

W10b

RECORD PACKET COPY

STATE OF CALIFORNIA—THE RESOURCES AGENCY

PETE WILSON, Governor

CALIFORNIA COASTAL COMMISSION

SAN DIEGO COAST AREA
11 CAMINO DEL RIO NORTH, SUITE 200
SAN DIEGO, CA 92108-1725
(619) 521-8036

Filed: 6/26/97
49th Day: 8/14/97
180th Day: 12/23/97
Staff: WNP-SD
Staff Report: 7/24/97
Hearing Date: 8/12-15/97



REGULAR CALENDAR
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-97-45

Applicant: SDG&E

Agent: Mark Chomyn

Description: Dredge between 155,000 and 200,000 cubic yards of lagoon bottom (sand) within the outer basin of Agua Hedionda Lagoon starting September 15, 1997 and ending April 15, 1998. The sand is proposed to be placed on the "South Beach", in a 1,100 foot long and 200 foot wide area directly south of the Encina Power Plant discharge jetty on Carlsbad State Beach. The applicant is also requesting approval to dredge up to 500,000 cubic yards in any single event (dredge cycle) for a five year maximum (to 2002) total dredging volume of 1,250,000 cubic yards.

Site: Outer basin of north shore of Agua Hedionda Lagoon and Carlsbad beaches south of lagoon to Oak Street, Carlsbad, San Diego County.

Substantive File Documents: Certified Agua Hedionda Land Use Plan;
CDP No. 6-93-193-A and CDP No. 6-93-193-A2

STAFF NOTES:Summary of Staff's Preliminary Recommendation:

Staff is recommending partial approval of the applicant's request with conditions which allow a one-time dredge of up to 200,000 cu.yds. of material to be placed on the Middle Beach rather than the South Beach as proposed by the applicant. Staff's preferred deposition location will provide a greater recreational benefit to beach users along the Carlsbad shoreline because the Middle Beach is the most heavily attended beach in Carlsbad and has supporting parking facilities, public walkways and lifeguard service, while the South beach provides less beach use and support facilities. Staff is also recommending the applicant do a monitoring study of sand transport along the Carlsbad shoreline to determine where the best beach nourishment sites are at any given time for deposition of dredged material resulting from SDG&E's maintenance dredging of Agua Hedionda Lagoon. Absent this study, staff recommends the Commission deny the applicant's request to dredge up to 1,250,000 cu.yds. of material within the next five years. Further, staff recommends that any subsequent dredge cycles be subject to a separate coastal development permit and involve coordination with the Corps of Engineers, City of Carlsbad and State Parks to determine the appropriate disposal site(s) for the future. The attached conditions of this approval require final deposition plans, address sensitive resources, require final approval by the Corps of Engineers, and the State Department of Parks and Recreation.

PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

I. Approval with Conditions.

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. Timing of Dredging and Beach Deposition. Prior to the issuance of the coastal development permit, the applicant shall submit to the Executive Director for review and written approval, final plans and implementation measures for deposition of the dredged material on Middle Beach, between the ocean entrance to Aqua Hedionda Lagoon and the SDG&E discharge jetty, which incorporates the following:

a. Pre-and-Post Dredge Requirements. At least thirty days prior to dredging and within 60 days of completion of each dredge cycle, the applicant shall submit to the Executive Director for review and written approval the following:

1. A map of pre-dredge conditions of the lagoon and post deposition profiles at the approved beach deposition location(s); proposed dredge quantities; deposition plan and methodology; and signage plan;

2. Evidence the Corps of Engineers has approved the proposed dredge spoils as suitable for deposition at the approved beach locations, pursuant to ACOE Permit #87-171.

b. Public Access/Timing. Placement of sand on area beaches shall occur outside of the summer season (Memorial Day through Labor Day) when beach attendance is at its lowest.

c. Sensitive Species/Timing. To avoid potential impacts to the California least tern breeding period and the grunion spawning period, dredging can occur between September 15 and April 15 with the option of extending the dredge period to April 30 if approved in writing by the Executive Director in consultation with the Army Corps of Engineers (COE) and California Department of Fish and Game (DFG).

d. Eelgrass Impacts. The existing eel grass beds shall be mapped and recorded prior to each maintenance dredging operation. The mapping shall be submitted to the Executive Director at least 30 days before dredging and shall indicate the length, width, and density of the eel grass beds. Post-dredging mapping shall be submitted thirty days after the completion of dredging and shall be a second base map to identify the remaining eel grass beds in the project area. No anchorage of dredging equipment is permitted outside the limits of the dredging operation. If any eelgrass impacts occur outside the limits of dredging, revegetation must be carried out at a ratio of 1.0 square feet of mitigation area for each square foot of area impacted and shall be completed within four months. The above shall be submitted consistent with the requirements of the Corps of Engineers Permit #87-171 and shall be subject to review and approval of the Executive Director.

2. Monitoring.

a. Beach Profiles. Prior to the placement of any material at the Middle Beach, the applicant shall prepare two profiles of the beach and off shore area (to closure or wading depth, consistent with the survey requirements of the ACOE permit) showing the pre-disposal conditions. Profiles shall be taken at the same locations after completion of the disposal, one month after disposal, and annually thereafter until the area either returns to its pre-disposal condition or is further modified by additional nourishment. Reports shall be provided to the Executive Director following the one-month after disposal profiles and after each annual survey which provide information on site conditions and an analysis of the long-term changes in sediment supply between the jetties.

b. Report on Stable Disposal Sites. Prior to filing a permit application for any future dredge cycle at Aqua Hedionda Lagoon, the applicant shall submit to the Executive Director a report which identifies the stable beach disposal sites both north and south of the Agua Hedionda Lagoon jetties. This report may rely on available wave and current data and profile information developed by the applicant, City of Carlsbad, SANDAG, the Corps of Engineers, the Navy, and others. The report should identify at least one site north of Agua Hedionda lagoon and one site south of Agua Hedionda lagoon which are close to available public access and which seem relatively stable. If there is no sites adjacent to the lagoon which exhibit a greater tendency to stability, the report should identify the sites where nourishment material would have the greatest recreational benefit, without adversely affecting marine resources.

3. Term of Permit. This coastal development permit authorizes a one-time dredge of up to 200,000 cu.yds. to occur at the Middle Beach, between the ocean entrance to Aqua Hedionda Lagoon and the SDG&E discharge jetty. No extension of the permit expiration date or additional dredge cycles beyond the 1997-1998 cycle are approved.

IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description/History. The applicant proposes to dredge between 155,000 and 200,000 cubic yards of lagoon bottom (sand) within the outer basin of Agua Hedionda Lagoon starting September 15, 1997 and ending April 15, 1998. The sand is proposed to be placed on the South Beach, in a 1,100 foot long and 200 foot wide area directly south of the Encina Power Plant discharge jetty on Carlsbad State Beach (see Exhibit 1). The applicant is also requesting approval to dredge up to 500,000 cubic yards in any single event (dredge cycle) for a five year maximum (to 2002) total dredging volume of 1,250,000 cubic yards.

