

## CALIFORNIA COASTAL COMMISSION

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# W15d

## Addendum

Click here to go  
 to the original staff report  
 following the addendum.

June 13, 2011

To: Commissioners and Interested Persons

From: California Coastal Commission  
 San Diego Staff

Subject: Addendum to **Item W15d**, Coastal Commission Permit Application # **6-11-018 (SANDAG)**, for the Commission Meeting of June 15, 2011

Staff recommends the following changes be made to the above-referenced staff report:

1. On Page 1 of the staff report, the "SUMMARY OF STAFF RECOMMENDATION" shall be revised as follows:

[...] the Imperial Beach receiver site ~~will~~ may receive more sand [...]

2. On Page 3 of the staff report, Special Condition # 1 shall be revised as follows:

1. **Timing of Construction.** **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a construction schedule that conforms to the following restrictions:

~~— a. — Work on any receiver beach may occur prior to Memorial Day weekend or after Labor Day weekend. Work after Memorial Day weekend, but before Labor Day weekend must occur in the following order:~~

- ~~\_\_\_\_\_ 1. \_\_\_\_\_ Solana Beach~~
- ~~\_\_\_\_\_ 2. \_\_\_\_\_ Moonlight Beach~~
- ~~\_\_\_\_\_ 3. \_\_\_\_\_ Cardiff~~
- ~~\_\_\_\_\_ 4. \_\_\_\_\_ Torrey Pines~~
- ~~\_\_\_\_\_ 5. \_\_\_\_\_ South Carlsbad~~
- ~~\_\_\_\_\_ 6. \_\_\_\_\_ Imperial Beach~~
- ~~\_\_\_\_\_ 7. \_\_\_\_\_ North Carlsbad~~
- ~~\_\_\_\_\_ 8. \_\_\_\_\_ Oceanside~~
- ~~\_\_\_\_\_ 9. \_\_\_\_\_ Leucadia~~
- ~~\_\_\_\_\_ 10. \_\_\_\_\_ Batiquitos~~

Changes to the ~~above~~ construction schedule may be permitted by the Executive Director, without an amendment to this permit, where unforeseeable weather or construction constraints require that changes be made to avoid grunion impacts, a significant time delay and/or loss of money or available sand. Any required changes to the schedule shall be the minimum necessary in order to implement the project, and the approved schedule shall be resumed as soon as feasible.

~~a~~b. Horizontal beach access along the back beach on any section of any of the receiver sites shall not be blocked for more than one hour at any time during daylight hours.

The applicant shall undertake the development in accordance with the approved construction schedule. Any proposed changes to the approved schedule shall be reported to the Executive Director. No change to the schedule shall occur without a Commission-approved amendment to the permit unless such change is approved by the Executive Director, as allowed above ~~in subsection 'a' of this condition~~, or unless the Executive Director determines that no such amendment is legally required.

3. On Page 4 of the staff report, Special Condition # 2 shall be revised as follows:

2. **Beach Sand Monitoring**. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a detailed beach sand monitoring program for shore and nearshore monitoring at or near the receiver sites, and shall be in general conformance with the procedures and reporting outlined in "Draft Operations, Procedures, Mitigation Monitoring and Contingency Measures Plan for the San Diego Regional Beach Sand Project II, May 2011" ("Mitigation and Monitoring Plan"). Monitoring at and adjacent to the receiver sites shall address the following concerns:

- Confirm as-built project plans for location and deposition amounts and document any plan revisions;
- Seasonal and interannual changes to the receiver sites, in width ~~and length~~ of dry beach, subaerial and nearshore slope, offshore extent of nourished toe, and overall volume of sand in the profile;
- ~~Rate and~~ Extent of transport of material up- and down-coast from the receiver sites; and
- Time period over which the beach benefits related to the project can be identified as distinct from background conditions.

a. At a minimum, this information shall be provided through field surveys of the receiver sites and adjacent areas. Unless otherwise indicated, all profiles shall be from an upland fixed location or monument, across the beach, through the nearshore, to closure depth. Profiles shall be prepared immediately prior to the project (within 6 months), immediately upon completion of the project (this survey may be terminated offshore at the toe of the project rather than going to closure), following the project in the Fall of 2012, and every six months thereafter for a period of five years ~~until two~~

~~separate surveys show that the material and the project is undetectable.~~ Timing for the recurring six month survey efforts may be adjusted to coincide with the schedule that has been developed for the San Diego Regional Monitoring Program.

[...]

~~d. Pre and post construction bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey and a minimum of one (1) full depth profile (from dry beach through the borrow/excavation area) per borrow/excavation area. Additionally, full depth, profile surveys from dry beach through the borrow/excavation areas and~~ Pre-construction (within 6 months) and immediate post-construction (Fall 2012) bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey. Additionally, a minimum of two (2) transects extending through each borrow/excavation area, (one oriented parallel to the coastline, as well as one oriented perpendicular to the coastline), and information on grain size of the surface sand that has accumulated in the borrow/excavation areas, based upon surface samples collected in each borrow area or other methods that have been reviewed and approved by the Executive Director, shall be undertaken and reported to the Commission two, four, and six years after the excavation, or until additional permitted excavation is undertaken in borrow/excavation areas.

[...]

4. On Page 6 of the staff report, Special Condition # 3 shall be revised as follows:

**3. Dredging Activities Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final “Mitigation and Monitoring Plan.” Said plan shall be approved by the U.S. ~~Fish and Wildlife Service~~ Army Corps of Engineers, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” The plan shall also be distributed to each of the regulatory and resource agencies, including the U.S. Fish and Wildlife Service, California Department of Fish and Game, National Marine Fisheries Service, and Regional Water Quality Control Board. The California Coastal Commission shall be one of the resource agencies that must be contacted if turbidity exceeds the allowable levels or if operating procedures vary beyond specified limits.

[...]

5. On Page 6 of the staff report, Special Condition # 4 shall be revised as follows:

**4. Lagoon Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final mitigation and monitoring plan for potential impacts to lagoon habitat at Agua Hedionda, Batiquitos, San Elijo, San Dieguito, and Los Peñasquitos Lagoons. Said plan shall include monitoring to address the following:

- ~~Whether sand from the project is being transported into the lagoons, and if so, the volume and rate of transport; and~~
- Whether sand from the project is increasing the rate of shoaling in the lagoons, or altering the frequency or duration of lagoon mouth closings.

In addition, said plan shall be approved by the U.S. ~~Fish and Wildlife Service~~ Army Corps of Engineers, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” [...]

6. On Page 7 of the staff report, Special Condition # 5 shall be revised as follows:

**5. Biological Resources Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final “Mitigation and Monitoring Plan” for biological resources including: Grunions, California Least Terns, Western Snowy Plovers, and Pismo Clams. Said plan shall be approved by the U.S. ~~Fish and Wildlife Service~~ Army Corps of Engineers, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” The Executive Director California Coastal Commission shall be ~~one of the resource agencies that must be provided with all monitoring reports.~~

~~— a. Pismo Clams. A preconstruction assessment of the minus tide zone north of the Imperial Beach Pier shall be conducted prior to any placement of sand at the Imperial Beach receiver site. The assessment shall confirm the presence or absence of adult Pismo clams (minimum of 4.5 inches). If presence of a clam bed is confirmed (density greater than 0.07 adult individuals per square foot), the clam bed shall be avoided in its entirety and construction shall not impact any Pismo Clams or the Pismo Clam bed.~~

[...]

7. On Page 7 of the staff report, Special Condition # 6a shall be revised as follows:

a. The location of the project construction headquarter(s). Staging Project headquarters shall not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach. Equipment will be restricted to the active construction area at the receiver site.

8. On Page 8 of the staff report, Special Condition # 8 shall be revised as follows:

**8. Grunion. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a program of elements to be utilized in developing a revised, final construction schedule. In addition to the provisions of Special Condition # 5, the following provisions shall apply to grunion. If there is a conflict between the two conditions, these provisions shall be controlling. The applicant shall

adhere to the following provisions in order to ~~maximize avoidance~~ impacts to mature grunion and to grunion eggs during a spawning event to the extent feasible of expected grunion runs. The annually published California Department of Fish and Game (CDFG) expected grunion runs shall be used to determine possible grunion spawning periods. At this time, the 2012 CDFG expected grunion run information is not available. The program and revised construction schedule shall incorporate the following:

a. During the grunion spawning period of March through August, all proposed receiver sites shall be monitored for grunion runs concurrently (excluding the Batiquitos receiver site), unless the beach consists of 100 % cobble (i.e. there is no sand on the beach). In addition, prior to issuance of the permit, the applicant shall develop additional criteria to determine the viability of a deposition site for a spawning event and if the deposition site can be eliminated from the monitoring requirement. The criteria shall include, but are not limited to, predicted monthly high tides, current beach profiles, and historic grunion runs. The criteria shall be subject to approval of the Executive Director in consultation with CDFG, NMFS, USACE. Monitoring need not continue at a given site after sand replenishment has been completed at that site.

b. Grunion monitoring shall be conducted by ~~a~~-qualified biologists for 30 minutes prior to and two hours following the predicted start of each spawning event. Sufficient personnel shall be utilized to insure that the entire receiver site is monitored during the specified period. The magnitude and extent of a spawning event will be defined by the length of beach of 100 yards (for the purposes of determining the Walker Scale).

c. If a grunion run consisting of 0 to 100 fish (Walker Scale of 0 or 1) is reported within two weeks prior to or during construction/beach replenishment, the applicant does not need to take any avoidance action for grunion eggs. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

d. If a grunion run consisting of more than 100 fish (Walker Scale of 2, 3, 4, or 5) is reported within two weeks prior to the start of construction, the applicant shall avoid mobilization on those beach segments and no grunion eggs shall be buried or disturbed at the receiver site. The applicant shall alter the construction/beach replenishment schedule to replenish a beach segment that has not had such a grunion spawning event within two weeks prior to the start of construction. However, the applicant shall may also receive approval from the ~~CCC~~ Executive Director, in consultation with CDFG, NMFS, and USACE, and the Executive Director of appropriate avoidance action in the later part of the spawning season, i.e. after mid-June, to allow deployment to those beaches. This action may include measures pursuant to subsection (g) below. ~~avoiding impacts to grunion eggs through alteration of the discharge point and/or sand spreading, shifting the receiver site, etc or altering the construction/beach replenishment schedule to replenish a beach that has not had a grunion spawning event within two weeks prior to the start of~~

~~construction.~~ No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

e. If construction/beach replenishment has already begun when a grunion run consisting of ~~100-500 fish (Walker Scale of 2)~~ hundreds of fish spawning at different times or at once in several areas of beach (Walker Scale of 2 or 3) is reported, impacts to grunion eggs may occur if avoidance is not feasible. The applicant shall first attempt to minimize impacts to grunion eggs through measures pursuant to subsection (g) below.~~alteration of the discharge point and/or sand spreading.~~ No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

f. If construction/beach replenishment has already begun when a grunion run consisting of ~~more than 500 fish (Walker Scale of 3, 4, or 5)~~ thousands of fish together, with little sand visible between fish (Walker Scale 4 or 5) is reported, no impact to grunion eggs shall occur within that portion of at the receiver site experiencing that density of fish. The applicant shall avoid impacts to grunion eggs in that portion of the receiver site through alteration of the discharge point, and/or sand spreading, and or shifting receiver site boundaries. Ceasing of construction/beach replenishment activities at this location shall occur if avoidance measures are not feasible. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

g. The applicant shall develop a list of feasible measures for each deposition site, subject to approval of the Executive Director in consultation with CDFG, NMFS and ACOE, taking into consideration the size of the deposition site, stage of mobilization, construction constraints, etc., that may be utilized to allow work to continue but also minimize and/or avoid impacts to eggs and disruption within the two week spawning period.

9. On Page 12 of the staff report, the third complete paragraph shall be revised as follows:

The proposed project is scheduled to occur during the Spring and Summer of 2012. Construction activities are expected to begin on April 1, 2012 and continue until October 18<sup>th</sup> (See Exhibit # 5). Construction activities are proposed to occur around the clock, on a 7-day/24-hour basis. The longer construction hours allow for more efficient construction and greater production rates, and thus, would allow for a greater amount of sand to be placed on the beaches. ~~These construction hours require approval of a noise variance from Oceanside, Carlsbad, Solana Beach, and Imperial Beach prior to commencement of work at each site~~ Noise variances are required from Solana Beach and Encinitas (issued June 6, 2011). Noise exemptions have been issued by the cities of Oceanside and Imperial Beach, and both the cities of Carlsbad and San Diego have confirmed there is no action required.

10. On Page 13 of the staff report, the first incomplete paragraph shall be revised as follows:

While RBSP II is very similar to RBSP I, there are some variations. RBSP II proposes to place approximately 300,000 cu. yds. more sand on the receiver sites and less extensive post-construction monitoring is proposed. Additionally, the Del Mar and Mission Beach receiver sites from RBSP I will not receive any sand under RBSP II; the Oceanside receiver site will be shifted 1,800 ft. north towards the pier; the Imperial Beach receiver site ~~will~~ may receive approximately five and a half times more sand and be extended 1,750 ft. north and 1,700 ft. south; and the Leucadia receiver site will receive 13% less sand. No new receiver sites are proposed under RBSP II. The Del Mar and Mission Beach receiver sites from RBSP I are not included as part of RBSP II due to municipal budget constraints and they have or will be receiving sand from other projects.

11. On Page 15 of the staff report, the first complete paragraph shall be revised as follows:

The proposed project is designed to replenish the beach at ten receiver sites that have been identified by SANDAG and the Coastal Sediment Management Workgroup as having experienced erosion and critical shoreline problems. It is difficult to estimate precisely how long the fill sand will remain on receiver beaches; however, the Environmental Impact Report for the project estimates that it will take from three to five or more years for the receiver beaches to return to their pre-project condition. During that time, the public will have the benefit of wider sandy beaches (see Exhibit # 6). ~~Although sand from this project is expected to remain on some of the beaches for five or more years, e~~ Enhanced profile sand monitoring will ~~only~~ be done for ~~four~~ five years following construction. It is anticipated that the baseline beach profile monitoring will continue after the initial four years and that the enhanced beach profile monitoring will not be necessary because sand will be distributed throughout the littoral system and remaining project sand would not be substantial enough to be detectable through profiling. Monitoring of RBSP I showed that beach width gains lasted an average of four years and shore zone volume gains lasted an average of six years.

12. On Page 16 of the staff report, the second complete paragraph shall be revised as follows:

The applicant states that the contractor would be responsible for identifying any staging headquarters. However, ~~staging project~~ staging project headquarters would not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach. Additionally, equipment will be restricted to the active construction area at the receiver site. The contractor will likely rent staging space offsite. The minimum amount of parking spaces required has not been determined at this time. However, Special Condition # 6 requires that the applicant submit final staging plans identifying the location and amount of public

parking spaces required. The number of spaces occupied must be the minimum number necessary to implement the project.

13. On Page 17 of the staff report, the second complete paragraph shall be revised as follows:

At beaches that are less heavily used, for example, Leucadia, 12 days of beach closure would probably not have a significant adverse impact on the public. In contrast, even the partial closure of Torrey Pines Beach during any summer day is going to displace a significant number of beach users. The impact will be particularly significant at higher tides and at work areas where the entire beach area would be closed to the water line and people cannot get past the work area to the rest of the beach except by traveling inland around the construction area. At most of the receiver beaches, horizontal access along the back beach or adjacent public corridor would be maintained to allow access to either side of the active sand placement area. However, at receiver sites where sand may be required for placement to the edge of the back beach to create a level beach, horizontal access will be temporarily closed. While any beach closure is a public access concern, Special Condition # 1 requires that horizontal access on the beach behind any active construction area be closed for a maximum of one hour ~~per day~~ during daylight hours. The applicant will also attempt to limit construction of the back beach during daylight hours in order to allow maximum horizontal access during the day. Additionally, once the sand is placed and spread on each section of beach, the construction activities will shift down the beach. At that time, the replenished beach will be immediately available for use by the public. Thus, the public access impacts will be minimal and temporal.

14. On Page 17 of the staff report and continuing onto Page 18, the last paragraph shall be revised as follows:

SANDAG has submitted a schedule of work to the Commission, but has stated that when the contractor is hired for the job, changes may be needed. The applicant identified two biological constraints on timing which have been incorporated into the project. The Batiquitos receiver site will be constructed only after August 1<sup>st</sup> and after the cessation of least tern nesting in the area, in order to avoid impacts to foraging birds by increased turbidity. Beach suitability for grunion spawning will be analyzed and approved by the Commission and the less suitable beaches ~~scheduled, to the maximum extent feasible, outside for grunion spawning,~~ should be nourished during April through June, the primary grunion spawning season.

15. On Page 18 of the staff report, the third and fourth complete paragraphs shall be revised as follows:

Therefore, Special Condition # 1 places ~~a some general~~ parameters on the timing of construction. The condition takes into account both the biological constraints on dredging, and the fact that once dredging is started at a particular borrow site, it may be inefficient to stop dredging and move to another site. However, the intent is to ~~encourage as much work as possible to be completed before the summer season~~



~~(Memorial Day to Labor Day), and that work that has to be done at high use beaches during the summer be performed preferably before Memorial Day, (when many schools finish for the summer) or as early in the season as possible ensure that~~ maximum beach access is maintained by keeping horizontal access available to the greatest extent feasible.

Of the ten receiver sites, the applicant has identified that the following beaches traditionally have high recreational use: Solana Beach, Moonlight Beach, Cardiff, Torrey Pines, and South Carlsbad. Exhibit # 5 shows the order in which the applicant proposes the beach replenishment ~~must~~ be performed. Work at the most heavily used beaches is scheduled to occur prior to Memorial Day, in an attempt to avoid the prime summer season and to provide sand for summer beach users. As conditioned, conflicts between the proposed project and the general beach-going public will be minimized to the greatest extent feasible.

16. On Page 19 of the staff report, the last incomplete paragraph shall be revised as follows:

In summary, the proposed project will have short-term impacts on public access and recreation, which have been minimized by conditions requiring that ~~construction of heavily used beach areas be scheduled outside the summer season~~ horizontal beach access remain open as much as possible. The project overall will have a positive impact on San Diego's beaches, and the monitoring program will provide valuable information on the movement of sand along the San Diego shoreline that will be useful in planning and designing future sand replenishment projects. Therefore, as conditioned, the proposed project can be found consistent with the public access and recreation policies of the Coastal Act.

17. Beginning on Page 25 of the staff report, the second complete paragraph shall be revised as follows:

CDFG recommends that no beach replenishment occur on beaches that provide suitable grunion habitat during the grunion spawning season, March through August (CDFG Draft EIR Comment Letter). However, the applicant has stated that this is not feasible because the proposed project will take up to eight months and work must occur prior to the winter season to avoid large storms and waves. The applicant has also stated that it is not financially feasible to split the project into two segments and do one phase before grunion season and the remainder following grunion season or to do the replenishment over a two year period, because the cost of mobilizing the dredge equipment is too great. However, the applicant has not submitted documentation to the Commission in regards to the cost of dredge equipment mobilization. CDFG staff also states the following as reasons not to allow any impacts to grunion or grunion eggs: There are no studies showing that the grunion population is stable; imminent global warming/sea level rise threatens grunion spawning habitat; and there is a lack of convincing evidence that beach replenishment is appropriate mitigation for impacts to grunion (personal communication with CDFG, May 2011). CDFG staff agrees with the Commission that impacts to grunion eggs following runs of less than 100 grunion

should be permitted and that no mature grunion should be impacted. However, CDFG staff disagrees that impacts to hundreds of fish spawning at different times or at once in several areas of beach (Walker Scale of 2 or 3) ~~100-500 grunion~~ should be permitted if construction has already begun. CDFG staff states that impacts to grunion eggs following runs of hundreds of fish spawning at different times or at once in several areas of beach (Walker Scale of 2 or 3) ~~100-500~~ should not be allowed under any circumstance because 100-500 fish is the median run and there is no proven mitigation available for impacts to substantial amounts of grunion eggs. CDFG staff also suggests that grunion monitoring following beach replenishment would be invaluable for analyzing future projects (personal communication with CDFG, May 2011). Taking into account communication with CDFG, the Commission makes the following findings in regards to grunion impacts.

In order to avoid these impacts during implementation of RBSP II, Special Condition # 8 contains specific grunion monitoring and avoidance conditions. Grunion prefer to spawn on gradually sloping, sandy beaches. However, they also may spawn between areas of cobble cover and may spawn below seawalls or bluffs as tides recede. It is unknown whether the eggs deposited below seawalls or in areas with significant cobble cover are successfully hatched. Beaches would not be used for spawning if they are too steep or too rocky (personal communication, Dr. Karen Martin, May 2011). Based on the uncertainty surrounding appropriate spawning habitat, all receiver sites that are scheduled to be replenished during the grunion spawning season, March through August, shall be monitored concurrently for grunion, unless there is no sand on the beach. The applicant is required to develop a revised, final construction schedule, with the primary intent of avoiding impacts to grunion and grunion eggs by scheduling the sites most suitable for grunion spawning outside the primary grunion spawning season. In addition, the applicant shall develop, in consultation with CDFG, NMFS, USACE and the Executive Director, additional criteria to determine the viability of a deposition site for a spawning event and if the deposition site can be eliminated from the monitoring requirement. The criteria shall include, but are not limited to, predicted monthly high tides, current beach profiles, and historic grunion runs. As part of these criteria, the applicant will develop specific grunion avoidance measures for each of the ten receiver sites. The Batiquitos receiver site is scheduled after August 1<sup>st</sup>, due to least tern nesting constraints, and therefore does not need to be monitored for grunion. The Commission is requiring all beaches to be monitored concurrently so that the applicant will be able to avoid placing sand on beaches with grunion eggs. During RBSP I, the applicant only monitored the next scheduled replenishment receiver site for grunion runs. This method proved to be unsuccessful because the applicant did not know which receiver site to replenish if grunion runs were discovered on the next scheduled site. Monitoring for grunion need not continue at a given site after sand replenishment has been completed at that site. The Commission also considered monitoring the next three beaches scheduled for replenishment, with the possibility that at least one out of the three beaches would not have had a recent grunion spawning event. An additional grunion monitoring requirement considered by the Commission was to monitor beaches that are expected to be replenished within a specified time period (i.e. 1-2 months). However,

monitoring all beaches suitable for grunion spawning during grunion spawning season provides the greatest assurance that grunion eggs will not be impacted.

The applicant reported that during RBSP I, it was determined that monitoring two hours before each run, two hours during each run, and two hours following each run was not necessary. The Final Grunion Monitoring Report states that grunion were almost always observed at a monitoring site within the predicted peak period or at most 15 minutes prior to the predicted peak period. In one instance, grunion began arriving about one hour prior to the peak period. SANDAG has further reported that based on experience over the last few years, fish are not typically observed in number more than 30 minutes prior to the predicted peak period. Based on these reports, monitoring for grunion by a qualified biologist is only required 30 minutes prior to and two hours following the predicted start of each spawning event. However, Special Condition 8b requires that sufficient personnel shall be utilized to insure that the entire receiver site is monitored during the specified period. In addition, the extent of the spawning event shall be defined by a length of beach of 100 yards for the purposes of determining the Walker Scale.

18. On Page 27 of the staff report, the first and second complete paragraphs shall be revised as follows:

Because 100-500 fish is the median spawning event and more than 500 fish in an event only occurs on one third of the reported spawning events, it would not be appropriate to consistently impact these runs. Additionally, because of the uncertainly involved with the trade-off between grunion impacts and temporary habitat creation, it is questionable if it is possible to mitigate for substantial impacts to grunion. If grunion runs of more than 100 fish are reported before construction has started, the applicant must avoid the grunion eggs. The applicant shall alter the construction/beach replenishment schedule to replenish a beach that has not had such a grunion spawning event within two weeks prior to the start of construction. Avoidance shall be done in consultation with the resource agencies and may consist of alteration of the discharge point and/or the locations where sand is spread, shifting the receiver site footprint, or replenishing a different receiver site. While grunion have not been found to return to the same beaches year after year, they do often return to the same beaches within one spawning season. Therefore, in some cases the applicant may be permitted to impact grunion with appropriate avoidance action following the peak spawning season, i.e. after mid-June when grunion runs are traditionally smaller, to allow deployment to those beaches. Feasible avoidance actions for grunion at each of the ten receiver beaches that allow work to continue, but also minimize and/or avoid impacts to grunion eggs, shall be developed by the applicant, subject to approval of the Executive Director in consultation with CDFG, NMFS and UCSACE. These avoidance actions shall take into consideration the size of the deposition site, stage of mobilization, construction constraints, etc.

If construction has already begun and a grunion run of hundreds of fish spawning at different times or at once in several areas of beach (Walker Scale of 2 or 3) 100-500 is reported, the applicant must attempt to avoid/minimize impacts using the specific

avoidance actions developed for each of the ten beaches. through alteration of the discharge point and/or the locations where sand is spread. If avoidance this is not possible, the grunion eggs may be impacted. Impacts are permitted in this case because switching receiver sites once construction has begun is very expensive. This additional expense would result in less sand being placed on receiver sites and therefore less potential improvement to grunion spawning habitat. However, if construction has begun and greater than hundreds of fish spawning at different times or at once in several areas of beach (Walker Scale of 4 or 5) 500 grunion are reported, no impacts to grunion eggs are permitted. If the applicant cannot avoid impacts to grunion eggs through alteration of the discharge point and/or the locations where sand is spread, all beach construction/replenishment must cease at that receiver site. In those instances, the Commission finds a more conservative approach which protects the spawning run is warranted.

19. On Page 28 of the staff report, the first incomplete paragraph shall be revised as follows:

Pismo clams are managed by the CDFG as a recreational marine resource. The population of Pismo clams has been severely depleted along the Southern California coast in recent years (personal communication with CDFG, May 2011). Pismo clams live in sandy areas from the intertidal zone to depths of 80 ft. and concentrate in beds in certain areas. The project EIR asserts that Pismo clams are capable of relatively rapid movement and normally bury to a depth of two to six inches. The project EIR also states that at Imperial Beach, subadult-sized Pismo clams and relatively large, clam shells were observed north of the pier within the receiver site footprint. The occurrence or extent of adult Pismo clams in the adjacent subtidal zone is not known. The EIR goes on to state that if adult clams are present subtidally, there would be the potential for impacts to some individuals along the seaward edge of the fill. However, because clams are mobile, some individuals would be expected to relocate during replenishment. The applicant has proposed to avoid impacts to Pismo clams through measures such as a slow discharge rate or modification to the seaward edge of the fill. However, it is uncertain if these measures would prevent impacts to Pismo clams. ~~Therefore, Special Condition # 5 requires that the applicant conduct preconstruction monitoring for Pismo clam beds at the Imperial Beach receiver site, regardless of the amount of sand proposed to be placed on the beach.~~ In consultation with the CDFG, the Commission ecologist has reviewed available information and concurs that Pismo Clam beds should be protected. If the presence of a clam bed is confirmed, then the bed ~~shall~~ should be avoided in its entirety, by shifting the location of sand within the deposition site. Because Pismo Clam beds are located only in tidal areas seaward of the mean high tide, the Port of San Diego would have coastal development permit jurisdiction over them in the Imperial Beach receiver site and thus, will be addressed by the Port in their CDP for the project. No Pismo Clam beds are expected within the project area in the Commission's CDP jurisdiction.

20. On Page 29 of the staff report, the third complete paragraph shall be revised as follows:

However, the plan does not provide adequate avoidance measures for California grunion, Pismo clams, beach/sand monitoring, or lagoon entrances. Special Condition # 8 requires additional monitoring and avoidance measure for the California grunion. ~~Special Condition # 5 requires additional monitoring and avoidance measures for the Pismo clam.~~ Special Condition # 2 requires additional monitoring for beach/sand resources. In addition to sand/beach monitoring proposed in the EIR and the monitoring plan, pre- and post- construction bathymetric surveys of the borrow/extraction areas, ~~full depth profiles for each borrow/extraction area~~ transects of each borrow/excavation area, and profiles of grain size of the surface sand that accumulates in the borrow/extraction areas is needed in order to ensure that taking large amounts of sand from offshore reserves does not impact local beach sand supplies.

21. On Page 30 of the staff report, the first complete paragraph shall be revised as follows:

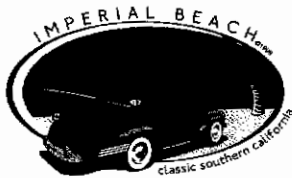
As stated, the “Mitigation and Monitoring Plan” has not been finalized, pending final review and approval of the resource agencies. Special Conditions #s 2-5 also require SANDAG to submit and implement final monitoring programs for beach/sand monitoring, turbidity, lagoons, and biological resources that have been reviewed and approved by the U.S. ~~Fish and Wildlife Service~~ Army Corps of Engineers. Special Condition # 7 requires the applicant to submit a copy of any other state or federal permits required, to ensure any additional mitigation required is incorporated in the subject permit. However, mitigation measures that resulted in a substantial change to the project would require an amendment to this permit or a new coastal development permit.

22. The label on Exhibit # 4 shall be revised as follows:

~~Location Map~~ Grain Size

23. Exhibit # 10 shall reflect the following changes (shaded figures):

		Carun	0	0	0	0	0	0	0	0
Solana Beach	267 (Bedrock)	Solana Beach	0	0	0	0	0	0	0.1 (U)	Year 1
City of San Diego <sup>3</sup>	107 (Bedrock, Cobble)	Torrey Pines	0	<0.1	0	0	0	0.6	2.1 (0.1 S, 2 U)	Year 1 (scour), Years 2-4 (height)
Imperial Beach	2,396 (Cobble)	Imperial Beach	0	0	0	0	1.1	0.1	2.5 (U)	Years 1-5
Total			0	0.1 <sup>3</sup>	0	0	1.1	1.2 <sup>3</sup>	8 <sup>2</sup> (1.2 S, 6.8 U)	



NISD

City of Imperial Beach, California

[www.cityofib.com](http://www.cityofib.com)

**OFFICE OF THE MAYOR**

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June 8, 2011

Click here to go  
to the original staff report  
following the added correspondence.

Ms. Dayna Bochco, Chair  
California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105

Dear Ms. Bochco:

As Mayor of Imperial Beach, let me express our city's strong support for SANDAG's Regional Beach Sand Project (RBP).

This regional effort will be similar to the SANDAG project in 2001 which was very helpful in preserving sand on our beach and increasing beach width without any negative environmental impacts.

We believe the RBSP will enhance the public's access and enjoyment of beaches throughout San Diego County, from Oceanside to Imperial Beach.

We urge you and all Coastal Commissioners to support this project.

Sincerely,

*Signature on file*

James C. Janney  
Mayor

JUN 10 2011

cc: Peter M. Douglas, Executive Director  
Eric Stevens, Coastal Program Analyst  
Imperial Beach City Council

Letters of Support

825 Imperial Beach Blvd., Imperial Beach, CA 91932 Tel: (619) 423-8303 fax: (619) 628-1395

17



# BEACH ECOLOGY COALITION

To enhance ecosystem conservation  
and beach management  
to balance natural resource  
protection and recreational use.

California Coastal Commission  
45 Fremont St., Suite 2000  
San Francisco, CA 94105

June 2, 2011

RE : CCC Application 06-11-018,  
Application of San Diego Regional Association of Governments to place approximately 2.5 million cubic yards of sand dredged from 3 off shore borrow sites on to ten beaches in the San Diego area.

I am writing this as the President of the Beach Ecology Coalition, a California Non-Profit geared toward promoting sustainable and environmentally sensitive beach maintenance procedures on all beaches in California, while taking into account the needs of native and transient species that populate our beaches as well as the economic and recreational impacts that beaches have on our citizens.

The Regional Beach Sand Project 2 has the potential to impact spawning grunion along the San Diego Coast especially during the placement of sand during prime grunion season (March to August). We consider the South Carlsbad, North and South Receiver Site, Leucadia Beach Receiver Site, Moonlight Beach Receiver Site, Cardiff Beach Receiver Site and the Solana Beach Receiver Sites as the best potential grunion nesting site enhancement areas due to the early spring beach conditions at these locations. Based on observations and available information these areas tend to be wet beaches, with little or no sloped sand areas, that are therefore conducive to nesting grunion. Our recommendation is to provide monitoring before, during and after the placement of sand on the early project receiver sites. The monitoring should be geared toward observing conditions prior to placement in regards to grunion spawning activity, observation during and immediately after placement of sand, and continued monitoring throughout the remainder of Grunion Season to determine if the newly placed sand has in fact shown signs of grunion nesting activity. During the Regional Beach Sand Project 1 I was the Beach Manager for the City of San Diego Park and Recreation Department. As part of my duties I monitored the placement of sand in Mission Beach during grunion season as a part of the City of San Diego's overall Grunion Grooming Protocol and did observe grunion spawning along the newly replenished areas that same season. The possibility that this project can have an immediate positive impact on grunion spawning is reason enough to prioritize funding for monitoring through the entire season and not just during placement.

Respectfully Submitted,

*Signature on file*

Dennis Simmons  
President, Beach Ecology Coalition



**CITY OF OCEANSIDE**  
**OFFICE OF CITY MANAGER**

June 2, 2011

**RECEIVED**

**JUN 06 2011**

Eric Stevens  
California Coastal Commission  
7575 Metropolitan Drive, Suite 103  
San Diego, CA 92108-4402

CALIFORNIA  
COASTAL COMMISSION  
SAN DIEGO COAST DISTRICT

Dear Mr. Stevens:

**SUBJECT: Application No. 6-11-018, SANDAG Regional Beach Sand Project**

The City of Oceanside would like to offer its support for the approval of Application No. 6-11-018, the San Diego Association of Governments (SANDAG) Regional Beach Sand Project (RBSP).

In 2001, SANDAG placed 2.1 million cubic yards of sand on 12 beaches as part of a regional beach nourishment project. The proposed RBSP is designed to provide a second regional beach sand replenishment project in the San Diego region. The receiver sites are generally in the same location as those included in the RBSP completed in 2001, with some variations due to economic and recreational needs. The RBSP will place up to 2.3 million cubic yards of sand on up to 10 receiver sites from Oceanside to Imperial Beach.

