation to maintain the wells (and hence the pipes leading to and from them) adjacent to the seawater wedge (freshwater – seawater interface) and within the coastal hazards zone and permissible under the cited LCP policies, provided mitigation is incorporated.

A geologic report for the project was prepared by Pacific Crest Engineering Inc. (October 20, 2002; updated November 14, 2003), supplemented by information a coastal erosion study by Haro & Kucinich Associates (December 2003) in accordance with LCP policy 4.3.9, but at an overview, not design detail, level. Thus not all final design details and mitigation measures are

known. Thus, the essence of City conditions # 5 and #18 requiring a design-level geotechnical report is incorporated into conditions of approval of this permit (see Special Condition #13.5). Also, the results of this additional work may result in some project modifications, thereby necessitating that the final plans incorporate any resultant changes (see Special Condition #2). Furthermore, to address seismic issues associated with constructing the desalination plant, the City conditioned for following Uniform Building Code guidelines for Seismic Zone #4. This condition is retained in this permit approval in order to be consistent with LCP policy 4.3.8 (see Special Condition #13.6).

At some point bluff retreat and shoreline erosion will necessitate relocating the wells in order for the project to continue functioning. In order to avoid possible interruptions in water supply, and minimize the risk associated with coastal hazards, the Adaptive Water Supply Management Program outlined in the Project Description finding above is incorporated into the City's conditions of approval. It will monitor beach profiles and water quality from the extraction wells and recommend relocation of infrastructure as necessary. It is likely that the relocation would be accomplished in a manner that also complies with the hazard policies. The City Engineer has indicated that the injection wells will be abandoned and left in place, being buried so deep in the sand as to not be a hazard. The extraction wells will either be capped according to well abandonment standards or dug out and moved. However, such actions are not included in the Program. While it is appropriate to retain this Program as a condition of this coastal permit, amplifications are necessary in order to fully comply with LCP policies (see Special Condition #5). The permit needs to be explicit that relocation will occur and will occur in a timely manner and that shoreline protection measures that are inconsistent with LCP policies will not be employed.

Finally, since the City is installing the project in a hazardous area a necessary mitigation is that the City assume the risk and liability for doing so (see Special Condition #12).

3. Hazard Coastal Permit Conclusion

The proposed project is generally consistent with the LCP's hazards policies, but lacking in some necessary detail. The project is planned to include measures to minimize risk from shoreline erosion and seismic hazards. However, final design detail in the initial project and plans for the long-term to ensure this risk minimization are lacking. As conditioned to require the City to prepare and follow a design-level geotechnical report and a more explicit future relocation plan and to assume all risks for development within the shoreline hazards area, the desalination project is consistent with the hazard policies of the certified LCP.

D. Environmentally Sensitive Habitat Areas (ESHA)

1. Relevant ESHA Policies

The certified Sand City LCP implements the environmentally sensitive habitat area (ESHA) policies of Coastal Act Section 30240 through broad policies requiring the protection of natural resources and dune habitats, and more specific policies that require the use of development standards to protect ESHAs. First, consistent with the Coastal Act definition of an Environmentally Sensitive Habitat Area, the LCP defines ESHA as follows:

> *Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which easily could be disturbed or degraded by human activities and developments (Sand City Local Coastal Program Land Use Plan* p. 38; *Sand City Implementation Plan,* p. 21*).*

Second, with respect to general ESHA protection, *Sand City Local Coastal Program Land Use Plan* **Policy 6.4.16** states, in relevant part:

> *Desalination facilities must: b) Avoid or fully mitigate any adverse environmental impacts to coastal resources; c) Be consistent with all LCP and Coastal Act policies, including those for concentrating development, supporting priority coastal uses, and protecting significant scenic and habitat resources;*

With respect to more specific protections, *Sand City Local Coastal Program Land Use Plan* **Policy 4.3.21** states:

> *Protect environmentally sensitive habitat areas by developing and implementing standards for development (including vegetation removal, excavation, grading, filling and the construction of roads and structures). Standards should include, but may not be limited to:*
>
> *a) encourage retention of open space through deed restrictions or conservation easements;*
> *b) restrict land disturbance and the removal of indigenous plants to the minimum amount necessary for structural improvements;*
> *a) require incorporation of appropriate mitigation measures such as setbacks, buffer strips, landscape plans, drainage control plans and restoration;*
> *b) where appropriate and feasible, allow the exchange of existing resource areas for other open space areas that would provide a more logical*

location for open space and that could be planted with those species found in the resource area; and

c) require landscaping with native coastal plants in development proposals.

Sand City Local Coastal Program Land Use Plan Policy **4.3.20** requires, in relevant part, that ESHAs be protected as follows:

d) New uses proposed adjacent to locations of known environmentally sensitive habitats shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such areas.

Sand City Local Coastal Program Land Use Plan **Policy 4.3.23** requires:

Require implementation of dune stabilization and/or restoration programs as a part of new developments west of Highway One, in areas shown on Figure 7.

Sand City Local Coastal Program Land Use Plan **Policy 4.3.25** requires:

Enhance coastal plant communities by requiring new developments to utilize appropriate native coastal plants in landscaping plans that are compatible with existing native species. Prohibit the use of invasive plants in landscaping schemes.

2. ESHA Coastal Permit Analysis

ESHA Background: Portions of the proposed project, including the wells and some of the pipelines are located in the vicinity of coastal dune environmentally sensitive habitat. As quoted in Urban Services Finding #B above, the Coastal Commission has found these dunes to be environmentally sensitive habitat areas. A number of special-status plants and animals occur among the coastal dune habitat in the vicinity of the proposed project including habitats of the Smith's blue butterfly, Western snowy plover, sand gilia, and Monterey spineflower, all of which are listed by the U.S. Fish and Wildlife Service as either threatened or endangered species. The proposed desalination plant site is located on vacant land in a mixed-use area adjacent to a coastal dune along Highway One.

Inland of Vista del Mar Street between Tioga Avenue and Bay Avenue are dune formations in good condition (minimal historic landform alteration), mostly covered with iceplant and other invasives, but also containing some special status species adjacent to Sand Dunes Drive. The portion of this area closest to Sand Dunes Drive is designated in the LCP, pursuant to policy 4.3.23, for dune stabilization or restoration.

Project's Relationship to ESHA: Several potential impacts on ESHA from the immediate proposed project have been identified in the *Draft EIR* (page 74). The potential impacts on coastal dune habitat are:

> *The project currently proposes to install most of the pipelines and the RO/desalination facility within paved street right-of-way or previously developed areas. The installation of water pipelines would result in temporary impacts to approximately 3,300 square feet (0.08 acre) of coastal dune habitat at two locations, however. Trenching would temporarily impact an approximate 150-foot by 20-foot area along an unpaved segment of Scott Street and installation of a temporary bore pit at the terminus of Ortiz Avenue near Highway One would impact an approximately 20-foot by 10-foot area*[4].
>
> *Installation of pipelines in coastal dune habitat could impact several special-status plant species, however. As described in Table 6, four special status plant species could occur in coastal dune areas east of Highway One. Protocol level surveys for Monterey spineflower, sand gilia, coast wallflower, and Monterey Indian paintbrush during the flowering seasons for these species have not been conducted within the two locations where trenching or a bore pit could impact unpaved sand dune areas. If the coastal sand dune habitat at these locations supports special status plant species, even temporary impacts could constitute a significant impact to coastal dune habitat.*

With regard to the desalination plant and water tank site, the *EIR* does not provide detail as to any impacts to the adjacent dunes.

Impacts to Smith's Blue Butterfly are stated on pages 76 – 77 of the *Draft EIR*:

> *Smith's blue butterfly use two buckwheat species found in coastal dune habitat as larval host plants. Removal of buckwheat plants associated with trenching activities for the water supply pipeline could result in a direct impact to butterfly habitat and/or individuals. Areas where this potentially could occur are within the 150-foot by 20-foot unpaved area of Scott Street and the 10-foot by 20-foot area at the terminus of Ortiz Street. There are also areas of sand dunes supporting the larval host plants for Smith's blue butterfly located adjacent to proposed construction. These include areas along Tioga Avenue, Sand Dunes Drive, Bay Street, Sylvan Avenue, Park Avenue, Scott Street, East Avenue, Fir Avenue, and the area around the proposed bore pits along Vista del Mar.*

The potential impacts to Western snowy plover are listed on page 78 of the *Draft EIR*:

> *The western snowy plover breeds in a protected area south of Bay Street. This bird has not been observed breeding within the project area, but they could be*

[4] The Scott Street location is not in the coastal zone, the Ortiz Avenue location is in the coastal zone.

present in the project area on a rare to occasional basis. The breeding season for western snowy plover is March to September. Although not reported to nest within the project area, ground vibrations and construction activity associated with trenching or boring activities within approximately 500 feet of nests could impact ground nesting snowy plovers. Birds subject to construction disturbance may remain away from nests long enough for eggs to be lost to predation, shifting sand, overheating, or the adults may abandon nests altogether. Construction activities on the west side of Sand Dunes Drive, in the vicinity of Bay Street and to the south, could disturb nesting birds to the extent that they might abandon nests.

It is not anticipated that there will be any regular or ongoing maintenance requirements of the wells, pipelines, or other infrastructure that may have the potential to disturb or disrupt adjacent habitat areas.

However, as noted in the Hazards findings above, the City has adopted an Adaptive Water Supply Management Plan to relocate the wells, related piping, and infrastructure in the future. The relocation site has not yet been determined, but will almost certainly be inland of Vista del Mar Street between Bay and Tioga Avenues. Although the project *EIR* did not evaluate any relocation impacts, one could project that, similar to the construction impacts listed above, relocation of the wells and piping may introduce impacts to special-status plant and animal species by disrupting or displacing the habitat they are dependent upon or disturbing animal behavior during critical nesting / breeding seasons. While relocation of the extraction wells may occur along the noted roadways, there is no inland roadway parallel to Vista del Mar Street for the injection wells to be located in until about 600 feet back in Sand Dunes Drive.

Project's Consistency with ESHA Policies: The *Final EIR* recommended measures to avoid impacts to coastal dune habitat and special status plant and animal species including the Monterey spineflower, coast wallflower, sand gilia, Monterey Indian paintbrush, Smith's blue butterfly, black legless lizard, Western snowy plover, and burrowing owl due to the original construction. For example, the *Final EIR* recommends:

- In areas where construction and pipeline installation will occur directly adjacent to dune habitat, exclusionary fencing will be placed along the boundary of construction to protect against trampling.

- Protocol level surveys for Monterey spineflower, sand gilia, coast wallflower, and Monterey Indian paintbrush will be prepared along the pipeline alignment during the April to September flowering season immediately prior to project construction. In the event any species are found, construction methods will be modified to include directional drilling under the paved portions of the road(s) and bore pits will be installed within currently paved areas of roadway.

- The protocol surveys will also include a survey for two species of buckwheat (*Eriogonum latifolium and Eriogonum parvifolium*) that are the host plants for the federally

endangered Smith's blue butterfly. In order to avoid indirect impacts to adults, eggs, and larvae, construction will not be undertaken in areas adjacent to populations of the two species of buckwheat during the period of June through September. The results of the protocol level plant surveys will be provided to the U.S. Fish & Wildlife Service and the California Department of Fish & Game prior to the start of pipeline installation along the unpaved segment of Scott Street or at the terminus of Ortiz Avenue.

- Spoils generated from trenching and installation of temporary bore pits for the installation of pipelines will be placed on existing pavement or in designated storage areas. Placement of spoils within coastal dune habitat will be prohibited during construction.

- Construction staging areas will be located on paved or previously disturbed areas.

- Biological monitoring of the site during construction activity near coastal dune habitat.

- A discussion of dune erosion factors, legal requirements and protection measures to be used by project personnel to minimize risk of impacts to coastal dune habitat or special status plant or animal species during project implementation.