The powerplant is located on the south shore of the outer basin of Agua Hedionda Lagoon, within a few hundred yards of the Pacific Ocean. Typically, the dredged sand is discharged from the dredging boat through a pipeline beneath Carlsbad Boulevard to replenish the beach. SDG&E has conducted the dredging operation since 1954 when the generating station was constructed.

The dredging is necessary to provide an adequate water supply of cooling water to maintain the powerplant's operating efficiency. According to the applicant, the dredging is necessary because of changing conditions and circumstances regarding the existing hydraulics of the lagoon and the existing contractual commitments of the dredging operation. The applicant states that due to current hydraulic conditions in the Agua Hedionda lagoon system (outer, middle, and inner lagoons), yearly sand influxes into the lagoon are in excess of 150,000 cubic yards per year. The applicant states that most of the sand entering the outer lagoon ocean entrance comes from north-to-south sand movement associated with the Oceanside littoral cell.

The Coastal Commission has approved the dredging program and modifications to it over the years. CDP #F 5536 (1977), the Coastal Commission's initial approval of the dredging operation, required dredged sand from the lagoon's outer basin to be deposited on Carlsbad State beach, immediately adjacent to the facility. In CDP 6-93-193-A, the Commission approved the applicant's request to move the approved beach replenishment boundary approximately 1 mile north from the limit approved in CDP #F 5536 (exhibit 2). CDP 6-93-193-A was approved as an amendment to CDP #F 5536. The boundary was proposed to be expanded north to Oak Street so that beach sand could be deposited where it is needed most as Carlsbad beaches are typically sand-starved.

CDP 6-93-193-A also required evidence that the Corps of Engineers has approved the spoils for beach replenishment, a provision that placement of sand must occur outside the summer season, timing requirements to limit dredging to the period between October 1 and April 15 to avoid potential breeding impacts to the California Least Tern and grunion spawning, pre-and-post dredge mapping of eel grass beds within the outer lagoon to ensure no impacts to the beds from dredging, and a mitigation plan to be implemented should eelgrass impacts occur.

On September 14, 1995, the Commission approved CDP 6-93-193-A-2 to allow a one time dredge of up to 500,000 cubic yards of material to be placed within the dredge disposal limit. SDG&E proposed placement of 400,000 cubic yards of

material for the 1995-96 dredge cycle as 150,000 cu.yds. on the South Beach (south of the plant's warmwater discharge jetty) and 250,000 cu.yds. of material on the Middle Beach (between the discharge jetty and the ocean entrance jetty to Agua Hedionda Lagoon). The above figures were estimates based on pre-dredge soundings. The final dredge report indicates 443,130 cubic yards of sand was dredged from the outer basin. At that time the City of Carlsbad proposed to have a portion of the dredged material placed on North Beach, north of the Tamarack parking lot. However, SDG&E indicated they did not intend to amend or renew the Special Use Permit (SUP, 1993) issued by the City because they did not want the sand to be placed north of the ocean entrance as proposed by the City and the Beach Erosion Committee (BEC), a citizen's advisory group. (Between 1993 and 1995 both the City and the BEC had reviewed SDG&E's beach deposition plan and determined if the dredge spoil placement areas were appropriate through the SUP process.) SDG&E stated that sand placed north of the ocean entrance migrated back into the outer basin through the north-to-south littoral drift shoreline process and would have to be dredged again resulting in a waste of time and money to annually dredge the outer basin.

SDG&E cited the California Public Utility Commission's jurisdiction and preemptive authority as the reason the SUP would not be amended or renewed. The City desired to retain the SUP process; however, subsequently the City's requirements for the SUP was declared void by the Superior Court. The decision is currently being appealed by the City to the Appellate Court. Therefore, at this time the City has no legal authority to regulate sand disposal; however, the City is pursuing resolution of the preemption issue currently on appeal.

The City maintains it has a legal right to determine future impacts on its local beaches and has the authority to regulate the placement of dredged material from all future dredging activities within the City's boundaries. The City maintains that until such time as the City's appeal is decided, the City will continue to recommend appropriate disposal locations through the review process of both the Army Corps of Engineers and California Coastal Commission permits.

As noted, SDG&E's last dredge cycle (1995-96) was done under CDP #6-93-193-A2 which allowed for a one time-dredging of up to 500,000 cubic yards of material. The final dredge report indicates 443,130 cubic yards of sand was dredged from the outer basin and distributed as follows:

Middle Beach--294,312 cu. yds.--Between the jetties (Ocean entrance to Agua Hedionda Lagoon and SDG&E warm water discharge jetty)

North Beach--106,416 cu. yds.--North of Ocean jetty (Tamarack to Oak Street)

South Beach--42,402 cu. yds.--South of Intake Jetty

In that action, the Commission denied the applicant's request for a 5 year permit allowing up to 500,000 cubic yards of dredge disposal in any single

event, up to a maximum of 1,250,000 cubic yards in the 5 year period. The subject proposal includes the same request for a 5 year permit, in addition to the 155,000 to 200,000 cubic yards of beach disposal for the 1997-98 dredge cycle.

2. Beach Replenishment/Public Access. The subject proposal involves dredging the outer basin of Agua Hedionda lagoon, and placement of dredged spoils on the adjacent Carlsbad State Beach, a maintenance operation for the SDG&E powerplant that has been occurring for 40 years. There are several provisions of the Coastal Act, which are applicable to the proposed project, which encourage use of suitable material to supply the region's littoral zones with sand. Such deposition of beach quality material on the region's shoreline will create and protect coastal recreational areas for use by the general public, consistent with Coastal Act policies as follows:

Coastal Act Section 30233 addresses placement, within the littoral zone, of dredge spoils. Section 30233 (b) states:

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

The above language in Section 30233 clearly suggests the benefit of restoring the region's beaches through use of material that would otherwise reach the shoreline, but for man's intervention by development and flood control projects. Therefore, the Commission finds when dredge material is compatible with and suitable for use as beach sand along the region's shoreline, it should be transported to the shoreline for such use, consistent with the public access and recreation policies of the Act.

The San Diego Association of Governments (SANDAG) has adopted the Shoreline Preservation Strategy (Strategy) for the San Diego region and is currently working on techniques towards its implementation. The shoreline is recognized as a valuable asset to the environment and economy of the San Diego region and the State. It is also considered a resource of national significance. The Strategy identifies that beaches in the San Diego area have been steadily eroding for the past decade, and increasing beach loss and property damage have been projected for the future. The Strategy also emphasizes beach replenishment to preserve and enhance the environmental quality, recreational capacity, and property protection benefits of the region's shoreline. Additional sand on the region's beaches will increase the amount of available recreational area for public use, and decrease the rate of beach erosion, thereby reducing pressure to construct shoreline protective devices, which can adversely affect both the visual quality of scenic coastal areas and shoreline sand supply.