The SANDAG Regional Shoreline Management Program includes collaboration and consultation with the region's coastal jurisdictions to protect and restore the coastline. The beach nourishment projects provide a valuable source of beach quality material, helping to restore eroding beaches. In addition, the nourishment project provides several benefits, including biological by increasing sandy beach habitat, economic through increased beach attendance, and public property protection.

We appreciate the California Coastal Commission's consideration of Application No. 6-11-018 and hope that it passes with unanimous support. We expect that the RBSP scheduled for construction in Spring 2012 will have the same positive result as the 2001 project, an increase in beach widths with no significant environmental impacts.

Please feel free to contact Shelby Tucker with SANDAG at 619-699-1916 or [stu@sandag.org](mailto:stu@sandag.org) for any comments or concerns related to the RBSP.

Sincerely,

*Signature on file*

PETER WEISS  
City Manager

**A**





RECEIVED

JUN 09 2011

CALIFORNIA  
COASTAL COMMISSION  
SAN DIEGO COAST DISTRICT

**GREG COX**  
SUPERVISOR, FIRST DISTRICT  
San Diego County Board of Supervisors

June 7, 2011

Mr. Eric Stevens  
Coastal Program Analyst  
California Coastal Commission  
7575 Metropolitan Drive, Suite 103  
San Diego, CA 92108-4402

**RE: APPLICATION NO. 6-11-018, SANDAG REGIONAL BEACH SAND PROJECT**

Dear Mr. Stevens:

As Supervisor for the First District in the County of San Diego, I am writing to express my support for the San Diego Association of Governments' (SANDAG) Regional Beach Sand Project (RBSP).

The SANDAG Regional Shoreline Management Program includes collaboration and consultation with the region's coastal jurisdictions to protect and restore the coastline. The beach nourishment projects provide a valuable source of beach quality material, helping to restore eroding beaches.

The RBSP is also important for the City of Imperial Beach as a wide sandy beach not only provides critical shoreline protection but also provides an extremely vital recreational resource for both tourists and local residents from my district in South County. This, in turn, provides far-reaching economic benefits to the local, state and national economies.

It is for these reasons that I urge you to approve SANDAG's application for their Regional Beach Sand Project. If you would like to learn more about the project, please feel free to contact Shelby Tucker with SANDAG at (619)699-1916 or [stu@sandag.org](mailto:stu@sandag.org).

I appreciate your consideration.

Sincerely,

*Signature on file*

GREG COX  
Supervisor, First District



# CITY OF CORONADO

OFFICE OF THE MAYOR

CASEY TANAKA

---

1825 STRAND WAY • CORONADO, CA 92118 • (619) 522-7320 • CTANAKA@CORONADO.CA.US

June 6, 2011

Eric Stevens  
California Coastal Commission  
7575 Metropolitan Drive, Suite 103  
San Diego CA 92108-4402

JUN 08 2011

SUBJECT: Application No. 6-11-018, SANDAG Regional Beach Sand Project

Dear Mr. Stevens:

The City of Coronado would like to offer its support for the approval of Application No. 6-11-018, the San Diego Association of Governments (SANDAG) Regional Beach Sand Project (RBSP).

In 2001, SANDAG placed 2.1 million cubic yards of sand on 12 beaches as part of a regional beach nourishment project. The proposed RBSP is designed to provide a second regional beach sand replenishment project in the San Diego region. The receiver sites are generally in the same location as those included in the RBSP completed in 2001, with some variations due to economic and recreational needs. The RBSP will place up to 2.3 million cubic yards of sand on up to 10 receiver sites from Oceanside to Imperial Beach.

The SANDAG Regional Shoreline Management Program includes collaboration and consultation with the region's coastal jurisdictions to protect and restore the coastline. The beach nourishment projects provide a valuable source of beach quality material, helping to restore eroding beaches. In addition, the nourishment project provides several benefits, including biological by increasing sandy beach habitat, economic through increased beach attendance, and public property protection.

We appreciate the California Coastal Commission's consideration of Application No. 6-11-018 and hope that it passes with unanimous support. We expect that the RBSP scheduled for construction in spring 2012 will have the same positive result as the 2001 project, an increase in beach widths with no significant environmental impacts.

Please feel free to contact Shelby Tucker of SANDAG at 619-699-1916 or [stu@sandag.org](mailto:stu@sandag.org) for any comments or concerns related to the RBSP.

Sincerely,

*Signature on file*

---

Casey Tanaka  
Mayor

CT/mlc

A

June 10, 2011

Eric Stevens  
California Coastal Commission  
7575 Metropolitan Drive, Suite 103  
San Diego, CA 92108-4402

Dear Mr. Stevens:

**SUBJECT: APPLICATION NO. 6-11-018, SANDAG REGIONAL BEACH SAND  
PROJECT**

The San Diego Unified Port District (District) would like to offer its support for the approval of Application No. 6-11-018, the San Diego Association of Governments (SANDAG) Regional Beach Sand Project (RBSP). The District has been granted by the state of California approximately 402 acres of Pacific Ocean tide and submerged lands. These granted lands are bounded by the historic mean high tide line for about 1.4 miles along the Imperial Beach shoreline. According to the certified Port Master Plan Precise Plan for the Imperial Beach Planning District, the "sandy ocean beach is probably the most important natural physical asset in the area." As such, the District believes the proposed RBSP project would not only help conserve this important natural asset, but also facilitate and promote existing and new public access and recreational opportunities along the Imperial Beach coastline for the general public to enjoy.

Project Background

The SANDAG Regional Shoreline Management Program includes collaboration and consultation with the region's coastal jurisdictions to protect and restore the coastline. In 2001, SANDAG placed 2.1 million cubic yards of sand on 12 beaches as part of a regional beach nourishment project. The proposed RBSP is designed to provide a second regional beach sand replenishment project in the San Diego region. The receiver sites are generally in the same location as those included in the RBSP completed in 2001, with some variations due to economic and recreational needs. The RBSP will place up to 2.3 million cubic yards of sand on up to 10 receiver sites from Oceanside to Imperial Beach.

Coastal and Public Access Benefits

The beach nourishment projects provide a valuable source of beach quality material, helping to restore eroding beaches. In addition, the nourishment project provides several benefits, including biological by increasing sandy beach habitat, economic through increased beach attendance, and public property protection.

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The RBSP is particularly important for the City of Imperial Beach as a wide sandy beach not only provides critical shoreline protection but also provides an extremely vital recreational resource for both out-of-town tourists and local visitors from much of the South Bay area of San Diego County, including the communities of San Ysidro and Nestor in the City of San Diego, and the cities of National City and Chula Vista. This, in turn, provides far-reaching economic benefits to the local, state and national economies.

Closing

We appreciate the California Coastal Commission's consideration of Application No. 6-11-018 and hope that it passes with unanimous support. We expect that the RBSP scheduled for construction in spring 2012 will have the same positive result as the 2001 project, an increase in beach widths with no significant environmental impacts.

Please feel free to contact me at (619) 686-6473 or [dnicandr@portofsandiego.org](mailto:dnicandr@portofsandiego.org) if you have any questions regarding this letter, or Shelby Tucker with SANDAG at (619) 699-1916 or [stu@sandag.org](mailto:stu@sandag.org) for any comments or concerns related to the RBSP.

Sincerely,

*Signature on file*

---

DARLENE NICANDRO  
Director, Environmental & Land Use Management  
San Diego Unified Port District

cc: Commissioner Dan Malcolm, Board of Port Commissioners  
Wayne Darbeau, San Diego Unified Port District  
Mayor Jim Janney, City of Imperial Beach  
Greg Wade, City of Imperial Beach  
Shelby Tucker, SANDAG

DM#: 472160

**June 10, 2011**

Chairperson and Commissioners

California Coastal Commission

45 Fremont Street, Suite 2000

San Francisco CA 94105-2219

Dear Commissioners:

I am writing to support item 6-11-018, the SANDAG Regional Sand Project.

This project is a golden opportunity to use opportunistic sand materials to replenish to some extent our damaged beaches. I have worked on this project from a legislative position as a past member of the Board of Directors of SANDAG and a member of the Imperial Beach City Council for twelve years until my retirement last year. I was also a California Coastal Commissioner in 2000.

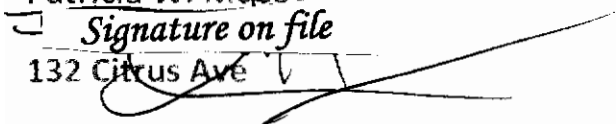
This sand will help restore eroded shoreline where there is ecological damage. My main priority is to protect the environmental integrity of the shoreline and this project does accomplish remediation and contributes to restoration.

The side benefits of increased sandy beaches for the general public in general will give a much needed boost to beach related economic opportunity.

I would appreciate your support for this project at this time while we sort out better ways to protect our beaches.

Sincerely

Patricia W. McCoy

 *Signature on file*

132 Citrus Ave

Imperial Beach CA 91932

mccoy4ib@aol.com



401 B Street, Suite 800  
 San Diego, CA 92101-4231  
 (619) 699-1900  
 Fax (619) 699-1905  
 www.sandag.org

June 10, 2011

Mr. Eric Stevens  
 California Coastal Commission  
 7575 Metropolitan Drive, Suite 103  
 San Diego, CA 92108

Dear Mr. Stevens:

SUBJECT: Consideration of Coastal Development Permit Application  
 No. 06-11-018 - Regional Beach Sand Project II

MEMBER AGENCIES

- Cities of
- Carlsbad
- Chula Vista
- Coronado
- Del Mar
- El Cajon
- Encinitas
- Escondido
- Imperial Beach
- La Mesa
- Lemon Grove
- National City
- Oceanside
- Poway
- San Diego
- San Marcos
- Santee
- Solana Beach
- Vista
- and
- County of San Diego

ADVISORY MEMBERS

- Imperial County
- California Department of Transportation
- Metropolitan Transit System
- North San Diego County Transit Development Board
- United States Department of Defense
- San Diego Unified Port District
- San Diego County Water Authority
- Mexico

The San Diego Association of Governments (SANDAG) has received confirmation that the Regional Beach Sand Project (RBSP) II is on the California Coastal Commission (CCC) June 15, 2011, agenda. We appreciate your consideration of the project.

SANDAG and the coastal cities of the San Diego region are pleased to have another opportunity to nourish eroded beaches between the cities of Oceanside and Imperial Beach. The 2001 RBSP I was a successful pilot project that provided increased beach widths that enhanced public access and created sandy beach habitat. The currently proposed RBSP II mimics the 2001 project placing beach quality material on ten receiver beaches (totaling approximately 4.6 miles of enhanced shoreline) along the 75-mile long San Diego coast. Given the potential placement of up to 2.3 million cubic yards of sand, a construction duration of approximately six to eight months is anticipated. Construction will occur during the spring and summer months when less wave action occurs along the coast. This will allow the contractor to safely dredge and moor a monobuoy off each of the receiver sites.

We are in receipt of the staff report released June 2, 2011, and have reviewed the Special Conditions proposed by staff. Most of the conditions are consistent with prior discussions. However, we have substantial concerns regarding Special Condition No. 8 addressing grunion because it would negatively affect project constructability. SANDAG staff and the consultant team feel strongly that if Special Condition No. 8 regarding grunion remains unchanged, it could render the project unbuildable at certain sites. This would potentially make implementation of the project as a whole infeasible and eliminate the opportunity to enhance this public resource that will ultimately benefit grunion and other sandy habitat species. We have coordinated with the CCC ecologist and other agencies to generate revised proposed measures, which are a compromise that would minimize impacts to the species while allowing the project to move forward. As a result, grunion as a species will benefit from the restoration of regional beach habitat.

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In addition, we would like to recommend clarifications to Special Condition Nos. 1b, 2, 2d, 3, 4, 5, and 6a. We met with CCC staff June 9, 2011, to discuss SANDAG's concerns and clarifications, and again appreciate the time they have taken to consider the comments. The discussion was extremely productive, and we understand that some of the clarifications discussed at the meeting are acceptable, while others will require additional internal coordination with CCC staff. Each of the clarifications is likely to be addressed in the addendum to the June 2, 2011, staff report being prepared by CCC staff for distribution prior to the hearing. SANDAG staff and the consultant team have not reviewed the addendum and wanted to provide a record of our discussions with CCC staff; therefore, we have addressed each of the different discussion items in attachments to this letter.

Attachment A provides a prioritized discussion of the primary issues and concerns that SANDAG has regarding the conditions, as proposed in the June 2, 2011, staff report. Attachment B contains a list of all recommended Special Conditions from the staff report (in numeric order), our proposed revised language (where applicable), and rationale for the suggested revisions. The attachment also is color coded to reflect substantial constructability issues, clarifications requested, and notes regarding internal consistency between the staff report and the condition language. Finally, Attachment C provides supplementary information on grunion, a game species that is not threatened or endangered.

As part of the RBSP II, we have been coordinating extensively with the CCC and other regulatory/resource agency staff over the past year and appreciate the time they have taken to provide thoughtful input on the project design and monitoring program. We are continuing to coordinate with the various regulatory and resource agencies through the other permitting processes required for RBSP II implementation. We appreciate CCC staff coordination efforts and your consideration of the project. Please feel free to contact Shelby Tucker, RBSP II Project Manager, at (619) 699-1916 or stu@sandag.org with any comments or concerns regarding RBSP II.

As discussed, SANDAG agrees with many of the proposed Special Conditions included in the staff report, but has strong concerns regarding the ramifications of Condition No. 8 that could jeopardize project implementation. We request that, as part of project authorization, the CCC adopt the revised language provided in Attachment A.

Sincerely,

GARY L. GALLEGOS  
Executive Director

GGA/STU/adi

Attachments: A – Memorandum  
B – List of RBSP II Special Conditions and SANDAG Recommendations  
C – Supplementary Materials on Grunion  
D – Grunion Coordination with Bob Hoffman (NMFS)



401 B Street, Suite 800  
San Diego, CA 92101-4231  
(619) 699-1900  
Fax (619) 699-1905  
www.sandag.org

June 10, 2011

TO: California Coastal Commissioners  
FROM: SANDAG Staff  
SUBJECT: Consideration of Coastal Development Permit Application  
No. 06-11-018 - Regional Beach Sand Project (RBSP) II

MEMBER AGENCIES

- Cities of
- Carlsbad
- Chula Vista
- Coronado
- Del Mar
- El Cajon
- Encinitas
- Escondido
- Imperial Beach
- La Mesa
- Lemon Grove
- National City
- Oceanside
- Poway
- San Diego
- San Marcos
- Santee
- Solana Beach
- Vista
- and
- County of San Diego

ADVISORY MEMBERS

- Imperial County
- California Department of Transportation
- Metropolitan Transit System
- North San Diego County Transit Development Board
- United States Department of Defense
- San Diego Unified Port District
- San Diego County Water Authority
- Mexico

After reviewing the staff report released June 2, 2011, SANDAG concurs with the majority of information included in the report. There are some specific conditions that would affect the constructability of the project, however, as well as some additional clarifications that SANDAG has noted. This memorandum provides a discussion of the primary issues and concerns that SANDAG has regarding the conditions, as proposed in the June 2, 2011, staff report, for RBSP II (Application No. 06-11-018). We understand that some of these revisions may be addressed in an addendum currently being prepared, based on a meeting with SANDAG and CCC staff on June 9, 2011. The discussion in this memo is prioritized in order of importance. For each condition, original text from the CCC Staff Report is provided with proposed revised language shown in track changes (underlined text), followed by rationale for that change.

**Special Condition No. 8. Grunion**

**Requested Condition Change**

SANDAG requests that Special Conditions 8a, 8d, 8e and 8f be revised as provided below. These clarifications also are provided in Attachment B.

**No. 8a**

During the grunion spawning period of March through August, all proposed receiver sites shall be monitored for grunion runs concurrently (excluding the Batiquitos receiver site), unless the beach consists of 100% cobble (i.e., there is no sand on the beach) or the high tide area experiences high wave energy due to runup along the back beach or bluff (i.e., there is no beach at high tide). Monitoring need not continue at a given site after sand replenishment has been completed at that site.

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No.8d

The following proposed language is based on conditions generated by John Dixon, the CCC Ecologist, and Bob Hoffman from National Marine Fisheries Service (NMFS) (via e-mail from Bob Hoffman May 12, 2011, and subsequent June 3, 2011, e-mail from Bob Hoffman summarizing coordination at the June 2, 2011, resource agency meeting, the statement regarding no burial of adult grunion is retained from the conditions in the staff report. This issue was not specifically addressed in the May 12 or June 3 e-mails):

1) During the grunion spawning period of March through August, grunion spawning monitoring will occur at all sites where sand disposal is anticipated to occur. Location of spawning activity and a Walker Scale estimate of the density of spawning will be included in that work. Survey results will be provided to the regulatory and resource agencies in a timely manner such that effective management decisions regarding upcoming disposal activities can be made. Prior to a predicted grunion run, the applicant or their consultants will coordinate with the resource agencies potential grunion mitigation measures that may need to be implemented depending on the condition of the specific receiver site and density of grunion spawning that may have occurred during the preceding grunion run or which may occur during the next predicted run. This coordination should begin at least one week prior to disposal work at each site. The preferred approach is avoidance; however, monitoring data can be used to identify those beaches where impacts can be minimized, and direct work to those sites. Monitoring will also document actual impacts.

2) If a sand disposal site has a Walker Scale 1,2, or 3 spawning event either immediately prior to or during disposal activities, sand placement may proceed as long measures to minimize impacts are incorporated. Those measures may include shifting of the entire site, minimizing impacts through discharge location, or other appropriate mitigation actions. No burial of adult grunion will occur.

3) If a sand disposal site has a Walker Scale 4 or 5 spawning event either immediately prior to or during disposal activities, measures to minimize or eliminate impacts will be implemented that may include shifting of the entire site, use of a single point discharge, berm construction, potential ceasing of disposal activities, or other appropriate mitigation actions. No burial of adult grunion will occur.

4) Because of the difficulty in anticipating every possible scenario, given the unique characteristics of some of the sites as well as unanticipated conditions that may exist at the time of disposal, the regulatory and resource agencies will be consulted and an approach will be agreed upon prior to the placement of any sand at a site where grunion spawning has occurred.

No.8e

Based on conditions generated by CCC and NMFS (see above).

No.8f

Based on conditions generated by CCC and NMFS (see above).

**Rationale for Change**

SANDAG has incorporated measures into the project to minimize and avoid impacts to grunion (e.g., habitat suitability surveys, pre-construction monitoring, construction schedule constraints, and modified construction techniques as appropriate). Grunion avoidance has been the subject of extensive coordination; most recently the subject of focused communication between John Dixon (CCC ecologist) and Bob Hoffman (NMFS). This focused effort was conducted at the direction of CCC

staff and included meetings and conference calls on May 3, May 9, and June 2, 2011. NMFS and CCC jointly provided language to SANDAG for inclusion in the Final EIR/EA regarding grunion monitoring and approach to be implementation based on the resulting data, and NMFS provided further clarification regarding coordination requirements on June 3, 2011 (Attachment D). That joint language is provided as recommended replacement language for Special Conditions 8d, 8e, and 8f (Attachment B). The parties involved came to consensus, recognizing that overall the long-term benefits to the species as a whole outweighs the short-term loss of grunion eggs at selected sites during selected runs. For reference, some general information regarding grunion life history and specific benefits and impacts associated with RBSP II is provided in Attachment C. The conditions as stated in the Staff Report are too prohibitive to allow SANDAG to implement the project effectively and do not recognize the almost immediate longer-term benefit of the project; a discussion of the rationale for each proposed revision is provided below.

Condition 8a as written would require monitoring at all non-cobble receiver sites. The proposed revised language (above and provided in Attachment B) allows for appropriate flexibility if the schedule needs to be adjusted, provides grunion run information for potential upcoming receiver sites, and avoids monitoring where grunion runs are not viable.

Condition 8d as written would likely stop the project at most receiver sites before it could start since there is a high probability that even marginally suitable beaches would have 100 fish, with an even greater likelihood of encountering 100 fish as the project proceeded to beaches that may have higher suitability. This would effectively not allow SANDAG to start construction at a beach, with no ability to move to another beach if 100 fish were observed prior to construction. The revised language would allow construction to occur on beaches that had experienced a run of Walker Scale 3, if impact minimization measures were implemented. Under these circumstances there may be some burial of grunion eggs; however, the tradeoff is the longer term benefit of providing more suitable habitat for subsequent runs, which occur many times per year by the same female (thereby enhancing the probability of survivorship of eggs). For example, grunion have been observed spawning on RBSP I receiver sites, which prior to the project were not suitable for grunion spawning. The current CCC language prohibits construction in relatively common circumstances and would not provide any benefit to regional beaches that are marginally suitable and in an erosive state.

An additional concern is that grunion spawn at nighttime hours, when agency contact for authorization is not feasible, which would prohibit any construction from continuing in potentially many circumstances until at least the next business day (which could mean 3 days if occurs on a weekend). One intent of the revised measure is to provide some direction prior to placement to reduce the need for last-minute coordination, which would be infeasible to achieve as directed.

Condition 8e as written would not stop the project, however, the high probability that receiver beaches will have a run of 100-500 fish, especially as the project proceeds to beaches that will have suitable habitat, makes this condition prohibitive. The revised language would allow SANDAG to construct at sites with runs of Walker Scale 3, with the implementation of minimization measures.

Condition 8f as written would likely stop the construction at that receiver site. Given where grunion spawning occurs along the beach profile, there is no way to construct the beach and avoid grunion eggs. One potential option is to move equipment around the area; however, this would require remobilizing and staging the monobuoy and pipeline (this is costly and may not be feasible since there are other conditions to avoid sensitive habitat), and the end result would be a segmented beach (i.e., large beach separated by a narrow beach) which may become a safety issue. This option may not be feasible from an engineering perspective depending on the receiver beach condition, or

would be cost prohibitive, and would effectively stop construction at that receiver site, which could also reduce any potential long-term benefits. The revised language identifies Walker Scale 4 as a threshold, before considering stopping construction.

#### **Special Condition No. 5a. Pismo Clams**

##### **Requested Condition Change**

Based on the June 9, 2011, meeting with CCC staff, SANDAG understands that Special Condition 5a will be removed from CDP No. 06-11-018 in the addendum being prepared by CCC staff.

##### **Rationale for Change**

Special Condition No. 5a addresses the potential presence of a Pismo clam bed that was noted in the intertidal area (below the mean high tide line) north of the Imperial Beach Pier during pre-construction surveys conducted for the project. Project surveys have eliminated this species as a potential issue at all other receiver sites. The subject portion of the Imperial Beach receiver site is located outside of the identified limits of this permit purview since it is within the Local Coastal Program jurisdiction of the Port of San Diego. As noted in Section IV.6. of the staff report (p. 32), a separate CDP is required. Therefore, SANDAG anticipates any conditions associated with Pismo clams at the Imperial Beach receiver site will be addressed in that CDP.

#### **Special Condition No. 1b. Timing of Construction**

##### **Requested Condition Change**

SANDAG requests that Special Condition No. 1b be updated to reflect that horizontal beach access along the back beach on any section of any of the receiver sites shall not be blocked for more than one hour during daylight hours. We understand, based on the June 9, 2011, meeting with CCC staff, that this proposed change has been approved. The clarification described above will be included addendum as a modified Special Condition No. 1b, as revised in Attachment B and described below.

##### **Rationale for Change**

Horizontal beach access along the back beach of the receiver site is important to maintain public access along the coastline during public use of the site, which primarily occurs during daylight hours.

#### **Special Condition No. 2. Beach Sand Monitoring**

##### **Requested Condition Change**

SANDAG requests that Special Condition No. 2 be updated to reflect the clarifications sd described below regarding the physical monitoring program. We understand, based on the June 9, 2011, meeting with CCC staff, that additional coordination with the CCC engineer will be conducted to confirm these changes are acceptable. If so, the clarifications described below may be included in the addendum as a modified Special Condition No. 2, as revised in Attachment B and described below.

## **Rationale for Change**

As noted in the staff report (p. 19), SANDAG has been conducting a coastal profile monitoring program since 1996. This program was enhanced with additional profiles after implementation of RBSP I to provide more information regarding the transport trends of sand placed as part of that project. The enhanced monitoring program (61 transects) was conducted for a period of 4 years after construction, after which the baseline program was continued (55 transects). SANDAG proposes to again implement an enhanced profile monitoring program with implementation of RBSP II. The program is better designed to provide enhanced information compared to the RBSP I program, but would include a similar number of transects, located at more precise locations along the receiver sites. The enhanced monitoring program is proposed for a duration of 5 years post-construction, based on the results of the modeling. It is anticipated at this time that the baseline program would continue after this enhanced monitoring period.

Special Condition No. 2 addresses the information anticipated to be provided by the profile monitoring program. The second and third bullets note that the monitoring will provide information regarding the width and length of dry beach, as well as the rate and extent of transport of material up and down coast. While the enhanced program provides a range of extremely valuable information, including the concerns noted in the remainder of the measures, the profiles consist of discrete transects oriented perpendicular to shore and cannot provide a measure of the length of dry beach associated with a receiver site. In addition, the program consists of snapshots in time, and does not provide a rate of transport calculation, but rather trends in transport that can be identified. Therefore, we recommend those bullets be clarified.

Special Condition 2a dictates shoreline profile monitoring continuing until two separate surveys show that project material is undetectable. This condition places a high level of uncertainty on the proponents. SANDAG modeling identified a potential lifespan of the project of up to 5 years and is proposing to conduct an enhanced monitoring program through that 5 year period after construction. Additional monitoring using the enhanced program is not anticipated to be useful to tracking project performance, as discussed in the staff report (p. 15). It is anticipated at this time that the baseline monitoring program would be continued after the enhanced program is completed. Therefore, we propose terminating the enhanced monitoring at the 5 year mark, with baseline monitoring continuing as it has in the past.

Special Condition 2b indicates a need for one profile upcoast and two profiles downcoast of each receiver site. The staff report (p. 19) discusses the need for one profile upcoast and one profile downcoast, consistent with the CDP condition for RBSP I. SANDAG requests that clarification be made to Special Condition 2b to be consistent with the staff report.

Special Condition 2d requires one full-depth profile from dry beach through each borrow site be monitored pre- and post-construction. SANDAG requests that this requirement instead be revised to reflect the need to survey each borrow site independently from adjacent beach sites. The existing historical beach profiles will be used to characterize the beach conditions in the vicinity of the borrow sites. Bathymetry obtained on transects oriented both perpendicular and parallel to the shoreline through the extent of each borrow site will provide a more comprehensive characterization of borrow site changes after construction. In addition, it may not be possible to accurately site a pre-construction borrow site profile because the exact footprint and configuration will not be known until after dredging.

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**Special Conditions 3, 4, and 5. USFWS approval of the mitigation and monitoring plan**

**Requested Condition Change**

SANDAG requests that Special Conditions No. 3, 4, and 5 be updated to reflect the need for USACE approval of the plan and the condition that the final plan be distributed by SANDAG to regulatory and resource agencies, including USFWS, CDFG, NMFS, and RWQCB.

We understand, based on the June 9, 2011, meeting with CCC staff, that additional coordination will be conducted to confirm these changes are acceptable. If so, the clarifications described below may be included in the addendum as modified Special Condition Nos. 3, 4, and 5, as revised in Attachment B and described below.

**Rationale for Change**

Special Conditions 3, 4, and 5 require approval of the Mitigation and Monitoring Plan by USFWS. This report is being prepared by SANDAG in response to agency coordination and permit requirements, and will be provided to each of the regulatory and resource agencies upon completion of the report. Approval of the Plan will be required from USACE as part of the issuance of the final Section 404 permit, to which the USFWS is advisory.

**Special Condition No. 4. Lagoon mitigation and monitoring**

**Requested Condition Change**

SANDAG requests that Special Condition No. 4 be updated to remove the first bullet, as indicated in Attachment B to this letter. We understand, based on the June 9, 2011, meeting with CCC staff, that additional coordination with the CCC engineer will be conducted to confirm these changes are acceptable. If so, the clarifications described below may be included in the addendum as a modified Special Condition No. 4, as described below.

**Rationale for Change**

This condition requires monitoring of lagoon inlets to determine both the volume of sand transport into individual lagoons, as well as which sand is increasing the rate of shoaling in the lagoons or altering the frequency or duration of lagoon mouth closings. SANDAG conducts monthly lagoon monitoring and annual reporting on the maintenance requirements and closure history of each lagoon. This program is anticipated to provide information regarding the rate of shoaling in lagoons, but cannot reliably segregate the amount of sand from the project and the rate at which it is entering the lagoons. To meet this need, additional techniques would be required (e.g., sand tracers), which is not feasible and may not provide the level of information requested. As with RBSP I, the monitoring method will be used to infer an impact based on a change in lagoon behavior/performance relative to historical conditions.

**Special Condition No. 6a. Final Staging Plans**

**Requested Condition Clarification**

SANDAG requests that Special Condition No. 6a be revised to reflect that project headquarters would not be located on the beach, or within beach parking lots. We understand, based on the June 9, 2011, meeting with CCC staff, that these changes are acceptable and a modified Special Condition No. 6a will be included in the addendum, as revised in Attachment B to this letter and described below.

**Rational for Change**

Project headquarters, if necessary, would not be located on public beaches or within public beach parking lots. Each receiver site would require equipment (which could include a small temporary trailer) that would be maintained within the limited beach area restricted to public access, as described in the staff report. This area would shift down the beach as sand placement is completed, and would not restrict public access to the beach. This would be identical to the operations associated with RBSP I.