- In the event installation of pipelines will directly impact buckwheat host plants for the butterfly, damaged or removed buckwheat plants will be replaced at a 3:1 ratio in accordance with a Butterfly Habitat Restoration Plan. At least 70% of these plantings shall survive for 5 years and be monitored annually. If this goal has not been met at 5 years, then planting will continue until compliance is achieved.

- Preconstruction surveys for Black legless lizards will be performed no more than 24-hours prior to commencement of construction. Any legless lizards found in the work area will be moved to suitable areas away from the construction zone. A letter report detailing plans for locating and, if necessary, capturing legless lizards for relocation will be prepared and provided to the California Department of Fish and Game for review prior to preconstruction surveys. Plans will include a description of how Black legless lizards would be relocated and potential release sites.

- To the extent feasible, trenching and boring activities along Sand Dunes Drive, Bay Street, Vista del Mar Street and Tioga Avenue will be scheduled to occur during the non-breeding season (September to March). If construction is to occur between March and September in these areas, a qualified ornithologist will conduct a preconstruction survey for nesting western snowy plover within 500 feet of proposed construction areas. If plovers are found within 500', the ornithologist will, in consultation with the U.S. Fish and Wildlife Service, determine a construction-free setback around the nest (usually a minimum of 250 feet).

- A preconstruction survey will be conducted no more than 30 days prior to ground disturbing activities to determine if burrowing owls are present within the construction zone of the proposed project. For construction during the nesting season (February –

August), a construction free buffer (usually 250 feet) would be established around any active burrowing owl nest. Once young have fledged, construction activity could occur within close proximity of the former nest.

The City is required by state law to adopt a Mitigation Monitoring Program (MMP) when it approves a project with a *Final EIR* that includes as conditions of the project, measures to mitigate or avoid potential significant effects on the environment. In terms of mitigating biological impacts, the adopted MMP includes some of the identified *Final EIR* measures to avoid disruption of sensitive habitat and minimize direct take of species listed under the Endangered Species Act. However, several identified mitigation measures were also partially or entirely omitted from the City's adopted mitigation monitoring program. In particular, a measure to stop construction in areas adjacent to populations of buckwheat during the months of June – September to avoid direct impacts on feeding Smith's blue butterfly larvae was not included. Similarly, the MMP omitted replanting and restoration plans for various plant species (Monterey spineflower, sand gilia, Monterey paintbrush, and coast wallflower) and the implementation of necessary performance criteria to ensure the success of the restoration in the long-term (5 years and beyond). The MMP omitted the biological monitor requirement to oversee activity during construction and the requirement for establishing a construction staging area on paved or previously disturbed areas. In addition to including these omitted mitigations, other measures are needed to ensure that disturbed areas will be restored with native dune vegetation at the appropriate replanting ratios and that sensitive habitat areas adjacent to the project site will be protected. Special Condition #4 lists and requires the applicant to implement the recommended mitigation and avoidance measures identified in the project *EIR* that are not included in the City's condition (Special Conditions #13.10, #13.11, and 13.13).

The required further habitat evaluation should more precisely address impacts and mitigation measures to the dunes adjacent to the proposed plant and tanks. Since all or portions of the 18 parcels to be acquired for these facilities appear to contain dunes, the dune portions should be permanently protected as provided for in Special Condition #4.

Also so that future relocation does not disrupt ESHA it is necessary to incorporate such assurances into noted Adaptive Water Supply Management Program. As noted, the area inland of the injection wells is dune ESHA, some specifically designated in the LCP for dune stabilization/restoration. Thus, to prevent impacts to theses dunes, it appears that the first relocation should avoid them by resiting the injection wells on paved Sand Dunes Drive if necessary pipes emanating from Sand Dunes Drive could be installed under the dunes to an appropriate terminus. There still could be impacts from this approach that should be considered as the Adaptive Water Supply Management Program is implemented and updated (see Special Condition #5).

3. ESHA Coastal Permit Conclusion

The proposed project is generally consistent with the LCP's ESHA policies, but lacking in detail. The pipeline and wells are planned to be located in paved streets and the plant is proposed to be

location on a vacant parcel and to minimize and mitigate any impacts to ESHA. However, since the proposed work will be occurring in the vicinity of environmentally sensitive coastal dune habitat it poses potential damage to the habitat that has yet to be fully evaluated and addressed. As conditioned to require implementation of City ESHA conditions, mitigation measures listed in the EIR, a construction plan, and ESHA consideration in a future relocation plan, the desalination project is consistent with the ESHA policies of the certified LCP.

E. Public Access and Recreation

1. Relevant Public Access Policies

The applicable Coastal Act policies are:

> ***Coastal Act Section 30210:*** *...maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*
>
> ***Coastal Act Section 30211:*** *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization...*
>
> ***Coastal Act Section 30212:*** *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in all new development projects except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) Adequate access exists nearby, or (3) Agriculture would be adversely affected...*
>
> ***Coastal Act Section 30221:*** *Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

Applicable provisions in *Sand City Local Coastal Program Land Use Plan* include:

> ***Policy 5.3.7:*** *Require new developments to provide vista points along the shoreline and blufftop in conjunction with provision of public vertical and lateral accessways....*
>
> ***Policy 2.3.1:*** *Require all future shorefront developments to provide public access in the following manner:*

a) *where access is shown on Figure 4, dedication of a vertical and/or blufftop access easement which meets the criteria established in Policy 2.3.4;*

Policy 2.3.2: *Require dedication of lateral access easements for dry sand access along sandy beaches as part of all shorefront development.*

Policy 2.3.4: *The following criteria shall be used to determine the exact location of accessways:*

a) *Accessways should be located at intervals commensurate with the level of public use*
b) *Accessways should be sited where the least number of improvements would be required to make it usable by the public, where support facilities exist or can be provided, where public safety hazards are minimal, and where resource conflicts can be avoided or mitigated...*

Policy 2.3.7 *Protect visual access at the general points shown on Figure 4 by requiring provision of public vista points as part of future developments in these areas. [These are at the ends of Bay and Tioga Avenues.] Site specific locations will be developed as part of future development proposals and according to the guidelines set forth in Policy 2.3.4.*

Policy 2.3.15: *The following specific access improvements are required as a part of development south of Bay Avenue:*

a) *two vista points, one approximately 440 feet north of Bay Avenue and west of Vista Del Mar Street, and .... An overlook point shall be established at the end of Bay Avenue. All of these points shall be connected with vertical and lateral accessways and public parking areas. These public parking areas shall be credited toward site development public parking requirements;*
b) *a pedestrian and bicycle path connecting the south end of Vista del Mar and the three vista overlook points with Sand Dunes Drive; and then along Sand Dunes Drive to the southern city boundary. Public parking areas should also be connected to the pedestrian accessway;*
c) *access and drainage improvements, as deemed necessary by the City, along Sand Dunes Drive, Bay Avenue and Vista del Mar Street;*
d) *vertical accessway (and stairway, if necessary) from public road to beach at the end of Bay Avenue; and...*

These are repeated in **Policy 6.4.1.b,** that covers an area seaward of Vista del Mar Street, both north and south of Bay Avenue:

vista point (approximately 440 feet north of Bay Avenue and west of Vista del Mar Street, overlook (at end of Bay Avenue), dune stabilization bluff top enhancement,

public restrooms, public parking, public fisherman's facilities, public-serving commercial uses, and public access improvements;

and are also repeated in **Policy 3.3.12** as being required to be provided by the developer "as part of any visitor-serving commercial development approved by the City for the area south of Bay Avenue."

2. Public Access Coastal Permit Analysis

Public Access Background: Public access to the shoreline in Sand City can be gained from the Bay Street and Tioga Avenue street ends. Parking is permitted along either roadway and beach users can scramble down the sandy embankment to the beach. Public access along the shoreline is also provided by a bicycle path that runs parallel to Sand Dunes Drive. At Tioga Avenue, undercut asphalt, rock debris, and other impediments block direct access to the beach and users must traverse south along Vista del Mar Street to a break in the failing asphalt where a natural sand ramp provides a smooth transition to the beach below. There is much less of a bluff feature at the Bay Street end where the roadway transitions to sand and follows a gentle sloping grade down to the waters edge. On the bluff between these two improved roads, Vista del Mar Street provides a lateral connection that is passable during periods of high tides and storm-driven surf. Much of the asphalt that once covered Vista del Mar Street has failed and migrated onto the beach. This is particularly noticeable near Tioga Avenue where the debris field clearly precludes lateral access along the beach during even medium tides in the summer and winter.

Project's Relationship to Public Access: The proposed project should not significantly affect public access, but there may be some temporary disruptions. Public access along Bay Street, Vista del Mar, and Tioga Avenue will be limited for an estimated two to three weeks during installation of the extraction and injection wells and related pipelines. Public access would be similarly affected along Sand Dunes Drive, as the current proposal is to install pipelines in the bicycle path paralleling the Drive. Construction activities, including the introduction of noisy equipment into what is a fairly tranquil natural area would affect the aesthetics, ambiance, serenity, and safety of the immediate recreational beach experience.

Once the infrastructure is in the ground and the wells have been secured, additional public access impacts will be limited primarily to the need to perform maintenance or repair work on the existing infrastructure and/or future relocation of the wells and pipelines. The City has indicated that maintenance activities would be minimal and, hence, the potential to interfere with public access would be negligible.

Additional public access impacts could be expected to occur in connection with relocation of the wells and pipelines in response to a shoreline hazard or the need to manage well water salinity. Because of the unpredictable nature of shoreline erosion, any public access impacts associated with relocation are not possible to quantify at this time.

Project's Consistency with Public Access Policies: While the proposed project should not significantly affect public access, except for some temporary disruptions, it also does not provide for any of the access improvements called for in the local coastal program. The temporary disruptions can be minimized (although not totally eliminated) by appropriate construction controls, such as limiting the width of the construction corridors, limiting the times when work can take place, fencing the minimum construction area necessary, keeping equipment out of high use areas, storing equipment off of the beach at night, and clearly delineating and avoiding to the maximum extent feasible public use areas, etc., as outlined in Special Condition #3.

Given that access impacts will be temporary and given that circumstances have changed, there is not sufficient reason to require all of the access improvements shown in the LCP for the area to be part of the project. The LCP, written some 20 years ago, was predicated on large private developments occurring in the vicinity that would be required to install the access improvements as a condition of permit approval. These developments will no longer occur because the sites for this development have been publicly purchased. Since most of this area will now remain open and continue to erode inland, there is not the urgency to install some of the formal, structural access components listed in the LCP. Generally, the areas slated for public access improvements (along and at the ends of Bay and Tioga Avenues and along Vista del Mar) are accessible without the imperative to install more formal parking or vista points/ overlooks. Planning for continued shoreline retreat by employing movable boardwalks and the like rather than resurfacing and armoring Vista del Mar Street and the street ends is more in the spirit of Coastal Act policies. The one improvement that is most desirable is formalizing an accessway from the end of Tioga Avenue to the beach below. Because there are access improvements required by the LCP that have not been made, there will be some temporary access impacts, construction will occur at the locations slated for access improvements, and because these improvements are shown on land that the applicant City owns, the City should be required to at least install one improvement, preferably the one just described, as outlined in Special Condition #1, to be consistent with the LCP policies and those of the Coastal Act. Additional access requirements may be appropriate when the project is relocated, as outlined in Special Condition #5.

3. Public Access Coastal Permit Conclusion

The proposed project will not significantly adversely impact public access but will cause some short-term disruptions and does not incorporate any of the LCP's planned access improvements in the areas where work will occur. As conditioned to require at least one access improvement be incorporated into the project, a construction plan to minimize access disruption, and access considerations in a future relocation plan, the desalination project is consistent with the certified LCP and Coastal Act access and recreation policies discussed in this finding.