Section 30604(c) of the Act requires that a specific access finding be made in conjunction with any development located between the nearest public road and the sea. In this case, such a finding can be made. Many provisions of the Coastal Act address public access and recreation, including the following:

Section 30210

In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Section 30212.5

Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Providing as much sandy beach area as possible for use by the public is consistent with the intent of Sections 30210 and 30212.5 which require that public access and recreational opportunities be maximized in order to protect any one natural resource area, i.e. shoreline or park, from overuse. Providing additional recreational area, through placement of sand along a useable shoreline, will result in less crowding and provide an alternative to existing resource areas which are highly utilized by the public due to the availability of sand.

Section 30213

Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred....

Section 30220

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Providing additional useable beach area is providing a lower cost visitor and public recreational facility. When it is feasible for dredge projects which involve excavation of large volumes of beach suitable material to deposit the dredged material on the region's beaches, such activity is consistent with Section 30213 of the Act. Creation of additional coastal areas, such as beaches, suited for water-oriented recreational activities, is also consistent with Section 30220.

As noted, SDG&E has conducted the dredging operation since 1954 when the generating station was constructed. SDG&E is proposing to place the projected 155,000 - 200,000 cubic yards at the South Beach immediately south of the plant's warm water discharge jetty where processed hot water is discharged into the ocean. Approximately 42,402 cu. yds. of sand was placed at the South Beach during the last dredge cycle. Approximately 294,312 cu. yds. of

material was placed at the Middle Beach during the last dredging cycle. An additional 106,416 cu. yds. of sand was placed at the City's request in the North Beach area, which is north of the ocean entrance jetty of the lagoon.

As noted, until the last dredging cycle, the City, in conjunction with the Beach Erosion Committee, had reviewed previous disposal plans and determined if the dredge spoil placement areas were appropriate through its Special Use Permit. Dredged materials were placed north in previous years based in part on the findings of the Beach Erosion Committee and the City. However, for the 1995-96 dredging and the proposed dredging cycle there was and is disagreement between the City and BEC and SDG&E where the sand should be placed. The City has traditionally sought to place the dredged material along the stretch of beach beginning at the northerly limits of the permitted disposal site (Oak Street) and deposit the material in a southerly fashion towards the Tamarack Beach parking lot. The City states the north reaches of the shoreline are among the most heavily used by coastal visitors. The City pays the State Department of Parks and Recreation parking fees for the Tamarack parking lot to allow free use of the beaches in the area. Also, the City provides day use parking, public walkways and lifeguard service along the curb in the Middle Beach area. The City maintains that these areas, from strictly a recreational viewpoint, would be enhanced with the return of the beach sand from where it came from.

SDG&E's current dredging program does not propose to place any sandy material north of this jetty. The City of Carlsbad and the Beach Erosion Committee have prepared a letter stating their position regarding this year's proposed dredge cycle and deposition site south of the discharge jetty (attached). It requests that the Commission require SDG&E to return trapped sand in the western and middle cells of Agua Hedionda Lagoon to the local reaches of the Carlsbad coastline on a comparable rate to sand losses due to the operational impacts of the Encina Power Plant. It recommends that 1/3 of the total dredged material should be placed northerly of the inlet jetties, and 2/3 of the total dredged material should be placed directly between the inlet and outlet jetty structures.

Carlsbad is located in the middle of the Oceanside Littoral Cell. The cell extends from Dana Point to the La Jolla Canyon. The dominant direction of sediment transport in this cell is to the south; while the volume of sediment carried along the shoreline will vary greatly from year to year, the average annual net transport is approximately 270,000 cubic yards. This net annual southerly transport of 270,000 cubic yards of material means that during the average year there may have been vast amounts of material carried from south to north, but, after one average year, there will have been 270,000 cubic yards of material more carried to the south than carried to the north.

The total amount of material that will be carried past the Carlsbad shoreline will vary significantly from year to year. In general, Arctic storm fronts and winter wave conditions tend to cause a southerly transport of material and transport of material to the north occurs from southern hemisphere swell and tropical storms (typically summer and fall events). The dominance of southerly versus northerly transport of material past the Agua Hedionda

jetties will be influenced by the frequency and intensity of weather conditions and the availability of material for transport. A general range of transports (provided by personal communication with Dr. Scott Jenkins, consultant to SDG&E) shows that some years up to 80% of all sediment transport will be from north to south and other years this can drop to approximately 65%.

SDG&E's current dredging program proposes to place all the material removed from the lagoon onto beaches south of the intake jetties. Their consultant, Dr. Scott Jenkins, has studied the littoral drift patterns in this area and has indicated that dredged material deposited north will eventually enter the lagoon and possibly choke the entrance to the lagoon mouth impacting the cooling system of the power plant. Dr. Jenkins states that approximately 40% of the sand transported in the Oceanside Littoral Cell enters the lagoon naturally and therefore, 40% of any material placed north of the lagoon entrance to the ocean would likely enter it.

There is no preferential interception of material by the lagoon; that is, the lagoon will trap material which is being carried to the north just as much as it will trap material being carried to the south. The City has recommended that 1/3 of all dredge material be placed on beaches north of the intake jetties, based on a rough approximation that 1/3 of all sediment transported past the intake jetties is from south to north. SDG&E has rejected this location for sand placement because it believes that the dominate southerly transport in this area will ultimately result in this material being carried south, past the intake jetties and that 40% of this material will be deposited again in the lagoon. Available information on sediment transport for the Oceanside Cell indicate that both parties are correct. The beaches to the north of Agua Hedionda Lagoon are being deprived of sand by the lagoon; but, much material placed on these beaches is likely to end up in the lagoon and be part of the dredging impact.

Another significant factor raised by the applicant is that placing the sand as proposed (south of the ocean entrance to the lagoon) would benefit sand-starved beaches to the south of the powerplant as sand would migrate downcoast and not be lost inside the lagoon. SDG&E is monitoring how much sand is entering the lagoon through instrumentation but this monitoring has only been going on since November, 1996 and cannot be considered conclusive at this time.

A third concern of the applicant is that further ingestion of sediment by the lagoon could lead to complete closure of the lagoon entrance and cut off the supply of cooling water to the power plant. Since the plant was opened in 1954, over 672,000 cubic yards of material has been deposited in the lagoon. While the original design has included some surplus lagoon volume to allow for deposition, SDG&E has added several more operating units which have increased the demand for additional cooling water. The tidal exchange which occurs in the lagoons, the tidal prism, affects whether there will be sufficient movement of water through the intake jetties to keep this area open. At present, the deposition of material in the lagoon has reduced the tidal prism to the point where the intake could close during some combination of neap tides, high cooling water demand and/or high energy oblique waves. For this reason, the applicant is very concerned about placing any new dredge material in areas where it has a strong likelihood of returning to the intake area.