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CONDITIONS AS IDENTIFIED IN STAFF REPORT	PROPOSED SANDAG REVISIONS	DISCUSSION/RATIONALE
Noted Inconsistency between condition and staff report Clarifications Requested		
<p><b>Substantial Constructability Issues</b></p> <p><b>1. Timing of Construction, PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a construction schedule that conforms to the following restrictions:</p> <p>a. Work on any receiver beach may occur prior to Memorial Day weekend or after Labor Day weekend. Work after Memorial Day weekend, but before Labor Day weekend must occur in the following order:</p> <ol style="list-style-type: none"> <li>1. Solana Beach</li> <li>2. Moonlight Beach</li> <li>3. Cardiff</li> <li>4. Torrey Pines</li> <li>5. South Carlsbad</li> <li>6. Imperial Beach</li> <li>7. North Carlsbad</li> <li>8. Oceanside</li> <li>9. Leucadia</li> <li>10. Batiquitos</li> </ol> <p>Changes to the above construction schedule may be permitted by the Executive Director, without an amendment to this permit, where unforeseeable weather or construction constraints require that changes be made to avoid a significant time delay and/or loss of money or available sand. Any required changes to the schedule shall be the minimum necessary in order to implement the project, and the approved schedule shall be resumed as soon as feasible.</p> <p>b. Horizontal beach access along the back beach on any section of any of the receiver sites shall not be blocked for more than one hour at any time.</p>	<p>Retain as is.</p> <p>Retain as is.</p>	<p>CCC staff approved June 9, 2011.</p> <p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting. Length of dry beach cannot be quantified by profile surveys, suggest remove this requirement.</p> <p>Can not quantify rate of transport from profile surveys at the spatial and temporal interval of the current program. Suggest remove "rate."</p>
<p><b>2. Beach Sand Monitoring, PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a detailed beach sand monitoring program for shore and nearshore monitoring at or near the receiver sites, and shall be in general conformance with the procedures and reporting outlined in "Draft Operations, Procedures, Mitigation Monitoring and Contingency Measures Plan for the San Diego Regional Beach Sand Project II, May 2011, ("Mitigation and Monitoring Plan"). Monitoring at and adjacent to the receiver sites shall address the following concerns:</p> <ul style="list-style-type: none"> <li>• Confirm as-built project plans for location and deposition amounts and any plan revisions;</li> </ul>	<p>Horizontal beach access along the back beach on any section of any of the receiver sites shall not be blocked for more than one hour at any time during daylight hours.</p> <ul style="list-style-type: none"> <li>• Seasonal and interannual changes to the receiver sites, in width and length of dry beach, subaerial and nearshore slope, offshore extent of nourished toe, and overall volume of sand in the profile.</li> <li>• Rate and extent of transport of material up- and down-coast from the receiver sites; and</li> </ul>	<p>CCC staff approved June 9, 2011.</p> <p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting. Length of dry beach cannot be quantified by profile surveys, suggest remove this requirement.</p> <p>Can not quantify rate of transport from profile surveys at the spatial and temporal interval of the current program. Suggest remove "rate."</p>

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<ul style="list-style-type: none"> <li>Seasonal and interannual changes to the receiver sites, in width and length of dry beach, subaerial and nearshore slope, offshore extent of nourished toe, and overall volume of sand in the profile;</li> <li>Rate and extent of transport of material up- and down-coast from the receiver sites; and</li> <li>Time period over which the beach benefits related to the project can be identified as distinct from background conditions</li> </ul> <p>a. At a minimum, this information shall be provided through field surveys of the receiver sites and adjacent areas. Unless otherwise indicated, all profiles shall be from an upland fixed location or monument, across the beach, through the nearshore, to closure depth. Profiles shall be prepared immediately prior to the project, immediately upon completion of the project (this survey may be terminated offshore at the toe of the project rather than going to closure), following the project in the fall of 2012, and every six months thereafter for a period of 4/5 years, until two separate surveys show that the material and the project is undetectable. Timing for the recurring six month survey efforts may be adjusted to coincide with the schedule that has been developed for the San Diego Regional Monitoring Program.</p>	<p>a. At a minimum, this information shall be provided through field surveys of the receiver sites and adjacent areas. Unless otherwise indicated, all profiles shall be from an upland fixed location or monument, across the beach, through the nearshore, to closure depth. Profiles shall be prepared immediately prior to the project (within 6 months), immediately upon completion of the project (this survey may be terminated offshore at the toe of the project rather than going to closure), following the project in the fall of 2012, and every six months thereafter for a period of 4/5 years, until two separate surveys show that the material and the project is undetectable. Timing for the recurring six month survey efforts may be adjusted to coincide with the schedule that has been developed for the San Diego Regional Monitoring Program.</p> <p>b. There shall be a minimum of one profile through each receiver site, and at least one profile up coast and two profiles down coast for each receiver site. To the maximum extent practicable, these should occupy the profile locations currently being used in the San Diego Regional Monitoring Program. In locations where the receiver sites are close together, profiles may be used to provide both upcoast information for one site and downcoast information for another.</p>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p>
<p>b. There shall be a minimum of one profile through each receiver site, and at least one profile up coast and two profiles down coast for each receiver site. To the maximum extent practicable, these should occupy the profile locations currently being used in the San Diego Regional Monitoring Program. In locations where the receiver sites are close together, profiles may be used to provide both upcoast information for one site and downcoast information for another.</p> <p>c. Monitoring information shall be analyzed regularly for any changes that have occurred at the receiver sites. To the extent practicable, these reports should incorporate information from the San Diego Regional Monitoring Program on both historic changes at the receiver sites and on-going regional shoreline trends.</p>	<p>d. Pre- and post-construction bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey and a minimum of one (1) full-depth profile (from dry beach through the borrow/excavation area) per borrow/excavation area. Additionally, full-depth, profile surveys from dry beach through the borrow/excavation area and information on grain size of the surface sand that has accumulated in the borrow/excavation areas, based upon surface samples collected in each borrow area or other methods that have been reviewed and approved by the Executive Director, shall be undertaken and reported to the Commission two, four, and six years after the excavation, or until additional permitted excavation is undertaken in borrow/excavation areas.</p>	<p>CCC staff approved at June 9, 2011 meeting.</p> <p>Page 19 of the staff report is inconsistent with this condition, and cites a minimum of one profile that crosses through each receiver site and at least one profile downcoast of large receiver beach sites. This is similar as the approach used for RBSP I.</p>
<p>d. Pre- and post-construction bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey and a minimum of one (1) full-depth profile (from dry beach through the borrow/excavation area) per borrow/excavation area. Additionally, full-depth, profile surveys from dry beach through the borrow/excavation area and information on grain size of the surface sand that has accumulated in the borrow/excavation areas, based upon surface samples collected in each borrow area or other methods that have been reviewed and approved by the Executive Director, shall be undertaken and reported to the Commission two, four, and six years after the excavation, or until additional permitted excavation is undertaken in borrow/excavation areas.</p>	<p>d. Pre- and post-construction bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey. Additionally, a minimum of one (1) full-depth profile (from dry beach through the borrow/excavation area) per borrow/excavation area, (one oriented parallel to the coastline, as well as one oriented perpendicular to the coastline) and, additionally, full-depth, profile surveys from dry beach through the borrow/excavation areas and information on grain size of the surface sand that has accumulated in the borrow/excavation areas; based upon surface samples collected in each borrow area or other methods that have been reviewed and approved by the Executive Director, shall be undertaken and reported to the Commission two, four, and six years after the excavation, or until additional permitted excavation is undertaken in borrow/excavation areas.</p>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p> <p>SANDAG requests that this requirement instead be revised to reflect the need to survey each borrow site independently from adjacent beach sites. This will allow SANDAG to better characterize the beach comprehensively using historic profile data, and will provide more meaningful data to compare to borrow site characteristics.</p>

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<p>e. Oblique aerial photographs of the RBSP II receiver sites shall be taken semiannually during the first two years following construction, and annually during Year 3 and Year 4 following construction.</p> <p>3. <b>Dredging Activities Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a final "Mitigation and Monitoring Plan." Said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in "Mitigation and Monitoring Plan." The California Coastal Commission shall be one of the resource agencies that must be contacted if turbidity exceeds the allowable levels or if operating procedures vary beyond specified limits.</p>	<p>until additional permitted excavation is undertaken in borrow/excavation areas.          Retain as is.</p> <p><b>PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a final "Mitigation and Monitoring Plan." Said plan shall be approved by the U.S. Fish and Wildlife Service, Army Corps of Engineers, and shall be in general conformance with the procedures and reporting outlined in "Mitigation and Monitoring Plan." The plan shall be distributed to each of the regulatory and resource agencies, including the U.S. Fish and Wildlife Service, California Department of Fish and Game, National Marine Fisheries Service, and Regional Water Quality Control Board. The California Coastal Commission shall be one of the resource agencies that must be contacted if turbidity exceeds the allowable levels or if operating procedures vary beyond specified limits.</p>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p> <p>U.S. Fish and Wildlife Service will have the opportunity to comment on the plan; as well as all of the agencies, however, the plan is a result of coordination with the different agencies and incorporates all of the permit conditions from the project. As a condition of the 404 permit, it is anticipated that the U.S. Army Corps of Engineers will have approval over the plan, similar to RBSP I.</p>
<p>4. <b>Lagoon Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a final mitigation and monitoring plan for potential impacts to lagoon habitat at Agua Hedionda, Batiquitos, San Elijo, San Dieguito, and Los Peñasquitos Lagoons. Said plan shall include monitoring to address the following:</p> <ul style="list-style-type: none"> <li>• Whether sand from the project is being transported into the lagoons, and if so, the volume and rate of transport; and</li> <li>• Whether sand from the project is increasing the rate of shoaling in the lagoons, or altering the frequency or duration of lagoon mouth closings.</li> </ul> <p>In addition, said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in "Mitigation and Monitoring Plan." The applicant has calculated the predicted amount of sand that will enter the lagoon mouths and met with each lagoon management entity to determine the cost of future lagoon mouth dredging operations which result from this project. The applicant shall pay the following amounts to the appropriate management entity upon completion of construction (these amounts are based on proposed placement volumes and may be subject to change based on actual volumes placed at each relevant receiver site):</p> <ul style="list-style-type: none"> <li>• Agua Hedionda, \$0</li> <li>• Batiquitos Lagoon, \$245,800</li> <li>• San Elijo Lagoon, \$32,600</li> <li>• San Dieguito Lagoon, \$20,076</li> </ul>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p> <p>The first bullet point is not feasible to calculate without using specific sand tracers. Patterns and trends can be provided, but volume and rate are too speculative.</p>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p> <p>U.S. Fish and Wildlife Service will have the opportunity to comment on the plan; as well as all of the agencies, however, the plan is a result of coordination with the different agencies and incorporates all of the permit conditions from the project. As a condition of the 404 permit, it is anticipated that the U.S. Army Corps of Engineers will have approval over the plan, similar to RBSP I.</p>

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<p>Los Penasquitos Lagoon, \$24,650</p> <p><b>5. Biological Resources Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a final "Mitigation and Monitoring Plan" for biological resources including: Grunions, California Least Terns, Western Snowy Plovers, and Pismo Clams. Said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in "Mitigation and Monitoring Plan." The California Coastal Commission shall be one of the resource agencies that must be provided with all monitoring reports.</p> <p>a. Pismo Clams: A preconstruction assessment of the minus tide zone north of the Imperial Beach Pier shall be conducted prior to any placement of sand at the Imperial Beach receiver site. The assessment shall confirm the presence or absence of adult Pismo clams (minimum of 4.5 inches). If presence of a clam bed is confirmed (density greater than 0.07 adult individuals per square foot), the clam bed shall be avoided in its entirety and construction shall not impact any Pismo Clams or the Pismo Clam bed.</p>	<p><b>PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, a final "Mitigation and Monitoring Plan" for biological resources including: Grunions, California Least Terns, Western Snowy Plovers, and Pismo Clams. Said plan shall be approved by the U.S. Fish and Wildlife Service, Army Corps of Engineers, and shall be in general conformance with the procedures and reporting outlined in "Mitigation and Monitoring Plan." The California Coastal Commission shall be one of the resource agencies that must be provided with all monitoring reports.</p> <p>Remove from permit</p>	<p>CCC staff coordinating internally to confirm based on June 9, 2011 meeting.</p> <p>U.S. Fish and Wildlife Service will have the opportunity to comment on the plan; as well as all of the agencies, however, the plan is a result of coordination with the different agencies and incorporates all of the permit conditions from the project. As a condition of the 404 permit, it is anticipated that the U.S. Army Corps of Engineers will have approval over the plan, similar to RBSP I.</p>
<p><b>6. Final Staging Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT</b>, the applicant shall submit to the Executive Director for review and written approval, final plans that identify the following:</p> <p>a. The location of the project construction headquarters; Staging headquarters shall not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach.</p> <p>b. The minimum number of public parking spaces (on and off-street) that are required at each receiver site for the staging of equipment, machinery and employee parking. At each site, the number of public parking spaces utilized shall be the minimum necessary to implement the project.</p> <p>c. During the construction stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to implement the project. Construction equipment shall not be washed on the beach or in the beach parking lots.</p> <p>d. Additional protection will be provided by the contractor using biodegradable (e.g., vegetable oil-based) lubricants and hydraulic fluids, and/or electric or natural gas powered equipment, where practicable.</p> <p>e. Immediately upon completion of construction and/or when the staging site is no longer needed, the site shall be returned to its preconstruction state.</p> <p><b>7. Other Permits. PRIOR TO COMMENCEMENT OF CONSTRUCTION</b>, the applicant shall provide to the Executive Director copies of all other required</p>	<p>Staging project headquarters shall not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach. Equipment will be restricted to the active construction area at the receiver site.</p> <p>Retain as is.</p> <p>Retain as is.</p> <p>Retain as is.</p> <p>Retain as is.</p> <p>Retain as is.</p>	<p>CCC staff approved removal of condition at June 9, 2011 meeting. Will be addressed in Port CDP.</p> <p>The area below the mean high tide line and the entire length of the receiver site fall under the jurisdiction of the Port of San Diego, therefore Pismo Clams are anticipated to be included under the Port CDP.</p> <p>CCC staff approved at June 9, 2011 meeting.</p>

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<p>state or federal discretionary permits for the development herein approved. The applicant shall inform the Executive Director of any changes to the project required by such permits. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.</p> <p><b>8. Grunion.</b> In addition to the provisions of Special Condition # 5, the following provisions shall apply to grunion. If there is a conflict between the two conditions, these provisions shall be controlling. The applicant shall adhere to the following provisions in order to maximize avoidance of expected grunion runs. The annually published California Department of Fish and Game (CDFG) expected grunion runs shall be used to determine possible grunion spawning periods. At this time, the 2012 CDFG expected grunion run information is not available.</p> <p>a. During the grunion spawning period of March through August, all proposed receiver sites shall be monitored for grunion runs concurrently (excluding the Batiquitos receiver site), unless the beach consists of 100 % cobble (i.e. there is no sand on the beach). Monitoring need not continue at a given site after sand replenishment has been completed at that site.</p>	<p>During the grunion spawning period of March through August, all proposed receiver sites shall be monitored for grunion runs concurrently (excluding the Batiquitos receiver site), unless the beach consists of 100 % cobble (i.e. there is no sand on the beach) or the high tide area experiences high wave energy due to runup along the back beach or bluff (i.e., there is no beach at high tide). Monitoring need not continue at a given site after sand replenishment has been completed at that site.</p>	<p>CCC staff will review as part of the addendum preparation; this was updated based on the discussion at the June 9, 2011 meeting.</p> <p>The proposed revised language allows for appropriate flexibility if the schedule needs to be adjusted, provides grunion run information for potential upcoming receiver sites, and avoids monitoring where grunion runs are not viable.</p>
<p>b. Grunion monitoring shall be conducted by a qualified biologist for 30 minutes prior to and two hours following the predicted start of each spawning event</p>	<p>Retain as is.</p>	<p>The project would not affect adult fish, only eggs.</p>
<p>c. If a grunion run consisting of 0 to 100 fish (Walker Scale of 0 or 1) is reported within two weeks prior to or during construction/beach replenishment, the applicant does not need to take any avoidance action for grunion eggs. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.</p>	<p>Retain as is.</p>	<p>This condition as written would likely stop the project at most receiver sites before it could start since there is a high probability that even marginally suitable beaches would have 100 fish, with an even greater likelihood of encountering 100 fish as the project proceeded to beaches that may have higher suitability. This would effectively not allow SANDAG to start construction at a beach, with no ability to move to another beach if 100 fish were observed prior to construction. The revised language would allow construction to occur on beaches that had experienced a run of Walker Scale 3; if impact minimization measures were implemented. Under these circumstances there may be some burial of grunion eggs, however, the tradeoff is the longer term benefit of providing more suitable habitat for subsequent runs, which occur many times per year by the same female (and</p>
<p>d. If a grunion run consisting of more than 100 fish (Walker Scale of 2, 3, 4, or 5) is reported within two weeks prior to the start of construction, no grunion eggs shall be buried or disturbed at the receiver site. Work may continue if avoidance action can be taken. However, the applicant shall also receive approval from the CCC, CDFG, NMFS, and USACE of appropriate avoidance action. This action may include avoiding impacts to grunion eggs through alteration of the discharge point and/or sand spreading, shifting the receiver site or altering the construction/beach replenishment schedule to replenish a beach that has not had a grunion spawning event within two weeks prior to the start of construction. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.</p>	<p>Based on conditions generated by the CCC Ecologist and NMFS (via email from Bob Hoffman May 12, 2011 and subsequent June 3, 2011 email from Bob Hoffman summarizing coordination at the June 2, 2011 resource agency meeting. The statement regarding no burial of adult grunion is retained from the conditions in the staff report. This issue was not specifically addressed in the May 12 or June 3 emails.)</p> <p>3) During the grunion spawning period of March through August, grunion spawning monitoring will occur at all sites where sand disposal is anticipated to occur. Location of spawning activity and a Walker Scale estimate of the density of spawning will be included in that work. Survey results will be provided to the regulatory and resource agencies in a timely manner such that effective management decisions regarding upcoming disposal activities can be</p>	<p>The project would likely stop the project at most receiver sites before it could start since there is a high probability that even marginally suitable beaches would have 100 fish, with an even greater likelihood of encountering 100 fish as the project proceeded to beaches that may have higher suitability. This would effectively not allow SANDAG to start construction at a beach, with no ability to move to another beach if 100 fish were observed prior to construction. The revised language would allow construction to occur on beaches that had experienced a run of Walker Scale 3; if impact minimization measures were implemented. Under these circumstances there may be some burial of grunion eggs, however, the tradeoff is the longer term benefit of providing more suitable habitat for subsequent runs, which occur many times per year by the same female (and</p>

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	<p>made. Prior to a predicted grunion run, the applicant or their consultants will coordinate with the resource agencies potential grunion mitigation measures that may need to be implemented depending on the condition of the specific receiver site and density of grunion spawning that may have occurred during the preceding grunion run or which may occur during the next predicted run. This coordination should begin at least one week prior to disposal work at each site. The preferred approach is avoidance; however, monitoring data can be used to identify those beaches where impacts can be minimized, and direct work to those sites. Monitoring will also document actual impacts.</p> <p>2) If a sand disposal site has a Walker Scale 1, 2, or 3 spawning event either immediately prior to or during disposal activities, sand placement may proceed as long measures to minimize impacts are incorporated. These measures may include shifting of the entire site, minimizing impacts through discharge location, or other appropriate mitigation actions. No burial of adult grunion would occur.</p> <p>3) If a sand disposal site has a Walker Scale 4 or 5 spawning event either immediately prior to or during disposal activities, measures to minimize or eliminate impacts will be implemented that may include shifting of the entire site, use of a single point discharge, berm construction, potential ceasing of disposal activities, or other appropriate mitigation actions. No burial of adult grunion would occur.</p> <p>4) Because of the difficulty in anticipating every possible scenario, given the unique characteristics of some of the sites as well as unanticipated conditions that may exist at the time of disposal, the regulatory and resource agencies will be consulted and an approach will be agreed upon prior to the placement of any sand at a site where grunion spawning has occurred.</p>	<p>thereby enhancing the probability of survivorship of eggs). The current language prohibits construction in relatively common circumstances and would not provide any benefit to regional beaches that are marginally suitable and in an erosive state. An additional concern is that grunion spawn at nighttime hours, when agency contact for authorization is not feasible, which would prohibit any construction from continuing in potentially many circumstances until at least the next business day (which could mean 3 days if occurs on a weekend). One intent of the revised measure is to provide some direction prior to placement to reduce the need for last-minute coordination, which would be infeasible to achieve as directed.</p>
<p>e. If construction/beach replenishment has already begun when a grunion run consisting of 100-500 fish (Walker Scale of 2) is reported, impacts to grunion eggs may occur if avoidance is not feasible. The applicant shall first attempt to minimize impacts to grunion eggs through alteration of the discharge point and/or sand spreading. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.</p> <p>f. If construction/beach replenishment has already begun when a grunion run consisting of more than 500 fish (Walker Scale of 3, 4, or 5) is reported, no impact to grunion eggs shall occur at the receiver site. The applicant shall avoid impacts to grunion eggs through alteration of the discharge point and/or sand spreading. Ceasing of construction/beach replenishment activities at this location shall occur if avoidance measures are not feasible. No mature grunion</p>	<p>Based on conditions generated by CCC and NMFS (see above).</p> <p>Based on conditions generated by CCC and NMFS (see above).</p>	<p>The high probability that receiver beaches will have a run of 100-500 fish, especially as the project proceeds to beaches that will have suitable habitat, makes this condition prohibitive. The revised language would allow SANDAG to construct at sites with runs of Walker Scale 3, with the implementation of minimization measures.</p> <p>This condition as written would likely stop the construction at that receiver site. Given where grunion spawning occurs along the beach profile, there is no way to construct the beach and avoid grunion eggs. One potential option is to move equipment around the area; however, this would require remobilizing and staging the monobuoy and pipeline (assuming this is possible, since there are other conditions to avoid sensitive habitat), and the end result would be a</p>

**List of RBSP II Special Conditions & SANDAG Recommendations**  
**CDP Application No. 6-11-018**  
**Hearing Date June 15, 2011**  
**Updated: June 9, 2011**

CONDITIONS AS IDENTIFIED IN STAFF REPORT	PROPOSED SANDAG REVISIONS	DISCUSSION/RATIONALE
<p>shall be buried or harmed as a result of construction/beach replenishment.</p>	<p>Retain as is.</p>	<p>segmented beach (i.e., large beach separated by a narrow beach) which may become a safety issue. This option may not be feasible from an engineering perspective depending on the receiver beach condition, or would be cost prohibitive, and would effectively stop construction at that receiver site, which would also reduce any potential long-term benefits. The revised language identifies Walker Scale 4 as a threshold, before considering stopping construction.</p>
<p><b>9. Final Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT,</b> the applicant shall submit final project plans to the Executive Director for review and written approval. Said plans shall be in substantial conformance with the plans submitted with this application by SANDAG received 3/15/2011.</p>	<p>Retain as is.</p>	
<p><b>10. Assumption of Risk, Waiver of Liability and Indemnity Agreement.</b> By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from wave action; (ii) to assume the risks to the applicant 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; and (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.</p>	<p>Retain as is.</p>	

## SUPPLEMENTARY MATERIALS ON GRUNION

### Anticipated Project Effects on Grunion

It should be noted that beach nourishment operations would not affect spawning adults but may affect eggs buried during spawning events. Given the general life history characteristics of grunion (i.e., high fecundity, multiple breeder in dynamic environment), it is presumed that natural mortality of eggs is high from a variety of different factors such as predation and disturbance (i.e., low probability that individuals would reach adulthood). The project would affect less than 1% of available San Diego County beach habitat during any single run, of which there are at least 12 runs during the year (Table 1). This does not include beaches throughout the remainder of the species' range in southern California, central California, Mexico, or Channel Islands. Since females may spawn up to six times per year, a spawning event would constitute 5.6% of her lifetime reproductive output assuming a 3-year life span, and 4.2% for a 4-year life span. In addition, SANDAG intends to minimize impacts to potentially large runs by nourishing beaches that appear less suitable for grunion during the early part of the season, which is when the larger runs are likely to occur. Also, throughout project implementation other measures would be undertaken to minimize any potential effect to grunion (see proposed monitoring framework below).

**Table 1. Anticipated Grunion Runs for 2012 (not CDFG)**

March 8-11, 2012	March 22-25, 2012
April 6-9, 2012	April 20-23, 2012
May 5-8, 2012	May 20-23, 2012
June 4-7, 2012	June 19-22, 2012
July 3-6, 2012	July 18-21, 2012
August 1-4, 2012	August 17-20, 2012

The June 2, 2011, staff report indicates that comments from California Department of Fish and Game (CDFG) staff noted there are no studies showing that the grunion population is stable. However, there are no data to indicate that the grunion population is unstable, and CDFG currently manages grunion as a sport fishery. The species is not listed under the Federal or State Endangered Species Act (ESA) and therefore is not afforded a level of protection as mandated by ESA. During the season, there is no possession limit (i.e., you can keep as many as you can catch). Under these regulations, CDFG notes that the resource seems to be maintaining itself at a fairly constant level ([www.dfg.ca.gov/marine/grunionschedule.asp](http://www.dfg.ca.gov/marine/grunionschedule.asp)). It is presumed that CDFG would close the fishery as they have done with some groundfish and salmonid fisheries concern developed about the stability of the grunion population.

As noted by CDFG, the most critical problem facing the grunion resource is the loss of spawning habitat caused by beach erosion, harbor construction, and pollution. One of the primary goals of this project is to offset some of this deficit and by doing so create additional sandy beach habitat. Sandy beach habitat provides habitat for a variety of marine invertebrates (crustaceans, clams, and worms), which serve as prey for foraging birds. In addition, beaches provide resting habitat for shorebirds and gulls, and provide potential spawning habitat for California grunion.



Prior to the RBSP I project, many of these habitat functions were absent or seasonally limited at many of the receiver beach sites (the receiver sites were selected since historically they were noted as seriously eroded). Thus, there was an improvement in habitat quality and biological resource use of beach habitat at receiver sites after the project. In addition, that benefit extended beyond the actual receiver site footprint to adjacent beaches, creating further long-term benefit following the project. The long-term benefits of beach nourishment from RBSP I to grunion, shore birds, and benthic infauna and epifauna were documented in the 2005 Coastal Habitat Study, 2003-2004 prepared by the City of Encinitas.

The staff report also indicates a concern from CDFG that there is a lack of convincing evidence that beach replenishment is appropriate mitigation for impacts to grunion. Since it appears that the loss of habitat is a primary concern, the creation of habitat appears to be the most logical means to counteract any effects to the species. RBSP II would replenish 4.6 miles of beach initially, and over time would enhance an even larger area. Findings from other beach nourishment projects (e.g., Oceanside Maintenance Dredging, Bolsa Chica Lagoon Maintenance Dredging, Surfside Sunset Maintenance Dredging) indicate grunion utilize replenished beaches immediately after placement. In addition, grunion have been observed spawning on RBSP I receiver sites, which prior to the project were not suitable for grunion spawning.

### **Proposed Monitoring Methods and Frequency**

The following text is from the Draft Mitigation and Monitoring Plan prepared by SANDAG and submitted to CCC staff prior to release of the staff report, and it outlines the proposed monitoring plan for grunion. The criteria were developed by John Dixon (CCC) and Bob Hoffman (NMFS) independent of SANDAG, recognizing that it would still be protective of grunion but would allow the project to proceed.

#### Initial Survey for Construction Scheduling

Because grunion spawning is limited to certain tidal and lunar conditions, anticipated grunion runs are predicted by CDFG. CDFG predicted grunion runs for 2012 are not available; however, the anticipated schedule based on lunar cycle in 2012 is provided in Table 1. The schedule will be verified when CDFG releases the anticipated runs for 2012. For any given month there are four sequential days of activity, for approximately 2 hours in the late nighttime or early morning hours, then approximately 2 weeks of no activity, and then again for 4 days of activity.

Upon selection of a dredging contractor, surveys will be conducted at all receiver sites to determine the suitability of the sites for grunion habitat. Suitability is based on factors such as base material (cobble versus sand), slope of the receiver site, and compaction. Based on previous beach surveys, it is likely that not all receiver sites will be suitable for grunion spawning. Those receiver sites consisting predominantly of cobble or exposed bluffs at high tide would not be considered suitable habitat. This information will be factored into the decision-making process to determine a potential construction schedule, as the goal is to minimize impacts during the peak spawning runs, which tend to occur early in the season (i.e., schedule construction at those beaches that are less suitable for spawning early in the season).

#### Predisposal Surveys

No later than 2 weeks prior to beach replenishment activities at each receiver site, a predisposal survey will be performed to determine the suitability of that site for grunion habitat. Suitability will

be based on the same criteria listed for the initial survey. If the site is determined to be unsuitable for grunion per those criteria, CDFG and other resource agencies will be notified. The data that support the justification will be provided to the agencies, including the date of the predisposal survey, review of the conditions at the time of the EIR/EA, and description of the physical conditions at the predisposal survey. At these sites, no monitoring for grunion will occur during replenishment.

### Construction Monitoring

If the receiver site appears suitable for grunion spawning, coordination with the Resident Engineer will occur to determine when the dredging activities will begin and end at an individual receiver site. Should the construction dates overlap an anticipated grunion run at a receiver site with appropriate sand conditions, a qualified monitor will be present every night of the forecasted run for 3 hours, commencing before predicted runs and extending to after the end of predicted runs. If grunion are observed spawning, location of spawning activity and a Walker Scale estimate of the density of spawning will be recorded. Survey results will be provided to the regulatory and resource agencies in a timely manner such that effective management decisions regarding upcoming disposal activities can be made. Because of the difficulty in anticipating every possible scenario, given the unique characteristics of some of the sites, as well as unanticipated conditions that may exist at the time of disposal, the regulatory and resource agencies will be consulted and a mitigation approach will be agreed upon prior to the placement of any sand at a site where grunion spawning has occurred. The preferred mitigation approach is avoidance, and monitoring data will identify those beaches where impacts are least likely. In the event that avoidance is not feasible, minimization measures include:

- If a receiver site has a Walker Scale 1, 2, or 3 spawning event either immediately prior to or during disposal activities, sand placement may proceed as long as measures to minimize impacts are incorporated. Those measures may include shifting of the entire site, minimizing impacts through discharge location, or other appropriate mitigation actions.
- If a receiver site has a Walker Scale 4 or 5 spawning event either immediately prior to or during disposal activities, measures to minimize or eliminate impacts will be implemented that may include shifting of the entire site, use of a single point discharge, berm construction, potential ceasing of disposal activities, or other appropriate mitigation actions.



### Grunion Coordination with Bob Hoffman (NMFS)

**From:** Bob Hoffman [mailto:Bob.Hoffman@noaa.gov]  
**Sent:** Friday, June 03, 2011 10:38 AM  
**To:** Smith, Robert R SPL  
**Cc:** Fenner, Teri; Kinkade, Cindy  
**Subject:** Fwd: RE: RBSP II Approach to Mitigation

Below is the grunion language that I and John Dixon of the CCC approved. In addition, we discussed at the 6/2 meeting a requirement that prior to a predicted grunion run, the applicant or their consultants will coordinate with the resource agencies potential grunion mitigation measures that may need to be implemented depending on the condition of the specific disposal site and density of grunion spawning that may have occurred during the proceeding grunion run or which may occur during the next predicted run. This coordination should begin at least one week prior to disposal work at each site.

----- Original Message -----

**Subject:** RE: RBSP II Approach to Mitigation  
**Date:** Thu, 12 May 2011 16:00:43 -0700  
**From:** Fenner, Teri <Teri.Fenner@aecom.com>  
**To:** Bob Hoffman <Bob.Hoffman@noaa.gov>  
**CC:** Kinkade, Cindy <Cindy.Kinkade@aecom.com>, Tucker, Shelby <stu@sandag.org>, Webb, Chris <cwebb@moffatnichol.com>, Lawrence Honma <LHonma@merkeline.com>, John Dixon <jdixon@coastal.ca.gov>

Hi Bob,

Talked to the team and we are good to go to make the appropriate changes to the Final EIR and ultimately to the monitoring plan per the language below. We really appreciate the extra time and coordination you and John have made this week. We know you have many items pressing for your attention.

Thanks so much, Teri

**From:** Bob Hoffman [mailto:Bob.Hoffman@noaa.gov]  
**Sent:** Thursday, May 12, 2011 3:15 PM  
**To:** Fenner, Teri  
**Cc:** Kinkade, Cindy; Tucker, Shelby; Webb, Chris; Lawrence Honma; John Dixon  
**Subject:** Re: RBSP II Approach to Mitigation

Teri,

I had a conversation with John Dixon this morning and the mitigation program below is what we believe is appropriate for the RBSP II project with respect to potential grunion and surfgrass impacts. However, the Coastal Commission may have additional requirements. It should be noted that the NMFS position on mitigation for both of these species is evolving, but the recommendations reflect our current thinking for this project.

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## Grunion

1) During the grunion spawning period of March through August, grunion spawning monitoring will occur at all sites where sand disposal is anticipated to occur. Location of spawning activity and a Walker Scale estimate of the density of spawning will be included in that work. Survey results will be provided to the regulatory and resource agencies in a timely manner such that effective management decisions regarding upcoming disposal activities can be made. The preferred mitigation approach is avoidance and monitoring data will identify those beaches where impacts are least likely. Monitoring will also document actual impacts.

2) If a sand disposal site has a Walker Scale 1,2, or 3 spawning event either immediately prior to or during disposal activities, sand placement may proceed as long measures to minimize impacts are incorporated. Those measures may include shifting of the entire site, minimizing impacts through discharge location, or other appropriate mitigation actions.

3) If a sand disposal site has a Walker Scale 4 or 5 spawning event either immediately prior to or during disposal activities, measures to minimize or eliminate impacts will implemented that may include shifting of the entire site, use of a single point discharge, berm construction, potential ceasing of disposal activities, or other appropriate mitigation actions.

4) Because of the difficulty in anticipating every possible scenario, given the unique characteristics of some of the sites as well as unanticipated conditions that may exist at the time of disposal, the regulatory and resource agencies will be consulted and a mitigation approach will be agreed upon prior to the placement of any sand at a site where grunion spawning has occurred.

## Surfgrass

Your mitigation (2) approach is what we agreed to last week and I continue to believe it is appropriate for this project. The following proposed text for the final EIR, with a few edits, is acceptable "...that mitigation would involve restoration of like habitat as a first priority. In the case of surfgrass mitigation, feasibility would be determined by an experimental five-year pilot project of at least 25% of the area confirmed to have been impacted, or not less than 0.1 acre, or some minimum size otherwise acceptable to the regulatory and resource agencies. Then, if that experimental project was determined not to be successful or full areal mitigation not likely to be feasible, 2:1 mitigation of out-of-kind habitat would be implemented via augmenting an existing natural reef. The decision regarding implementing out-of-kind mitigation would be done in consultation with the regulatory and resource agencies"

Finally, the mitigating entity, presumably the City of Solana Beach, needs to understand that the cost of implementing the above mitigation program could be substantial, perhaps in the mid six to seven figures. No firm cost estimate has been completed to date, but a cap on mitigation costs is likely to be in that ballpark.

Bob

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PSIM



California Natural Resources Agency  
DEPARTMENT OF FISH AND GAME  
Marina Region  
1333 Cliff Drive, Suite 9  
Santa Barbara, CA 93109  
www.dfg.ca.gov

ARNOLD SCHWARZKOPFER, GOVERNOR  
JOHN MCCAMMAN, Director



COMMENT B3 (1/5)

DFG Draft EIR Comment Letter  
AN response to comments

95

April 12, 2011

tru@sandag.org

Rob Rundle  
San Diego Association of Governments  
401 B Street, Suite 800  
San Diego, CA 92101

Subject: Draft Environmental Impact Report for the Regional Beach Sand  
Project II in San Diego County

Dear Mr. Rundle:

The Department of Fish and Game (Department) has reviewed the Draft Environmental Impact Report (DEIR) (State Clearinghouse Number 20100510E3) dated January, 2011 for the Regional Beach Sand Project II (RBSP II) proposed by the San Diego Area of Governments (SANDAG). The proposed project includes dredging sand from three offshore borrow sites and pumping the sand to 11 receiver sites located from Oceanside to Imperial Beach in San Diego County, California. This DEIR has been prepared by SANDAG to comply with the California Environmental Quality Act (CEQA). There are several alternatives for sand volumes, placement areas, and sand placement techniques analyzed in the DEIR. The proposed quantity of sand to be dredged is between 1.7 and 3.2 million cubic yards, depending on the alternative chosen. Potentially significant biological impacts may occur from the activities of this Project. According to the DEIR, Alternative 1 would place the least amount of sand on the receiver beach sites, and has the least risk for biological impacts to offshore sensitive habitats. Alternative 1 would use a volume of sand that is equal to the volumes used in the first phase of the Regional Beach Sand Project (RBSP I) in 2000. Monitoring reports from RBSP I did not show impacts to offshore resources and offshore reef monitoring is not proposed for this alternative. Differences between Alternative 1 and 2 include utilizing a significantly larger sand volume, and potentially utilizing different boundaries for the Solana Beach site. Also in Alternative 2, a new sand receiver site is proposed at the South Calshad South location.

As a trustee for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and habitat necessary for biologically sustainable populations. In this capacity, the Department administers the California Endangered Species Act, the Native Plant Protection Act, as well as other provisions of the California Fish and Game Code and Title 14 of the California Code of Regulations that afford protection to the State's fish

Conserving California's Wildlife Since 1870

B3-2

B3-2

B3-1

B3-1

To clarify, SANDAG is the San Diego Association of Governments. For clarification, the EA/Final EIR evaluates two alternatives as identified in Table 1-1. Alternative 1 would place up to 1.7 mcg and Alternative 2 would place up to 2.7 mcg. A 3.2 mcg alternative was eliminated from further review, as discussed in Section 2.3.3, and is not evaluated in the EA/Final EIR in detail. Since release of the Draft EIR/EA, a preferred Alternative has been identified (Alternative 2-R), and is described in the Preface to the EA/Final EIR. The proposed project would place up to 2.5 mcg at up to 10 receiver sites.