F. Visual Resources

1. Relevant Visual Resource Policies

Sand City Local Coastal Program Land Use Plan Policy **5.3.1** requires:

> *Views of Sand City's coastal zone shall be enhanced and protected through regulation of siting, design, and landscaping of all new development in the coastal zone, adjacent to Highway One (on both the east and west) in order to minimize the loss of visual resources.*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.2** states, in relevant part:

> *Views of Sand City's coastal zone, Monterey Bay and Monterey Peninsula shall be protected through provision of view corridors, vista points, development height limits, and dune restoration areas...*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.4.a** provides:

> *Encourage project design that is compatible to its natural surroundings and that enhances the overall City image. All buildings should be designed and scaled to the community character as established by new development.*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.4.e** states:

> *Utilize native plants in landscape plans. Discourage dense, massive and tall plant materials.*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.4.f** states:

> *Encourage the use of existing natural and manmade dunes as earth berms for visual and noise barriers, as well as buffers between land uses. Landforms are more efficient for visual and noise reduction than planting screens.*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.5** states:

> *Require all future developments to obtain a design permit, in order to assure conformance with the City's design standards, and design compatibility with surrounding development. All design permit applications shall be reviewed by the City's Design Committee.*

Sand City Local Coastal Program Land Use Plan **Policy 5.3.9** requires:

New development should to the extent feasible, soften the visual appearance of major buildings and parking areas from view of Highway One.

Similarly, *Sand City Local Coastal Program Land Use Plan* **Policy 5.3.10** requires:
Utilize existing or manmade dunes within project design to enhance visual resources.

And, *Sand City Local Coastal Program Land Use Plan* **Policy 5.3.11** requires:
In new developments require dune stabilization measures where feasible and where they would stabilize an unconsolidated dune, and/or reduce views of the development from Highway One.

Sand City Local Coastal Program Land Use Plan **Policy 6.4.5** Height Restrictions part e states:

e) all development within 100 feet of the freeway right-of-way (considered as the main thoroughfare right-of-way, excluding on/off ramps) shall be designed so as to minimize significant adverse visual impacts, limited to 25 feet in height except as permitted by (b) above, and landscaped. Unattractive elements shall be screened.

The *Sand City Local Coastal Program Coastal Implementation Plan* elaborates on landscape plan components in *Code* **Section 32.17.1 (c)** as follows:

1. location, type and size of all plants

2. any mounding shown in one-foot contour lines

3. constructed layout of irrigation systems

4. details of any screens, fences, walls, trellis, retaining walls, planter boxes, flagpoles, paths and sitting areas.

The *Implementation Plan* also sets the height limit on the subject site beyond 100 feet from the freeway right-of-way to not exceed 36 feet as measured from the existing grade and repeats the *Land Use Plan* provision of a 25 foot height limit closer to the freeway.

2. Visual Resource Coastal Permit Analysis

Visual Resource Background: The Sand City coastal zone offers views of the shoreline, Monterey Bay, the Monterey Peninsula, and extensive dune complex from Highway One and the bike path along Sand Dunes Drive.

Project's Relationship to Visual Resources: The primary development west of Highway One (wells, piping, related infrastructure) will all be under-grounded and thus there will not be any visual impacts associated with the proposed project.

East of Highway One, the proposed desalination facility and dual water storage tanks will be constructed on vacant lots in an already intensely developed area. The desalination plant building will be a single story in height and similar in mass and scale to nearby commercial and industrial buildings. Two large reservoir tanks, approximately 20 feet tall and 62 feet in diameter would be installed adjacent to the plant building and near the base of the Highway One road right-of-way embankment. Surrounding development includes large industrial and commercial buildings to the east, south and north east of the site. Several small homes are located to the north and the highway is located at a higher elevation west of the site. Views of the site from the Highway are at least partially screened by dune formations that crest between the highway and the site.

Project's Consistency with Visual Resource Policies: The proposed desalination plant and water tanks meet the LCP's height limits. The proposed development is generally consistent in scale with nearby existing buildings and will not adversely affect the visual character of this industrial area. Nevertheless, the tanks will be large, imposing structures. The City evaluated the possibility of a single buried concrete reservoir as an alternative to two above-ground tanks and concluded that a rectangular three-chambered tank could be accommodated on the site. The underground facility would provide the necessary storage capacity to be retained during service and maintenance activities and provide enough water to meet maximum daily demand plus firefighting capabilities of 3,300 gallons per minute for 3.5 hours. As a result the City conditioned its permit to allow for the tanks to be installed underground, and this condition is retained in this approval (see Special Condition #2.a.3) should the City decide to do so. Additionally the City required a final landscape plan and a final design permit in accordance with LCP requirements and these conditions are retained in this approval (See Special Condition #13.2 and #13.3).

3. Visual Resource Coastal Permit Conclusion

The proposed project is generally consistent with the LCP's visual resource policies. The only visible project component, the desalination plant, is planned to be located in a mixed-use area inland of and not visible from Highway One. However, design and landscaping details to ensure visual compatibility are lacking at present. As conditioned to allow for undergrounding the water storage tanks, a final design plan and permit and landscape plan, the desalination project is consistent with the visual resource policies of the certified LCP.

G. Marine Environment & Water Quality

1. Relevant Marine Environment and Water Quality Policies

Sand City Local Coastal Program Land Use Plan **Policy 6.4.16** states in part:

> *Desalination facilities must:... e) Use technologies that are most energy-efficient. Estimates of the projected annual energy use and the environmental impacts that will result from this energy production, and evidence of compliance with air*

pollution control laws for emissions from the electricity generation, should be submitted with permit applications; f) Use, where feasible, sub-surface feedwater intakes (e.g., beach wells) instead of open pipelines from the ocean, where they will not cause significant adverse impacts to either beach topography or potable groundwater supplies; g) Use technologies and processes that eliminate or minimize the discharges of hazardous constituents into the ocean and ensure that the least environmentally damaging options for feedwater treatment and cleaning of plant components are selected. Opportunities for combining brine discharges with other discharges (e.g., from a sewage treatment facility or power plant) should be considered and the least environmentally damaging alternative pursued. Applicants should provide information necessary to determine the potential impacts to marine resources from the proposed intake and discharge. Obtaining this information may require new or updated engineering, modeling and biological studies, or in some cases may be obtained from pre-operational monitoring, monitoring results from other desalination facilities, and pilot studies conducted before building a full-scale facility; ...

Sand City Local Coastal Program Land Use Plan **Policy 4.3.16** states:

Require drainage plan for development proposed on coastal bluffs that would result in significant runoff which could adversely affect unstable coastal bluffs.

Sand City Local Coastal Program Land Use Plan **Policy 4.3.28** states:

Protect marine resources for long-term commercial, recreational, scientific and educational purposes.

Sand City Local Coastal Program Land Use Plan **Policy 4.3.29** states:

Protect the water quality of the ocean. Sources of pollution to coastal waters shall be controlled and minimized.

2. Marine Environment and Water Quality Analysis

Marine Environment and Water Quality Background: The Monterey Bay National Marine Sanctuary abuts the Sand City shoreline where the desalination injection and extraction wells will be located. The sanctuary waters provide a productive marine environment for a diverse population of wildlife, including numerous invertebrates, plants, fish, seabirds, and marine mammals. Fish found within Monterey Bay and sanctuary waters include herring, sardines, rock fish, salmon, lingcod and sharks. Ninety-four seabird species are reported in the region. Marine mammals include whales, seals, sea lions, elephant seals, and sea otters.

Project's Relationship to Marine Environment and Water Quality: Although the footprint of the proposed project is on land, it will both extract water from and inject water into the marine environment. The proposed project includes design features to avoid adverse environmental impacts to coastal resources, including the use of subsurface intake and injection wells. The proposed reverse osmosis desalination facility employs subsurface feedwater wells located near

the freshwater-seawater interface that will avoid entrainment of marine organisms and allow for recovery and freshwater recharge of the shallow, brackish groundwater aquifer. The subsurface wells minimize landform alteration and avoid public access and visual resource impacts. Injection of the saline concentrate in a below sea level horizontal well beneath the coastal bluff will not significantly alter the seawater/freshwater interface or result in localized salinity increases near Monterey Bay and represents the least environmentally damaging alternative for discharge. The saline concentrate will be mixed with water drawn from the wells prior to re-injection to ensure that the water does not exceed the salinity of seawater and is similar in chemical composition. The proposed new water supply will be independent from the Carmel River or Seaside Basin Aquifer and the Cal-Am water supply, which is currently restricted by the State Water Resources Control Board.

Results from groundwater modeling indicate that the pumping of the wells over a 10-year period will not have a significant adverse impact on groundwater. The draft EIR (page 49) states in part:

> *Groundwater modeling of the shallow aquifer with and without the proposed project was conducted my Martin B. Feeney, Hydrogeologist. The model was calibrated using results from field exploration and a test-pumping program. A steady state simulation with no groundwater pumping or injection was used to establish the location of the seawater wedge beneath the coastal aquifer in Sand City. Groundwater modeling was conducted to show the anticipated shape of the seawater-freshwater interface after 10 years of pumping for the proposed water supply project. [The results of the modeling indicate that] the seawater-freshwater interface would shift inland in the vicinity of the injection well and to a lesser extent, near the extraction wells. Impacts from the injection well are not expected to be observed east of Highway One and there would only be a slight impact on the salinity in the Tioga Avenue well pair. The proposed project would result in a slight shift inland in the naturally-occurring seawater-freshwater interface along the coast, but would not substantially degrade or deplete groundwater resources. (Figure 13 DEIR)*

Installation of the extraction wells and related infrastructure has the potential to impact water quality and the marine environment by introducing boring spoils, mechanized equipment, and hydrocarbons into the nearshore marine environment.

Project's Consistency with Marine Environment and Water Quality policies: As proposed, the water supply project avoids and/or minimizes impacts to near shore organisms and the marine environment consistent with the certified LCP policy 6.4.16. The Commission recognizes subsurface intake wells as a superior alternative to open water intakes and the proposed project makes up of subsurface wells. The City conditioned its permit to limit the discharge to a maximum of 35,000 mg/L of total dissolved solids, which is the concentration found in seawater, and this condition is retained in this approval (see Special Condition #13.14).

Although the LCP contains general standards to protect the marine environment and preserve water quality, other agencies have more specific expertise and regulatory control in the details

associated with constructing and operating desalination plants. The City conditioned its permit on approvals from the California Department of Health Services and the Monterey County Department of Public Health[5] and this condition is retained in this coastal permit approval (see

[5] The following are some of the County's requirements as found in the *County Code*:
Section 10.72.010 Permits required: No person, firm, water utility, association, corporation, organization, or partnership, or any city, county, district, or any department or agency of the State shall commence construction of or operate any Desalinization Treatment Facility (which is defined as a facility which removes or reduces salts from water to a level that meets drinking water standards and/or irrigation purposes) without first securing a permit to construct and a permit to operate said facility. Such permits shall be obtained from the Director of Environmental Health of the County of Monterey, or his or her designee, prior to securing any building permit. (Ord. 3439, 1989)
10.72.020 Construction permit application process...
C. Submit a complete chemical analysis of the sea water at the site of proposed intake. Such chemical analysis shall meet the standards as set forth in the current ocean plan as administered by the California State Water Resources Control Board and the United States Environmental Protection Agency. In the event the proposed intake is groundwater (wells), a chemical analysis of the groundwater at the proposed intake site shall be submitted as prescribed by the Director of Environmental Health.
D. Submit to the Director of Environmental Health and Monterey County Flood Control and Water Conservation District a study on potential site impacts which could be caused by groundwater extraction.
E. Submit preliminary feasibility studies and detailed plans for disposal of brine and other by-products resultant from operation of the proposed facility.
F. Submit a contingency plan for alternative water supply which provides a reliable source of water assuming normal operations, and emergency shut down operations. Said contingency plan shall also set forth a cross connection control program. Applications which propose development of facilities to provide regional drought reserve shall be exempt from this contingency plan requirement, but shall set forth a cross connection control program.
G. Prior to issuance of any construction permit, the Director of Environmental Health shall obtain evidence from the Monterey County Flood Control and Water Conservation District that the proposed desalinization treatment facility will not have a detrimental impact upon the water quantity or quality of existing groundwater resources. (Ord. 3439, 1989)
10.72.030 Operation permit process: All applicants for an operation permit as required by Section 10.72.010 shall:
A. Provide proof of financial capability and commitment to the operation, continuing maintenance replacement, repairs, periodic noise studies and sound analyses, and emergency contingencies of said facility. Such proof shall be in the form approved by County Counsel, such as a bond, a letter of credit, or other suitable security including stream of income. For regional desalinization projects undertaken by any public agency, such proof shall be consistent with financial market requirements for similar capital projects.
B. Provide assurances that each facility will be owned and operated by a public entity.
C. Provide a detailed monitoring and testing program in a manner and form as prescribed by the Director of Environmental Health.
D. Submit a maintenance and operating plan in a form and matter prescribed by the Director of Environmental Health.
E. All operators of a desalinization treatment plant shall notify the Director of Environmental Health of any change in capacity, number of connections, type or purpose of use, change in technology, change in reliance upon existing potable water systems or sources, or change in ownership or transfer of control of the facility not less than ten (10) days prior to said transfer. (Ord. 3439, 1989)
10.72.040 Inspection.
A. Prior to operation of any desalinization treatment facility, operator shall submit to an on-site inspection of said facility by the Director of Environmental Health.