The Commission recognizes the difficulty of the situation but must review the request for consistency with the public access and recreation policies of the Coastal Act. It is evident that severe erosion to the Carlsbad coastline has occurred, particularly at the Middle Beach area, directly adjacent to the powerplant. Erosion is particularly evident on the Middle Beach near the ocean entrance to the lagoon. Upcoast beach locations to the north appear to more stable with the exception of the area immediately upcoast of the ocean entrance jetty at the Tamarack parking lot. In a regional context, beach replenishment in both areas is appropriate for public recreational use and property protection benefit.

The Commission has several concerns that adverse impacts may occur if sand is placed at the South Beach, as proposed by the applicant. One concern is that the sand placed here may cover up some tidepools and off-shore reefs that are located near the southern boundary of the South Beach deposition location. The Commission received many letters during the last dredging from school children stating that the tidepools had been covered by sand as a result of the sand deposition. Tidepools and off-shore reefs are coastal resources that are protected under the Coastal Act from adverse affects. Further, the Carlsbad Submarine canyon exists offshore near Terramar Point. The canyon head begins in about 100 feet of water and it has not been identified as a major sink for sediment. However, approximately 30,000 cubic yards of sediment are lost, on average, each year to the offshore Carlsbad area, and this canyon is an obvious destination for some of the offshore sediments. Until the complete dynamics of the Carlsbad Canyon are understood, it may be unproductive to the sediment demands of downcoast beach areas to place material where some of it could be quickly lost to this offshore sink. No definitive studies of either of these issues have been undertaken to date.

Thus, based on conflicting opinions of shoreline experts and the lack of definitive studies that corroborate either the City's or the applicant's position, the Commission finds that the sand should be placed where it would provide the most recreational benefit to coastal visitors. Staff has visited the project area and notes that the area that provides the most public recreational benefit to the most users is the Middle Beach. As noted, day use parking is provided free of charge along the curb in the Middle Beach area. This area accommodates the greatest beach patronage along the Carlsbad shoreline. According to a city representative more than a million people yearly visit this beach, making it by far the most heavily-used beach in the City of Carlsbad.

For this reason, the Commission can find that nourishing this area would have a positive public benefit. The public access and recreation policies of the Coastal Act and certified Agua Hedionda LUP seek to maximize public recreation and access opportunities at shoreline locations and the project would further that end.

Regarding SDG&E's proposal for a 5 year permit, similar to the Commission's previous action, SDG&E proposes to dredge the middle and inner cells of the lagoon in the near future. As proposed, approximately 57,000 cubic yards of sand dredged from the middle lagoon could be placed on the South Beach by the

end of this year. Approximately 250,000 cubic yards of sand from the inner lagoon will be dredged sometime next year, if funding is secured. These quantities could be placed on either South, North or Middle Beach or a combination of the three beaches. However, based on the preceding, the Commission can not authorize approval for more than the current dredge cycle. Because of possible changes to local environmental conditions which could affect shoreline processes (El Nino, severe winter storms, beach nourishment on the Carlsbad shoreline from other projects), the Commission finds it is most appropriate to review and approve every individual dredge cycle for a suitable sand deposition site. By reviewing each individual dredge cycle, information resulting from both monitoring the previous dredge cycle and evaluating current environmental conditions can be used to determine the best deposition site.

Because of the above uncertainties, the Commission finds that nourishing the Middle Beach at this time would have the most positive public benefit. Should further studies and future environmental conditions dictate that sand generated from future dredgings of the middle and inner lagoons be placed at locations other than Middle Beach, other deposition locations can be approved. However, for this particular dredging it appears deposition of the sand at the Middle Beach is most consistent with the public access and recreation policies of the Coastal Act and certified Agua Hedionda LUP.

Special Condition #1 requires that the applicant monitor the shoreline where the dredge material will be placed. The applicant will prepare pre-and-post deposition profiles as part of their permit for the Corps of Engineers. As a condition of this permit, the applicant will survey two profiles of the receiver beach, before and after the material has been placed on the beach. The applicant will also survey these same profiles two months after the material has been deposited to show the adjustments of the deposited material to the existing wave conditions. Annual profiles will be provided thereafter to provide information on the long-term changes to the shoreline. These profiles will be surveyed annually until either the profiles return to their pre-disposal condition or until the beach area is further modified by direct deposition of additional permitted material.

From a regional perspective, Carlsbad beaches have and will be receiving additional beach nourishment from a number of sources. For example, the Navy's Homeporting Project, which will deposit 2,890,170 cubic yards of sandy material dredged from the San Diego Bay main navigation channel to various locations in San Diego County, would distribute beach sand on Carlsbad beaches as follows: 550,027 cu. yds. at North Carlsbad Beach (adjacent to ocean entrance to Buena Vista Lagoon) and 931,146 cu. yds. at South Carlsbad Beach (adjacent to the South Carlsbad State Beach campground). The North Carlsbad sand is proposed to be spread on the shoreline beginning near the ocean entrance to Buena Vista Lagoon on the north with distribution continuing south to Oak Street. The beach deposition would be done between November, 1997 and January, 1998.

Additionally, the City of Carlsbad's Opportunistic Sand Program is designed to place sand on Carlsbad beaches as it becomes available through development

projects within the City. According to a City representative, beach grade material would be stockpiled at north and south locations: near the ocean entrance to Buena Vista Lagoon in north Carlsbad and south of the SDG&E discharge jetty in south Carlsbad. The sand would be spread as needed. However, this program is on a much smaller scale than the above Homeporting project and should not be counted on as a major supplier of beach sand to Carlsbad.

Regarding beach quality sand that has been placed on Carlsbad beaches resulting from the Batiquitos Lagoon Enhancement Project (BLEP), approximately 1,600,000 cubic yards of sand was dredged from Batiquitos Lagoon and distributed on Encinas Beach and another 500,000 cubic yards was placed near the ocean entrance to San Marcos Creek. This sand has significantly improved recreational opportunities at these locations as the formerly cobble-laden shoreline has been replaced by wide sandy beach area.

However, the Commission finds it cannot support the applicant's request to dredge a maximum of 1,125,000 yards of dredging over a five year period. As noted, further study of the shoreline processes at work within the approved disposal boundary limits needs to be done to determine where the most appropriate locations for sand nourishment are during any given dredging event. It is clear that coastal erosion is occurring along the entirety of the study area and that changed circumstances in the future may dictate that sand be deposited to the north to have the greatest public benefit to public access and recreation. Thus, the current permit will allow the proposed one-time deposition of up to 200,000 cu.yds. of material in the 1997-1998 dredge cycle only. Any subsequent dredging shall be the subject of a separate coastal development permit application.