Section 4.4 of the EA/Final EIR identifies less than significant impacts to biological resources under either alternative. There are specific areas identified that are at a higher risk for partial burial if Alternative 2 is implemented, based on the conservative assumptions incorporated into the model. These are identified in Table 4.4-3. While the risk of sedimentation to these areas is noted, sedimentation at a depth or duration that would result in long-term significant impacts to habitat is not anticipated. As with RBSP I, monitoring would be performed to confirm that no long-term significant impacts occur. Monitoring under RBSP II would be focused on areas with persistent sensitive marine resources that have higher risk of sedimentation than RBSP I. For Alternative 2-R, monitoring would be conducted at Solana Beach.

Draft EIR Comment Letter

DFG, Cont.

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Rob Rundle  
Page 2 of 5  
April 12, 2011

Comment B3 (2/5)

and wildlife. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act (MLPA) in coastal marine waters of California. Pursuant to our jurisdiction, the Department submits the following concerns and recommendations regarding the Project.

General Comments

The Department agrees that Alternative 1 has the least risk of incurring sedimentation impacts to marine biological resources offshore of the beach receiver sites. The Department concurs that reef monitoring may not be needed for Alternative 1, as no significant impacts to offshore reefs were found when these activities were conducted for the previous RBSP I project. The DEIR indicates that Alternative 2 would result in potentially significant impacts to Solana Beach offshore biological resources due to sedimentation effects. Therefore, a mitigation and monitoring plan for offshore reefs, surfgrass and any other vulnerable habitat is recommended for the Solana Beach receiver site and at the new South Carlsbad South site. The final EIR should also include an evaluation of the best management practices for avoidance and minimization of impacts to marine biological resources for each beach receiver site.

Specific Comments

The final EIR should address all the following potential biological resources impacts for Alternatives 1 and 2:

- Special status species that could potentially be affected by the Project include: the California least tern (*Sterna antillarum brownii*), the Western snowy plover (*Charadrius alexandrinus nivosus*), and Black abalone (*Haliotis cracherodii*). Increases in intertidal vehicle traffic, noise, lighting, sand deposition, turbidity and sedimentation may adversely impact the California least tern and the Western snowy plover during their breeding seasons. Abalone, if present, may also be affected by sedimentation in the nearshore.
- Recreationally important species such as the California gurnion (*L. eurystes tenuis*), could also be impacted by project activities. Increases in vehicular traffic, sand deposition and sedimentation may adversely impact California Gurnion during the spawning season. Another recreationally important species is the Pismo clam, *Tresus stultorum*. Pismo clams tend to develop high concentrations (or beds) on flat beaches, in the surf zone, and at the mouths of bays, rivers and estuaries. The proposed activity makes this species, and other marine invertebrates, more susceptible to direct and indirect impacts related to water turbidity, burial, and long-shore sediment transport.
- Cumulative impacts may occur from future opportunistic sand deposition projects. Impacts may include crushing and compaction of beach habitat from vehicle traffic, and burial of beach and nearshore marine resources. Other impacts may include the destruction or degradation of reef habitats, bird habitats, seagrass and algal beds and their associated biological communities.
- Project activities described in the DEIR, such as sediment removal from offshore

B3-3  
B3-4  
B3-4  
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B3-9  
B3-10

B3-3 Thank you for your comment and concurrence that no nearshore reef monitoring would be required with implementation of Alternative 1.

B3-4 Please see response to comment B3-2. A detailed monitoring plan will be prepared based on the framework outlined in Section 2.5 and refined through permitting agency coordination prior to the initiation of construction. Until monitoring identifies the occurrence of significant impacts, a detailed mitigation plan cannot be prepared because impact types and areas are uncertain (and not necessarily predicted based on the modeling). Please note that the final proposed project, defined as Alternative 2-R in the Preface of this EA/Final EIR, would include placement of Alternative 2 volumes at the Solana Beach receiver site, but placement at the South Carlsbad South receiver site would not occur. Therefore, monitoring would be limited to at risk nearshore areas in proximity to the Solana Beach receiver site.

B3-5 Section 2.5 describes avoidance and minimization measures incorporated into the project. For specific discussion of measures related to biological resources at each receiver site, please refer to Section 4.4 of the document.

B3-6 Section 4.4 identifies potential impacts to special status species, including the California least tern, Western snowy plover, and black abalone. With the incorporation of avoidance and minimization measures (Section 2.5), such as scheduling construction of the Batiquitos receiver site outside of the breeding season, no significant impacts are anticipated. The potential to impact abalone, which appears to have rare occurrence on nearshore reefs in the project area based on available survey data, is considered less than significant, similar to the assessment for nearshore reefs.

B3-7 Potential impacts to the California gurnion are addressed in Section 4.4. The incorporation of avoidance and minimization measures, as described in Sections 2.5 and 4.4, would result in less than significant impacts to gurnion. Additionally, adding sand to eroded beaches would provide additional habitat, which would be beneficial.

B3-8 As noted in Section 3.4, beach receiver site surveys included sampling for Pismo clams at each receiver site. Subadult-sized Pismo clams and relatively large, clam shells were observed within the Imperial Beach receiver site (Section 4.4). A pre-construction assessment would be conducted prior to construction to determine whether or not a clam bed is present at that location. If a clam bed is confirmed, minimization measures would be implemented and the appropriate agencies notified (Sections 2.5 and 4.4).

B3-9 Cumulative impacts to biological resources are discussed in Section 5.2.4. As noted in Chapter 5, there could be the potential for cumulative impacts if opportunistic sand projects were implemented at the same location and during the same year as the RBSP II. However, impacts are anticipated to be less than significant because SCoup programs include measures to restrict placement of sand on the same location within the same year. The potential for future cumulative impacts on sandy beach fauna considers that repetitive placement in the same location is restricted for SCoup sites.

B3-10 Section 4.4 of the EA/Final EIR notes that sand removal at borrow sites and sand placement at receiver sites will result in habitat alteration and reduction of invertebrate communities, which are anticipated to be less than significant because invertebrate

and sediment placement on shore, may potentially alter sensitive nearshore marine habitats. These activities may cause a reduction in suitable habitat for native species including surfgrass, kelp, invertebrates, birds, and nearshore fishes.

B3-10 cont'd

Recommendations

1. The Department recommends that updated pre-construction baseline surveys be conducted to identify biological resources and to avoid potential impacts from proposed Project activities. Surveys should include identifying and locating the least biologically vulnerable areas for placement of the offshore pipelines, and for placement of sand at all receiver sites. Survey methods should also be evaluated and updated if necessary.

B3-11

B3-11

As discussed in Sections 2.5 and 4.4, pre-construction surveys would be conducted to avoid biological resources during discharge pipeline placement and to avoid placement on substantial grunion spawning areas.

2. If Alternative 2 is chosen as the preferred Project, the Department recommends detailed reef habitat mitigation and monitoring plans be developed for the receiver site at Solana Beach and the site at South Carlsbad South. These plans should be included in the final EIR to address the additional sand volumes and the new site.

B3-12

B3-12

Please see response to comment B3-4.

3. Biological monitoring plans should incorporate an adaptive management approach to encourage the ongoing development of improved conservation measures that avoid and minimize adverse impacts to the maximum extent possible. Biological monitoring plans should be developed in collaboration with the Department as well as other appropriate agencies.

B3-13

B3-13

As discussed in Section 2.5 and response to comment B3-4, a detailed monitoring plan will be prepared prior to the initiation of construction. This plan will be developed in coordination with resource agencies through the permitting process.

4. Project construction (including staging of equipment, contouring and seeping of sand) occurring near bird nesting sites in the vicinity of Batiquitos Lagoon should be concluded outside the bird breeding season (generally March 1<sup>st</sup> through September 30<sup>th</sup>) to avoid impacting nearby sensitive bird breeding colonies. Reports for bird and nest monitoring should be submitted to the Department in a timely manner.

B3-14

B3-14

Sand placement at the Batiquitos receiver site would be scheduled outside of the breeding season to minimize potential impacts to snowy plover, as discussed in Sections 2.5 and 4.4. Specific reporting requirements associated with any required monitoring will be detailed in the monitoring plan to be developed prior to initiation of construction.

5. Each receiver site should include a vehicle route plan that sufficiently avoids and minimizes impacts to marine waters, sensitive species, and their habitats. Specifically, the vehicle route plan should prohibit driving directly in marine water or in sensitive habitats such as Pluma clam beds, grunion egg nests, bird foraging and nesting areas, and areas of surfgrass habitat.

B3-15

B3-15

Proposed vehicle access routes for each receiver site are identified in Section 2. Construction of the receiver sites requires vehicles to access the sites by traveling along the sand at certain locations. A pre-construction survey will be conducted prior to construction at each receiver site to determine potential suitability for grunion spawning, and if suitable, monitoring will be conducted to confirm spawning activity. Results of those surveys will be communicated to the resources agencies and may be used to further review and modify construction activities, including vehicle access routes, if necessary.

6. As discussed in previous agency meetings, grunion spawning avoidance and monitoring plans should be reviewed by the Department, be adaptive in nature, and should include the following considerations as applicable:

a. If grunion monitoring surveys indicate grunion habitat exists on site, then sand placement and construction activities on the beach should be avoided during the spawning season. All spawning habitat assessment reports should be submitted to the Department for approval. The spawning season is typically March 1<sup>st</sup> to August 31<sup>st</sup>.

B3-16

B3-16

Habitat suitability surveys would be conducted prior to construction to determine the suitability of each receiver site for grunion spawning, as noted in Section 2.5. Construction is scheduled to occur in late spring through summer of 2012, and due to seasonal constraints on construction conditions, cannot be rescheduled to fall outside of the spawning season. Similar to RBSPI, monitoring during predicted runs at appropriate receiver sites would be conducted to avoid or minimize impacts to the species. Additional language has been added to clarify coordination requirements with NMFS, CDFG, and USACE if grunion spawning is observed, and it is SANDAG's understanding that only the presence of a significant grunion run would warrant implementation of avoidance measures. With these monitoring and coordination requirements, which reflect practical results from RBSPI, no significant impacts would occur to grunion.

DFG, Cont.

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Comment B3 (4/5)

DFG, Loni

b. If avoiding the grunion spawning season is not feasible, then the Department recommends development of spawning and egg nest monitoring and avoidance plans.	B3-17
c. A pre-construction grunion spawning monitoring plan should be submitted to the Department for approval at each applicable site. Predicted grunion spawning runs should be monitored prior to and during construction by a qualified and independent biologist.	B3-18
d. Avoidance measures should include avoidance of construction activities in the intertidal area below the high water line during the two week incubation period after a significant grunion spawning event. Subsequent spawning runs should also be monitored and avoided.	B3-19
7. The Department recommends that all potential impacts to Pismo clam beds, as well as high concentrations of other unique or vulnerable species, should be identified in the final EIR. Impacts to these species should be avoided.	B3-20

The Department appreciates the opportunity to provide comments for the DEIR. As always, the Department is available to discuss our comments and concerns. Please contact Ms. Loni Adams, Environmental Scientist, at (858) 627-3985, 4949 Viewridge Ave, San Diego, CA 92123, or [ladams@dfg.ca.gov](mailto:ladam@dfg.ca.gov).

Sincerely,

*Marja Volkovich*  
Marja Volkovich  
Regional Manager  
Marine Region

cc: Ms. Sandy Vassman  
U.S. Fish and Wildlife Service  
6010 Hillsten Valley Road  
Carlsbad, CA 92011

Mr. Eric Chavez  
National Marine Fisheries Service  
501 West Ocean Blvd., Suite 4200  
Long Beach, CA 90802-4213

Mr. Alan T. Morji  
San Diego Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

cc's continued on Page 5

B3-17  
Please see response to comment B3-16.

B3-18  
Please see response to comment B3-16. As with RBSP I and discussed in Section 2.5, the monitoring plan includes a pre-construction component to determine grunion habitat suitability. This will allow SANDAG and the construction contractors to develop a schedule that would avoid/minimize impacts to grunion, as well as other resources, to the extent practicable. If specific receiver sites appear to be suitable for grunion spawning, monitoring will occur by a qualified biologist during construction at those receiver sites during predicted grunion spawning events. This information will be incorporated in the monitoring plan.

B3-19  
Please see response to Comment B3-16.

B3-20  
Please see response to comment B3-8. Impact minimization measures to Pismo clam beds have been discussed in Sections 2.5 and 4.4 of the EAV/EIR.

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DFG, Cont.

Comment B3 (5/5)

Rob Rundle  
Page 5 of 5  
April 12, 2011

cc: Ms. Vicki Frey  
Department of Fish and Game  
619 Zuma Street  
Eureka, CA 95501

Ms. Lori Adams  
Department of Fish and Game  
4519 Viewridge Avenue  
San Diego, CA 92123

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WKSd

LITTORAL  
ECOLOGICAL & ENVIRONMENTAL  
SERVICES



1075 Urania Ave.  
Leucadia, CA 92024  
Phone Number:  
(760) 635-7998  
dennislees@cox.net  
7 June 2011

Honorable Commissioners  
California Coastal Commission  
45 Fremont St # 2000  
San Francisco, CA 94105-2221

JUN 10 2011

c/o: Mr. Eric Stevens, San Diego office

Subject: Agenda Item 15d; Application No. 6-11-018; Fisheries considerations for borrow sites

Dear Commissioners:

As a consulting marine ecologist, I have been studying infaunal assemblages on subtidal sand habitats in southern California since the early 1970s. Most of the work I have done involves examining both the larger, longer-lived but less numerous species (megafauna) by means of direct-observation surveys as well as the smaller, far more numerous, and more ephemeral members of the assemblage (macroinfauna) that is the infaunal component most commonly examined in monitoring studies and that was used in the preparation of the EIR. Because of my perspective in comparing the value of areas on the basis of both mega- and macrofauna, I am concerned that decisions on the borrow areas were made without consideration of the appropriate groups of organisms.

Megafauna and macroinfauna represent quite different components of the benthic assemblage living on and in sand substrates. Again, megafauna generally comprises the larger, longer-lived but less numerous species. Major megafaunal species, including large tubicolous polychaete worms as well as clams, snails, shrimp, crabs, sea cucumbers, sea pens and sea pansies, and peanut and acorn worms, live from 5 to >25 years and many contribute substantial structure to the seafloor. But these animals can require many years to recolonize an area that is dredged or otherwise disturbed. They are analogous to the trees in a forest and, like the trees, their species composition and abundance are reasonably stable seasonally. However, because they are far less common than the macroinfauna and many live in burrows or tubes that extend deeper into the sediments

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(with comments) 51

*We haven't inherited the earth, we have just borrowed it from our children!!*

than the effective sampling depth of grab samplers, they are either missed by the sampling effort or are excluded from analysis because they are too uncommon to enter into the statistical analyses.

In contrast, macroinfauna comprises smaller, far more numerous, and more ephemeral members of the benthic assemblage. Most live no longer than 3 months to a year. They are more analogous to the weeds in the forest or on the shoulder of a highway. And, like weeds, their species composition and abundance vary dramatically seasonally, making them poor representatives of long-term conditions. But, because of their greater abundance, they are the component that is typically considered by the statistical approaches used to analyze the benthic assemblage. This was definitely the case in the analyses describing baseline conditions and considering the potential environmental impacts from dredging in the borrow sites and in monitoring their recovery.

So why is this important? First, because megafaunal forms are generally relatively long-lived, they provide a more realistic indication of long-term environmental conditions in an area (e.g., surge and current intensity, nutrition regime, sediment texture, and nutrient overload or eutrophication). In contrast, the “weeds” provide substantially less insight into long-term environmental conditions that characterize an area.

Second, and most important in this context of this project, megafaunal organisms are widely used by larger fisheries resources that are of greater value in commercial and sport fisheries. Areas where densities of megafaunal forms are higher will support larger numbers of valuable fisheries resources.

And this brings me to the focus of my concerns. The benthic studies that were performed for the EIR do not provide the data necessary to select borrow sites on the basis of the compared potential value to the fisheries. The conclusions basically assume that each area has the same value. And yet, every fisherman knows that some areas are good for fishing (i.e., good fishing holes) and some aren't. Some areas provide good forage resources for commercial and sport fisheries resources and some don't.

Moreover, the studies do not provide useful information for evaluating the time likely required for recovery of the area by the “trees” that formerly inhabited those sediments.

Beyond the fact that the standard approach to sampling sand habitats provides mainly information on the “weeds” rather than the “trees”, one of my disappointments with it is that sampling the “trees” is far more cost-effective and requires substantially less time to accomplish if the field work is conducted by a well-qualified benthic ecologist. You do not need to collect numerous large samples for macroinfaunal analysis that require months and hundreds of dollars per sample to analyze. Instead, a knowledgeable marine ecologist observes the density of the megafaunal species either directly or during review

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A handwritten signature or set of initials in black ink, located in the bottom right corner of the page. The signature is stylized and appears to consist of a large 'S' followed by a smaller 'J' or similar character.

of video records of the area and tabulates these data quickly. Very little time or expense is spent in the laboratory.

Based on these considerations, I would like to recommend the application be approved subject to adding a condition that the borrow sites be re-evaluated on the basis of the long-lived megafauna ("trees") rather than the ephemeral macrofauna ("weeds"). Such an evaluation could be conducted in a timely, cost-effective manner using the direct-observation approach described briefly above. The objective of this condition would be to optimize selection of dredging sites in order to preserve, to the extent possible, richer forage areas and fisheries resources. This would promote dredging in the poorer, less productive area and avoid dredging in the more productive that are inhabited by greater concentrations of "trees". The benefit of this re-evaluation would be better stewardship of the valuable fisheries resources of the region.

If you have questions or need clarification, please feel free to contact me at the above addresses.

Respectfully,

 *Signature on file*

Dennis C. Lees  
Littoral Ecological & Environmental Services

# PEPPERDINE UNIVERSITY

## Seaver College

### NATURAL SCIENCE DIVISION

California Coastal Commission  
45 Fremont Street, Suite 2000  
San Francisco, CA 94105-2219

June 9, 2011

Greetings,

I am writing to address the effects of the SANDDAG RBSP2 project, Application 6-11-018 on an endemic marine fish species, the California Grunion. I have done research on this species for 15 years and lead the Grunion Greeters, a group of citizen science volunteers that monitor the spawning runs statewide.

The California Grunion is an endemic species found only in coastal California and upper Baja California. The entire US habitat range of this species is in California and probably 95% of the entire population of the species resides in California waters. Of that, 90% or more of the population is concentrated in southern California, in San Diego, Orange, and Los Angeles Counties. Probably around 30% of this species' entire population is found within San Diego County.

California Grunion are not caught or observed with traditional fisheries methods with any regularity or substantial numbers. If we were relying on traditional fisheries data such as trawls or catches for population estimates of California Grunion, the census size would be zero.

Because the fish are briefly visible during their midnight spawning runs we know the population is not zero. However, the runs are not a perfect estimate of the population size because individual fish may come ashore repeatedly during the runs or move between beaches during subsequent spawning events.

It is not easy to estimate population size for grunion, and no one previously has tried. Based on 10 years of spawning run data across the entire habitat range, it is likely that there are more people in the City of San Diego than adult California Grunion in the ocean.

Observations by our volunteer Grunion Greeters are focused in the peak spawning season of April, May and early June. During peak season, in the heart of grunion habitat, San Diego County, the largest Walker 5 runs were fewer than 5% of their reports over the past 10 years.

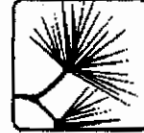
Past experience has shown that California Grunion may run on beaches undergoing sand replenishment. Potential impacts are outlined in the permit application. If the peak spawning season cannot be avoided, I urge you to accept the recommendations of the Coastal Commission staff report for RBSP2 to minimize impacts to spawning runs of this endemic species.

Respectfully submitted,

Karen Martin, Ph.D.  
Professor of Biology, Frank R. Seaver Chair in Natural Science  
Research Associate, Scripps Institution of Oceanography



# City of Del Mar



June 9, 2011

Members of the California Coastal Commission  
c/o Coastal Commission San Diego District Office  
7575 Metropolitan Drive  
Suite 103  
San Diego, CA 92108-4402

Re: Application No. 6-11-018, SANDAG's Regional Beach Sand Project II

Dear Commissioners:

On behalf of the City Council of the City of Del Mar, I am writing to express the City's support for the referenced Coastal Development Permit application. The proposed project will replenish a number of San Diego County beaches with quality dredged material. The sand replenishment project is consistent with the Commission's goal of enhancing opportunities for the public to visit and enjoy the shoreline. The project will also result in several other benefits, including an increase in biological beach habitat and protection of shoreline properties.

Initially, the City of Del Mar had concerns about the extent of sand to be dredged from one of the project's sand borrow sites, SO-5, located off of Del Mar's northerly beach area. However, those concerns have been addressed with the applicant's recent commitment to reduce the extent of sand dredging from SO-5, and with the conditions suggested by your staff for beach sand monitoring and the requirement that the applicant provide funds to offset sedimentation that could otherwise impede tidal flows at the mouth of the San Dieguito Lagoon.

We appreciate your consideration of Application No. 6-11-018 and hope that it receives unanimous support. We expect that the RBSP will have the same positive result as the 2001 project, an increase in beach widths with no significant environmental impacts.

Respectfully submitted.

*Signature on file*

Donald Mosier  
Mayor

cc: Del Mar City Council  
SANDAG  
Del Mar City Manager

DM/ab

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15/



# Surfrider Foundation San Diego County Chapter

P.O. Box 1511  
Solana Beach, California 92075  
Phone (858) 792-9940 Fax (858) 755-5627

**SURFRIDER**  
FOUNDATION

California Coastal Commission  
San Diego Coast District  
7575 Metropolitan Drive, Suite 103  
San Diego, CA 92108-4421  
To whom it may concern:

June 15, 2011 Public Hearing Agenda #15d  
PERMIT NUMBER: 6-11-018  
IN FAVOR

**RECEIVED**  
JUN 09 2011

CALIFORNIA  
COASTAL COMMISSION  
SAN DIEGO COAST DISTRICT

SANDAG has done an admirable job of reaching out to local stakeholders during the planning of this project. SANDAG has worked with the San Diego chapter of Surfrider Foundation and responded to our comments regarding the final EIR for the Regional Beach Sand Project II project. We are not opposing the SANDAG project (Application No.: 6-11-018), but have stressed to SANDAG that the physical monitoring should include consideration of impacts to local surf spots. We strongly agree with your Special Condition #2 (sand monitoring requirement), as any discussion of physical monitoring is absent from the final EIR. Further, we would like to suggest that your Special Condition #2 include monitoring of nearby surf spots. Our comments, including the surf spot monitoring template and discussion are submitted as Exhibit #1. To this point, we proposed surf spot monitoring following the template established for Surfrider Foundation's artificial reef project in El Segundo, CA. The template has undergone scientific peer review, and was instrumental in the removal of the reef.

On page 4.6-4 of the final EIR, SANDAG states "Some sand may accumulate in localized portions of existing reefs on a seasonal or short-term basis, which could temporarily affect confined portions of existing reef surf breaks.". This should be reason enough for requirement of surf spot monitoring. Furthermore, in the CCC staff report regarding this project, it says, "While a surf break monitoring report was discussed as a part of this project, the applicant determined that there is too much uncertainty involved to undertake an objective study.". No attempt was made to outline a surf break monitoring report in final EIR, and the basis for the above statement is not discussed with the final EIR. There are private companies, such as Surfline.com and SurfShot.com which make their living on surf spot monitoring, and the template provided by Surfrider shows a scientific peer-reviewed method for surf spot monitoring.

Surf spots are an important part of our culture and economics, and they should be protected as much as possible. Regional beach fill projects are also important to the region's culture and economics, but should not be constructed at the expense of other important resources. Too often, the impact to surf spots from beach fill projects are presented as anecdotal evidence, which is unreliable due to the wide range of surfing skill and experience. The template presented by Surfrider, attempts to take out the uncertainty, and provide surf spot monitoring that is useful. We hope you consider our suggestion to add surf spot monitoring to Special Condition #2. Thanks for the opportunity to express our comments.

*Signature on file*

Tom Cook  
Advisor to the Chapter  
3357 Bancroft St  
San Diego, CA 92104

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches. Founded in 1984 by a handful of visionary surfers in Malibu, California, the Surfrider Foundation now maintains over 50,000 members and 90 chapters worldwide. For an overview of the San Diego Chapter's current programs and events, log on to our website at [www.surfriderSD.org](http://www.surfriderSD.org) or send email to [info@surfridersd.org](mailto:info@surfridersd.org).

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cross-shore transport, the Coastal Engineering Manual (CEM) approach. The DEIR selectively utilizes CEM techniques such as GENESIS for longshore transport and omits completely CEM methods for cross-shore transport as mentioned above.

In order to make the analysis comply with CEQA in properly describing the Alternatives, cross-shore transport must be added to the analysis and the GENESIS model must be corrected to include bathymetry and wave characteristics in the study area. Final calibration of the model should include using results of past projects such as RBSPI. The rapid loss of sand in RBSPI in Torrey Pines and Solana Beach should also be repeatable in any model used to properly describe Alternatives in RBSPII.

### **3.2) Reef Burial Impact on Surfing Not Performed**

Given the amount of sand being placed on the receiver beaches as well as the larger sediment size, it is of utmost importance to ensure offshore reefs are not buried as the sand erodes from the beach face. The DEIR expresses concern for this in section E-8,

*“Burial of up to 2.5 acres of reef with sensitive indicators could occur under Alternative 2, while partial sedimentation of 1.1 acre or 3.0 acres of reef with sensitive indicators are anticipated under Alternatives 1 and 2, respectively”.*

Since the DEIR does not expect significant impacts from RBSP II, it can be assumed that reef burial is not considered a significant impact. This is not acceptable, physical modeling and monitoring of offshore reef burial should be in place for the final EIR to understand the movement of the sediment introduced from RBSP II.

Page 4.6-3 to 4 discusses Alternative 1 Impacts

*“Although no receiving beaches have reef breaks located immediately offshore, some placement sites are located in proximity to reefs that may be impacted by sand. In particular, placement of sand at Leucadia, Moonlight, Cardiff, and Solana receiving beaches could result in sand being transported to nearby reef breaks. Some sediment accumulation is anticipated in reef areas; however, natural transport processes move sediments through these reef areas under normal conditions. Additional sand placed as part of the proposed project would not substantially alter sand transport patterns in these areas.”*

and Page 4.6-7 to 8 Alternative 2 Impacts

*“Surfing impacts under Alternative 2 would be similar to Alternative 1.”*

*“An increased volume of sand delivered to these beaches could result in more sediment accumulation at nearby reef breaks. Sand accumulation and transport through these reefs occur under natural transport processes under normal conditions and are not expected to be substantially altered with implementation of Alternative 2.”*

However there is no analysis to substantiate these anecdotal claims. Tables 4.4-1 and 4.4-3 (pages 4.4-10 and 4.4-30) show the burial of reefs for Alternatives 1 and 2. Given the data in table 4.4-3, reefs in Alternative 2 are likely to be buried. The analysis of reef coverage does not include an analytical or scientific impact analysis on surf breaks for

surf reefs buried in sand.

**Table 4.4-1**  
**Estimated Acreage of Potential Impact to Nearshore Reefs Based on**  
**Model Predicted Increase in Sand Elevation for Alternative 1**

Jurisdiction	Acres of Hard-Bottom Offshore Jurisdiction <sup>1</sup>	Receiver Site	Estimated Sedimentation						Partial Sedimentation (Reef Height Reduced to $\leq 1$ ft) <sup>4</sup>	Duration	
			Surfgrass		Kelp Bed		Understory Algae <sup>2</sup>				
			Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour			
Oceanside	69 (Cobble, Bedrock)	Oceanside	0	0	0	0	0	0.2	0	Years 1-5	
Carlsbad	396 (Bedrock, Cobble)	North Carlsbad	0	0	0	0	0	0.3	1.2 <sup>3</sup> (U)	Year 1 (scour), Years 1-5 (height)	
		South Carlsbad North	0	0	0	0	0	0	0.8 (0.3 S, 0.5 U)	Years 1, 4-5	
		South Carlsbad North	NA	NA	NA	NA	NA	NA	NA	NA	NA
		South Carlsbad South	0	0.1	0	0	0	0	-0.1	1.3 (0.8 S, 0.5 U)	Year 1 (scour), Years 1-3 (height)
Encinitas	759 (Bedrock, Cobble)	Barigatos	0	0	0	0	0	0	0	0	Years 4-5
		Leucadia	0	0	0	0	0	0	0	0	0
		Moonlight	0	0	0	0	0	0	0	0	0
		Cardiff	0	0	0	0	0	0	0	0	0
Solana Beach	267 (Bedrock)	Solana Beach	0	0	0	0	0	0	0.1 (U)	Year 1	
City of San Diego <sup>3</sup>	107 (Bedrock, Cobble)	Torrey Pines	0	-0.1	0	0	0	0.6	2.1 (0.1 S, 2.0 U)	Year 1 (scour), Years 2-4 (height)	
Imperial Beach	2,396 (Cobble)	Imperial Beach	0	0	0	0	0	0	0	0	
Total			0	0.1 <sup>2</sup>	0	0	0	1.1 <sup>2</sup>	5.5 <sup>2</sup> (1.2 S, 4.3 U)		

<sup>1</sup> Acreage based on 2002 Nearshore Program Habitat Map; predominant hard-substrate type is listed first (see Table 3.2-6 in Appendix C)  
<sup>2</sup> The 2002 understory algae category may include a mix of substrates with sensitive indicators and non-sensitive algal turfs and crusts  
<sup>3</sup> Acreage for City of San Diego includes 1 mile up and downcoast of Torrey Pines receiver site  
<sup>4</sup> There is relatively greater uncertainty of potential impacts from estimated reef height reduction (S = surfgrass, U = understory algae)  
<sup>5</sup> Potential for greater sedimentation in Year 5 after project implementation under low gross transport conditions based on preliminary model results

Table 4.4-1 from DEIR.

**Table 4.4-3**  
**Estimated Acreage of Potential Impact to Nearshore Reefs Based on**  
**Model Predicted Increase in Sand Elevation for Alternative 2**

Jurisdiction	Acres of Hard-Bottom Offshore Jurisdiction <sup>1</sup>	Receiver Site	Estimated Sedimentation						Partial Sedimentation (Reef Height Reduced to $\leq 1$ ft) <sup>4</sup>	Duration	
			Surfgrass		Kelp Bed		Understory Algae <sup>2</sup>				
			Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour			
Oceanside	69 (Cobble, Bedrock)	Oceanside	0	0	0	0	0	0.2	0	Years 1-5	
Carlsbad	396 (Bedrock, Cobble)	North Carlsbad	0	0	0	0	0	0.3	1.2 <sup>3</sup> (U)	Year 1 (scour), Years 1-5 (height)	
		South Carlsbad North	0	0.7	0	0	0.8	0.9	2.5 (0.5 S, 2 U)	Years 1-2, 3 (burial), Years 1-5 (scour, height)	
		South Carlsbad North	0	0.1	0	0	0.1	0.7	0.5 (0.1 S, 0.4 U)	Years 1-3 (burial), Years 1-5 (scour, height)	
		South Carlsbad South	0	0	0	0	0	0	0	0	0
Encinitas	759 (Bedrock, Cobble)	Barigatos	0	0.1	0	0	0	0	-0.1	1.3 (0.8 S, 0.5 U)	Year 1 (scour), Years 1-3 (height)
		Leucadia	0	0	0	0	0	0	0	0	0
		Moonlight	0	0	0	0	0	0	0	0	0
		Cardiff	0	0	0	0	0	0	0	0	0
Solana Beach	267 (Bedrock)	Solana Beach	0	-0.1	0	0	0.5	0.4	1.5 (0.6 S, 0.9 U)	Years 1-3 (burial), Years 1-5 (height, scour)	
City of San Diego <sup>3</sup>	107 (Bedrock, Cobble)	Torrey Pines	0	-0.1	0	0	0	0.6	2.1 (0.1 S, 2 U)	Year 1 (scour), Years 2-4 (height)	
Imperial Beach	2,396 (Cobble)	Imperial Beach	0	0	0	0	1.1	0.1	2.5 (U)	Years 1-5	
Total			0	0.9 <sup>2</sup>	0	0	2.5	3.2 <sup>2</sup>	11.5 <sup>2</sup> (2 S, 9.5 U)		

<sup>1</sup> Acreage based on 2002 Nearshore Program Habitat Map; predominant hard-substrate type is listed first (see Table 3.2-6 in Appendix C)  
<sup>2</sup> 2002 map category may include a mix of substrate with sensitive indicators and non-sensitive algal turfs and crusts; S = surfgrass, U = understory algae  
<sup>3</sup> Acreage for City of San Diego includes 1 mile up and downcoast of Torrey Pines receiver site  
<sup>4</sup> There is relatively greater uncertainty of potential impacts from estimated reef height reduction  
<sup>5</sup> Potential for greater sedimentation acreage in Year 5 after project implementation under low gross transport conditions based on preliminary model results

Table 4.4-3 from DEIR

An analysis should cover the baseline conditions for low relief reefs, e.g. Tabletops,

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Swamis, Big Rock, Seaside, Rockpile, and various reefs in La Jolla and Sunset Cliffs. The analysis must consider the tidal conditions which cause a wave to “mush out” and sand coverage which can cause a wave to “closeout”. A predictive model must be created to determine how often the reef is covered in sand relative to these conditions. Monitoring and measurements to validate would precede and follow nourishment with the mitigation being to dredge it offshore or downstream if excessive coverage occurs.

We should also be clear, regardless of the uncertainty in establishing a baseline, that **burying a specific reef by a certain predetermined amount in sand is unacceptable and should be set as a threshold for a significant impact in accordance with CEQA.** Hypothetically, 2 feet of sand covering 90% of Swamis Reef for more than 1 month is unacceptable. Conditions of impact significance for surf break reef coverage must be derived and included as an impact in the DEIR.