Special Condition #13.4). Additionally, the Regional Water Quality Control Board will have approve the discharge into Monterey Bay and the National Marine Sanctuary will have to authorize that permit. Therefore, evidence of those approvals is also required by this coastal permit (see Special Condition #11).

In order to address construction related impacts, the project includes implementation of Best Management Practices in accordance with the City's Phase II Stormwater Permit. (p.54 of Draft EIR). The City has conditioned its approval for a final grading and erosion control plan, watering of exposed surfaces, placement of spoils on pavement or in designated storage areas, a construction worker awareness program, and exclusionary fencing, and these are retained as conditions of this approval (Special Conditions #13.7, 13.8, 13.11, 13.12, and 13.13.) The City has also committed to preparing a Spill Prevention and Response Plan to be submitted for Coastal Commission approval (p.54 of *Draft EIR*). These measures can be supplemented with some additional good housekeeping practices contained in a Construction Plan, as required in Special Condition #3.

3. Marine Environment and Water Quality Conclusion

The proposed project is generally consistent with the LCP's marine environment and water quality policies. The project includes design features to avoid adverse environmental impacts to coastal resources, including the use of subsurface intake and injection wells that avoid entrainment of marine organisms and allow for recovery and freshwater recharge of the shallow, brackish groundwater aquifer. However, final design and construction detail and approval by other regulatory agencies are lacking at present. As conditioned to require evidence of other agency approval, a final grading and erosion control plan, a final construction plan, dust control, and a limit on Total Dissolved Solids content of the discharge water, the desalination project is consistent with the marine environment and water quality policies of the certified LCP.

H. Archaeological Resources

1. Relevant Archaeological Resource Policies

Sand City Local Coastal Program Land Use Plan **Policy 4.4.34** provides:

B. The Director of Environmental Health shall have a continuing right to reasonable inspection of any desalinization treatment facility. (Ord. 3439, 1989)
10.72.050 Testing.
A. Prior to operation, all desalinization treatment facilities shall be tested for reliability and efficacy for a period and in a form and manner as prescribed by the Director of Environmental Health.
B. In the event that testing prescribed by Section 10.72.050A proves satisfactory, and notwithstanding any other permits required by this Chapter, applicant shall obtain a water system permit from the Director of Environmental Health prior to commencing operation. (Ord. 3439, 1989)

Require protection, evaluation, and/or removal under supervision by a qualified archaeologist and consultation with a qualified Native American representative, archaeological resources that may be found during the construction process.

2. Archaeological Resource Coastal Permit Analysis

The draft EIR did not anticipate that the project would disturb any archaeological resources. Nevertheless, the City permit conditioned for possible discovery of any cultural resources and that requirement is retained as a condition of this coastal permit (see Special Condition #13.15) in order to be consistent with LCP archaeological policies.

I. Energy Use

1. Relevant Energy Policies

Sand City Local Coastal Program Land Use Plan **Policy 6.4.16** states in part:

Desalination facilities must:... e) Use technologies that are most energy-efficient. Estimates of the projected annual energy use and the environmental impacts that will result from this energy production, and evidence of compliance with air pollution control laws for emissions from the electricity generation, should be submitted with permit applications;

2. Energy Coastal Permit Analysis

The proposed desalination plant will require an energy source to operate. The City conditioned the permit to require an energy recovery system and that condition is retained in this coastal permit approval (see condition #13.16) in order to be consistent with LCP energy policies.

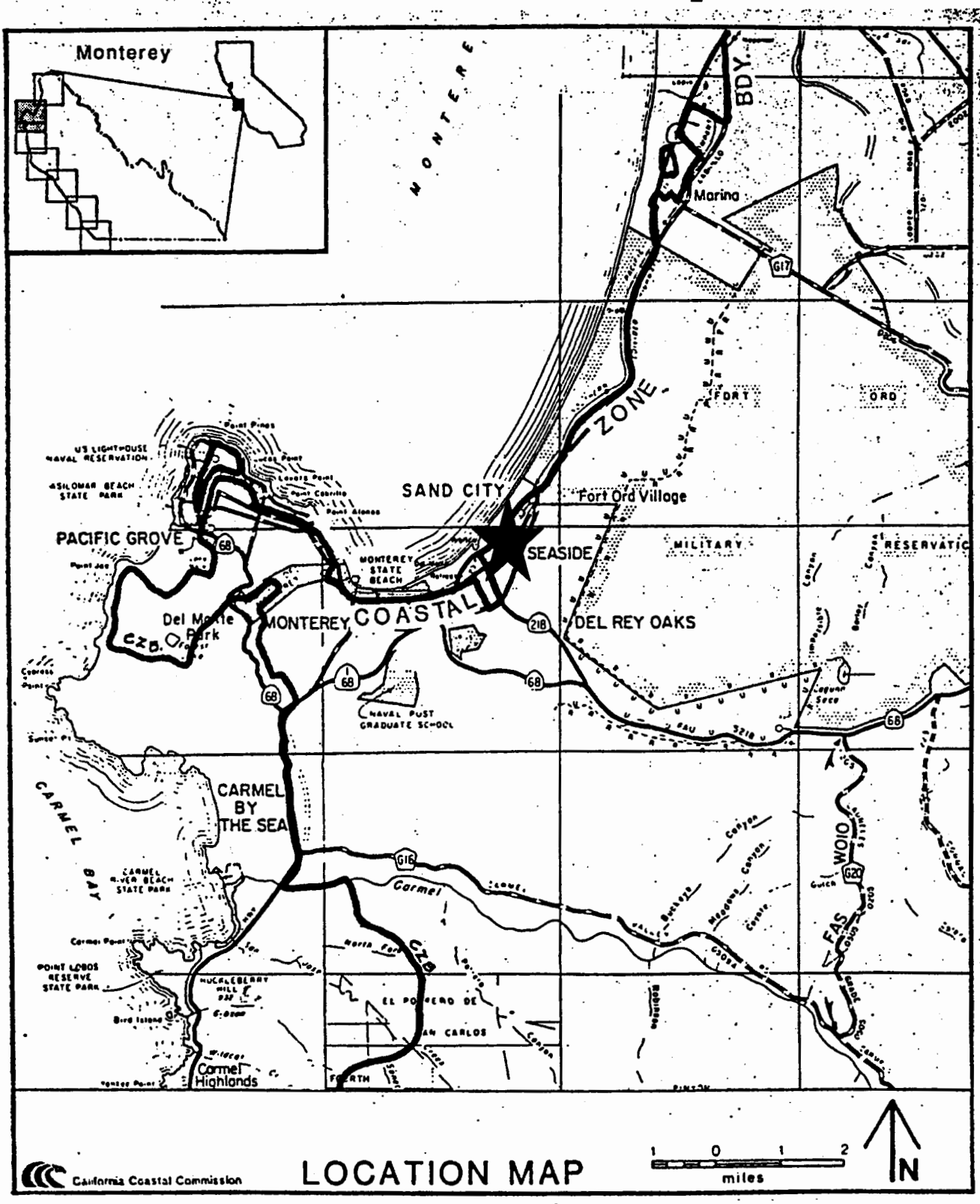
J. California Environmental Quality Act (CEQA)

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. An Environmental Impact Report has been prepared for this project. This staff report has analyzed the environmental impacts posed by the project and identified changes to the project that are necessary to reduce such impact to an insignificant level. Based on these findings, which are incorporated by reference as if set forth herein in full, the Commission finds that only as

modified and conditioned by this permit will the proposed project avoid significant adverse effects on the environment within the meaning of CEQA.