It must be noted that SDG&E's dredging and beach replenishment plan has been successfully operated since 1954 to provide sand to Carlsbad beaches and as such is a tremendous public benefit. The beach replenishment plan has been developed in consultation with the City of Carlsbad, COE, the California Department of Fish and Game (DFG), the Regional Water Quality Control Board, and the Environmental Protection Agency and is an example of a proactive effort between public and private interests serving both local and regional recreational needs. Therefore, as conditioned, the Commission can find the proposed project consistent with the public access and recreation policies of the Coastal Act.

2. Sensitive Resources. Sections 30233 and 30240 of the Coastal Act provide for the protection, preservation and enhancement of coastal wetlands and species that depend on those wetlands as habitat. With respect to dredging of the outer lagoon, the time of year during which the dredging can occur is restricted by a number of resource agency approvals. These restrictions assure there are no adverse impacts to the California least tern breeding period and the grunion spawning period. The COE 404 permit allows dredging between September 15 and April 15 through 1997, outside the sensitive breeding seasons with the option of extending the dredge period to April 30 if approved in consultation with the Army Corps of Engineers (COE) in consultation with the California Department of Fish and Game (DFG) and the

National Marine Fisheries Service. On several occasions the COE has allowed dredging to extend until April 30, finding by field inspection that the time extension would not adversely impact either the least tern or grunion breeding seasons.

The outer basin of Agua Hedionda Lagoon also contains extensive eel grass beds, a protected resource under Section 30240 of the Coastal Act. Eel grass provides habitat for many fish and invertebrates. CDP 6-93-193A requires the mapping of the existing eel grass beds prior to dredging and after dredging to determine any impacts from dredging. If any eelgrass impacts occur, the COE permit requires revegetation must be carried out at a ratio of 1.0 square feet of mitigation area for each square foot of area impacted. The final location of the mitigation area is verified by the National Marine Fisheries in conjunction with the Dept. of Fish and Game. The mitigation area is not subject to future dredging. Monitoring and maintenance of the revegetation effort is also required through the COE permit. These requirements remain in effect; therefore, the Commission finds the proposed project consistent with past Commission precedent regarding this resource and resource protection policies of the Coastal Act.

The amendment also proposes to extend the permit's expiration date to December 7, 2000 to coincide with the termination date of the existing COE permit. The Commission cannot accept the amended date due to the uncertainty associated with future beach conditions and City of Carlsbad involvement in the permitting process. As currently written, the special conditions allow Executive Director review and approval of the proposed dredge plan, but do not specifically allow for modification to the plan if it is not acceptable to the City. In order to assure adequate opportunity for input from the community and other interested parties on any future dredge proposals, Special Condition #3 is limiting this authorization to the 1996-1997 dredge cycle. Future dredge and beach deposition will require review and approval by the Commission through a separate coastal development permit. Only as conditioned, can the Commission assure future beach replenishment efforts will meet the requirements of Chapter 3 of the Coastal Act.

3. Local Coastal Planning. Section 30604 (a) requires that a coastal development permit shall be issued only if the Commission finds that the permitted development will not prejudice the ability of the local government to prepare a Local Coastal Program (LCP) in conformity with the provisions of Chapter 3 of the Coastal Act. In this case, such a finding can be made.

The project area is zoned and planned in the certified Carlsbad LCP for Open Space and Recreation Uses. As conditioned, the proposed project is consistent with provisions of these designations and past Commission actions on the site. Therefore, approval of the project as conditioned is consistent with Chapter 3 policies of the Coastal Act and the resource protection policies of the certified Carlsbad LCP.

4. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's administrative regulations requires Commission approval of a coastal development permit or amendment to be

supported by a finding showing the permit or permit amendment, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(i) 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 impact which the activity may have on the environment.

The proposed project has been conditioned to be found consistent with the resource protection and recreation policies of the Coastal Act and the Carlsbad LCP. Mitigation measures will minimize all adverse environmental impacts. As conditioned, there are no feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

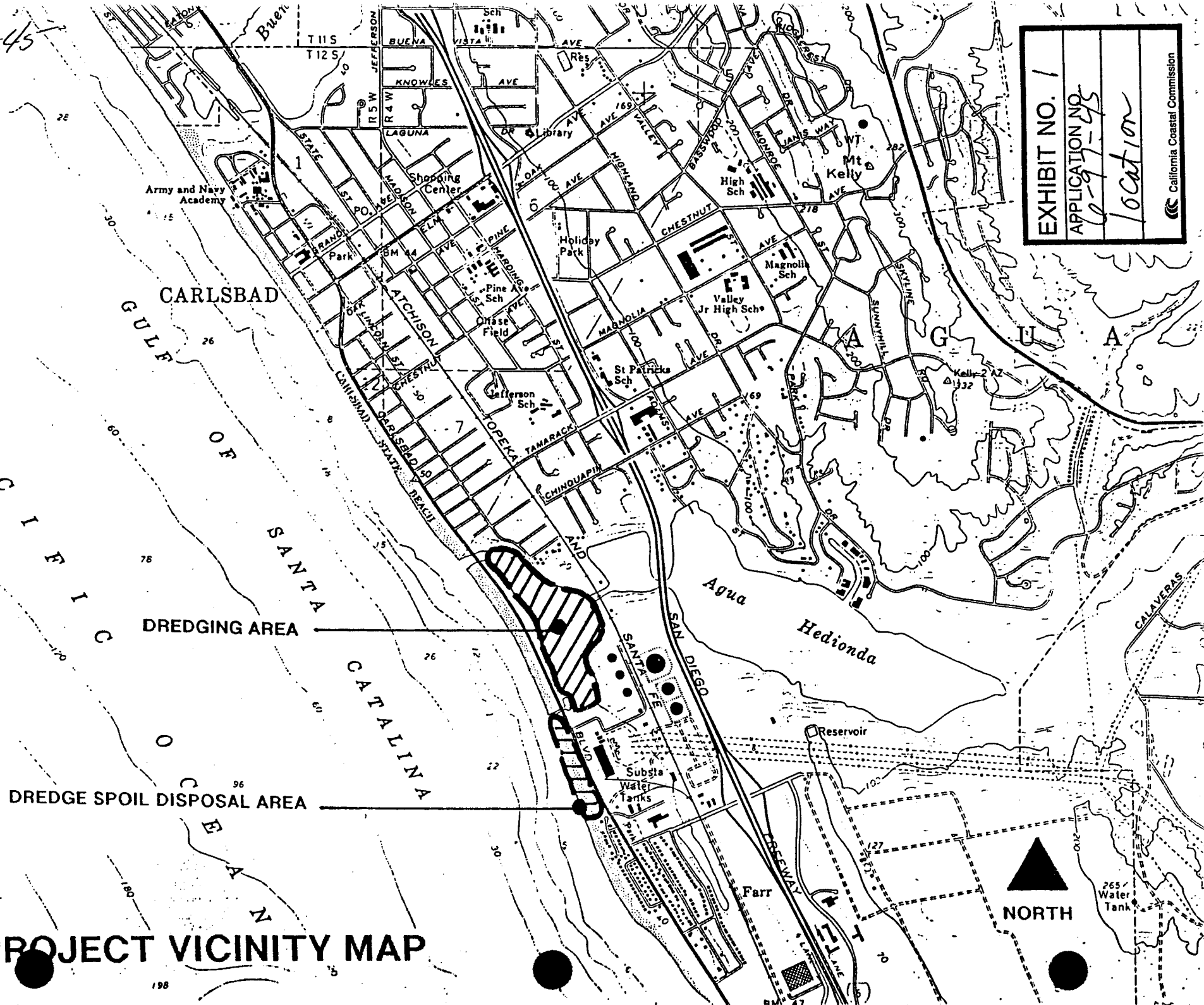
STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgement. 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. Compliance. All development must occur in strict compliance with the proposal as set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. 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.
7. 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.