**4) Beach fill performance is ignored, as post construction monitoring efforts are not an integrated part of the project**

The DEIR does not describe the physical monitoring, as it is mentioned that a monitoring plan will be developed as part of the permitting process. Therefore, it is likely that the physical monitoring will lack the scope to properly monitor the fate of the filled sediment, as well as its impact to surfing areas. For example, A single transect along a receiver beach can not adequately describe a surf spot, which in some cases (i.e. beach breaks) can vary seasonally and over hundreds yards.

The Southern California Beach Process study, conducted by Scripps Institution of Oceanography, is valuable resource and has been working towards understanding the fate of beach fill from RBSP I. Efforts like this should be an integral component of a large scale beach fill project such as RBSP II. Research from this study has been peer-reviewed and published in major scientific journals. This type of monitoring has much better detail than the typical SANDAG monitoring, and is more suitable for determining whether or not the project is behaving as designed.

The lack of this extensive modeling is bad for RBSP II, as performance of the project cannot be evaluated without the proper supporting data.

**4.1) A monitoring program for impacts to surf breaks over the pre- and post-construction is needed**

Surfing is a recreational activity that many San Diego residents take part in daily. It is also an important source of tourism dollars, as many people worldwide travel to San Diego to experience our wide variety of surf spots. Surf spots are unique, in that various configurations of the shoreline result in different types of waves. Not all breaking waves are suitable for surfing, and changes in the shoreline and nearshore environment have a profound impact on surf spots. Given the large volume of sand, and extension of the shore face associated with RBSP II, it is likely that surf spots nearby receiver beaches will be impacted by the project. Understanding these impacts should be a priority for

SANDAG and local municipalities that depend on the economic benefit from surfing. While the authors of the DEIR understand the importance of surfing, they do not discuss any specific monitoring plan regarding the impact to surf quality in the region.

Surfrider Foundation's comments in the scoping phase and public outreach suggested monitoring of impacts to surf breaks before and after the project. This included in Appendix A of DEIR and in the Intro – Stakeholder input 1-19 and 1-20 “Description of Proposed Action and Alternatives

*“engage the surfing community*

- *provide a pre- and post-project monitoring program to understand the impacts on surfing resources”*

No monitoring for surfing is identified. Surfrider Foundation is well prepared to offer comment on monitoring impacts associated with surfing and would hope that SANDAG adopts methods used in Surfrider Foundation monitoring surf conditions of Pratte's Reef. California Coastal Commission Application E-98-15 (Pratte Surfing Reef, El Segundo) and associated permit - Application of Surfrider Foundation and California Coastal Conservancy for experimental surfing reef with 10 to 20 geotextile bags containing 5,000 total cu.yds. of sand, 15 feet below sea level, 100 yards offshore and 300 yards north of Grand Avenue groin, El Segundo had the following permit condition,

*“1. Effectiveness of Pratte's Reef Surfrider shall monitor the reef performance and shall provide the executive director with annual reports on the results from this monitoring. Performance monitoring shall include inspection for bag movement or damage, changes in wave quality, and qualitative and quantitative measure of surf enhancement, incoming swell, tides and weather. Performance shall be prepared in a manner that allows inter-annual comparisons of the performance.”*

[http://www.surfrider.org/artificialreef/report/appendicesyrl\\_qt1.pdf](http://www.surfrider.org/artificialreef/report/appendicesyrl_qt1.pdf)

We have included for reference a description of the Pratte's Reef monitoring Program below. This is the type of monitoring that is required to quantify impacts of the project on surf resources.

## Pratte's Reef Monitoring Program

### **“SURF QUALITY MONITORING**

Artificial reef surfing performance monitoring observations shall provide qualitative and quantitative measurements of the changes to the surfing environment associated with the installation of Pratte's reef. Monitoring shall commence as soon as possible to establish the quality of the waves present at the proposed project site and at other “control” locations. Monitoring shall occur for a period of one year after the installation of Pratte's

reef. Monitoring should occur for a minimum of 20 days every month to collect a statistically valid data set. Results of the monitoring program will be tabulated and statistically analyzed to assess the relative improvement of the surfing environment relative to control locations.

### **Surfing Environment Observation (SEO) Program Overview**

The Littoral Environment Observation program was established by the Coastal Engineering Research Center to provide data on coastal phenomena at low cost (CERC, 1981). This original program was developed to provide guidelines on making visual measurements of littoral processes to aid coastal engineers in quantifying the magnitude of sediment transport at a particular site. The Surfing Environment Observation Program (SEO) described within this document is modified to include parameters that will quantify the quality of surfing conditions.

Visual measurement techniques described in the SEO program are subject to error. Although each observer will be trained, the skill and opinion of each SEO observer will have significant effects on the quality of data collected. While the accuracy of each individual SEO observation may be questionable, the relative quality of the surfing conditions at various sites can be assessed by comparing SEO observations made by one observer at various locations during a particular tide and swell condition.

### **Required Equipment**

Each SEO observer should have the necessary equipment and supplies to make and record observations: Clipboard, recording form, instruction form, Stop watch, pencil, one drogue (grapefruit work well), still camera and video camera.

### **Data Collection Methods**

The SEO form is attached. All data are entered on the form and rounded to the nearest whole number. One SEO form should be filled out for each wave observation station location. The following section describes all of the parameters to be entered into the SEO form as well as methodology used for collecting data.

#### *Station Identification*

Each of the SEO observation stations shall be assigned a station name, for example: Pratte, Pratte up-drift, Pratte down-drift, Dockweiler, El Porto. The two control locations shall be designated by the Surfrider Foundation prior to starting the SEO program. Locations of the control observation sites, should be standardized, and documented with photography.

#### *Date and Time of Observation*

The last two digits of the year and the numerical order of month and day are entered into the appropriate boxes in the SEO observation sheet. The time observation is by the 24-hour system (example: 3:00 pm = 15:00, and 8:00 am = 08:00).

#### *Wind Speed*

The wind speed shall be classified as calm (smooth water surface), medium (rippled

water surface), or hard (choppy water surface with white caps offshore) and recorded in the SEO observation sheet.

#### *Wind Direction*

The wind direction shall be classified as the direction from which the wind is blowing. Incident wind directions are delineated into wind blowing: Onshore, Offshore, North Sideshore (from north) or South Sideshore (from south). The incident wind direction should be circled on the SEO data sheet. If the wind direction is blowing at an angle to the shoreline, then two directions should be circled (example if the wind is blowing onshore from the north, both Onshore and Sideshore (from north) should be circled).

#### *Drogue Distance*

The SEO observer shall mark a line in the sand with his foot directly onshore from the observation point. The observer then shall simultaneously throw a drogue into the nearshore surfzone, approximately 10 feet from the landward limit of the wave uprush, and start the stopwatch. The drogue is to be followed as it travels with the wave generated alongshore current for the period of 1 minute. The distance the drogue traveled in one minute is then paced off parallel to the shoreline, and recorded in the SEO observation sheet. (The length of the observer's pace (in feet) must be established to make this conversion) These results will be used to calculate the speed of the longshore current to aid in calculating sediment transport rates and assess potential shoreline effects.

#### *Direction of Drogue Travel*

The direction of drogue movement is referenced to an observer facing seaward. The direction of drogue movement should be circled on the SEO observation sheet.

#### *Number of Surfers*

A reef will generate one wave "peak" where surfers may take off and ride a wave. If the specified control location is a wide open beach break, the particular sand bar that produces the best wave (and largest crowd) should be documented. The total number of surfers attempting to surf at the observed peak should be documented.

#### *Time for 11 Wave Crests to Pass*

Wave period is recorded as the number of seconds it takes for 11 wave crests to pass an arbitrary fixed point in the surf zone (prior to the breaking point). Timing begins when the 1<sup>st</sup> crest passes the point and ends when the 11<sup>th</sup> crest passes the point; this time is then recorded. All waves, whether large or small, should be counted.

#### *Wave Peel Direction*

Surfers ride waves at an angle to the shoreline immediately in front of the breaking point. This wave peel direction is defined as either right or left, with right hand waves breaking from north to south on the West Coast of the United States. Some surf breaks have either a right or left breaking condition during a particular swell condition, while other surf breaks peel both right and left simultaneously. The attached SEO form is set up with a column of information for evaluating both the right and left peeling waves at the project site.

### *Breaking Wave Height*

This parameter is based on the observers visual estimate of the average height of the landward side of the breaking wave from crest to trough (or from top to bottom) just prior to wave breaking. The height of the surfer riding the wave (approximately six feet tall) may be used as an aid in judging the wave height. Oftentimes a wave will break on the outside sand bar or reef, stop breaking in a deep trough region, and then re-form and break again on the inside, closer to or on the dry sand. Breaking wave height, to the nearest foot for both the outside and inside regions should be recorded in the SEO form. During swell conditions waves approach the coastline in groups or "sets." Only the set wave heights should be considered.

### *Breaking Wave Type*

Breaking waves are classified into the following four types:

1. **Spilling** occurs when the foamy, breaking region of the wave develops at crest and slowly progresses down the face of the wave to the trough. Some surfers define these waves as "mushy."
2. **Plunging** occurs when the wave crest is "thrown" out as a thin curtain of water. This curtain of water often times impacts the trough of the wave, causing a violent explosion of water. Some surfers define these waves as "hollow."
3. **Collapsing** occurs as the wave crest is thrown out as a thick curtain of water that violently impacts either the dry sand or a very shallow depth of water. Some surfers define these waves as "shore pound." Although not optimal for surfing, these waves are often preferred by body boarders.
4. **Surging**, while not exactly breaking, occurs when the nearshore bottom slopes are very steep, causing the wave crest and trough to rapidly surge up the dry beach face. The breaking wave type should be noted for each wave peel direction and for both the outside and inside sections in the SEO sheet.

### *Ride Length*

The quality of a surf break is not only defined by the breaking wave type, as defined in the previous section, but also by the length of ride a surfer may have. While surfers with varying levels of skill will have varying ride length, average length of ride shall be recorded to approximate the quality of the wave at the time of observation. SEO observers should observe the performance of the surfers present at the site and approximate the length of ride similar to the Drogue Distance section of the SEO instruction sheet, section 3.e. The mean ride lengths for both the right and left breaking waves on both the inside and outside breaking regions should be recorded on the SEO observation sheet. If a particular wave direction is un-ridable due to very fast breaking conditions "closed out" should be noted in this section of the SEO observation sheet.

### *Ride Duration*

While the Ride Length is being calculated the average duration of ride should be measured with the stopwatch. Time of ride for the right and left breaking waves on both the outside and inside regions should be approximated and recorded on the SEO observation sheet. If no surfers are riding in a particular direction, zero should be noted on the SEO observation sheet.

### **REPORTING**

The results of both the shoreline and surf quality monitoring will be presented in a written report. The report will be provided to all interested agencies on a quarterly basis. The report will include the raw data collected and field notes taken. The survey data will be presented in standard plots and comparisons will be made between each data set. The reports will include an Executive Summary which identifies any impacts and discusses the significance of the impacts. The reports will be provided quarterly after construction for the first two years of the project and annually after the first two years.

### **PERSONNEL INVOLVED & TRAINING**

The monitoring program will be closely supervised and for the most part conducted by scientists, engineers and biologists, all whom already have extensive experience. The scientists who will be making these observations are both very experienced surfers familiar with classifying surfing waves. The observers also have several years of combined surfing time in the area where the reef will be installed and are very knowledgeable about the area. The only work to be performed by volunteers will be the SEO data collection. These volunteers will be trained and continually supervised by the lead SEO scientist. The training will include about one half hour of classroom instruction and about two hours of field training.”

**SURFING ENVIRONMENT OBSERVATION FORM**

**OBSERVER**

<b>STATION ID</b>	<b>YEAR</b>	<b>MONTH</b>	<b>DATE</b>	<b>TIME (24 Hour Syst.)</b>

<b>WIND SPEED (Please Circle)</b>	<b>WIND DIRECTION</b>
Calm Medium Hard	Onshore Offshore From South From North

<b>DROGUE DISTANCE (Feet)</b>	<b>DIRECTION OF DROGUE TRAVEL</b>
	To Right To Left Offshore Inshore

<b>NUMBER OF SURFERS</b>	<b>TIME FOR 11 WAVE CRESTS TO PASS</b>

		PEEL DIRECTION	
		RIGHT	LEFT
WAVE HEIGHT (FT)	INSIDE		
	OUTSIDE		
WAVE TYPE	INSIDE	SPILLING PLUNGING COLLAPSING SURGING	SPILLING PLUNGING COLLAPSING SURGING
	OUTSIDE	SPILLING PLUNGING COLLAPSING SURGING	SPILLING PLUNGING COLLAPSING SURGING
RIDE LENGTH	INSIDE		
	OUTSIDE		
RIDE TIME	INSIDE		
	OUTSIDE		

**COMMENTS**

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Wisd

**Eric Stevens**

**From:** Seymour Phillips [sbp@fitallfeet.com]  
**Sent:** Wednesday, June 08, 2011 11:06 AM  
**To:** Eric Stevens  
**Subject:** Permit # 6-11-018

California Coastal Commission: Dear Sirs & Madams, As a property owner in the Las Brisas HOA, in Solana Beach, and reading the proposal to re-sand the Beaches of our coast line, I find it difficult to believe that a larger heavier grained sand will stay on the shorelines along our beaches. During high tides and wind blown tides, large and small stones/rocks are moved all around the beaches, let alone small grains of sand.. The cost and manpower to place this new sand on our beaches, against the costs, seem like there should be no question but to scrub this folly. We need to place the sand with offshore retention devices all at the same time. Please save the funds and do a real shore saving project all at one time. Sincerely, Seymour Phillips 135 south Sierra Ave # 24, Solana Beach, CA 92075-1818 858 792 7671

6/8/2011

Letters of Opposition 67

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Permit Number: 6-11-018

Charles H. Gaylord, Jr.  
Lynn M. Gaylord

2820 Ocean Front

Del Mar  
California 92014

June 5, 2011

California Coastal Commission  
7575 Metropolitan Drive, Suite 103  
San Diego, CA 92108-4421

JUN 07 2011

Attn: Members of the California Coastal Commission

RE: Permit Number 6-11-018

Dear Members of the California Coastal Commission:

Steve Blank	Dayna Bochco
Dr. William A. Burke	Wendy Mitchell
Mary K. Shallenberger	Jana Zimmer
Martha McClure	Steve Kinsey
Mark W. Stone	Brian Brennan
Richard Bloom	Esther Sanchez

My wife and I live at 2820 Ocean Front, Del Mar. As we stated at the SANDAG meeting held at the Del Mar City Council, ~~my wife and I~~, along with many of our neighbors who live in the north beach area of Del Mar, ~~are very~~ concerned about the Regional Beach Sand Project that is being contemplated by SANDAG.

Our principal objection is that ~~the sand~~ is principally being taken from a sensitive area, presently in flux, just ~~offshore~~ the mouth of the San Dieguito River. No one can really predict what effect the ~~removal~~ of such a huge quantity of sand will have on the changing character of ~~the~~ beaches south of the proposed site, a site which is already under study because of the ongoing project of the San Dieguito River tidal area. It would be foolish to remove such a huge quantity from such a site, and it would be even more foolish to remove it to beaches far away. **We believe that such an action could cause irreparable harm to the beaches and adjacent properties in the area.**

The project, as described by SANDAG and their consultants, has focused on Del Mar as the principal "borrow" site, wherein up to 70% ~~of approximately~~ 2.7 million cubic yards of sand would be removed from the area just offshore the mouth of the San Dieguito River.

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The current state of the new tidal basin and mouth of the San Dieguito River is very much in flux following the dredging of the areas east and south of the Del Mar Fairgrounds. Presently, sand is washing out of the river and is depositing in relatively shallow water and along the borders of the river mouth. However, it is anybody's guess as to whether that accumulation may continue, or, as the channel is deepened (and made more fast flowing), the sand may be deposited in deeper water and unavailable for seasonal accumulation onto the beach. Any additional changes would certainly have unknown, but potentially deleterious, effects. No models will be able to determine with any degree of certainty what the effects could be.

The term, "borrowing," is a misnomer. The sand is not going to be returned, even if we have favorable littoral drifts. Most will end up in deep water soon after the placement is done. Just consider the results of the 2001 project. The sand placed on Del Mar's beach was completely washed away and gone within one tidal cycle.

Further, the program unfairly puts the burden of the "borrowing" of sand on the area offshore Del Mar beaches. Taking that much sand from one site is unreasonable, even if SANDAG's consultants believe that the "grain size" of the sand is preferable. If this project is to be carried out, it should use as many borrow sites as possible to smooth out the unknown effects such a taking of sand would have.

In summary, the Coastal Commission should reconsider this project either in its entirety or certainly the unreasonable burden placed on Del Mar's already fragile beach system. Despite their qualifications, SANDAG's consultants just cannot know the effects of such a taking on an already unstable and changing beach and river flow area.

Sincerely,

*Signature on file*   
\_\_\_\_\_  
Charles H. Gaylord, Jr.

Cc: Terry Sinnott, Del Mar City Council

# CLTFA

## California Lobster & Trap Fishermen's Association

California Coastal Commission  
San Diego Coast District Office  
7575 Metropolitan Dr. Ste 103  
San Diego, CA 92108  
Sherilyn Sarb, Deputy Director  
Deborah Lee, District Manager

6-10-11

### RE: Coastal Development Permit No. 6-11-018 (SANDAG)

CLTFA wishes to express our concerns with the above mentioned permit. Our membership consists of commercial fishermen, mainly commercial lobster fishermen. As I'm sure you are aware the majority of our industry operates within close proximity to shore. We specifically are concerned with three issues:

- Damage to surf grass and reef structures (vital for safe harbor of juvenile lobsters as well as other species)
- Manipulation of the natural eco system (sand replaced will ultimately be pulled off the beach naturally and may be deposited over the surf grass and reef structures)
- Sand replenishment taking place in an MPA (one of the goals of the Marine Life Protection Act is to restore the area to its natural state)

We understand the importance of protecting property, livelihoods contingent on tourism and the ability of the public to enjoy our coast. We ask you please keep in mind that during the spring and summer months lobsters move into shallow waters to breed and the juveniles seek safety in the surf grass. Also sand movement is quite capable of (as we have experienced) covering up of reef structure.

Lastly, having been a member of the RSG (Regional Stakeholder Group) in the MLPA process in the South Coast representing commercial lobster interests, I am greatly troubled by the idea of artificially depositing sand on beaches within an MPA. Is it not hypocritical that although we close an area to "recover", we feel it is acceptable to deposit many hundreds of thousands of cubic yards of sand on the beach, not to mention leaving holes in the ocean where sand has been extracted?

Sincerely,

  
*Signature on file*

Josh Fisher  
Vice President  
714 231-2012

JUN 10 2011

CLTFA/PO Box 2294 Capo Beach, Ca. 92624/Fax: 714 630-1783

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## CALIFORNIA COASTAL COMMISSION

SAN DIEGO AREA  
7575 METROPOLITAN DRIVE, SUITE 103  
SAN DIEGO, CA 92108-4402  
(619) 767-2370



# W15d

Filed: March 15, 2011  
49th Day: May 3, 2011  
180th Day: September 11, 2011  
Staff: E.Stevens-SD  
Staff Report: June 2, 2011  
Hearing Date: June 15, 2011

REGULAR CALENDAR  
STAFF REPORT AND PRELIMINARY RECOMMENDATION

Application No.: 6-11-018

Applicant: San Diego Association of Governments (SANDAG)

Agent: Cindy Kinkade, AECOM

Description: Placement of approximately 2.3 million cubic yards of sand dredged from three off-shore borrow sites onto ten beaches in the San Diego area. Placement to begin in Spring and Summer 2012.

Site: San Diego County area beaches at: South Oceanside, North Carlsbad, South Carlsbad North, Batiquitos, Leucadia, Moonlight Beach, Cardiff, Solana Beach, Torrey Pines, and Imperial Beach (See Exhibit # 11 for specific beach segments and borrow sites).

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STAFF NOTES:

Summary of Staff's Preliminary Recommendation:

Staff is recommending approval of the proposed beach replenishment project, with a number of special conditions. In 2000, the Commission approved the first large sand replenishment project for San Diego County, entitled the Regional Beach Sand Project I (RBSP I). The project included the placement of approximately two million cu. yds. of sand on 12 San Diego County beaches. As part of that project, extensive monitoring for impacts to biological resources, which were mandated for a period of four years by the Commission, found no significant impacts were caused by the project. In addition, monitoring of sand movement was also included. Compared to the RBSP I, the proposed project will include similar sand quantities for nine of the receiver sites; the Imperial Beach receiver site will receive more sand and the Mission Beach and the Del Mar receiver sites will not receive sand. Additionally, the applicant has stated that it is likely that the Torrey Pines receiver site will not be receiving sand, although it is still included in this analysis. Thus, it is expected that impacts on biological resources will not occur as the result of this project.

The proposed project will have a positive impact on public access and recreation by enhancing San Diego County's beaches. In order to avoid winter storms, the project is proposed to take place during the spring and summer months. Thus, some short-term, temporary impacts to public recreation will occur. Therefore, Special Condition # 1 lists the order in which work must be performed at each beach, such that work is completed outside the summer season at the beaches that have the highest public use. Thus, impacts to public access and recreation will be minimized to the greatest extent feasible.

The proposed receiver beaches were chosen based on the need for sand and the need to avoid impacts to sensitive biological resources at the replenishment sites. Although the dredging and sand replenishment is not expected to have any adverse environmental impacts, the project includes a mitigation and monitoring program that ensures any potential impacts on sensitive biological resources will be evaluated and mitigated if necessary. In addition, the project includes a sand monitoring program, which will evaluate the accumulation of sand at the project sites for a period of 4 years following project completion. Nearshore biological monitoring will not be conducted for any of the receiver sites.

Standard of Review: The local jurisdictions have requested that the Commission issue a consolidated permit, therefore the standard of review is the Chapter 3 policies of the Coastal Act, with the appropriate local coastal programs used as guidance.

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Substantive File Documents: SANDAG, The San Diego Regional Beach Sand Project II Final EIR/EA, May 2011; Moffatt & Nichol, Draft Operations, Procedures, Mitigation Monitoring and Contingency Measures Plan for the San Diego Regional Beach Sand Project II, May 2011; SANDAG, Proposed RBSP II Construction Schedule (Based on Beach Events/Attendance, Predicted Grunion Runs & Predicted Bird Nesting Seasons), May 2011; EDAW, Final Summary Report Grunion Monitoring for the SANDAG Regional Beach Sand Project I, January 2002, CDP #6-00-038, CDP #6-00-038-A1, CDP #6-00-038-A2, CDP #6-00-038-A3

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I. PRELIMINARY STAFF RECOMMENDATION:

The staff recommends the Commission adopt the following resolution:

**MOTION:**            *I move that the Commission approve Coastal Development Permit No. 6-11-018 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 Chapter 3 of the Coastal Act. 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.

II. Standard Conditions.

See attached page.

III. Special Conditions.

The permit is subject to the following conditions:

1. **Timing of Construction.** **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a construction schedule that conforms to the following restrictions:

a. Work on any receiver beach may occur prior to Memorial Day weekend or after Labor Day weekend. Work after Memorial Day weekend, but before Labor Day weekend must occur in the following order:

1. Solana Beach
2. Moonlight Beach
3. Cardiff

4. Torrey Pines
5. South Carlsbad
6. Imperial Beach
7. North Carlsbad
8. Oceanside
9. Leucadia
10. Batiquitos

Changes to the above construction schedule may be permitted by the Executive Director, without an amendment to this permit, where unforeseeable weather or construction constraints require that changes be made to avoid a significant time delay and/or loss of money or available sand. Any required changes to the schedule shall be the minimum necessary in order to implement the project, and the approved schedule shall be resumed as soon as feasible.

b. Horizontal beach access along the back beach on any section of any of the receiver sites shall not be blocked for more than one hour at any time.

The applicant shall undertake the development in accordance with the approved construction schedule. Any proposed changes to the approved schedule shall be reported to the Executive Director. No change to the schedule shall occur without a Commission-approved amendment to the permit unless such change is approved by the Executive Director, as allowed in subsection 'a' of this condition, or unless the Executive Director determines that no such amendment is legally required.

2. **Beach Sand Monitoring.** **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a detailed beach sand monitoring program for shore and nearshore monitoring at or near the receiver sites, and shall be in general conformance with the procedures and reporting outlined in "Draft Operations, Procedures, Mitigation Monitoring and Contingency Measures Plan for the San Diego Regional Beach Sand Project II, May 2011" ("Mitigation and Monitoring Plan"). Monitoring at and adjacent to the receiver sites shall address the following concerns:

- Confirm as-built project plans for location and deposition amounts and document any plan revisions;
- Seasonal and interannual changes to the receiver sites, in width and length of dry beach, subaerial and nearshore slope, offshore extent of nourished toe, and overall volume of sand in the profile;
- Rate and extent of transport of material up- and down-coast from the receiver sites; and
- Time period over which the beach benefits related to the project can be identified as distinct from background conditions.

a. At a minimum, this information shall be provided through field surveys of the receiver sites and adjacent areas. Unless otherwise indicated, all profiles shall be



from an upland fixed location or monument, across the beach, through the nearshore, to closure depth. Profiles shall be prepared immediately prior to the project, immediately upon completion of the project (this survey may be terminated offshore at the toe of the project rather than going to closure), following the project in the Fall of 2012, and every six months thereafter until two separate surveys show that the material and the project is undetectable. Timing for the recurring six month survey efforts may be adjusted to coincide with the schedule that has been developed for the San Diego Regional Monitoring Program.

b. There shall be a minimum of one profile through each receiver site, and at least one profile up coast and two profiles down coast for each receiver site. To the maximum extent practicable, these should occupy the profile locations currently being used in the San Diego Regional Monitoring Program. In locations where the receiver sites are close together, profiles may be used to provide both upcoast information for one site and downcoast information for another.

c. Monitoring information shall be analyzed regularly for any changes that have occurred at the receiver sites. To the extent practicable, these reports should incorporate information from the San Diego Regional Monitoring Program on both historic changes at the receiver sites and on-going regional shoreline trends.

d. Pre- and post-construction bathymetric surveys of the borrow/excavation areas shall be conducted using an areal survey and a minimum of one (1) full-depth profile (from dry beach through the borrow/excavation area) per borrow/excavation area. Additionally, full-depth, profile surveys from dry beach through the borrow/excavation areas and information on grain size of the surface sand that has accumulated in the borrow/excavation areas, based upon surface samples collected in each borrow area or other methods that have been reviewed and approved by the Executive Director, shall be undertaken and reported to the Commission two, four, and six years after the excavation, or until additional permitted excavation is undertaken in borrow/excavation areas.

e. Oblique aerial photographs of the RBSP II receiver sites shall be taken semi-annually during the first two years following construction, and annually during Year 3 and Year 4 following construction.

f. Annual monitoring reports and a final report evaluating long-term effects of the project shall be submitted to the CCC, NMFS, CDFG, and USACE.

The applicant shall undertake the development in accordance with the approved monitoring program. Any proposed changes to the approved program shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is legally required.

3. **Dredging Activities Mitigation and Monitoring.** **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final “Mitigation and Monitoring Plan.” Said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” The California Coastal Commission shall be one of the resource agencies that must be contacted if turbidity exceeds the allowable levels or if operating procedures vary beyond specified limits.

The applicant shall undertake the development in accordance with the approved monitoring program. Any proposed changes to the approved program shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is legally required.

4. **Lagoon Mitigation and Monitoring.** **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final mitigation and monitoring plan for potential impacts to lagoon habitat at Agua Hedionda, Batiquitos, San Elijo, San Dieguito, and Los Peñasquitos Lagoons. Said plan shall include monitoring to address the following:

- Whether sand from the project is being transported into the lagoons, and if so, the volume and rate of transport; and
- Whether sand from the project is increasing the rate of shoaling in the lagoons, or altering the frequency or duration of lagoon mouth closings.

In addition, said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” The applicant has calculated the predicted amount of sand that will enter the lagoon mouths and met with each lagoon management entity to determine the cost of future lagoon mouth dredging operations which result from this project. The applicant shall pay the following amounts to the appropriate management entity upon completion of construction (these amounts are based on proposed placement volumes and may be subject to change based on actual volumes placed at each relevant receiver site):

- Agua Hedionda, \$0
- Batiquitos Lagoon, \$245,800
- San Elijo Lagoon, \$32,600
- San Dieguito Lagoon, \$20,076
- Los Penasquitos Lagoon, \$24,650

The applicant shall undertake the development in accordance with the approved program. Any proposed changes to the approved program shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved

amendment to the permit unless the Executive Director determines that no such amendment is legally required.

**5. Biological Resources Mitigation and Monitoring. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, a final “Mitigation and Monitoring Plan” for biological resources including: Grunions, California Least Terns, Western Snowy Plovers, and Pismo Clams. Said plan shall be approved by the U.S. Fish and Wildlife Service, and shall be in general conformance with the procedures and reporting outlined in “Mitigation and Monitoring Plan.” The California Coastal Commission shall be one of the resource agencies that must be provided with all monitoring reports.

a. Pismo Clams. A preconstruction assessment of the minus tide zone north of the Imperial Beach Pier shall be conducted prior to any placement of sand at the Imperial Beach receiver site. The assessment shall confirm the presence or absence of adult Pismo clams (minimum of 4.5 inches). If presence of a clam bed is confirmed (density greater than 0.07 adult individuals per square foot), the clam bed shall be avoided in its entirety and construction shall not impact any Pismo Clams or the Pismo Clam bed.

The applicant shall undertake the development in accordance with the approved monitoring program. Any proposed changes to the approved program shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is legally required.

**6. Final Staging Plans. PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit to the Executive Director for review and written approval, final plans that identify the following:

- a. The location of the project construction headquarter(s). Staging headquarters shall not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach.
- b. The minimum number of public parking spaces (on and off-street) that are required at each receiver site for the staging of equipment, machinery and employee parking. At each site, the number of public parking spaces utilized shall be the minimum necessary to implement the project.
- c. During the construction stages of the project, the permittee shall not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion. In addition, no machinery shall be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to implement the project. Construction equipment shall not be washed on the beach or in the beach parking lots.
- d. Additional protection will be provided by the contractor using biodegradable (e.g., vegetable oil-based) lubricants and hydraulic fluids, and/or electric or natural gas powered equipment, where practicable.

- e. Immediately upon completion of construction and/or when the staging site is no longer needed, the site shall be returned to its preconstruction state.

The applicant shall undertake the development in accordance with the approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No change to the program shall occur without a Commission-approved amendment to the permit unless the Executive Director determines that no such amendment is legally required.

7. **Other Permits.** **PRIOR TO COMMENCEMENT OF CONSTRUCTION**, the applicant shall provide to the Executive Director copies of all other required state or federal discretionary permits for the development herein approved. The applicant shall inform the Executive Director of any changes to the project required by such permits. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. **Grunion.** In addition to the provisions of Special Condition # 5, the following provisions shall apply to grunion. If there is a conflict between the two conditions, these provisions shall be controlling. The applicant shall adhere to the following provisions in order to maximize avoidance of expected grunion runs. The annually published California Department of Fish and Game (CDFG) expected grunion runs shall be used to determine possible grunion spawning periods. At this time, the 2012 CDFG expected grunion run information is not available.

- a. During the grunion spawning period of March through August, all proposed receiver sites shall be monitored for grunion runs concurrently (excluding the Batiquitos receiver site), unless the beach consists of 100 % cobble (i.e. there is no sand on the beach). Monitoring need not continue at a given site after sand replenishment has been completed at that site.

- b. Grunion monitoring shall be conducted by a qualified biologist for 30 minutes prior to and two hours following the predicted start of each spawning event

- c. If a grunion run consisting of 0 to 100 fish (Walker Scale of 0 or 1) is reported within two weeks prior to or during construction/beach replenishment, the applicant does not need to take any avoidance action for grunion eggs. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

- d. If a grunion run consisting of more than 100 fish (Walker Scale of 2, 3, 4, or 5) is reported within two weeks prior to the start of construction, no grunion eggs shall be buried or disturbed at the receiver site. Work may continue if avoidance action can be taken. However, the applicant shall also receive approval from the CCC, CDFG, NMFS, and USACE of appropriate avoidance action. This action may include avoiding impacts to grunion eggs through alteration of the discharge point and/or sand spreading, shifting the receiver site or altering the construction/beach replenishment schedule to replenish a

beach that has not had a grunion spawning event within two weeks prior to the start of construction. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

e. If construction/beach replenishment has already begun when a grunion run consisting of 100-500 fish (Walker Scale of 2) is reported, impacts to grunion eggs may occur if avoidance is not feasible. The applicant shall first attempt to minimize impacts to grunion eggs through alteration of the discharge point and/or sand spreading. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

f. If construction/beach replenishment has already begun when a grunion run consisting of more than 500 fish (Walker Scale of 3, 4, or 5) is reported, no impact to grunion eggs shall occur at the receiver site. The applicant shall avoid impacts to grunion eggs through alteration of the discharge point and/or sand spreading. Ceasing of construction/beach replenishment activities at this location shall occur if avoidance measures are not feasible. No mature grunion shall be buried or harmed as a result of construction/beach replenishment.

**9. Final Plans. PRIOR TO THE ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicant shall submit final project plans to the Executive Director for review and written approval. Said plans shall be in substantial conformance with the plans submitted with this application by SANDAG received 3/15/2011.

The applicant shall undertake the development in accordance with the approved plans. Any proposed changes to the approved plans shall be reported to the Executive Director. No changes to the plans shall occur without a Coastal Commission approved amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

**10. Assumption of Risk, Waiver of Liability and Indemnity Agreement.**

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from wave action; (ii) to assume the risks to the applicant 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; and (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.