Exhibit 1: Location Map



County of Monterey

Sheet 2 of 7

Exhibit 2: Parcel Map

R/O Desalination Plant
and Water Storage Tanks

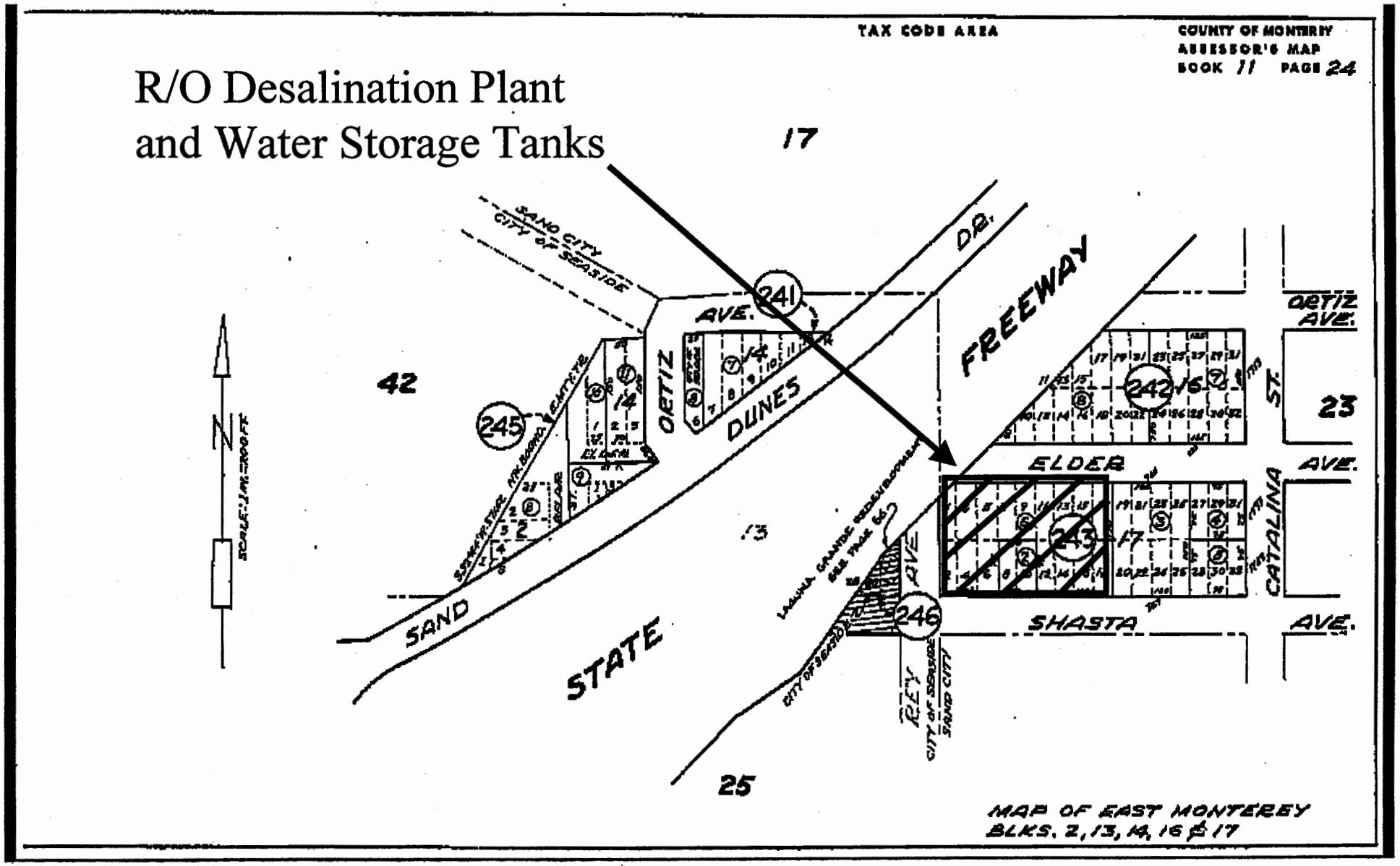


Exhibit 2: Parcel Map

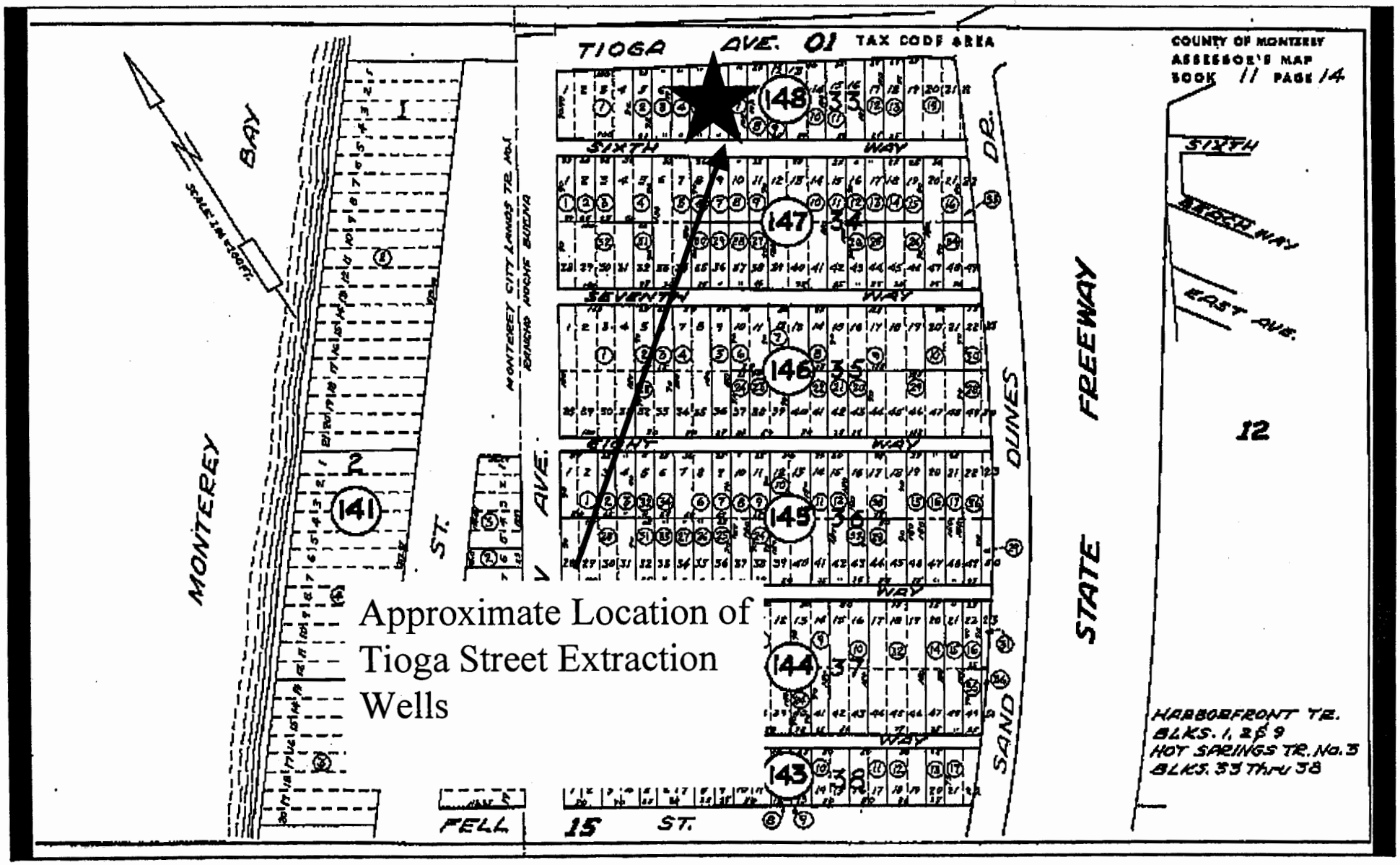
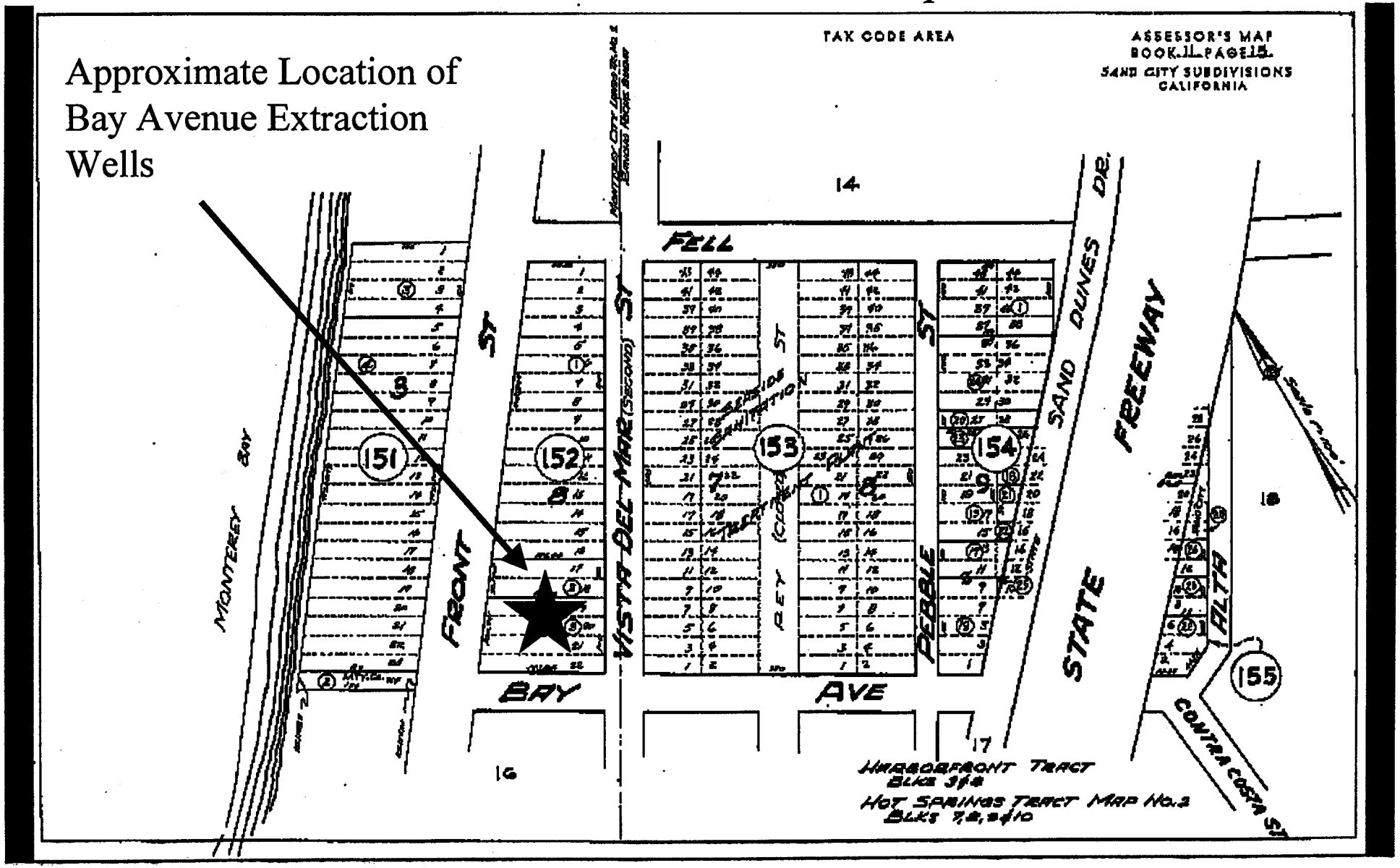
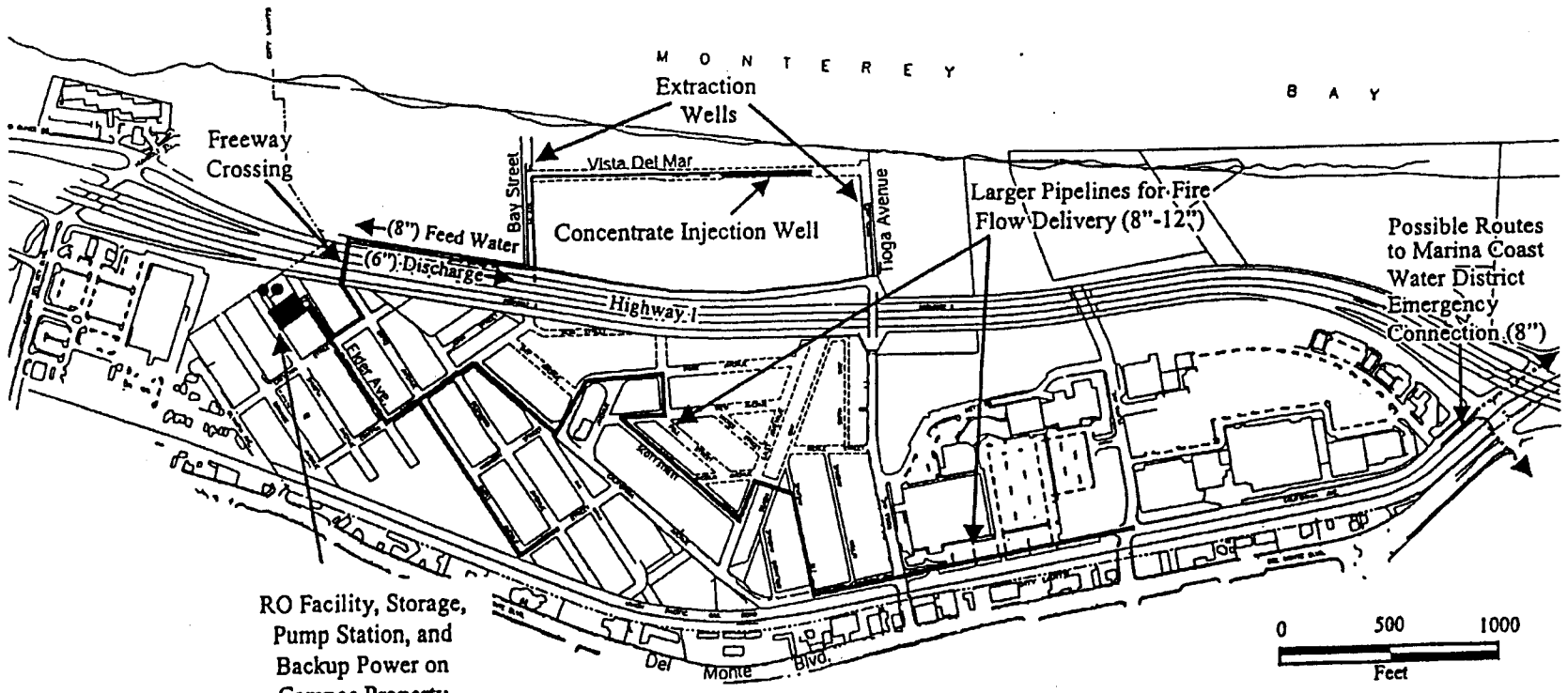