WED 10b

6-97-45

EXHIBIT NO. 1
APPLICATION NO. 6-97-45
Location
California Coastal Commission



PROJECT VICINITY MAP

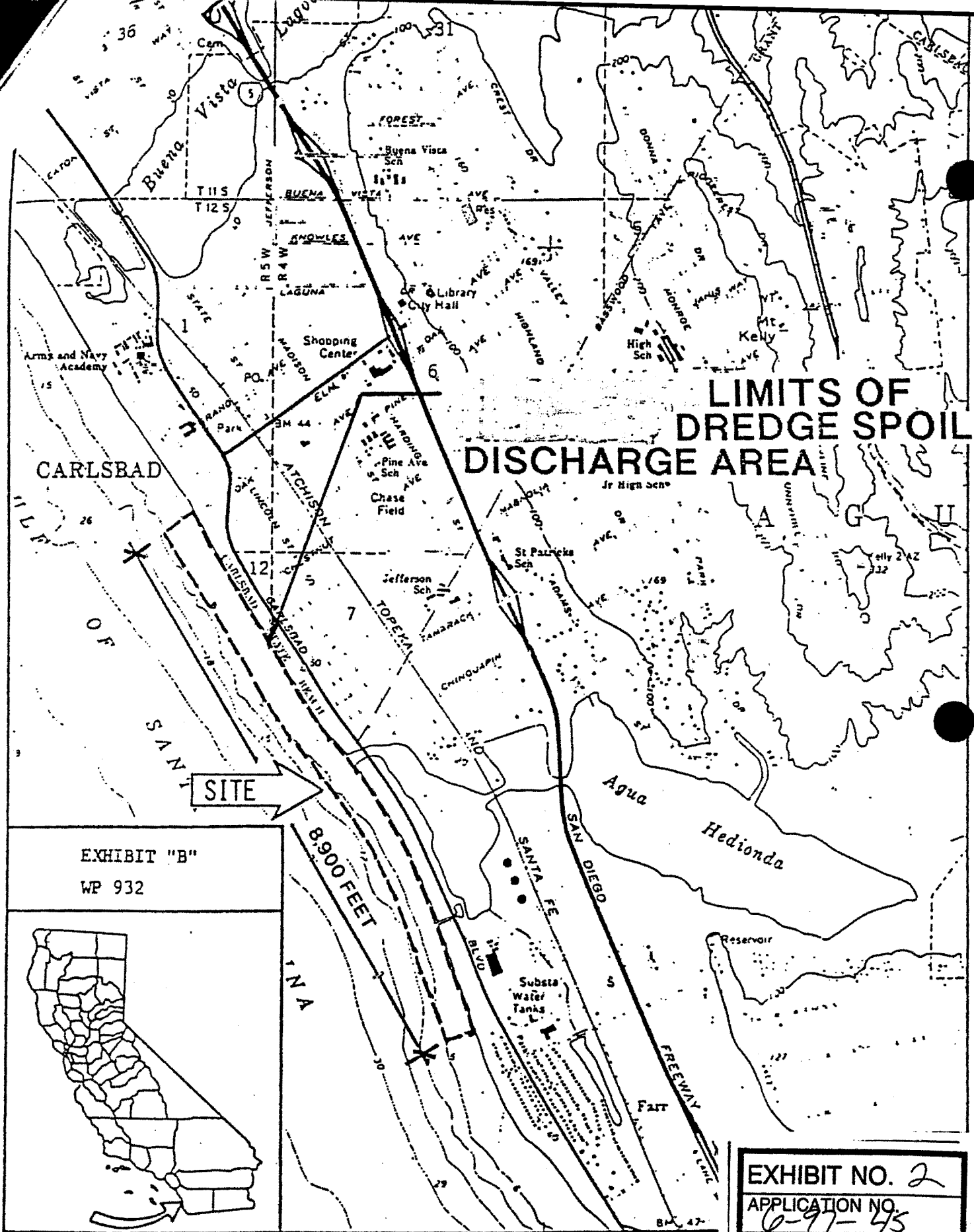


EXHIBIT NO. 2
APPLICATION NO. 6-97-45
limits of Deposition
California Coastal Commission



City of Carlsbad

Engineering Department

May 18, 1997

Mr. William Ponder
CALIFORNIA COASTAL COMMISSION
San Diego Coast Area
3111 Camino Del Rio North, Suite 200
San Diego CA 92108-1725

EXHIBIT NO. 3
APPLICATION NO. 0-97-45
City's Position
California Coastal Commission

SAN DIEGO GAS & ELECTRIC COASTAL DEVELOPMENT PERMIT 1997-98 AGUA HEDIONDA LAGOON DREDGING PROGRAM

Thank you for the opportunity to comment on the Coastal Development Permit application for San Diego Gas and Electric (SDG&E) Company's proposed 1997-1998 dredging program for both the western and middle cells of the Agua Hedionda Lagoon. The following comments are submitted for your consideration during the processing of the permits based on input from the Carlsbad Beach Erosion Committee and the City's experiences along our local coastline.

The Agua Hedionda Lagoon was originally dredged in 1954 to provide condenser cooling water to the Encina Electric Power Plant. The size and depth of the lagoon was designed to provide a tidal prism with an adequate and reliable source of cooling water for the plant during normal conditions to accommodate the original three (3) generating units. However, SDG&E has since added Units 4 and 5 which, in essence, almost doubled the original power output at Encina and resulted in the increased need for additional cooling water capacity. The original design, as well as with the addition of the two (2) additional units, requires periodic maintenance dredging of the western cell of the lagoon in order to ensure an adequate supply of cooling water from the lagoon.