#### IV. Findings and Declarations.

The Commission finds and declares as follows:

1. Detailed Project Description/History. The proposed project is beach replenishment of up to 2.3 million cubic yards of sand to be deposited at the following ten San Diego region receiver beaches: Oceanside, North Carlsbad, South Carlsbad North, Batiquitos, Leucadia, Moonlight Beach, Cardiff, Solana Beach, Torrey Pines, and Imperial Beach. Sand would be dredged from up to three offshore borrow sites, shown on Exhibit # 1. A detailed description of each of the ten proposed replenishment sites is attached as Exhibit #'s 2 and 3.

The purpose of the project is to provide enhanced public recreational opportunities and public access at the receiver sites, and to increase protection of public property and infrastructure at risk from shoreline erosion. The project is also expected to have the effect of increasing protection for private beach front and bluff top development. In 1993, SANDAG prepared the *Shoreline Preservation Strategy for the San Diego Region* (Strategy), which identified regional coastal areas with critical shoreline problems and recommended a strategy to address the issue. The strategy involved various components including beach replenishment, sand retention structures, property protection structures, and policies regarding the use of the shoreline and bluff tops. In March 2009, SANDAG prepared the *Coastal Regional Sediment Management Plan* (Plan) for the San Diego Region. The Plan uses the Strategy as a baseline to guide the level of comprehensive nourishment needed for the San Diego region over the next 50 years. Recently, the Coastal Sediment Management Workgroup prepared the *2010 California Beach Erosion Assessment Survey*. The survey provides a listing of Beach Erosion Concern Areas (BECA) throughout California which identifies beach erosion problem areas.

Each of the ten receiver beaches for the current project are identified as BECA in the *2010 Beach Erosion Assessment Survey* and were chosen based on the critical need for replenishment (as identified by SANDAG in the *Coastal Regional Sediment Management Plan*), and the potential that no impacts to sensitive marine resources would result from sand replenishment. The offshore sand borrow sites were chosen after marine geophysical surveys and vibrocore investigations were conducted along the San Diego coastline to map the horizontal and vertical extent, and compute the volume, of beach-quality sand at 57 possible sites within eight work areas from Imperial Beach to Oceanside in 2008. The proposed borrow sites were chosen on the basis of grain-size analyses that determined that the dredge material would be compatible with the receiver sites' existing sediments, based on guidelines specified by the U.S. Army Corps of Engineers (ACOE) (See Exhibit # 4). The U.S. Environmental Protection Agency (EPA) and the ACOE have both reviewed the project and concurred that the proposed nourishment materials from the three borrow sites are physically compatible and chemically suitable for use as nourishment material at the proposed receiver sites.

The project EIR states that dredging of the borrow sites would not significantly affect sand levels on San Diego County beaches. Borrow sites are outside the depth of closure

and thus do not attract nearshore sand that is inside the depth of closure. The depth of closure is defined as the water depth at the outer limit of seasonal sand movement; this depth varies depending on site-specific conditions. During strong storm events, sand may be carried outside the depth of closure. However, the size and location of the borrow sites does not impact how much sand is removed from the littoral cell. Typically, for the San Diego region, greater sand movement from the exposed beach to the offshore portion of the profile occurs in the winter due to large storms and waves, followed by a period of sand gain to the exposed beach during the summer's more gentle conditions and surf. The littoral cell is defined as a coastal reach bounded by physiographic features (e.g., submarine canyons, coastal headlands, harbors, etc.) where sediment enters, moves along, and leaves the coast. The seaward edge of the active littoral cell is defined as its depth of closure.

Borrow site SO-5 will be dredged to a maximum depth of ten ft. and is located in water depths of 34 to 49 ft. Borrow site SO-6 will be dredged to a maximum depth of 20 ft. and is located in water depths of 42 to 56 ft. Borrow site MB-1 will be dredged to a maximum depth of ten ft. and is located in water depths of 60 to 74 ft. Biological surveys were performed in 2009 to compare conditions at RBSP I borrow sites, nearby areas at similar depths that had not been dredged, and proposed borrow sites for RBSP II. The survey found that fish, sediment, and benthic characteristics were similar among all three locations. The survey also revealed that approximately one foot of post-RBSP I sedimentation was recorded at one of the RBSP I borrow sites, eight years after it was dredged for RBSP I. This illustrates that the term 'borrow site' is somewhat deceptive, a more appropriate term would be 'donor site,' as borrow sites are only filled back in as a result of infrequent, powerful storm events. The applicant states that the sand in the borrow sites was most likely a result of historic river outflow sedimentation. Additionally, the applicant contends that adding sand to regional beaches will increase the sum amount of sand in the littoral cells. However, much of the sand will be lost in submarine canyons.

The proposed project is funded as follows: 85% from California Department of Boating and Waterways (up to \$6.5 million each year for three years totaling \$19.5 million), 15% from municipal jurisdictions (based on the amount of sand received, miles of coastline restored, and population), and approximately \$150,000 from the Bureau of Ocean Energy. Municipal jurisdictions that are receiving more sand than they received with RBSP I will pay 100% of the costs for the additional sand. The total maximum budget for all engineering design and construction plans, all environmental compliance costs, including CEQA/NEPA documentation, monitoring, and mitigation (if necessary), all permitting activities, and construction is approximately \$22 to 25 million dollars. The jurisdictions are planning to spend the Coastal Commission mandated sand mitigation and recreation funds. Current amounts available for funding of sand placement for RBSP II from the sand mitigation and recreation funds is as follows: Encinitas - \$109,809.57, Solana Beach - \$976,694.49 (mitigation fund) and \$274,582.24 (recreation fund), San Diego - \$34,953.02, Imperial Beach - \$27,493.74, and Oceanside - \$37,783.35.

The general process for sand dredging, delivery, and spreading would be similar for all of the receiver beaches. The contractor, when chosen, will have the option to either use a hopper dredge or a cutterhead suction dredge. A hopper dredge was used for RBSP I and is anticipated for RBSP II. If a hopper dredge is used, sand will be sucked up into the hopper dredge from the borrow site. The hopper dredge then travels to a stationary mono buoy (floating platform) which is anchored to the seafloor, where a floating or submerged approximately 30 in. diameter pipe (perpendicular to the shoreline) transports a mixture of the dredged sand and sea water to the beach; or the hopper dredge can bypass the mono buoy and connect directly to the pipe. Sections are then added to the original pipe (parallel to the shoreline on the upper beach) as the sand is pumped and spread further down the receiver site, making the pipe into a "L" shape. The sand is discharged within training dikes (berms of sand) that allow the water to drain out, increasing the amount of sand that stays on the receiver site and decreasing turbidity. The sand is redistributed on the beach with scrapers and bulldozers. The hopper dredge would need to make numerous trips between the borrow site and the mono buoy for each receiver site, as it can only hold 2-5,000 cu. yds. of sand at a time. The piping and mono buoy would be dismantled and moved for each receiver site.

Unlike the hopper dredge, the cutterhead dredge typically remains at the dredge site for the entire operation and uses long pipes to transport a mix of sand and seawater to the receiver sites. For sites that are located greater distances from the borrow site, such as the Imperial Beach receiver site which is located more than 15 miles from the borrow site, the cutterhead dredge would need to transit to the receiver site to unload. Floating/submerged piping associated with the cutterhead dredge would be subject to wave action and high tides and may need to be disassembled 2-3 days prior to predicted large waves or extreme tides.

The proposed project is scheduled to occur during the Spring and Summer of 2012. Construction activities are expected to begin on April 1, 2012 and continue until October 18<sup>th</sup> (See Exhibit # 5). Construction activities are proposed to occur around the clock, on a 7-day/24-hour basis. The longer construction hours allow for more efficient construction and greater production rates, and thus, would allow for a greater amount of sand to be placed on the beaches. These construction hours require approval of a noise variance from Oceanside, Carlsbad, Solana Beach, and Imperial Beach prior to commencement of work at each site.

The predecessor to this project, San Diego Regional Beach Sand Project I (RBSP I), was completed in the Spring and Summer of 2001. RBSP I placed approximately two million cu. yds. of sand on 12 San Diego County Beaches. Extensive monitoring was completed in association with RBSP I and found no significant impacts to biological resources. The Commission also did not receive any adverse comments in regard to public access during or following construction of RBSP I.

While RBSP II is very similar to RBSP I, there are some variations. RBSP II proposes to place approximately 300,000 cu. yds. more sand on the receiver sites and less extensive post-construction monitoring is proposed. Additionally, the Del Mar and Mission Beach



receiver sites from RBSP I will not receive any sand under RBSP II; the Oceanside receiver site will be shifted 1,800 ft. north towards the pier; the Imperial Beach receiver site will receive approximately five and a half times more sand and be extended 1,750 ft. north and 1,700 ft. south; and the Leucadia receiver site will receive 13% less sand. No new receiver sites are proposed under RBSP II. The Del Mar and Mission Beach receiver sites from RBSP I are not included as part of RBSP II due to municipal budget constraints and they have or will be receiving sand from other projects.

The Cities of Oceanside, Carlsbad, Encinitas, San Diego, and Imperial Beach all have certified Local Coastal Programs. While these cities would normally issue coastal development permits for projects landward of the mean high tide line, they have all requested that the Commission issue a consolidated coastal development permit for this project. Coastal Act Section 30601.3 states that the Commission may process and act upon a consolidated coastal development permit application if (1) a proposed project requires a coastal development permit from both a local government with a certified local coastal program and the Commission and (2) the applicant, the appropriate local government, and the Commission, which may agree through its executive director, consent to consolidate the permit action, provided that public participation is not substantially impaired by that review consolidation. The standard of review for a consolidated coastal development permit is Chapter 3 (commencing with Section 30200), with the appropriate local coastal program used as guidance. Solana Beach does not have a certified Local Coastal Program, and therefore does not have coastal development permit jurisdiction on its beaches. In Imperial Beach, the legislature has granted sovereign lands from Imperial Beach to the Port of San Diego; and, therefore the Port of San Diego will issue the coastal development permit for the portions of this receiver site seaward of the mean high tide line at that location. The Commission has original jurisdiction for the portions seaward of the mean high tide line for all of the other receiver sites. Chapter 3 of the Coastal Act is the standard of review for the entire project subject to Coastal Commission review.

2. Beach Replenishment/Public Access. Many policies of the Coastal Act address public access. The following are most applicable to the proposed development and state, in part:

#### 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 30211

Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

### Section 30212

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in 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...

### 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.

### Section 30233(b)

(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.

Finally, Section 30604(c) of the Coastal Act requires that a specific access finding be made in conjunction with any development located between the sea and the first public roadway, indicating that the development is in conformity with the public access and public recreation policies of Chapter 3. In this case, such a finding can be made.

The San Diego Association of Governments (SANDAG) has adopted the *Shoreline Preservation Strategy* (Strategy) and the *Coastal Regional Sediment Management Plan* (Plan) 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 as a means 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, decrease the rate of beach erosion, and provide a buffer (a wider beach) between waves and adjacent private/public development, thereby potentially reducing pressure to construct shoreline protective devices which can adversely affect both the visual quality of scenic coastal areas and shoreline sand supply. The Plan uses the Strategy as a baseline to guide the level of comprehensive nourishment needed for the San Diego region over the next 50 years. Recently, the Coastal Sediment Management Workgroup prepared the *2010 California Beach Erosion Assessment Survey*. The survey provides a listing of “Beach Erosion Concern Areas” (BECA) throughout California which identifies beach erosion problem areas. All of the proposed receiver sites are cited as “Beach Erosion Concern Areas” in the survey.

The proposed project is designed to replenish the beach at ten receiver sites that have been identified by SANDAG and the Coastal Sediment Management Workgroup as having experienced erosion and critical shoreline problems. It is difficult to estimate precisely how long the fill sand will remain on receiver beaches; however, the Environmental Impact Report for the project estimates that it will take from three to five or more years for the receiver beaches to return to their pre-project condition. During that time, the public will have the benefit of wider sandy beaches (see Exhibit # 6). Although sand from this project is expected to remain on some of the beaches for five or more years, enhanced profile sand monitoring will only be done for four years following construction. It is anticipated that the baseline beach profile monitoring will continue after the initial four years and that the enhanced beach profile monitoring will not be necessary because sand will be distributed throughout the littoral system and remaining project sand would not be substantial enough to be detectable through profiling. Monitoring of RBSP I showed that beach width gains lasted an average of four years and shore zone volume gains lasted an average of six years.

Nevertheless, the project is expected to have some adverse impacts on public access and recreation, primarily during its placement. Typically, the Commission has prohibited construction on beaches or in recreational areas from occurring during the summer months, or, if summer construction is unavoidable, prohibited construction on weekends or holidays. However, the proposed deposition has been scheduled to begin in the spring because placing the sand earlier or later in the year would increase the chance that winter storms would remove the newly placed material immediately, thus reducing benefits for beachgoers. In addition, SANDAG has proposed the construction occur as continuously as possible (not stopping on weekends or holidays), to minimize down-time construction costs and ensure that the project funding translates into the maximum amount of sand on the beach. Thus, as proposed, the project could involve closing portions of San Diego County’s beaches to the public during the time when demand for beach area is at its highest.

SANDAG has submitted a detailed schedule which indicates the order and projected dates that receiver sites will receive sand. The schedule is based on beach suitability for grunion runs (peak spawning season is late March to early June), local beach events, intensity of beach use, and nearby sensitive bird habitat and historic nesting areas (see

Exhibit # 5). The Commission recognizes that this is a tentative schedule and may need to be modified. However, Special Condition # 1 requires that no change to the schedule shall occur without consultation with the Executive Director to determine whether an amendment to the permit is necessary.

As proposed, there would be impacts to beach access resulting both from the actual beach replenishment activities and from equipment staging and maintenance. However, as proposed, beach replenishment activities would occur on a constant basis at each site and using only the few machines necessary, thus there would not be a need for equipment storage. During replenishment activities, the vehicles would either be active or temporarily idle on the receiver site itself. Any fueling or maintenance activities would occur at the nearest public street or parking lot. Construction personnel would park near the receiver sites in public parking areas. SANDAG estimates that up to 12 public parking spaces would be usurped at each beach site by construction workers.

The applicant states that the contractor would be responsible for identifying any staging headquarters. However, staging headquarters would not be permitted on public beaches, within public beach parking lots, or in any other location that would otherwise restrict public access to the beach. The contractor will likely rent staging space offsite. The minimum amount of parking spaces required has not been determined at this time. However, Special Condition # 6 requires that the applicant submit final staging plans identifying the location and amount of public parking spaces required. The number of spaces occupied must be the minimum number necessary to implement the project.

The applicant states that many of the beaches proposed for nourishment as part of RBSP II are in an eroded state, and provide little recreational use due to cobble or wave runup during high tide. The amount of time that each receiver site would be impacted will vary from beach to beach. At each site, construction would involve some preliminary mobilization prior to dredging, dredging and sand placement, then demobilization. The total active dredging time is estimated at five and a half to eight months. The applicant states that it will likely take substantially less than eight months. RBSP I began construction April 6, 2001 and ended construction on September 23<sup>rd</sup>, 2001, a total of five and a half months. Although slightly more sand is being placed with RBSP II (2.3 million cu. yds. vs. 2 million cu. yds.), it is expected that RBSP II will be able to place the sand more quickly due to a larger average grain size of sand.

On any given day, only a small portion of a receiver beach would be under active construction and closed to the public. For example, at the 5,750-foot long Imperial Beach receiver site, the typical active construction area would be 300 feet in length. No buffer around the active construction area for safety purposes is needed. Safety measures in the vicinity of the receiver sites could include fencing, barricades, and flag personnel as necessary. Thus, for the Imperial Beach receiver site, 300 feet in length would be closed to the public each day for an estimated 41 consecutive days. The applicant has provided a schedule of construction that shows work at the busiest beaches will occur outside of prime summer beach use months. The Coastal Commission approved RBSP I with a special condition that mandated work on the beach during daylight hours on

weekends or holidays between Memorial Day and Labor Day be avoided to the maximum extent feasible. The applicant reports that work on the beach occurred during all holidays and weekends during this time period for RBSP I and SANDAG does not propose to avoid work during these high beach use times. However, the applicant does assert that the beach replenishment did not appear to have any impact on the beach-going public and that beach goers would begin using the wider newly created beach area as soon as it was open. Therefore, the applicant is not proposing to limit work on weekends or holidays during the summer.

The sand pipelines will be located as far back on the beach as possible, and sand berms will be constructed on the side of the pipe to allow pedestrians to cross over the pipeline. Based on photos from RBSP I, it does not appear that the sand pipelines on the beach caused significant impacts or substantial deterrence to public access opportunities (see Exhibit # 7). Also, as stated previously, for the RBSP I project, no complaints were received at the local Commission office regarding work occurring during the summer. The remaining beach area outside of the active construction area would remain open to the public, and there would not be any significant restrictions on activity in the water. Exhibit # 8 indicates how much beach area for each beach would be closed per day during replenishment activities.

At beaches that are less heavily used, for example, Leucadia, 12 days of beach closure would probably not have a significant adverse impact on the public. In contrast, even the partial closure of Torrey Pines Beach during any summer day is going to displace a significant number of beach users. The impact will be particularly significant at higher tides and at work areas where the entire beach area would be closed to the water line and people cannot get past the work area to the rest of the beach except by traveling inland around the construction area. At most of the receiver beaches, horizontal access along the back beach or adjacent public corridor would be maintained to allow access to either side of the active sand placement area. However, at receiver sites where sand may be required for placement to the edge of the back beach to create a level beach, horizontal access will be temporarily closed. While any beach closure is a public access concern, Special Condition # 1 requires that horizontal access on the beach behind any active construction area be closed for a maximum of one hour per day. The applicant will also attempt to limit construction of the back beach during daylight hours in order to allow maximum horizontal access during the day. Additionally, once the sand is placed and spread on each section of beach, the construction activities will shift down the beach. At that time, the replenished beach will be immediately available for use by the public. Thus, the public access impacts will be minimal and temporal.

SANDAG has submitted a schedule of work to the Commission, but has stated that when the contractor is hired for the job, changes may be needed. The applicant identified two biological constraints on timing which have been incorporated into the project. The Batiquitos receiver site will be constructed only after August 1<sup>st</sup> and after the cessation of least tern nesting in the area, in order to avoid impacts to foraging birds by increased turbidity. Beach suitability for grunion spawning will be analyzed and approved by the

Commission and the less suitable beaches scheduled, to the maximum extent feasible, outside April through June, the primary grunion spawning season.

The purpose of the project is to benefit public access and recreation, and SANDAG has avoided placing non-biologically related limitations on the time of the replenishment and the location of staging and storage areas with the intent of allowing the maximum flexibility to place the greatest amount of sand on the beach with the available project funding. The Commission understands that the more flexibility the contractor has in scheduling, the less likely the project will experience expensive, non-productive “down-time.” SANDAG has taken some measures to reduce the impact the project will have on the public. Prior to beach building activities, SANDAG would notify the local jurisdiction and the local print media of the activity. Those entities would publicize the upcoming activity. SANDAG would also maintain a project website with current information ([www.sandag.org/shoreline](http://www.sandag.org/shoreline)). In this way, potential beach goers will be aware of the project and be able to use a different beach for their recreation.

Nevertheless, the project will still have adverse impacts on the beach going public. Sandy beach will be blocked and public parking spaces will be usurped. Scheduling the replenishment activities so that the busiest beaches are avoided during the peak summer season would considerably reduce this impact. Again, the Commission understands the importance of the project in providing enhanced access and recreational opportunities and protection of upland development. However, the Commission must still ensure that the proposed project is consistent with Coastal Act access and recreation policies.

Therefore, Special Condition # 1 places some general parameters on the timing of construction. The condition takes into account both the biological constraints on dredging, and the fact that once dredging is started at a particular borrow site, it may be inefficient to stop dredging and move to another site. However, the intent is to encourage as much work as possible to be completed before the summer season (Memorial Day to Labor Day), and that work that has to be done at high-use beaches during the summer be performed preferably before Memorial Day, (when many schools finish for the summer) or as early in the season as possible.

Of the ten receiver sites, the applicant has identified that the following beaches traditionally have high recreational use: Solana Beach, Moonlight Beach, Cardiff, Torrey Pines, and South Carlsbad. Exhibit # 5 shows the order in which the beach replenishment must be performed. Work at the most heavily used beaches is scheduled to occur prior to Memorial Day, in an attempt to avoid the prime summer season and to provide sand for summer beach users. As conditioned, conflicts between the proposed project and the general beach-going public will be minimized to the greatest extent feasible.

The project also includes a detailed sand monitoring program, which will provide information on the movement of sand along the coast beaches and nearshore areas in three littoral cells. The program involves measuring beach profiles at a total of 61 transects perpendicular to the coast in spring and fall for a period of four years following completion of RBSP II. The transects extend from Oceanside to Imperial Beach. Each

spring and fall, beach profile data compatible with historical data will be obtained at the 61 transects. Semi-annual aerial photographs will be taken at each of the five lagoon sites for documentation and planning current surveys for the first two years following construction and annually after two years. In addition, assessments of lagoon closure and maintenance records will be undertaken. The applicant has been conducting the SANDAG Beach Monitoring Program since the spring of 1996 to provide a regional perspective of nearshore processes and coastal changes along the San Diego County coastline. This program monitors beach sand profiles and lagoon mouth entrances. In 2001, the program was expanded for a period of four years to develop more detailed information about the outcome of the RBSP I nourishment activities. In 2010, the program consisted of 55 transects perpendicular to the coast. Thus, five additional transects will be added for a period of four years following construction of RBSP II in order to comply with Special Condition # 2 which mandates that a minimum of one profile crosses through each receiver site and at least one profile shall be added through the downcoast of large receiver beach sites. The ongoing lagoon mouth monitoring will not change as a result of RBSP II.

The proposed project is not intended to be a permanent solution to counter San Diego's eroding shoreline. Beach replenishment is necessarily an on-going effort. The SANDAG Beach Monitoring Program is intended to provide information regarding the short and long-term effects of beach replenishment, including how long the sand remains on the beach at different sites in different conditions. With the movement of replenishment beach sand through the littoral processes, offshore bars could potentially develop over time, thereby affecting surf breaks. Changes in the formation of offshore sand bars is a natural occurring event, and there are seasonal periodic changes to surfing localities, and the proposed project is not expected to have any long-term impacts on surfing. Monitoring results of RBSP I were inconclusive in terms of surf break conditions. Members of the public expressed that surf breaks were both improved and adversely affected as a result of the sand placement. While a surf break monitoring report was discussed as a part of this project, the applicant determined that there is too much uncertainty involved to undertake an objective study. Special Condition # 2 requires SANDAG to submit a sand monitoring program that tracks the changes to the receiver sites and the transport of material up and down coast of receiver sites. Monitoring reports and evaluations must be submitted to the Commission on an annual basis. This will enable the Commission to assess the project's long-term impacts and benefits to public access. To ensure that the final project design is consistent with the Commission's conditions and that it minimizes impacts to public access, Special Condition # 9 requires that the applicant submit final plans for the project to the Executive Director for review and written approval before the coastal development permit can be issued.

In summary, the proposed project will have short-term impacts on public access and recreation, which have been minimized by conditions requiring that construction of heavily used beach areas be scheduled outside the summer season as much as possible. The project overall will have a positive impact on San Diego's beaches, and the monitoring program will provide valuable information on the movement of sand along

the San Diego shoreline that will be useful in planning and designing future sand replenishment projects. Therefore, as conditioned, the proposed project can be found consistent with the public access and recreation policies of the Coastal Act.

3. Biological Resources/Water Quality. The following Coastal Act policies are applicable to the proposed project and state, in part:

Section 30230

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30240

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

The applicant is only proposing biological monitoring in locations where there is potential for additional sedimentation of marine habitats. The only receiver site receiving more sand in RBSP II vs. RBSP I is Imperial Beach. There is no bedrock (primary kelp habitat) within one mile of the Imperial Beach receiver site, although there is extensive cobble which can support kelp. However, cobble bottom is considered an 'ephemeral reef' due to a high probability of variability in the amount of hard-bottom at any given time. Monitoring from 2002 found that for the proposed Imperial Beach receiver site, the estimated closest distance to hard-bottom habitat, intertidal surfgrass, subtidal surfgrass, understory algae, and kelp beds was 540 ft., greater than three miles, greater than three miles, 540 ft. and 1,900 ft., respectively. Four years of extensive monitoring following RBSP I confirmed that that no significant impacts occurred to sensitive marine habitats as the result of that project. Where RBSP I monitoring confirmed no impacts occurred and receiver sites and sand placement volumes are similar for RBSP II, no post-construction biological monitoring is proposed. Although significantly more sand is proposed for the Imperial Beach receiver site in RBSP II, the applicant found that due to its distance from sensitive habitats, sand replenishment at the Imperial Beach receiver site does not have a significant risk of adverse impacts to coastal resources and thus does not require biological monitoring. The Commission ecologist has reviewed this information and concurs that monitoring is not necessary.



The above cited Coastal Act policies require the Commission to address the impacts of the proposed project on marine resources by considering the timing of the deposition of the material on the beach, the location of the receiver beach and the presence of environmentally sensitive resources. The extraction of sand for restoring beaches is a permitted use under Section 30233; however, the project must be the least environmentally damaging alternative, and any impacts must be mitigated. Deposition of material onto the beach can affect marine life through the burial of organisms on the beach and in the nearshore environment, and by increasing turbidity in adjacent waters. In addition, as discussed above, the project is proposed for the spring and summer months, in order to avoid winter storms that could remove the sand quickly. However, this schedule coincides with the nesting season for California least terns, the California Brown Pelican, and western snowy plovers; and, turbidity in the water could adversely impact their ability to find food in offshore waters. The schedule also coincides with the grunion spawning season.

The EIR for the project reviewed the potential project impacts from both the direct placement of sand, from the dredge equipment, from turbidity, long-term sediment transport, and direct impacts from dredging. The project has been designed to avoid sensitive marine resources by choosing both dredge sites and the receiver beaches in locations that do not contain biological resources such as reefs, surfgrass beds, and kelp canopies. The sand pipeline routes have been mapped to avoid reefs, kelp beds, and surfgrass. Sand is the predominant existing habitat at the proposed receiver sites; although most have bands of cobblestones as well, and as such, there would be no direct impacts to nest locations of western snowy plovers or least terns. Some loss of benthic organisms on the receiver beaches is expected; however, these species are fairly adaptable and are expected to recover quickly. None of the receiver sites are predicted to experience long-term, significant direct impacts from the physical placement of sand.

### Turbidity

Turbidity can indirectly impact plankton, fish, marine mammals, birds, vegetated reefs, and benthic invertebrates. Turbidity results from suspended particles in the water column that can reduce ambient light levels, which can impact primary production of plankton and inhibit kelp and algae growth. Turbidity plumes from dredging of the borrow sites is expected to be small, as the dredge material is sandy sediment with a low percentage of fines. Typical near-surface turbidity plumes generated from a hopper dredge are estimated to extend 50 to 250 feet downcurrent from the dredge. Under maximum current conditions, plumes could extend up to 300 to 600 feet from the dredge site. If a cutterhead dredge is used, horizontal extent of turbidity plumes would be substantially less. Monitoring from RBSP I showed surface turbidity plumes within 250 to 500 feet downcurrent of the hopper dredge and generally dissipated within 5-10 minutes after the hopper dredge moved from the borrow area. A minimum 500 foot buffer has been provided between the dredge area and natural hard bottom habitat (kelp or reefs), although the distance would generally be much greater. The EIR determined that while there is some potential for turbidity plumes to reach reefs, the duration would be limited,

and the actual amount of a turbidity plume that would reach the sensitive areas is minimal and considered less than significant.

Predicted turbidity plumes from construction were analyzed at each receiver site, along with sediment transport modeling. Turbidity at the receiver sites would result from placement of the dredged material on the beach in a slurry mixture. As the water flows back toward the ocean waves, finer materials that have not settled behind the training dikes would generate turbidity. Turbidity is expected to be localized to the discharge location (an average of 300 feet) under average current conditions. None of the receiver beaches are in or adjacent to (i.e., within 3,100 feet) an Area of Special Biological Significance (ASBS); thus, sand placement would not be expected to affect the natural water quality within an ASBS. Monitoring of RBSP I found that most plumes ranged from 100 to 328 feet long and 66 to 164 feet wide. The largest plume was 984 feet long and 656 feet wide, but rapidly dissipated with a lengthening of the training dike configuration. The current project proposes to use larger grain sizes than RBSP I and with less fines; thus, plumes should be smaller than RBSP I. Monitoring data from previous California beach nourishment projects have found concentrations within the plumes to be no higher than that which occurs naturally in nearshore waters under higher wave or storm conditions. Plumes from dredging and sand placement of this project are not expected to have a significant impact.

#### Least Terns

A historic least tern nesting site is located within Los Penasquitos Lagoon, which could be impacted during sand placement at the Torrey Pines receiver site. The applicant will coordinate with California State Parks and the USFWS to determine if the nesting is occurring during construction. If nesting is occurring, the turbidity plume will be actively managed by monitoring and changing the configuration of the training dike, if necessary to reduce the plume. Actively managing the training dike was found to be effective during RBSP I. All other receiving sites, with the exception of the Batiquitos receiver site, are greater than one mile from historic least tern nesting sites and will not require additional monitoring. To avoid impacts to least terns, the applicant will construct the Batiquitos receiver site after August 1<sup>st</sup>, 2012 and after cessation of least tern nesting in that area.

Prior to RBSP I, a project-specific evaluation was completed to estimate the amount of area potentially affected by turbidity from the project within a one-mile radius of known tern nesting locations. The length of the plume was calculated based on the average grain size in each borrow site, the current speed, and the water depth. The analysis determined that under the worst-case conditions of maximum typical current, up to four percent of foraging area within one mile would be affected, and 96 percent would remain available. The more typical condition, an average current, would result in less than one-half of one percent affected. In addition, the turbidity plume would dissipate as it is carried away from both the borrow and the receiver sites, so there would not be continuous turbidity. Thus, the EIR concluded that turbidity impacts would be less than significant for foraging birds. The applicant states that intensive monitoring showed that no negative effects

resulted from the plumes and they may have actually acted as an attractor to birds. In the case of RBSP II, the ACOE determined that this type of analysis was not necessary.

### Grunion

The “Mitigation and Monitoring Plan” provides the following grunion background information:

*The California grunion (Leuresthes tenuis) is a member of the New World silversides family, Atheriniopsidae, along with jacksmelt and topsmelt. Their usual range extends from Point Conception, California, to Point Abreojos, Baja California. Occasionally, they are found farther north, to Monterey Bay, California, and south to San Juanico Bay, Baja California. They inhabit the nearshore waters from the surf to a depth of 60 ft. Tagging studies indicate that they do not migrate.*

*Grunion leave the water at night to spawn on beaches during the spring and summer months. For four consecutive nights, beginning on the nights of the full and new moons, spawning occurs after high tides and continues for several hours. As waves break on the beach, grunion swim as far up the slope as possible... While spawning may only take 30 seconds, some fish remain stranded on the beach for several minutes.*

*Spawning occurs from March through August, and occasionally in February and September. Peak spawning is late March to early June. Mature grunion may spawn during successive runs, with females spawning up to six times each season. Females lay between 1,600 and 3,600 eggs during one spawn, with larger females producing more eggs. Eggs are deposited during the high tides of the month and incubate in the sand during the lower tides, when they will not be disturbed by wave action. The eggs are kept moist by residual water in the sand. They hatch about 10 days later, during the next high tide series, when they are inundated with sea water and agitated by rising surf.*

*Beach replenishment activities could potentially bury grunion eggs or change the beach profile such that juvenile grunion are unable to return to the ocean...*

The intensity of grunion spawning runs are typically rated using the Walker Scale. This scale rates spawning runs from W-0 to W-5, based on the numbers of grunion and the duration of the spawning event. The Walker Scale is shown below:

<b>The Walker Scale for Assessment of Grunion Runs</b> Developed by K. Martin, M. Schaadt, and S. Laurenz-Miller, 2001			
<b>Scale</b>	<b>Numbers of grunion</b>	<b>Duration</b>	<b>Descriptor</b>
<b>W-0</b>	no fish or only a few individuals, no spawning	under 1 hr	not a run
<b>W-1</b>	10 --100 fish scattered on beach at a time, some spawning	under 1 hr	light run
<b>W-2</b>	100 -- 500 fish spawning at different times, fish ashore with many of the large waves	under 1 hr	good run
<b>W-3</b>	Hundreds of fish spawning at once in several areas of beach	to 1 hr	strong run
<b>W-4</b>	Thousands of fish together, little sand visible between fish	to 1 hr	excellent run
<b>W-5</b>	Fish covering the beach several individuals deep, a silver lining along the surf	more than 1 hr	incredible run

Grunion begin spawning at one year of age and typically live 2-4 years. California grunion are endemic to the western coast of California and Baja California, and do not spawn anywhere else in the world. An estimated 90% of the population of California Grunion is off of the coasts of San Diego County, Orange County, and Los Angeles County. Spawning events do not necessarily return to the same beaches year after year, although there is strong evidence that they return to the same beaches during one spawning season. The median grunion run is approximately 100-500 fish (Walker Scale 2) and only about a third of the runs are greater than 500 fish (Walker Scale 3, 4, or 5), while the really large runs of thousands of fish (Walker Scale 5) are less than 5% of reported runs (personal communication with Dr. Karen Martin, a leading grunion researcher at Pepperdine University, May 2011). While there still exists some uncertainty about why a particular beach is chosen, it appears that grunion are attracted to freshwater outlets (storm drains, creeks, river mouths, etc.). Runs may be brief or last more than one hour.

California grunion is managed as a game species by the CDFG. Grunion have been protected by the CDFG since 1927, due to their vulnerability during spawning runs. Currently, no grunion take is permitted during April or May of any year; and, at all other

times, only hand capture is permitted and a fishing license is required. Grunion runs are becoming increasingly more popular; at times, there are more people on the beach than grunion and every grunion in a run can be captured. Grunion runs are also increasingly becoming more popular as public educational programs. More than 4,000 people paid to attend a recent grunion education event put on by the Cabrillo Marine Aquarium. The placing of sand on receiver sites could potentially impact grunion by burying grunion eggs or changing the beach profile such that juvenile grunion would not be able to return to the ocean (2001 Final Grunion Monitoring Report).