Exhibit 2: Parcel Map



Map

Exhibit 3: Site Plan



WATER SUPPLY PROJECT IMPROVEMENTS

086

ATTACHMENT 1

Exhibit 4: Appellant's Contentions

Reasons for Appeal of Sand City Water Supply / Desalination Project (CDP 04-08)

The City's approval of the above referenced permit, authorizing the establishment, construction, and operation of a desalination facility and potable water distribution system is inconsistent with the following Sand City certified Local Coastal Program hazards, urban services, land use, ESHA, desalination facility, and access provisions, as well as the public access policies of the Coastal Act:

- LCP Policy 4.3.8 requires all development to be sited and designed to minimize risk from geologic hazards. Policy 4.3.9 requires all coastal zone development proposals to prepare a geologic report and identify appropriate hazard setbacks based on the economic life of the project (minimum 50 years). The reports are required to also recommend mitigation measures and alternatives to minimize [coastal resource] impacts. Policy 4.3.12 requires the project be denied if shoreline hazards cannot be adequately mitigated as recommended in the geologic report. As approved by the City, the siting of the desalination intake and injection (outfall) wells are in an area that may be threatened by coastal erosion within the next 50-years. Though the City's conditions of approval require further geotechnical review and re-siting of the wells as necessary to achieve a 50-year (minimum) setback, the City did not evaluate the feasibility or impacts associated with re-siting the wells. The area landward of the proposed well locations consists mainly of sensitive coastal dune habitat that would likely be affected by such a move. Additionally, the City has not conditioned the project to prohibit seawalls in the future or provide clear criteria under which the wells must be relocated.

- Coastal Act Section 30212 generally requires that public access be provided in all new development along the shoreline. LCP policy 2.3.1 similarly requires all shorefront development to provide public access, and specifically requires dedication of vertical and/or lateral blufftop access while also referencing a planned bicycle path along Vista Del Mar at the location of the proposed injection well. LCP policy 2.3.2 requires dedication of lateral access easements for dry sand access along sandy beaches as part of all shoreline development projects. Policy 2.3.15 specifically requires access improvements such as an overlook point at the end of Bay Avenue, a vertical accessway (stairway, if needed) from the Bay Avenue street end to the beach, along with public access signing and safety warnings. Although the approved project is located between the first public road and the sea, there were no access improvements proposed or conditions to require the requisite access amenities. The initial construction of the desalination facility is likely to result in temporary impacts to public access and there are other long-term aspects of the project may result in significant adverse impacts on access. For instance, to the degree that shoreline armoring may be required to abate a hazard in the future, public access and recreational opportunities as well as public views could be impacted.

- LCP policy 6.4.16 relates specifically to desalination facilities and requires among other things, that proposed facilities be consistent with all LCP and Coastal Act policies including those concentrating development, supporting priority coastal uses, and protecting significant scenic and habitat resources. The City-approved desalination facility will generate 300 acre feet per year of water. Current water use in Sand City is roughly 120 acre feet per year. The difference (180 afy) is the amount of water the City has determined is necessary to meet estimated demand for water at full projected build-out of the City. The proposed capacity (300 afy) may exceed the amount necessary to serve the level of development allowed by the LCP because the level of development assumed for the area west of Highway 1 may conflict with the LCP requirements to protect sensitive habitat and views (e.g., LCP policy 6.4.1). Assumed levels of development in this area may be further limited by the risk of shoreline erosion.

  The City-approved project is likewise inconsistent with LCP policy 6.4.16 which further requires that desalination facilities be evaluated based upon adopted community planning documents, including the City's General Plan, Urban Water Management Plans, Regional Water Supply Plans, Local Coastal Programs and other approved plans that integrate local or regional planning, growth, and water supply / demand projections. The approved project does not ensure that there will be a commensurate reduction in the use of CalAm water or that water produced by the facility will be used solely in Sand City. Policy 6.4.16 also requires desalination projects to be implemented in coordination with water conservation and recycling measures. There are no conditions on the project that ensure water conservation measures or recycling will be pursued.

- Policy 4.3.21 provides that ESHA shall be protected by implementing standards for development including native landscaping and restoration. Policy 4.3.20 promotes protection of ESHA by requiring development adjacent to locations of known ESHA to be sited and designed to prevent impacts, which would significantly degrade such areas, and shall be compatible with the continuance of such areas. The City approved project does not include any native landscaping / restoration of the area to be disturbed, nor does it address the potential ESHA impacts of relocation of the wells or the long-term maintenance commitment to surrounding habitat areas. Although the intake and injection wells are proposed in an area of the dune that has been previously degraded, the Commission recognizes that dune habitat can be restored and that such areas play an important role in the health and productivity of the Monterey Dunes complex. The City's approval does not contain enough information to determine whether the project may encroach within ESHA, particularly given the fact that the exact location of the wells has yet to be identified (See first bullet above).

- Policy 6.4.16 of the certified LCP states that all desalination facilities must be public. Although it is anticipated that the City-approved development will be publicly owned and managed, the coastal development permit issued for the project does not contain the necessary findings and conditions to ensure that it will be public and remain a public facility over the life of the project.

EXHIBIT A

CITY OF SAND CITY

RESOLUTION NO. SC _____ (2005)

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAND CITY APPROVING THE COASTAL DEVELOPMENT PERMIT, INCLUDING SITE PLAN AND USES, FOR THE SAND CITY WATER SUPPLY PROJECT

WHEREAS, the City of Sand City and its Redevelopment Agency have proposed to develop certain properties in the City of Sand City with a 300 acre-foot per year (AFY) desalination facility including intake and discharge wells and related water distribution system in order to provide a long-term potable water supply to residents and businesses within the City of Sand City and its redevelopment project area; and

WHEREAS, the City of Sand City and the Coastal Commission have adopted and certified, respectively, the Sand City Local Coastal Program Land Use Plan which allows for desalination projects within Sand City provided certain criteria are satisfied; and

WHEREAS, the City of Sand City and the Coastal Commission have, respectively, adopted and certified the Sand City Local Coastal Program Implementation Plan which specifically allows desalination projects within Sand City provided certain criteria are satisfied; and

WHEREAS, the City of Sand City and its Redevelopment Agency have applied for a Coastal Development Permit for development and use of certain land located within the coastal zone in conjunction with the development of the Sand City Water Supply Project as generally illustrated on Exhibit A, attached hereto and incorporated by reference; and

WHEREAS, a Coastal Development Permit, including site plan approval and use approval is required for the project in accordance with the Sand City Zoning Ordinance; and

WHEREAS, a Final Environmental Impact Report (EIR) for the Sand City Water Supply Project has been prepared in accordance with the requirements of and pursuant to the California Environmental Quality Act (CEQA), and the City Council of the City of Sand City hereby certifies and finds as set forth in the CEQA Certification and Findings attached hereto as Exhibit B and incorporated by reference herein.

WHEREAS, approval of the Coastal Development Permit, including site plan and use approval is consistent with the Sand City General Plan and the Sand City Local Coastal Program, and the City Council of the City of Sand City hereby so determines as set forth in the following findings.

FINDINGS

Description of the Project: The proposed project is the construction and operation of a reverse osmosis (RO) desalination facility and potable water distribution system to serve customers in Sand City. Water to be treated at the facility will be obtained from the shallow groundwater aquifer near Monterey Bay. The proposed project will supply potable water to residential and commercial/industrial customers in Sand City at a rate of up to 300 acre-feet per year (AFY).

The proposed project includes design features to avoid adverse environmental effects to coastal resources, including marine organisms, groundwater supplies, and sensitive habitat areas. The proposed 300 AFY capacity of the RO/desalination facility will allow for recovery and freshwater recharge of the shallow, brackish groundwater aquifer. In addition, "reject" water (concentrate) from the RO facility will not exceed the approximate salinity of seawater and will be very similar in chemical composition. Injection of the concentrate in a below sea level , horizontal well beneath a coastal bluff will not substantially alter the existing, naturally-occurring seawater-freshwater interface near Monterey Bay or result in localized salinity increases in Monterey Bay. The proposed new water supply will be independent from the Carmel River Aquifer and the Cal-Am water supply which is restricted by the State Water Resources Control Board.

The proposed project is intended to provide water for existing and future development in accordance with the planned development, goals and objectives of the City's General Plan, Local Coastal Plan and Redevelopment Plan. With water conservation measures in place, the proposed project could serve a residential population of 1,029 and approximately three million square feet of commercial and industrial development, which is less than build-out allowed in the City's General Plan.

In approving the Project, the City Council acknowledges that the Project is subject to the conditions designated as applicable to the Coastal Development Permit in the Sand City Water Supply Project Conditions Master Set, attached hereto as Exhibit C and incorporated herein by reference. The measures identified in the Final Environmental Impact Report ("Final EIR") for the Project and, as so modified, shall be referred to as the "Approved Project."

The City finds as follows:

1. **Finding**: The City finds that the Approved Project, as conditioned, is consistent with the City of Sand City General Plan and all applicable policies and programs contained therein.

   Evidence: Application materials and the text and policies of the Sand City General Plan 2002 - 2017 have been evaluated during the course of the review of this application. No conflict or inconsistencies with the text or the policies were found to exist.

2. **Finding**: The City finds that the Approved Project, as conditioned, is consistent with the Sand City Local Coastal Plan which is a part of the Sand City General Plan 2002 - 2017. Specifically, regarding desalination facilities, the certified Local Coastal Plan requires that desalination facilities in Sand City must: a) Be public; b) avoid or fully mitigate any adverse environmental impacts to coastal resources; c) be consistent with all LCP and Coastal Act Policies, including those for concentrating development, supporting priority coastal uses, and protecting significant scenic and habitat resources; d) be evaluated based upon adopted

community planning documents, which may include General Plans, Urban Water Management Plans, Regional Water Supply Plans, Local Coastal Programs, and other approved plans that integrate local or regional planning, growth, and water supply/demand projections; e) use technologies that are most energy-efficient; (f) use, where feasible, sub-surface feedwater intakes (e.g., beach wells) instead of open pipelines from the ocean, where they will not cause significant adverse impacts to either beach topography or potable groundwater supplies; g) use technologies and process that eliminate or minimize the discharges of hazardous constituents into the ocean and ensure that the least environmentally damaging options for feedwater treatment and cleaning of plant components are selected; h) be designed and limited to assure that any water supplies made available as a direct or indirect result of the project will accommodate needs generated by development or uses consistent with the kinds, location and densities specified in the LCP and Coastal Act, including priority uses; and I) be an element (where economically and environmentally appropriate) of a balanced water supply portfolio that also includes conservation and water recycling to the maximum extent practicable.