The maintenance dredging history at the Agua Hedionda Lagoon averages approximately 120,000 - 140,000 cubic yards/year around the lagoon system which, in turn, represents the trapping of approximately 40% of the annual littoral drift in the northern reaches of the Oceanside Littoral Cell. Because this material is always returned to the beaches at the end of each dredging cycle, this trapping rate does not present a long term loss in the sand budget of the Oceanside Littoral Cell. However, between the dredging cycles there is sufficient time for a short term reduction in sand supply to occur along the reaches of the beach areas immediately adjacent of Agua Hedionda Lagoon while sand remains impounded in the lagoon system.

It is commonly known that the sand transport in the Oceanside Littoral Cell predominantly flows in a southerly direction due to the wave angle and the energy exhausted as part of the winter storm cycle originating in the northern seas from Alaska. However, during the summer months, the littoral drift is sometimes shifted in a northerly direction based on the wind driven waves from hurricanes originating southerly of Baja California, Mexico. By a general estimate, the southerly transport occurs approximately 2/3 of the year with the northerly drift occurring the remaining 1/3 of the year. As this littoral drift passes by the inlet to Agua



Hedionda Lagoon, the tidal flushing and net inflow of water through the inlet due to plant operations causes some of the littoral sediments to be ingested by the lagoon.

Plant diversion of lagoon water reduces the net portion of tidal prism flowing out the ocean inlet during ebb flow by approximately 28,000,000 cubic feet, or a 51% reduction in the original mean tidal prism. There is virtually no ebbing flow out of the ocean inlet during a neap tide when plant demand for cooling water is at a moderately high level. Consequently, the ebb flow during neap tides leave the lagoon system through the plant condensers rather than through the ocean inlet. Consequently, the inlet flow becomes a one-way transport pathway: sediment enters the inlet due to above threshold flooding flow, but no sediment is scoured from the inlet channel in the absence of any ebbing flow. Essentially, this allows the sand material that has entered the lagoon system to settle in the western basin and the ensuing tidal flow out of the lagoon does not have enough energy to scour or allow for the material to redeposit into the littoral cell, thus contributing to local shoreline erosion.

Therefore, the increased water flow into the lagoon for all 5 power generating units and the resulting influx of sand from the littoral drift has created a local beach erosion problem. This problem is seen on both the northern and southern beach sections directly adjacent to the entrance channel to the lagoon. The Agua Hedionda Lagoon acts as an effective "sand trap" for littoral sediments. This trapping is unavoidable due to short jetties and the diversion of 27-33% of the tidal prism through plant condensers. It is safe to assume that if the power plant did not need the waters for cooling purposes, this area of coastline would not be negatively impacted and would be subject to normal accretion from the sand supply in the littoral cell system.

With the above stated impacts of existing power operations in the Agua Hedionda Lagoon, the Carlsbad Beach Erosion Committee believes that SDG&E should mitigate the loss of sand adjacent to the entrance of the lagoon due to the increase in cooling water demand and the resulting loss of sand settling in the western cell of the lagoon system.

Therefore, the Beach Erosion Committee requests that the California Coastal Commission establish a condition in the proposed Coastal Development Permit that would require SDG&E to return trapped sand material in the western and middle cells of the Agua Hedionda Lagoon to the local reaches of the Carlsbad coastline on a comparable rate to sand losses due to the operational impacts of the Encina Power Plant as follows:

- 1/3 of the total dredged material should be placed northerly of the inlet jetties; and
- 2/3 of the total dredged material should be placed directly between the inlet and outlet jetty structures.

This mitigation effort would offset the trapping of material in the western cell of the lagoon and return this sand to the local beaches most impacted. In addition, these reaches of the coastline are most heavily used beaches by Carlsbad citizens and residents of north county. As you are probably aware, the City currently pays the State parking fees for the Tamarack Parking lot in order to allow for free use of the beaches in the area. Also, the City allow for day parking use along the curb adjacent to the beach area between the jetties. These areas, from strictly a recreational standpoint, would be enhanced with the return of the beach sand from where it came from.

If you have any questions or if I can provide additional information, please do not hesitate to contact me at (760) 438-1161 extension 4354.

Respectfully,

A handwritten signature in black ink, appearing to read "Steven Jantz", written in a cursive style.

STEVEN C. JANTZ
Associate Engineer

c: Beach Erosion Committee
City Manager
City Engineer
Planning Director
Deputy City Attorney
Army Corps of Engineers



San Diego Gas & Electric
An Enova Company

P.O. BOX 1831 • SAN DIEGO, CA 92112-4150 • 619 / 696-2000

EXHIBIT NO. 4
APPLICATION NO. 6-97-45
Applicants
Position
California Coastal Commission

July 14, 1997

Mr. William Ponder
California Coastal Commission
San Diego Coast District
3111 Camino Del Rio North, Suite 200
San Diego CA 92108-1725

**RE: AGUA HEDIONDA LAGOON OUTER AND MIDDLE DREDGING,
COASTAL APPLICATIONS 6-97-45 & 6-97-46**

Mr. Ponder:

We are responding to comments on our permit applications which you received from the City of Carlsbad on May 18, 1997 (attached). Our comments are based on forty years of experience with dredge operations and a series of extensive hydraulic modeling studies prepared for the Agua Hedionda Lagoon.

We would like to make the following comments and observations regarding the City of Carlsbad's letter:

In its September 14, 1995 approval of application 6-93-193-A2, the Coastal Commission was given a scientific overview of beach erosion and sediment transport processes in the Oceanside littoral cell. The relationship between sediment transport and the diminishing hydraulic efficiency of the Agua Hedionda Lagoon was also discussed. The dynamics of the Oceanside littoral cell and the lagoon have not changed. The Commission's decision not to require placement of sand north of the mouth of the Agua Hedionda Lagoon as a condition of its approval of application 6-93-193-A2 indicates it clearly understood the relationship between sediment transport and the health of the Agua Hedionda Lagoon.

The City of Carlsbad's assertion regarding the relative percentage of southward versus northward transport is pure conjecture, unsupported by any credible measurements specific to this site. In an effort to resolve this debate, once and for all, and to better understand littoral transport in this local sub-cell of the Oceanside littoral cell, SDG&E is currently monitoring longshore current activity at the mouth of the Agua Hedionda Lagoon. We have installed two "Sontek" acoustic doppler current meters at the mouth of lagoon. These meters have taken longshore current readings, at six second intervals, since November 1996. All longshore current activity measured to date has been from north to south. This would suggest that sand placed north of the mouth of the lagoon would return to the lagoon further exacerbating lagoon sedimentation. This action would result in the

perpetual recycling of one-third of the Agua Hedionda Lagoon maintenance dredge volume between the north Carlsbad beach disposal site and the lagoon; and would effectively impound this volume of sand, preventing it from participating in the otherwise natural re-supply and nourishment of beaches further to the south. This was a principle consideration in the Commission's decision to approve application 6-93-193-A2 in its September 1995 hearing, with no conditions requiring placement of sand north of the lagoon.