The previously approved coastal development permit for RBSP I (CDP #6-00-038) mandated that a grunion monitoring program would be implemented to ensure that construction is suspended until the grunion eggs hatch if spawning occurs at the construction site. The grunion monitoring program (“Mitigation and Monitoring Plan”) detailed that if grunion were observed spawning, disposal of sand would cease for a minimum of 14 days to allow the eggs to hatch and a buffer zone of 65 ft. shoreward of the high water mark at the spawning area and 100 ft. upcoast and downcoast of the spawning area would be established. The plan also mandated that grunion monitoring would occur for a total of six hours during each of the four days during the expected grunion run. During RBSP I, the applicant did conduct the required monitoring, but it did not properly avoid grunion or grunion eggs. The monitoring report for RBSP I shows that RBSP I caused substantial impacts to grunion and to grunion eggs (See Exhibit # 9).

CDFG recommends that no beach replenishment occur on beaches that provide suitable grunion habitat during the grunion spawning season, March through August (CDFG Draft EIR Comment Letter). However, the applicant has stated that this is not feasible because the proposed project will take up to eight months and work must occur prior to the winter season to avoid large storms and waves. The applicant has also stated that it is not financially feasible to split the project into two segments and do one phase before grunion season and the remainder following grunion season or to do the replenishment over a two year period, because the cost of mobilizing the dredge equipment is too great. However, the applicant has not submitted documentation to the Commission in regards to the cost of dredge equipment mobilization. CDFG also states the following as reasons not to allow any impacts to grunion or grunion eggs: There are no studies showing that the grunion population is stable; imminent global warming/sea level rise threatens grunion spawning habitat; and there is a lack of convincing evidence that beach replenishment is appropriate mitigation for impacts to grunion (personal communication with CDFG, May 2011). CDFG agrees with the Commission that impacts to grunion eggs following runs of less than 100 grunion should be permitted and that no mature grunion should be impacted. However, CDFG disagrees that impacts to 100-500 grunion should be permitted if construction has already begun. CDFG states that impacts to grunion eggs following runs of 100-500 should not be allowed under any circumstance because 100-500 fish is the median run and there is no proven mitigation available for impacts to substantial amounts of grunion eggs. CDFG also suggests that grunion monitoring following beach replenishment would be invaluable for analyzing future projects (personal communication with CDFG, May 2011). Taking into account

communication with CDFG, the Commission makes the following findings in regards to grunion impacts.

In order to avoid these impacts during implementation of RBSP II, Special Condition # 8 contains specific grunion monitoring and avoidance conditions. Grunion prefer to spawn on gradually sloping, sandy beaches. However, they also may spawn between areas of cobble cover and may spawn below seawalls or bluffs as tides recede. It is unknown whether the eggs deposited below seawalls or in areas with significant cobble cover are successfully hatched. Beaches would not be used for spawning if they are too steep or too rocky (personal communication, Dr. Karen Martin, May 2011). Based on the uncertainty surrounding appropriate spawning habitat, all receiver sites that are scheduled to be replenished during the grunion spawning season, March through August, shall be monitored concurrently for grunion, unless there is no sand on the beach. The Batiquitos receiver site is scheduled after August 1<sup>st</sup>, due to least tern nesting constraints, and therefore does not need to be monitored for grunion. The Commission is requiring all beaches to be monitored concurrently so that the applicant will be able to avoid placing sand on beaches with grunion eggs. During RBSP I, the applicant only monitored the next scheduled replenishment receiver site for grunion runs. This method proved to be unsuccessful because the applicant did not know which receiver site to replenish if grunion runs were discovered on the next scheduled site. Monitoring for grunion need not continue at a given site after sand replenishment has been completed at that site. The Commission also considered monitoring the next three beaches scheduled for replenishment, with the possibility that at least one out of the three beaches would not have had a recent grunion spawning event. An additional grunion monitoring requirement considered by the Commission was to monitor beaches that are expected to be replenished within a specified time period (i.e. 1-2 months). However, monitoring all beaches during grunion spawning season provides the greatest assurance that grunion eggs will not be impacted.

The applicant reported that during RBSP I, it was determined that monitoring two hours before each run, two hours during each run, and two hours following each run was not necessary. The Final Grunion Monitoring Report states that grunion were almost always observed at a monitoring site within the predicted peak period or at most 15 minutes prior to the predicted peak period. In one instance, grunion began arriving about one hour prior to the peak period. SANDAG has further reported that based on experience over the last few years, fish are not typically observed in number more than 30 minutes prior to the predicted peak period. Based on these reports, monitoring for grunion by a qualified biologist is only required 30 minutes prior to and two hours following the predicted start of each spawning event.

No impacts to mature grunion will be permitted in any spawning event. As stated earlier, mature grunion spawn up to six times per season and each female can lay 1,600 to 3,600 eggs each spawning event. Thus, the loss of even one mature grunion could affect thousands of grunion eggs. Grunion runs with only a few individuals and no spawning (Walker Scale 0) and runs with 10-100 fish scattered on the beach and only some spawning (Walker Scale 1) yield a low fecundity and thus produce limited numbers of

grunion eggs. Therefore, beach replenishment activities are permitted and no avoidance measures are necessary following grunion runs of less than 100 fish. Any impacts to grunion eggs during these small runs are expected to be insignificant, and they can be permitted in order to provide the temporary improvements to grunion habitat that increased sand on certain beaches may provide. While there are no studies showing that beach replenishment creates additional habitat for grunion, grunion cannot spawn on beaches that do not have any sand or on beaches where the high tides consistently reaches a seawall, rip-rap, or coastal bluff. Therefore, if beach replenishment provides sandy habitat on an otherwise cobble beach, it is at least creating a temporary spawning area; and, if beach replenishment creates a deeper beach with more sand, it is also potentially creating temporary spawning habitat. Therefore, grunion runs of fewer than 100 fish do not need to be avoided for this beach replenishment project and any impacts are mitigated by the increased temporary spawning habitat on regional beaches. Future beach replenishment projects with potential impacts to less than 100 grunion will need to be evaluated on a case by case basis.

Because 100-500 fish is the median spawning event and more than 500 fish in an event only occurs on one third of the reported spawning events, it would not be appropriate to consistently impact these runs. Additionally, because of the uncertainty involved with the trade-off between grunion impacts and temporary habitat creation, it is questionable if it is possible to mitigate for substantial impacts to grunion. If grunion runs of more than 100 fish are reported before construction has started, the applicant must avoid the grunion eggs. Avoidance shall be done in consultation with the resource agencies and may consist of alteration of the discharge point and/or the locations where sand is spread, shifting the receiver site footprint, or replenishing a different receiver site.

If construction has already begun and a grunion run of 100-500 is reported, the applicant must attempt to avoid/minimize impacts through alteration of the discharge point and/or the locations where sand is spread. If this is not possible, the grunion eggs may be impacted. Impacts are permitted in this case because switching receiver sites once construction has begun is very expensive. This additional expense would result in less sand being placed on receiver sites and therefore less potential improvement to grunion spawning habitat. However, if construction has begun and greater than 500 grunion are reported, no impacts to grunion eggs are permitted. If the applicant cannot avoid impacts to grunion eggs through alteration of the discharge point and/or the locations where sand is spread, all beach construction/replenishment must cease at that receiver site. In those instances, the Commission finds a more conservative approach which protects the spawning run is warranted.

### Pismo Clams

Pismo clams are managed by the CDFG as a recreational marine resource. The population of Pismo clams has been severely depleted along the Southern California coast in recent years (personal communication with CDFG, May 2011). Pismo clams live in sandy areas from the intertidal zone to depths of 80 ft. and concentrate in beds in certain areas. The project EIR asserts that Pismo clams are capable of relatively rapid

movement and normally bury to a depth of two to six inches. The project EIR also states that at Imperial Beach, subadult-sized Pismo clams and relatively large, clam shells were observed north of the pier within the receiver site footprint. The occurrence or extent of adult Pismo clams in the adjacent subtidal zone is not known. The EIR goes on to state that if adult clams are present subtidally, there would be the potential for impacts to some individuals along the seaward edge of the fill. However, because clams are mobile, some individuals would be expected to relocate during replenishment. The applicant has proposed to avoid impacts to Pismo clams through measures such as a slow discharge rate or modification to the seaward edge of the fill. However, it is uncertain if these measures would prevent impacts to Pismo clams. Therefore, Special Condition # 5 requires that the applicant conduct preconstruction monitoring for Pismo clam beds at the Imperial Beach receiver site, regardless of the amount of sand proposed to be placed on the beach. In consultation with the CDFG, the Commission ecologist has reviewed available information and concurs that Pismo Clam beds should be protected. If the presence of a clam bed is confirmed, then the bed shall be avoided in its entirety, by shifting the location of sand within the deposition site.

#### Post-deposition Impacts

Although no sand will be placed directly on sensitive marine resources, the sand placed on the receiver beaches will eventually be washed by waves and redistributed offshore and alongshore through natural processes. There is a potential that the sand introduced into the littoral cell through the proposed project would eventually settle on nearby sensitive resources, potentially disturbing or harming those resources. An analysis of indirect sedimentation impacts was performed which identified the location of sensitive resources, the “life history” of specific indicator species (i.e., how sensitive the species are to physical stresses), past beach replenishment projects, and natural sand fluctuations in the area. To determine whether an impact would be significant, the final EIR states that the following methodology was used:

*“...estimated impact acreages are compared to total hard bottom habitat within the same reef habitat categories offshore the jurisdictions in the study area, and the percentages of sensitive habitats potentially impacted are calculated for each alternative. The percentages of potentially impacted sensitive hard bottom habitats provide the basis of the qualitative assessment of whether the impact estimates are substantial. If a substantial reduction in sensitive habitat indicators occurs over the 4-year monitoring period due to long-term adverse impacts from sediment transport, a significant project-related impact would occur.”*

The EIR concludes that based on worst-case model predictions, partial sedimentation could occur to hard substrate with indicator species (surfgrass, feather boa kelp, sea fans, sea palms, and giant kelp). Exhibit # 10 shows the estimated acreage of potential impact to nearshore reefs. The table provides estimates for partial burial of indicator species which is when the predicted sand level increases could exceed reef heights for one or more years. The table also shows seasonal scour estimates which indicate predictions that sand could be at the same height, or could overtop, reef heights with sensitive



indicators in localized areas for one season, representing six months or less. As stated previously, monitoring from RBSP I showed no impacts to indicator species. Therefore, receiver beach sites that are placing the same amount of sand on the beach as was placed under RBSP I are not expected to adversely impact nearshore reefs. Imperial Beach is the only beach area receiving more sand under RBSP II, Imperial Beach. The Imperial Beach receiver site is not a concern for reef burial because the primary kelp beds are far enough from the shore that sand is not expected to reach them, and the kelp closer to shore is ephemeral due to the fact that it grows on cobble. Monitoring of nearshore habitat will not therefore be necessary.

### Conclusion

SANDAG has prepared a draft “Mitigation and Monitoring Plan” that identifies construction techniques, schedules, best management practices, monitoring methodologies, reporting protocol, contingency operations, etc., that will be implemented prior to, during, and after construction, to ensure that no significant adverse impacts occur. The plan addresses monitoring of water quality and marine resources. Hard-bottom marine habitat, beach/sand monitoring, lagoon entrances, California grunion, Pismo clams, marine mammals and turtles, and land-based biological resources, including the California least tern and western snowy plover, are addressed in the plan. A biological opinion and a biological assessment were prepared for RBSP I. However, the ACOE has determined that RBSP II would not result in effects to threatened or endangered species and therefore no biological opinion or biological assessment is necessary.

Although the “Mitigation and Monitoring Plan” is not finalized, the document constitutes a comprehensive plan for avoiding significant impacts to water quality, hard-bottom marine habitat, marine mammals, turtles, California least tern, and western snowy plover. The plan describes where and when monitoring for each of the resources will occur, sampling techniques and methods, etc. A biologist is required to be actively involved on-site during construction. For most plan elements, monitoring would occur during the construction period only. Monitoring pre-construction and during construction would occur for the resources above, and the results of this monitoring would be presented in the summary report.

However, the plan does not provide adequate avoidance measures for California grunion, Pismo clams, beach/sand monitoring, or lagoon entrances. Special Condition # 8 requires additional monitoring and avoidance measure for the California grunion. Special Condition # 5 requires additional monitoring and avoidance measures for the Pismo clam. Special Condition # 2 requires additional monitoring for beach/sand resources. In addition to sand/beach monitoring proposed in the EIR and the monitoring plan, pre- and post- construction bathymetric surveys of the borrow/extraction areas, full-depth profiles for each borrow/extraction area, and profiles of grain size of the surface sand that accumulates in the borrow/extraction areas is needed in order to ensure that taking large amounts of sand from offshore reserves does not impact local beach sand supplies.

As stated, the “Mitigation and Monitoring Plan” has not been finalized, pending final review and approval of the resource agencies. Special Conditions #s 2-5 also require SANDAG to submit and implement final monitoring programs for beach/sand monitoring, turbidity, lagoons, and biological resources that have been reviewed and approved by the U.S. Fish and Wildlife Service. Special Condition # 7 requires the applicant to submit a copy of any other state or federal permits required, to ensure any additional mitigation required is incorporated in the subject permit. However, mitigation measures that resulted in a substantial change to the project would require an amendment to this permit or a new coastal development permit.

The project is still being proposed in a dynamic and hazardous location. Thus, Special Condition #10 is imposed to ensure that the applicant acknowledges and assume all risks and liabilities from conducting development in such a hazardous location, where accidents may occur. As conditioned, the Commission finds that the proposed project, including implementation of the final “Mitigation and Monitoring Plan,” will ensure that all environmental impacts are minimized; and, if significant impacts do occur despite all precautions, they will be identified and adequately mitigated. In addition, with the special provisions to address grunion, impacts on this species will be minimized to the maximum extent feasible. Therefore, the proposed project can be found consistent with resource protection policies of the Coastal Act.

4. Water Quality. The following Coastal Act policy is applicable to the proposed project and states, in part:

Section 30231

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff...

Construction equipment used for the project has the potential to contaminate the sand from minor spills and leaks from equipment. However, as proposed, no refueling or fuel storage will occur on the beach, and the dredging contractor will be required to develop a Spill Prevention Control and Counter-Measure Plan (SPCC) prior to initiating pumping operations. Additional protection will be provided by the contractor using biodegradable (e.g., vegetable oil-based) lubricants and hydraulic fluids, and/or electric or natural gas powered equipment, where practicable. The Commission’s Water Quality Unit reviewed the proposed measures and concurs that they are appropriate and sufficient to protect water quality. Special Condition # 6 also prohibits the storage of construction material in the surf zone, and washing vehicles on the beach. As conditioned, no significant impacts to water quality are expected.

5. Shoreline Processes. The following Coastal Act policy is applicable to the proposed project and states, in part:

Section 30233

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

[...]

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

[...]

Special Condition # 4 requires mitigation for shoaling of lagoon mouth entrances. SANDAG has made agreements with the management entities of Batiquitos Lagoon, San Elijo Lagoon, San Dieguito Lagoon, and Los Peñasquitos Lagoon to pay the following amounts of money upon completion of construction as mitigation for expected sand volumes entering the lagoons:

- Agua Hedionda, \$0
- Batiquitos Lagoon, \$245,800
- San Elijo Lagoon, \$32,600
- San Dieguito Lagoon, \$20,076
- Los Penasquitos Lagoon, \$24,650

These funds shall be used in place of any potential mitigation; and, the applicant will not need to pay any additional money to the lagoon management entities, regardless of future lagoon shoaling. However, SANDAG will continue its lagoon monitoring program.

The applicant states that Agua Hedionda is not receiving any mitigation money because dredging records for maintenance activities show that the amount of sand proposed to be placed as part of this project is not expected to increase sand influx to the lagoon. Records show that the average dredging amounts from Agua Hedionda prior to and following RBSP I were comparable. Thus, RBSP I, which is the same sand volume as RBSP II, did not substantially increase sand influx to the lagoon.

For Batiquitos lagoon, an estimated 25,700 cu. yds. of sand over six years is predicted to enter the lagoon mouth based on the RBSP II proposed sand volumes. For San Elijo Lagoon, an estimated 10,000 cu. yds. of sand over four years is predicted to enter the lagoon mouth based on the RBSP II proposed sand volumes. For San Dieguito Lagoon,

an estimated 4,200 cu. yds. of sand over six years is predicted to enter the lagoon mouth based on the RBSP II proposed sand volumes. For Los Penasquitos Lagoon, an estimated 10,200 cu. yds. of sand over six years is predicted to enter the lagoon mouth based on the RBSP II proposed sand volumes.

The proposed project has been designed to compensate for impacts to coastal lagoons. Based on monitoring results from the RBSP I project in 2001, no unmitigated impacts to lagoon resources are anticipated. As conditioned, the Commission finds that the proposed project will ensure that the anticipated environmental impacts to these lagoons are minimized and that mitigation is provided to lagoon management entities to address shoaling impacts caused by this project. Therefore, the proposed project can be found consistent with resource protection policies of the Coastal Act.

6. Local Coastal Planning. The Cities of Oceanside, Encinitas, Carlsbad, San Diego, and Imperial Beach have certified LCPs, but have requested that the Commission issue a consolidated permit for the proposed sand replenishment that would occur in their jurisdictions. The City of Solana Beach does not have a certified LCP. Therefore, the Commission is responsible for the coastal development permit within the Commission's original jurisdiction and the portions of the project which have certified LCPs. The Port of San Diego will issue the coastal development permit for the portion of the project that lies within its jurisdiction.

As described above, the proposed project would provide sand for public recreation. Enhancement of beaches is consistent with all certified LCPs and with Chapter 3 of the Coastal Act. As conditioned, no adverse impacts to coastal resources are anticipated. However, a biological mitigation and monitoring program will ensure that any impacts are identified and mitigated. Therefore, the Commission finds that the proposed project will not prejudice the ability of any of the affected local governments to prepare or continue implementing a certifiable LCP.

7. Consistency with the California Environmental Quality Act (CEQA). Section 13096 of the Commission's Code of Regulations requires Commission approval of coastal development permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of the California Environmental Quality Act (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.

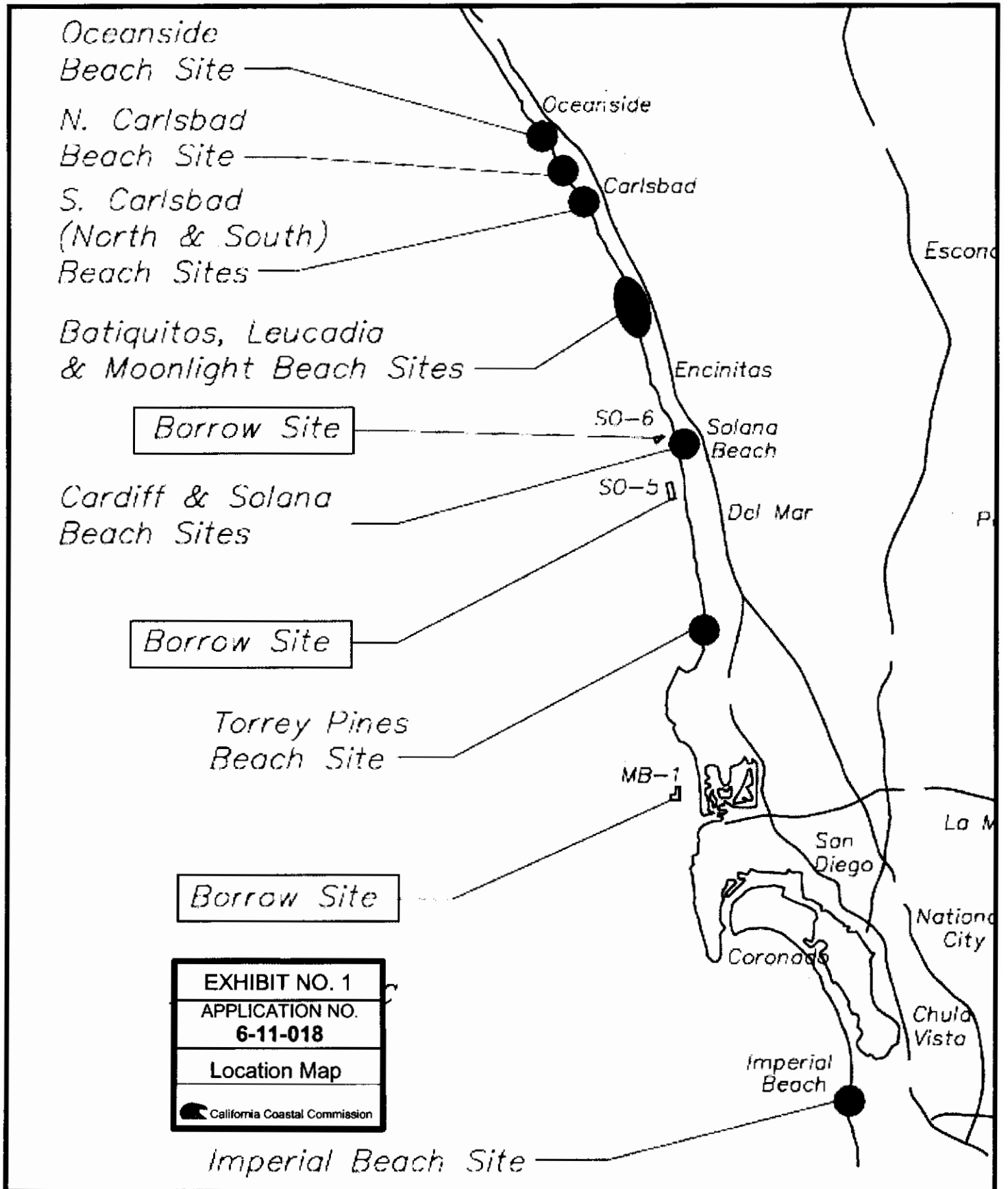
The proposed project has been conditioned in order to be found consistent with the biological resources and public access and recreational policies of the Coastal Act. Mitigation measures, including conditions on the timing of construction, mitigation and monitoring, and the submittal of final plans, 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 is the least environmentally-damaging feasible alternative and is consistent with the requirements of the Coastal Act to conform to CEQA.

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.

# Location Map



# Receiver Site Descriptions

## **Receiver Sites**

Beach replenishment at the Oceanside receiver site would place sand from Wisconsin Avenue south to Morse Street, a shift of approximately 1,800 feet north relative to RBSP I. The 4,100-foot-long beach fill would have a 200-foot-wide berm at +13 feet mean lower low water (MLLW). The total volume proposed for Oceanside for Alternative 1 is 420,000 cubic yards (cy).

Beach replenishment at North Carlsbad would involve placement of sand just south of Buena Vista Lagoon to approximately Oak Street. The proposed beach fill would have a 135-foot-wide berm at +12 feet MLLW. Approximately 225,000 cy of beach fill is proposed at North Carlsbad for Alternative 1.

Beach replenishment at South Carlsbad North would place sand just north of Encinas Creek. Approximately 158,000 cy is proposed over a 2,100-foot-long beach fill. The proposed berm would be approximately 180 feet wide at +12 feet MLLW.

Beach replenishment at Batiquitos would involve the placement of sand south of the Batiquitos lagoon inlet. The Batiquitos fill area would be approximately 1,490 feet long, with an 180-foot-wide berm at +12 feet MLLW. Approximately 118,000 cy of beach fill is proposed.

At the Leucadia site, approximately 117,000 cy of sand is proposed for beach replenishment along a narrow 2,700-foot-long reach with a 120-foot-wide berm at +12 feet MLLW.

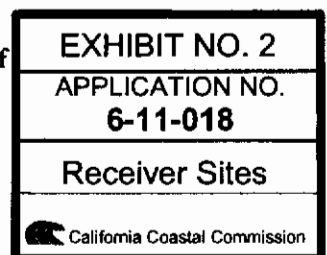
The Moonlight receiver site is located at the end of B and C streets. This small site only extends approximately 770 feet in length with an 180-foot-wide berm, which would result in just over 100,000 cy of beach fill.

The Cardiff Beach site is located just south of the San Elijo Lagoon inlet. This site is also small and would place just over 100,000 cy extending over a 780-foot length with a 150-foot-wide berm.

Beach replenishment at the Solana Beach site would extend 1,900 feet south from the access at Fletcher Cove and would place approximately 146,000 cy of sand. The berm width would be 70 feet at an elevation of +13 feet MLLW.

The Torrey Pines site is located at Torrey Pines State Beach. Approximately 245,000 cy of sand is proposed at this site in a 1,620-foot-long beach fill with a 160-foot-wide beach berm at +12 feet MLLW.

The Imperial Beach receiver site would be extended to 5,750 feet in length. A volume of 650,000 cy is proposed with a 260-foot-wide berm.



# Borrow Site Descriptions

## **Borrow Sites**

The three proposed borrow sites are located within or adjacent to borrow sites defined during RBSP I; SO-6, SO-5, and MB-1. Investigations for RBSP II focused on the previous borrow sites, then expanded those to determine whether additional deposits of beach quality sand were present. These additional investigations resulted in the expansion of some of the previous borrow site boundaries to encompass areas with the highest quality sand. Proposed dredge areas for RBSP II would be located within these expanded borrow sites. Table ES-4 provides a summary of borrow site characteristics including the volume of material to be dredged, the surface area affected, the depth of the dredge, and the water depth.

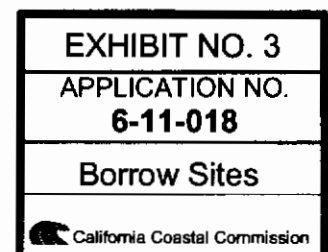
**Table ES-4  
Borrow Site Characteristics**

	<b>Borrow Site SO -6</b>	<b>Borrow Site SO-5</b>	<b>Borrow Site MB-1</b>
Approximate Volume Available for Dredging (cy)*	700,000	1,900,000	1,600,000
Maximum Surface Area to be dredged (in acres)	44	124	107
Water Depth (ft, MLLW)	-42 to -56	-34 to -49	-60 to -74
<b>Potential Volume of Sand to Be Dredged (cy)**</b>			
Alt 1 (1.8 mcy)	645,000	990,000	120,000
Alt 2 (2.7 mcy)	645,000	1,408,000	650,000

Source: Moffatt & Nichol 2009a

\* Assumes entire footprint dredged 10 feet; more sand would be available if dredging extends deeper, as proposed at SO-6 (20 feet).

\*\* Volume varies within footprint by increasing the depth of dredge.





# Grain Size

**Table 2-1  
Summary of Average Grain Size Distributions for Potential Borrow Sites  
(sites in bold indicate those proposed for use in RBSP II)**


<b>Borrow Site</b>	<b>Percent Fines<sup>1</sup> (%)</b>	<b>Grain Size<sup>2</sup> (mm)</b>	<b>Estimated Volume<sup>3</sup> (mcy)</b>	<b>Evaluation Outcome</b>
SM-1	12	0.17	3.8	Ranked low in priority
<b>SO-6</b>	<b>5</b>	<b>0.35</b>	<b>0.7</b>	Carried forward
<b>SO-5</b>	<b>2</b>	<b>0.59</b>	<b>1.9</b>	Carried forward
TP-1	9	0.13	0.8	Eliminated
<b>MB-1</b>	<b>2</b>	<b>0.51</b>	<b>1.6</b>	Carried forward
ZS-1	14	0.13	1.1	Eliminated
SS-1	15	0.21	1.2	Eliminated
<b>Estimated Quantity for All Borrow Sites</b>			<b>11.1</b>	

Source: URS 2009

<sup>1</sup> Defined as percentage of material passing the No. 200 (0.074 mm) sieve.

<sup>2</sup> Grain size is represented by D<sub>50</sub>, the median grain size. This is a commonly used indicator of approximate grain size in a sample.


<sup>3</sup> Assumes 10-foot dredge depth.

EXHIBIT NO. 4
APPLICATION NO. <b>6-11-018</b>
Location Map
 California Coastal Commission

# Construction Schedule

Proposed RBSP II Construction Schedule (Based on Beach Events/Attendance,  
Predicted Grunion Runs & Predicted Bird Nesting Seasons)

Receiver Beach Site	Notes	No. of days to build based on real quantity	dates	order	borrow site	Grouping of construction sites	First Group Second Group	Reason for Order
							Third Group	
Solana Beach	Less suitable for Grunion runs due to relatively narrow beach widths and wave run-up to and/or within a few ft of coastal bluffs; therefore, habitat suitability would depend on environmental conditions during the grunion season. High recreational use at main beach Fletcher Cove; build April-May	15	4/1 to 4/15	1	SO-5	Start by 4/1, end by 6/2	1	not grunion suitable + high rec use
Moonlight Beach	High recreational use and is central beach in Encinitas for Junior Lifeguard training, surf school and YMCA programs; City of Encinitas prefers built prior to May 14th, otherwise wait until after Labor Day. Habitat was potentially suitable for grunion spawning during the July 2009 survey.	10	4/15 to 4/25	2	SO-5	Compl by 5/14/12 for Jr Lfgd	2	public events (finish by 5/14)+ high rec use
Cardiff	High recreational use/attendance = 2,264,552 visitors in FY 08-09 at Cardiff State Beach and 960,683 visitors at San Elijo State Beach on northern end of Cardiff. Potential habitat suitability for grunion spawning was limited by relatively narrow beach widths and wave run-up to and/or within a few ft of riprap and/or dense cobbles; therefore, habitat suitability would depend on environmental conditions during the grunion season.	10	4/25 to 5/4	3	SO-5	Start by 4/1, end by 6/2	3	high rec use + proximity to prev sites

EXHIBIT NO. 5
APPLICATION NO. 6-11-018
Schedule
 California Coastal Commission

# Construction Schedule, Cont.

Receiver Beach Site	Notes	No. of days to build based on real quantity	dates	order	borrow site	Grouping of construction sites	First Group	Reason for Order
						Second Group	Third Group	
*Torrey Pines	High recreational use/attendance = 1,771,446 visitors in FY 08-09. Potential habitat suitability for grunion spawning was limited by relatively narrow beach widths above the high tide line; therefore, habitat suitability would depend on environmental conditions during the grunion season.	23	5/4 to 5/27	4	SO-5	Start by 4/1, end by 5/27	4	high rec use + proximity to prev sites
South Carlsbad	High recreational use/attendance = 1,582,743 visitors FY 08-09 and 222 campsites. Potential habitat suitability for grunion spawning varied due to cobble cover in the upper intertidal and may vary over the course of the grunion season with natural sand movement.	15	6/2 to 6/18	5	SO-5	Start by 6/2 (or end of 1st grp), end by 10/5	5	high rec use (could switch with number 6 if needed)
Imperial Beach	Less suitable for Grunion runs; potential habitat suitability was best on the wider beach near the pier and decreased downcoast with the narrow beach widths; therefore, habitat suitability would depend on environmental conditions during the grunion season. Does not have high recreational use/attendance; build April-May	41	6/18 to 7/30	6	MB-1	Start by 6/2 (or end of 1st grp), end by 10/5	6	not grunion suitable (could switch with number 5 if needed)
North Carlsbad	Moderate recreational use/attendance = 1,472,280 visitors FY 08-09. Beach width and sand depths appeared suitable for grunion spawning.	23	7/30 to 8/23	7	SO-6	Start by 6/2 (or end of 1st grp), end by 10/5	7	only moderate rec use

Receiver Beach Site	Notes	No. of days to build based on real quantity	dates	order	borrow site	Grouping of construction sites	First Group	Reason for Order
						Second Group	Third Group	
Oceanside	Low-limited recreational use/attendance due to eroded beaches. Potential habitat suitability for grunion spawning may be limited due to wave run-up to riprap under spring high tide conditions, but suitability may vary over the course of the grunion season with seasonal migration of sand.	30	8/23 to 9/23	8	SO-6	Start by 6/2 (or end of 1st grp), end by 10/5	8	low rec use + less south swell season left (remove material north toward harbor)
Leucadia	Low-limited recreational use/attendance. Habitat was potentially suitable for grunion spawning during the July 2009 survey.	12	9/23 to 10/5	9	SO-5	Start by 6/2 (or end of 1st grp), end by 10/5	9	low rec use + close to Baliquitos site for more efficient construction
Baliquitos	Must avoid nesting season; moderate recreational use/attendance with Junior Lifeguard training and surf camps throughout summer on northern end at Pointo State Beach; build on or after August 1 with verification of cessation of least tern nesting. Potential habitat suitability for grunion spawning was limited by dense cobble cover, relatively shallow sand depths, and narrow beach widths in the upper intertidal; therefore, habitat suitability would depend on environmental conditions during the grunion season.	12	9/23 to 10/18	10	SO-5	Site to be constructed last. Begin no earlier than late-Aug, end Oct	10	avoid bird foraging period

Small description of this site will be built

## Predicted Retention Time

**Table 4.1-1  
Predicted Retention Time of Beach Fill at Each Receiver Site**

<b>Receiver Site</b>	<b>Approximate Time for Receiver Site to Return to Pre-Fill Condition (years)</b>
Oceanside	Greater than 5 years
North Carlsbad	Greater than 5 years
South Carlsbad North	Greater than 5 years
South Carlsbad South	Greater than 5 years
Batiquitos	4 years
Leucadia	Greater than 5 years
Moonlight Beach	Between 3 and 4 years
Cardiff	Greater than 5 years
Solana Beach	Greater than 5 years
Torrey Pines	Greater than 5 years
Imperial Beach	4 years*

\* Imperial Beach was analyzed using a different method (dispersion analyses) than North County sites.

Source: Moffatt & Nichol 2010b

EXHIBIT NO. 6

APPLICATION NO.