Evidence: As described in the Final, Certified EIR, the Sand City Water Supply project will: 1) be publicly owned by the City of Sand City and/or the Sand City Redevelopment Agency; 2) avoid or fully mitigate any adverse environmental impacts to coastal resources, including scenic resources and special status plants and animals; 3) be consistent with the Local Coastal Plan by allowing only growth within Sand City and only growth that is consistent with the LCP certified land use plan; 4) be consistent with regional population projections of the Association of Monterey Bay Area Governments (AMBAG); 5) use energy efficient water treatment technology; 6) use subsurface feedwater wells within the on-land seawater wedge rather than open pipelines from the ocean; 7) be designed to properly dispose of membrane cleaning chemicals with no hazardous materials routed to the concentrate discharge system; 8) discharge a concentrated saline solution (not a brine) similar in composition and salt concentration to Monterey Bay waters through beach wells (no direct discharge to Monterey Bay; 9)not result in concentrate discharge that will adversely impact marine resources; and 10) will be coordinated with regional plans to expand the regional water supply to allow for reasonable growth as allowed under the Local Coastal Plan. In addition, the proposed water supply project is based on water demand projections that include continued conservation by water users in Sand City to the maximum extent practicable. A source of recycled water for non-potable purposes is being planned by the Monterey Regional Water Pollution Control Agency, of which Sand City is a member. If implemented, the recycled water will be made available to Sand City. The City has already indicated that at least one water user, Granite Rock, could use this water for its concrete-making batch plant.

On a regional basis, the City of Sand City continues to communicate with the two major water purveyors in the region, the California-American Water Company and the Marina Coast Water District. Sand City is also a member of the Monterey Peninsula Water Management District and has agreed to coordinate activities with any proposal the Water District may have to provide a regional, long-term water supply to the Monterey Peninsula. The Sand City Water Supply project is also regionally-oriented in that it will eliminate the need to extract water for its City purposes, from the Seaside Groundwater Basin and the Carmel River Basin, both of which are in overdraft, and the Project will eliminate up to 120

acre-feet of current extraction from those basins.

3. **Finding**: The City finds that the Approved Project is in conformity with the public access and recreation policies of the California Coastal Act of 1976, contained in Chapter 3, commencing with Section 30200 of the California Public Resources Code. The Approved Project, as conditioned, is consistent with the adopted and certified Sand City Local Coastal Program (LCP), including the Land Use Plan (LUP) and the Implementation Plan (IP), and all applicable policies and provisions contained therein

Evidence:

Public Access: The proposed project would install underground pipelines, four shallow groundwater extraction wells and a 500 foot long injection well within existing road rights-of-way. The project would not limit existing public access to the shoreline from Bay Street and Tioga Avenue, with the possible exception of brief periods during installation of the proposed extraction and injection wells. Components of the project west of Highway 1 would be underground, which will avoid impacts to the scenic and visual qualities of the coastal zone.

Recreation: Beach recreation is currently the primary type of recreation along the Sand City coast. Implementation of the proposed project would not prevent or limit continued recreational use and access to beach areas to the west of Bay Street and Tioga Avenue.

Coastal Resource Management: Injection of the concentrate from the RO/desalination facility, which would have the same salinity as seawater and a very similar chemical composition, would not adversely effect marine organisms (refer to Section II, D of the Final EIR). The proposed water supply system would use water from the shallow brackish aquifer near the Bay and would not substantially alter the existing, naturally-occurring seawater/freshwater wedge (refer to Section II B of the Final EIR). The project includes an adaptive water supply management program to provide protection for the water supply system within areas subject to coastal recession. This program would consist of monitoring and relocation of infrastructure under certain conditions and would not require the construction of protective devices that would alter natural landforms along bluffs and cliffs. This program is therefore consistent with the Coastal Resource Management Policy regarding geologic hazards (Section 30253).

Environmentally Sensitive Habitats: The infrastructure proposed as part of the Sand City Water Supply Project is primarily located outside of environmentally sensitive habitats. Some proposed project elements will be constructed adjacent to restored dune areas. The project includes measures to avoid direct and indirect impacts to these habitats during construction. (See mitigation monitoring plan, attached and incorporated herein by reference.)

4. **Finding**: The project is consistent with the Sand City Zoning Ordinance and Local Coastal Program Implementation Plan. The desalination facility is also a permitted use in the M-UP district as deemed appropriate by the Sand City Council for the site upon which it is proposed.

Evidence: The site upon which the desalination plant is proposed is zoned M-UP and CZ M-UP with permitted uses including desalination plants provided they meet the criteria listed in finding 1 above. The proposed plan satisfies those criteria as evidenced under finding 1. The proposed intake and discharge wells are proposed within Sand City public rights-of-way which allow for all public utilities.

5. **Finding**: The City finds that the Approved Project is consistent with the goals and purposes of the Sand City Redevelopment Project Area and Redevelopment Plan in that a new water supply is mandatory in order to facilitate redevelopment that will eventually eliminate blighting influences within the project area and promote housing and economic development. The Redevelopment Plan is time-sensitive (due to expire in 2027) and the City and Redevelopment Agency cannot afford to wait for other water sources to come on line due to there long or non-existent planning horizons.

   Evidence: The Sand City Water Supply Project will be completed within one year of project approval, a time line that cannot be matched by any other prospective water source. The City is currently under a defacto water limitation due to the requirements of State Water Resources Control Board Order 95-10 which prohibits more water being produced by Cal-Am, the city's current water purveyor, until major economic and environmental hurdles are overcome. By best estimates, Cal-Am predicts that any long-term water supply they produce is at least seven years from construction. At the current moment, it is still unclear what form of governance any new water supply project proposed by Cal-Am will take as it will likely require a public/private partnership, which is still in the formative stages.

6. **Finding**: The City finds that the Approved Project, as conditioned, will provide for adequate "fire flow" rates. Conditions of approval require compliance with the requirements fo the City of Monterey Fire Department.

   Evidence: The project has been conditioned to meet all fire flow requirements of the Monterey Fire Chief.

7. **Environmental Finding**: The Project, as conditioned and designed will not cause a significant impact on the environment. A Notice of Determination shall be filed with the County Clerk and State Clearinghouse acknowledging that fact. The environmental impact report for the project has been certified as being complete, correct and adequate, prepared in accordance with the California Environmental Quality Act (CEQA) and related state and local guidelines.

   Evidence: The Final certified EIR is available for review in the Sand City planning department and the Monterey and Seaside main libraries. It is hereby cited as part of the administrative record and its analysis, conclusions and findings are hereby adopted by reference.

8. **Finding**: The City finds that the Approved Project and its design and improvements as conditioned will not be detrimental to the public health and safety. As conditioned, the approved project will not create any hazards from air pollution, noise or any other environmental condition.

Evidence: Application materials and the project environmental impact report, incorporated by reference, were reviewed. No public health or safety impacts were identified related to noise, air quality or any other environmental condition. In fact, the approved project will eliminate reliance on two sources of water that are currently being overdrafted, a positive environmental impact of the project.

NOW, THEREFORE, IT IS HEREBY RESOLVED by the City Council of the City of Sand City as follows:

1. The Sand City Water Supply Project coastal development permit, including site plan approval and conditional use in the coastal zone as generally shown on Exhibit A, attached hereto and incorporated herein by reference is hereby approved subject to the conditions in Exhibit C, attached hereto and incorporated herein by reference.

PASSED AND ADOPTED by the City Council of the City of Sand City this 18th day of January 2005 by the following vote:

AYES:

NOES:

ABSTAINED:

ABSENT:

ATTEST:

Linda Scholink, City Clerk

APPROVED:

David K. Pendergrass, Mayor

watercdpfdgs.1

EXHIBIT C

SAND CITY WATER SUPPLY PROJECT CONDITIONS OF APPROVAL

These conditions of approval constitute the conditions applicable to the Sand City Water Supply Project Coastal Development Permit, including conditional use and site plan approval issued by the City of Sand City.

LAND USE

1. All development related activities required as part of the Sand City Water Supply Project shall generally conform to the site diagram attached hereto and incorporated herein by this reference.

2. Prior to issuance of building permit(s) for the desalination plant, a final landscape plan and architectural drawings shall be reviewed and approved by the Design Review Committee (DRC). The final landscape plan shall (a) be in accordance with Section 18.62.050 of the Municipal Code; (b) utilize native, non-invasive coastal plants to the extent feasible; and (c) provide for the use of drought tolerant plants in accordance with Chapter 15.12 of the Municipal Code.

3. Prior to public distribution of water, the City and/or the Redevelopment Agency shall obtain a final design permit from the DRC in accordance with Chapter 18.58 of the Municipal Code. The final design shall be consistent with the requirements of Chapter 18.64 of the Municipal Code and shall include a lighting plan which provides for the illumination of the desalination facility site for security purposes. The final design for the building(s) shall include plans for the design and screening of mechanical equipment proposed to be located on the building(s).

4. Prior to the issuance of building permits, the City and/or the Redevelopment agency shall obtain approval for operation of a water system from the California Department of Health Services (DHS) and the Monterey County Department of Environmental Health.

5. Prior to the issuance of building permits, a design-level geotechnical report shall be completed to recommend specific design criteria for the pipelines, wells, and foundations of structures at the desalination facility. The geotechnical report shall include site-specific evaluation of soils conditions, slope stability, ground-shaking and the potential for liquefaction, lateral spreading and seismically induced dry sand settlement. The report shall also address design criteria for avoiding impacts of coastal recession, erosion, and coastal bluff slope stability on the operation of the water supply system. At a minimum, design criteria shall include horizontal and vertical setbacks or safety factors for wells and pipelines within the area subject to coastal recession during the next 50 years. These criteria and recommendations shall be required conditions of the building and grading permits issued for the project.

All geotechnical reports shall be submitted to the Sand City Community Development Department and shall be peer-reviewed by a certified geotechnical engineer.

6. The RO/desalination facility on Shasta Avenue and its associated components shall be designed and constructed in accordance with the 1997 Uniform Building Code guidelines for Seismic Zone 4.

GRADING, DRAINAGE AND CONSTRUCTION

7. A final grading and erosion control plan for all applicable project components shall be submitted to, and approved by the City Engineer prior to issuance of a final grading permit. The plan shall provide that any grading between October 1 and April 15 will require approval of the City Engineer and shall be consistent with said plan. Implementation of the final grading plan shall also be consistent with habitat protection measures of these permit conditions.

8. All construction contracts shall require watering of exposed earth surfaces in the late morning and at the end of the day; frequency of watering shall be increased if wind speeds exceed 15 miles per hour.

9. Construction activities within 300 feet of residential uses shall be limited to 7:00 a.m. to 6:00 p.m. on weekdays, including Saturdays, with no construction activities on Sundays or holidays. All construction equipment shall be adequately maintained and muffled. Advanced written notification of planned construction activities shall be provided to residents within 300 feet of the construction zone.

VEGETATION AND WILDLIFE

10. A preconstruction biological survey shall be required for potential burrowing owls, Western snowy plover, black legless lizards and all sensitive plant species identified in the project environmental impact report (EIR). If construction is to occur between March and September, a qualified ornithologist will conduct a pre-construction survey for nesting snowy plovers within 500 feet of construction activity. If nesting snowy plovers are identified within 500 feet, the ornithologist will, in consultation with the U.S. Fish & Wildlife Service determine a construction-free setback around the nest. The setback shall be fenced and construction equipment and workers will not be allowed to enter the enclosed setback until the conclusion of the breeding season.

For construction activities proposed during the nesting season of the burrowing owl (February 1 through August), a construction-free buffer will be established around any active burrowing owl nest. Once the young have fledged, construction activity can occur within close proximity of the former nest. Construction activities shall be monitored by a qualified ornithologist to insure that construction activities do not result in harm or injury to resident owls.

11. Spoils piles generated during trenching and installation of temporary bore pits for the installation of pipelines and wells shall only be placed on existing pavement or in designated storage areas. The placement of trenching spoils within coastal dune habitat or in areas supporting buckwheat plants shall be prohibited. These requirements shall be conditions of all grading permits issued for the project.

12. A construction worker awareness program shall be required for all personnel working near coastal dune habitat prior to the initiation of work. The program shall include the general habits of special status species that could be present in the area, a discussion of dune erosion factors, legal requirements and protections that apply, and measures to be used by project personnel to minimize the risk of impacts to coastal dune habitat or special status plant or animal species during project implementation. This construction awareness program shall be a required part of all appropriate bid requirements issued by the City Engineer.