The City of Carlsbad is scheduled to receive approximately 550,000 cubic yards of on-shore beach replenishment (sand) from the U.S. Navy's Homeport project. Placement of the sand on North Carlsbad Beach is expected to occur from November 1997 to January 1998. This placement would coincide with SDG&E's dredging and beach replenishment work in the outer and middle lagoon. SDG&E is currently working with the Navy to develop a sand placement site and on-shore beach profile which would reduce impacts of sedimentation into the Agua Hedionda Lagoon. Even with the modification of sand placement and profile, our preliminary modeling of the Homeport north beach sand fill (per MCON Project P-706, C-55 to C-58) indicates that, after placement, sand influx rates into the Agua Hedionda Lagoon would be 223% of normal in the first year; 186% of normal in the second year; 146% of normal in the third year and 114% of normal in the fourth year. Predicted sand influx, in excess of normal influx, over the four year period would be 554,000 cubic yards. Placement of any additional sand, beyond the Homeport volumes, on the north beach is neither warranted or advisable.

Placing one-third of SDG&E's proposed outer and middle lagoon dredging volumes (approximately 80,000 cubic yards) north of the lagoon as the City of Carlsbad suggests has the potential to create a beach which is considerably out of equilibrium with natural beach equilibrium in the Oceanside littoral cell. An additional 80,000 cubic yards of sand combined with the proposed Homeport disposal would create an unnatural bulge in the shoreline similar to a river delta condition, at a location where there is no natural river mouth. The impacts on Carlsbad beaches from the entrapment of sand, which the City ascribes to the Agua Hedionda Lagoon, are more likely due to the even greater disturbance which the Oceanside harbor imposes on littoral drift, updrift of Carlsbad. It is hard to rationalize how the Agua Hedionda Lagoon alone could be responsible for these alleged impacts when it is down drift of most of the impacted beaches.

Shoreline erosion is a matter of regional importance. The City of Carlsbad is correct in noting that sand which enters the Agua Hedionda Lagoon is temporarily lost to the littoral cell between lagoon dredging episodes. This temporary loss of sand deprives beaches to the south, in Solana Beach and Encinitas, of littoral cell sand transport and natural shoreline replenishment. Placing sand immediately north of the Agua Hedionda Lagoon perpetuates the incremental loss of sand to beaches south of Carlsbad. We find the City of Carlsbad's request for sand north of the lagoon contrary to best interest of cities to the south and regional needs for sand replenishment.

SDG&E would be pleased to present it's previous overview of littoral cell dynamics and lagoon hydraulics, and any updated information since 1995, to the Commission during the public hearings for our applications. Please call me at (619) 696-2732 if you have any questions.

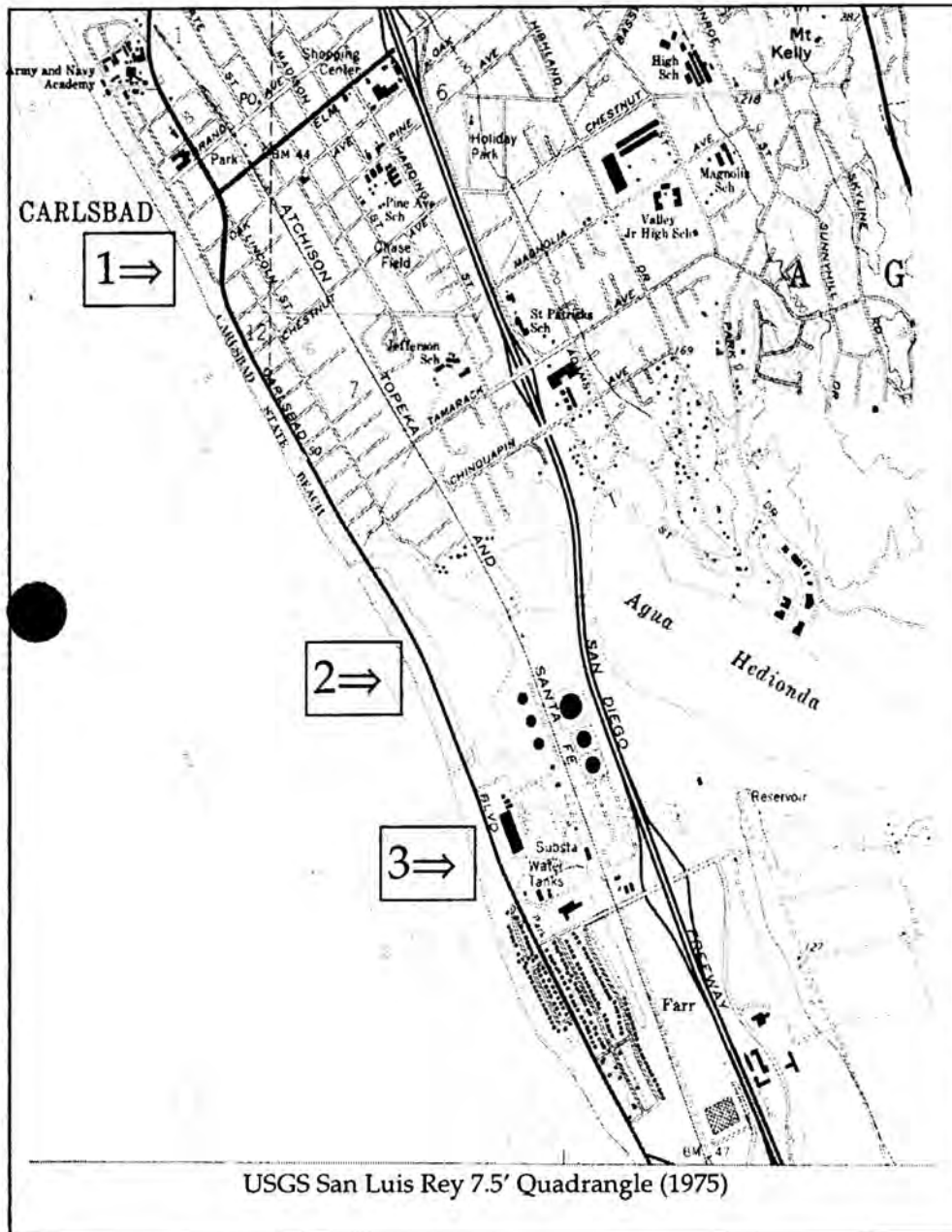
Sincerely,

Mark Chomyn

Mark Chomyn
Land Planner

cc: Mr. David Zoutendyk, U.S. Army Corps of Engineers
Mr. Paul O'Neal, SDG&E Public Affairs Representative

Exhibit #5
CDP 6-97-45



1. Beach Fronting Oak Street
Looking North



2. Beach Between Jetties
Looking North



3. Beach South of Pipeline Groin,
SDG&E's Proposed Disposal Site