**6-11-018**

Sand Retention

 California Coastal Commission



**RBSP I Pictures**



EXHIBIT NO. 7
APPLICATION NO. 6-11-018
RBSP I Pictures
 California Coastal Commission



**RBSP I Pictures, Cont.**




## Receiver Site Closure per Day

**Table 2-6**  
**Receiver Site Closures during Construction**

<b>Receiver Site</b>	<b>Approximate Length of Receiver Site Closed per Day (feet)</b>
Oceanside	175
North Carlsbad	250
South Carlsbad North	200
Batiquitos	175
Leucadia	325
Moonlight Beach	150
Cardiff	125
Solana Beach	200
Torrey Pines	100
Imperial Beach	300


**\*\* There would be an additional 2 to 4 days of mobilization and demobilization activity before and after the replenishment activities, but beach would not be closed**

EXHIBIT NO. 8
APPLICATION NO. <b>6-11-018</b>
Beach Closure
 California Coastal Commission

# RBSP I Grunion Impacts

**Table 3. Summary of Grunion Monitoring Results**

Receiver Site	Survey Date	Results	Footprint Modified?
Del Mar	April 25-28, 2001	No grunion were observed at this location during the predicted grunion run.	No.
Mission Beach	April 25-28, 2001	A total of less than 200 grunion were observed within or immediately adjacent to the receiver footprint, with about 100 individuals within the footprint. This was not considered a significant spawning event.	No.
Mission Beach	May 8-11, 2001	An estimated 3,000 to 4,100 grunion were observed during the monitoring event. With the exception of up to 150 individuals, nearly all grunion were observed within the beach replenishment footprint. The greatest numbers were in the southern half of the site.	Yes. Based on the results of the grunion monitoring, the project footprint was shifted approximately 950 feet to the north to avoid the majority of the grunion spawning area.
Leucadia Beach	May 24-27, 2001	On May 24 and 25, an estimated 45,000 individuals were sited, concentrated in the northern half of the receiver site footprint. An estimated 7,000 individuals were observed in the southern half of the site on these two nights. However, this area was completely awash each night at high tide, and it is expected that the potential for egg development in this area would be minimal. After the large run on May 24 and 25, the monitoring effort was shifted to the south to determine if sand replenishment could be moved to the south. Only a few isolated grunion were observed in this new area.	Yes. Based on the results of the first two nights, the receiver site footprint was shifted approximately 1,000 feet to the south.
North Carlsbad	June 23-26, 2001	An estimated 230 to 280 grunion were observed on the evening of June 23. No grunion were seen the remainder of the predicted grunion run. This was not considered a significant spawning event.	No.
North Carlsbad	July 7-10, 2001	Approximately 120 to 140 grunion were observed on July 8, and 3 grunion were seen on July 9. No grunion were observed on July 7 or 10. This was not considered a significant spawning event.	No.
North Carlsbad	July 22-25, 2001	A small group of about 20 grunion were observed on July 22. No other grunion were observed during the remainder of the predicted grunion run. This was not considered a significant spawning event.	No.
Batiquitos	Aug. 5-8, 2001	The total number of grunion observed on August 5 and 6 was approximately 375 to 425. These were observed in typically small groups scattered throughout the receiver footprint. No grunion were seen on August 7 and 8. This was not considered a significant spawning event.	No.
Batiquitos	Aug. 20-23, 2001	No grunion were observed during this monitoring event. Construction concluded at this location on August 22. Consequently, monitoring was not performed on August 23.	No.
Oceanside	Aug. 20-23, 2001	Two individuals were observed on the first night of monitoring. No other grunion were observed during the remainder of the predicted run.	No.

EXHIBIT NO. 9
APPLICATION NO. 6-11-018
Grunion
 California Coastal Commission



# Sedimentation

**Table P-4**  
**Estimated Acreage of Potential Impact to Nearshore Reefs Based on**  
**Model Predicted Increase in Sand Elevation for the Preferred Alternative 2-R**

Jurisdiction	Acres of Hard-Bottom Offshore Jurisdiction <sup>1</sup>	Receiver Site	Estimated Sedimentation						Partial Sedimentation (Reef Height Reduced to $\leq 1$ ft) <sup>4</sup>	Duration	
			Surfgrass		Kelp Bed		Understory Algae <sup>2</sup>				
			Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour	Partial Burial	Seasonal Scour			
Oceanside	69 (Cobble, Bedrock)	Oceanside	0	0	0	0	0	0.2	0	Years 1-5	
Carlsbad	396 (Bedrock, Cobble)	North Carlsbad	0	0 <sup>5</sup>	0	0	0	0.3 <sup>3</sup>	1.2 <sup>3</sup> (U)	Year 1 (scour), Years 1-5 (height)	
		South Carlsbad North	0	0	0	0	0	0	0.8 (0.3 S, 0.5 U)	Years 1, 4-5	
		South Carlsbad South	NA	NA	NA	NA	NA	NA	NA	NA	NA
Encinitas	759 (Bedrock, Cobble)	Batiquitos	0	0.1	0	0	0	<0.1	1.3 (0.8 S, 0.5 U)	Year 1 (scour), Years 1-3 (height)	
		Leucadia	0	0	0	0	0	0	<0.1 (S, U)	Years 4-5	
		Moonlight	0	0	0	0	0	0	0	0	0
		Cardiff	0	0	0	0	0	0	0	0	0
Solana Beach	267 (Bedrock)	Solana Beach	0	<0.1	0	0	0.5	0.4	1.5 (0.6 S, 0.9 U)	Years 1-3 (burial), Years 1-5 (height, scour)	
City of San Diego <sup>3</sup>	107 (Bedrock, Cobble)	Torrey Pines	0	<0.1	0	0	0	0.6	2.1 (0.1 S, 2 U)	Year 1 (scour), Years 2-4 (height)	
Imperial Beach	2,396 (Cobble)	Imperial Beach	0	0	0	0	1.1	0.1	2.5 (U)	Years 1-5	
<b>Total</b>			0	0.1 <sup>5</sup>	0	0	1.6	1.6 <sup>3</sup>	9.4 <sup>4</sup> (2 S, 9.5 U)		

<sup>1</sup> Acreage based on 2002 Nearshore Program Habitat Map; pre dominant hard-substrate type is listed first (see Table 3.2-6 in Appendix C)

<sup>2</sup> 2002 map category may include a mix of substrate with sensitive indicators and non-sensitive algal turfs and crusts; S = surfgrass, U = understory algae

<sup>3</sup> Acreage for City of San Diego includes 1 mile up and down coast of Torrey Pines receiver site

<sup>4</sup> There is relatively greater uncertainty of potential impacts from estimated reef height reduction

<sup>5</sup> Potential for greater sedimentation acreage in Year 5 after project implementation under low gross transport conditions based on preliminary model results

EXHIBIT NO. 10
APPLICATION NO.
<b>6-11-018</b>
Sedimentation
 California Coastal Commission

# Oceanside and North Carlsbad

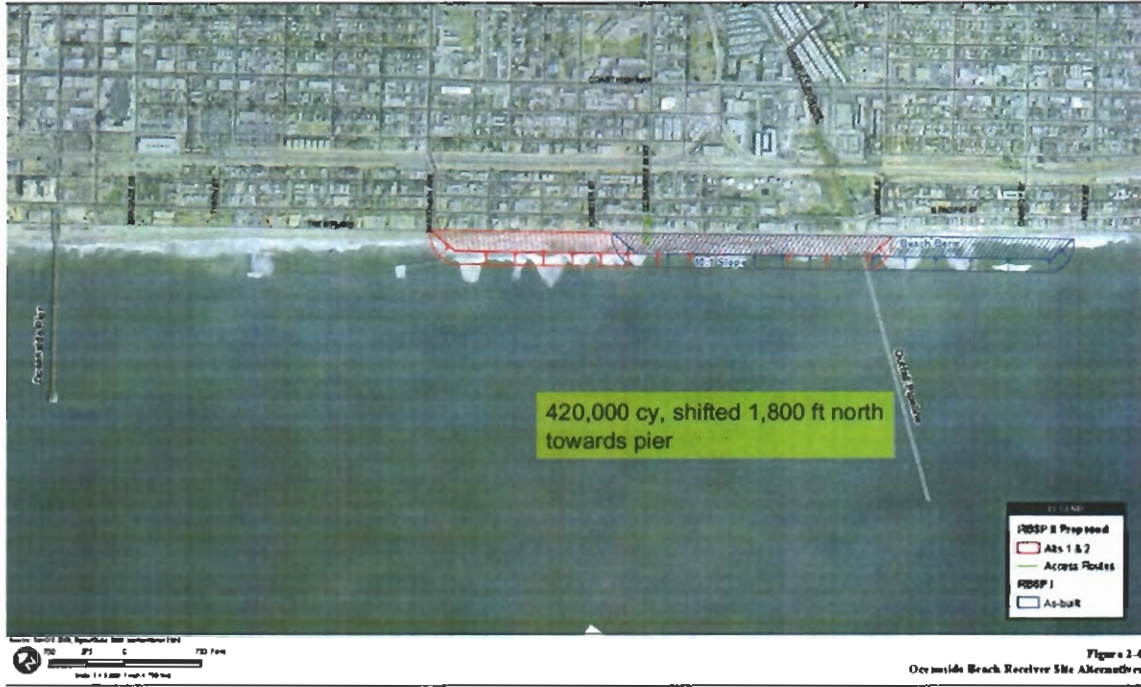


Figure 2-4  
Oceanside Beach Receiver Site Alternatives

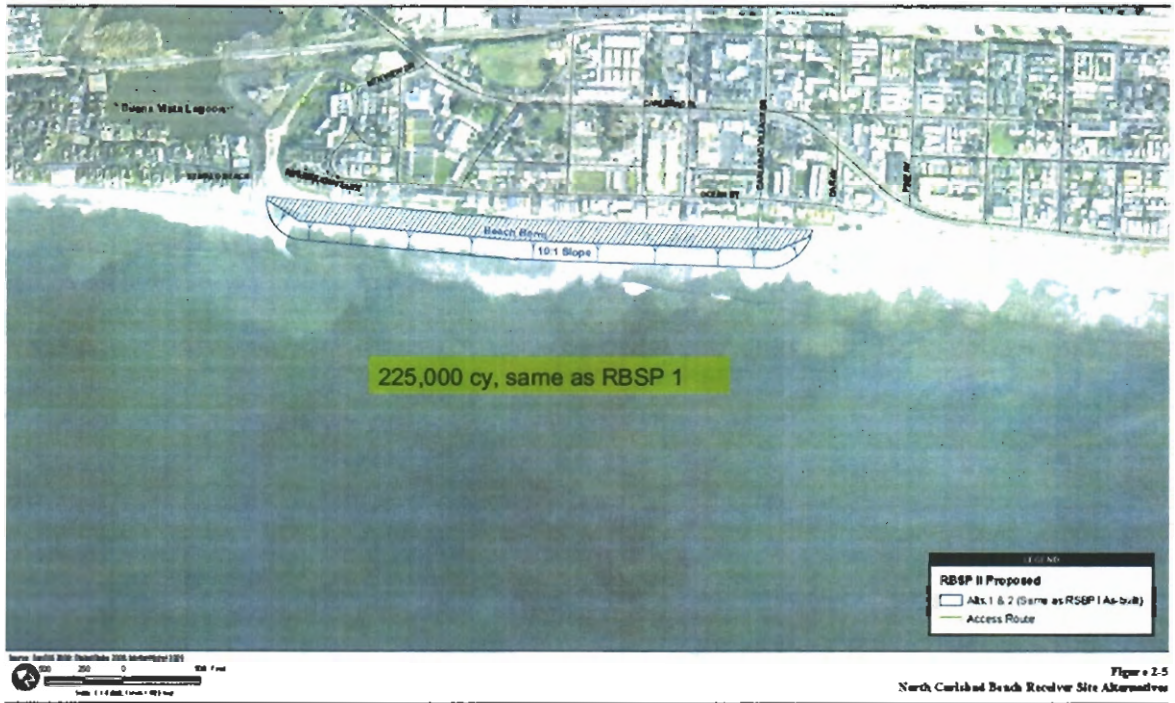
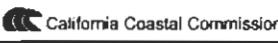


Figure 2-5  
North Carlsbad Beach Receiver Site Alternatives

EXHIBIT NO. 11
APPLICATION NO. 6-11-018
Sites




# Batiquitos and South Carlsbad North

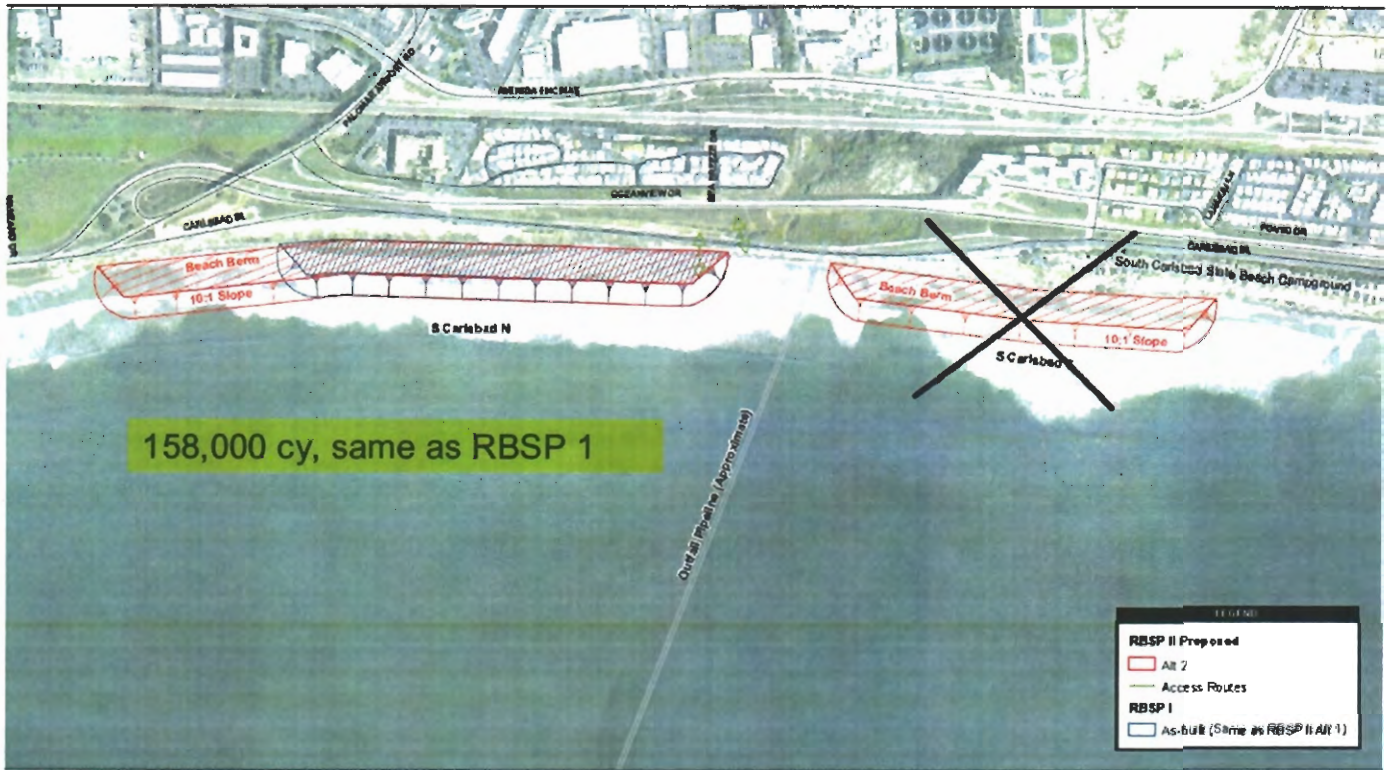


Figure 2-6  
South Carlsbad Beach North and South Receiver Site Alternatives



Figure 2-7  
Batiquitos Beach Receiver Site Alternatives



# Leucadia and Moonlight

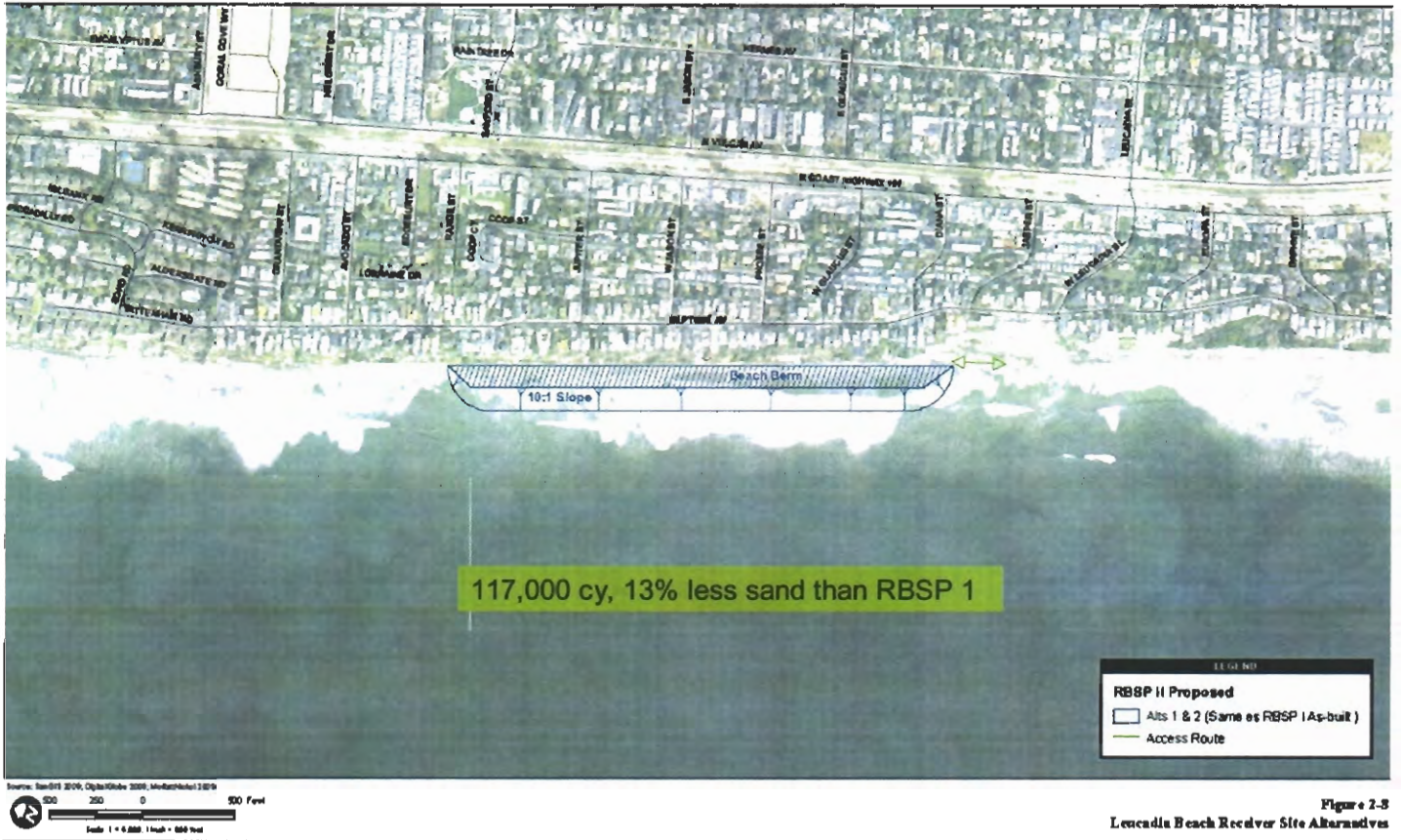


Figure 2-8  
 Leucadia Beach Receiver Site Alternatives

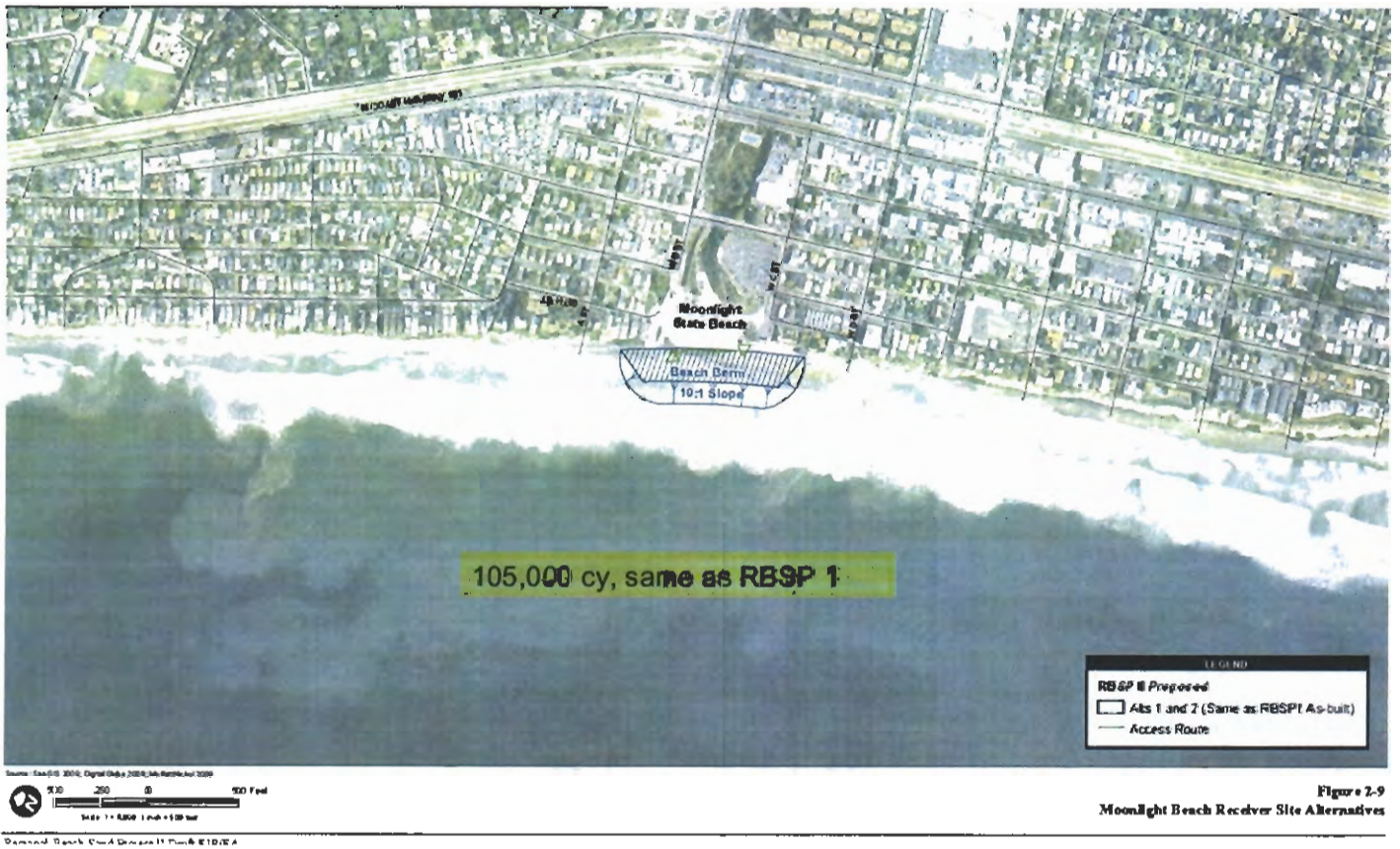


Figure 2-9  
 Moonlight Beach Receiver Site Alternatives



# Cardiff and Solana Beach

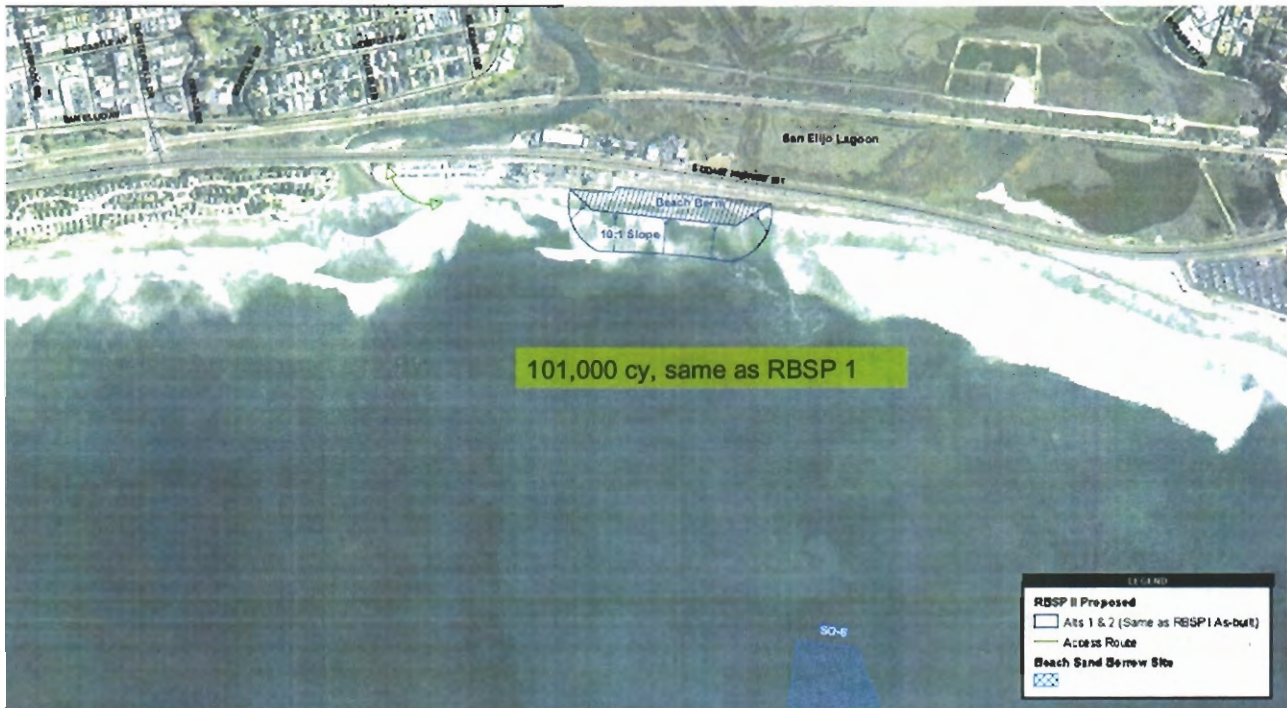


Figure 2-10  
Cardiff Beach Receiver Site Alternatives



Figure 2-11  
Solana Beach Receiver Site Alternatives



# Torrey Pines and Imperial Beach



Figure 2-12  
Torrey Pines Beach Receiver Site Alternatives

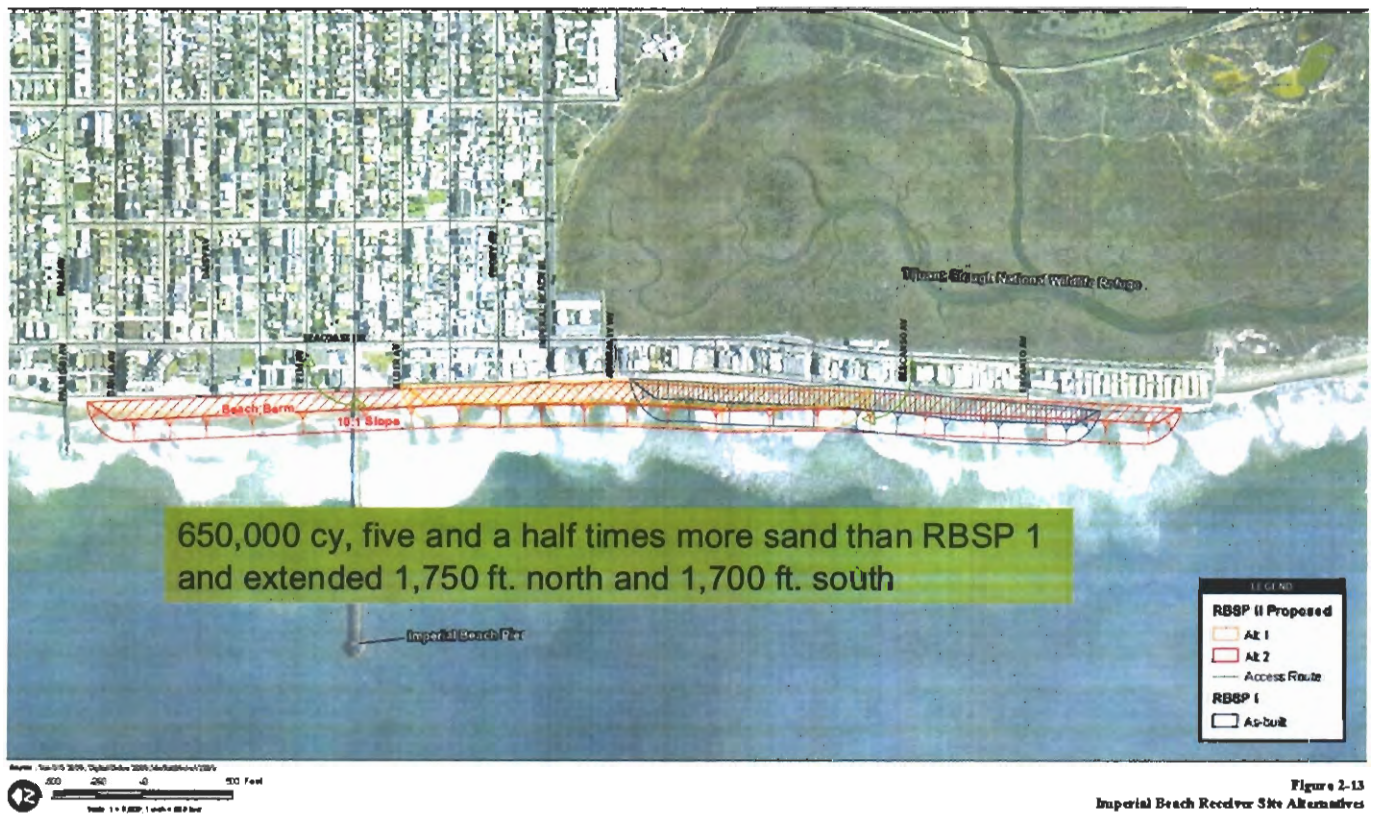
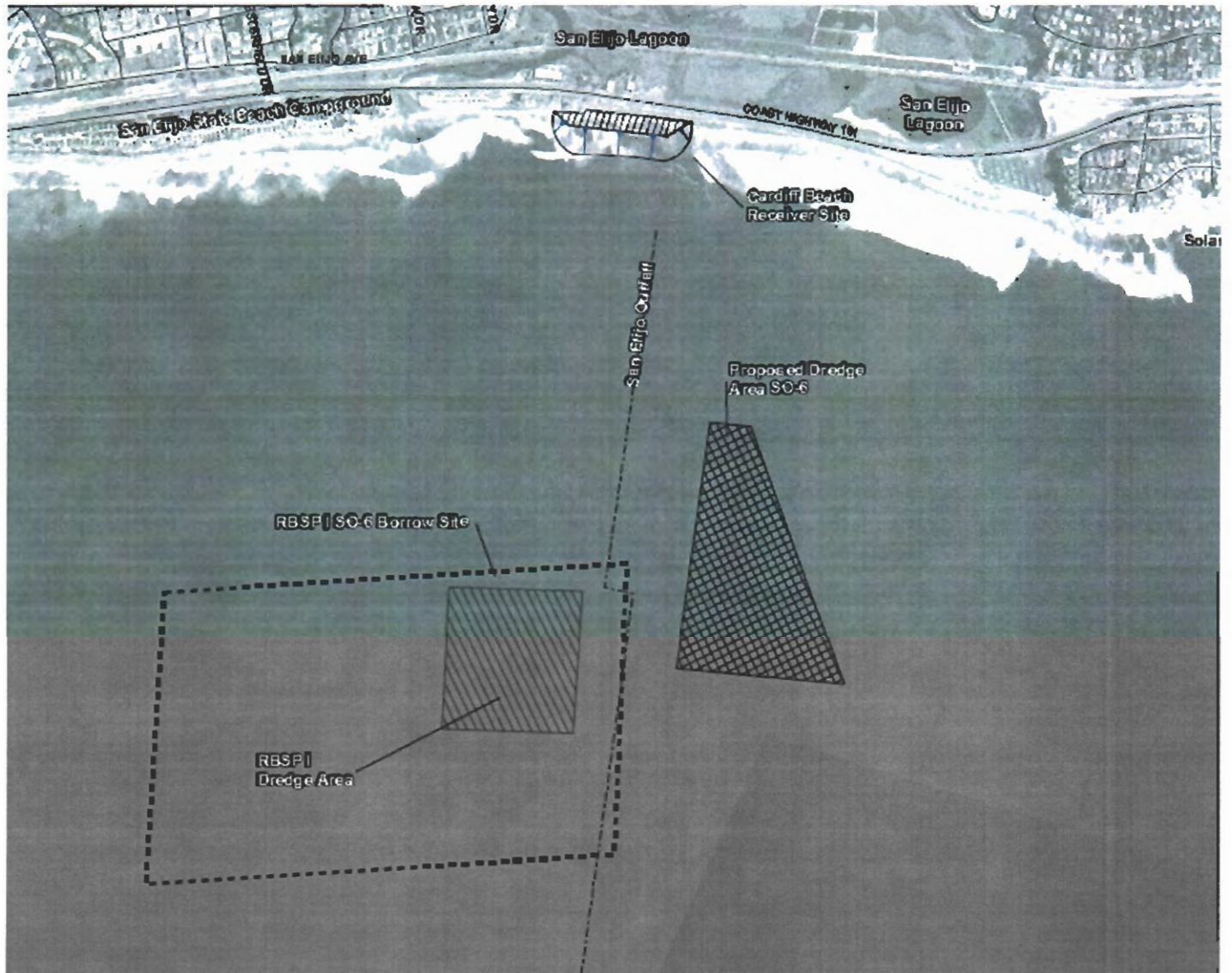


Figure 2-13  
Imperial Beach Receiver Site Alternatives



# S0-6 Borrow Site



# S0-5 Borrow Site