13. Exclusionary fencing shall be provided in areas identified as being necessary for such restrictions as determined by the preconstruction biological survey of areas to be disturbed by the project.

14. The discharge of concentrate (byproduct water of the desalination process) through subsurface injection well(s) shall have a total dissolved solids (TDS) content limited to a maximum of 35,000 mg/L.

ARCHEOLOGY

15. If cultural resources are uncovered during site preparation or construction, work shall be halted in the immediate area of the find and the regional office of the California State Archeological Survey and the City of Sand City planning department shall be notified so that suitable mitigation measures can be implemented, if necessary. Potential mitigation measures, as applicable, are described on pages 136, 137 of the Draft EIR for the project, and are incorporated herein by reference.

ENERGY

16. To the extent feasible, the RO/desalination facility shall be operated as needed to maintain adequate water supply for water users and for fire flows. The design of the RO/desalination facility shall require, in contract documents that state-of-the-art membrane technology be used and that an energy recovery system for the high pressure pumps be installed.

PUBLIC UTILITIES AND SERVICES

17. The Sand City Water Supply System shall satisfy fire flows required by the Monterey Fire Department (contract fire department of Sand City).

18. A design-level geotechnical study shall be required and peer reviewed prior to issuance of building permit(s).

Said study shall address design criteria for avoiding impacts of coastal recession, erosion and coastal bluff slope instability on the operation of the water supply system. At a minimum, design criteria shall include horizontal and vertical setbacks or factors of safety for wells and pipelines within the area subject to coastal recession during the next 50 years. Recommended factors of safety will be required conditions attached to the building permit(s) and will be part of the "adaptive water supply management program". Furthermore, the adaptive water supply management program, as proposed on page 14 of the Draft EIR is hereby incorporated by reference into this condition of project approval.

19. The RO/desalination facility on Shasta Avenue shall be designed and constructed in accordance with the 1997 Uniform Building Code guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking on the site.

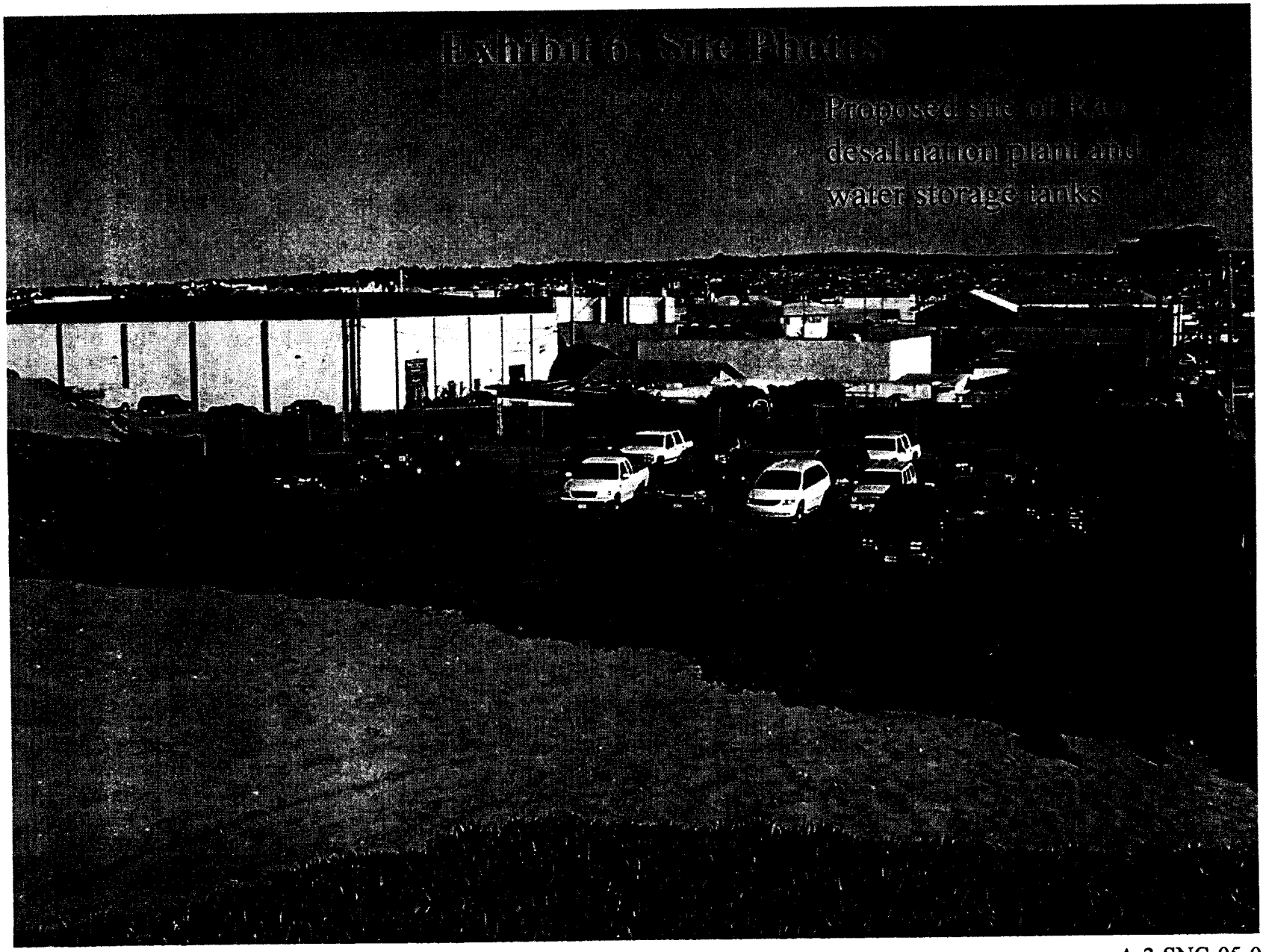


Exhibit 6. Site Photos
Proposed site of R
desalination plant and
water storage tanks

Exhibit 6: Site Photos

Exhibit 6: Site Photos

Proposed location of Bay Avenue extraction wells.

KEY POINTS REGARDING THE SAND CITY WATER SUPPLY PROJECT

1. It is consistent with the Coastal Commission 2004 Desalination Guidelines, which are mirrored in the Sand City LCP.

2. The project is almost "ready to go". It has a fully certified environmental impact report and mitigation monitoring program.

3. The project received no public opposition.

4. The proposed project has the written support of our district Assmbly Members and our State Senator.

5. The project has the support of the Desalination Institute, currently being formed at California State University, Monterey Bay (CSUMB).

6. The project would recycle water in two ways: (a) it uses brackish water which is partial runoff water that would otherwise be unused; and (b) the waste water from the Sand City system is treated at a regional tertiary sewage treatment plant that reuses the water for irrigation of crops in the Castroville area. The regional district claims this water recycling program is the largest in the nation.

7. Sand City's per capita water use illustrates that Sand City is one of the lowest water consumers (or conversely one of the most water-conserving) in California.

8. The proposed project is environmentally benign. The reject, processed water will cause zero brine discharge because its salinity will be at the same or lower level to that of ocean water. This desalination plant will be state-of-the-art.

9. The projected monthly cost of water charged to the residents and businesses in Sand City will be no more than the present rates charged by the California American Water Company (CalAm) - the present private water purveyor for services in Sand City. Based on rate increase requests to the CPUC by CalAm, the Sand City water rates are expected to be lower than CalAm rates.

10. The project would help alleviate current overdrafts in the Seaside Groundwater Basin and the Carmel River Basin.

City Hall
1 Sylvan Park,
Sand City, CA
93955

Administration
(831) 394-3054

Planning
(831) 394-6700

FAX
(831) 394-2472

Police
(831) 394-1451

FAX
(831) 394-1038

Public Works
(831) 394-1386

FAX
(831) 394-8518

Incorporated
May 31, 1960

CCC Exhibit 7
(page 1 of 1 pages)
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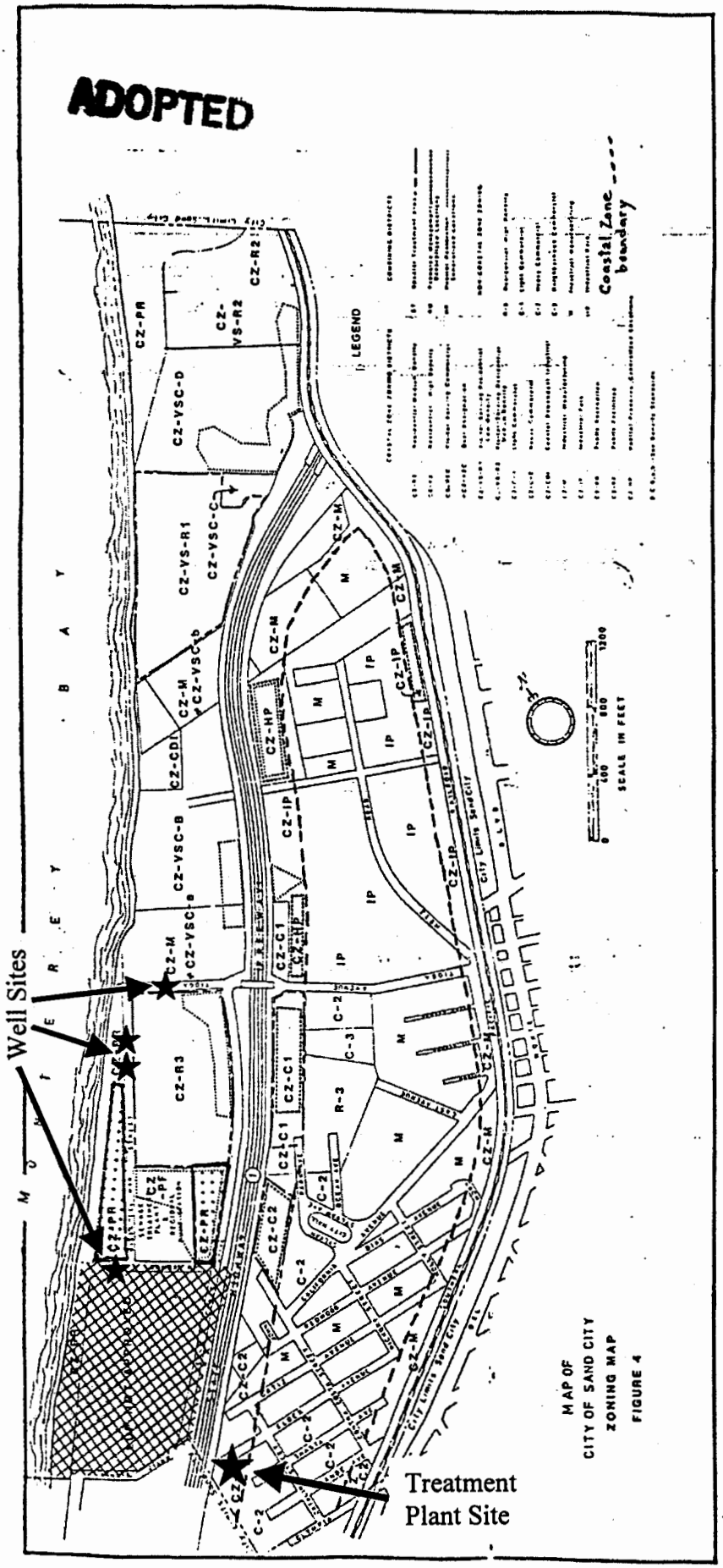

EXHIBIT B

AREAS EXCLUDED FROM APPROVAL

LUP not approved by Coastal Commission

IP lacks TDC program; LUP relates this area to above area

NOTE: See post-certification map for areas which permanently remain under Coastal Commission jurisdiction pursuant to Coastal Act Section 30519b and Section 30603a(1,2).

Exhibit 8

Coastal Zone Boundary and Area of Deferred Certification

A-3-SNC-05-010