W12a

ADDENDUM TO COMMISSION PACKET

FOR

ENERGY, OCEAN RESOURCES, and

FEDERAL CONSISTENCY

For Wednesday, July 10, 2013

Item No. W12a **CD-003-13**
U.S. Army Corps of Engineers

- Staff Report Modification
- Ex Parte Communication
- Correspondence

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Go to original staff report

W 12a

ADDENDUM

July 8, 2013

TO: Coastal Commissioners and other Interested Parties

FROM: Mark Delaplaine, Manager, Energy, Ocean Resources and Federal Consistency Division
Larry Simon, Federal Consistency Coordinator

SUBJECT: **Addendum to Item W 12a**, Consistency Determination CD-003-13 (Corps of Engineers, Encinitas and Solana Beach Coastal Storm Damage Reduction Project)

The following are changes to the proposed **Conditions** in the June 26, 2013, staff report (deleted language indicated by ~~strike through~~ and added language by underline):

Page 4, Modify Condition 1 as follows:

> On Line 1: "~~Reduced~~ Clarification of Nourishment Footprint in Solana Beach Segment. Prior to the start of project construction, the Corps will submit ~~revised~~ construction plans to . . . ."

Page 5, Modify Condition 3 as follows:

> On Line 8: ". . . construction of this phase. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing~~. . . ."

Page 5, Modify Condition 4 as follows:

> On Line 2: ". . . (a) that biological monitoring of all offshore potential impact areas shall be for a minimum of ~~2~~ 1 year~~s~~ of pre-construction and 2 years post-construction; . . . ."

Page 6, Modify Condition 4 as follows:

In paragraph (v), Line 11: ". . . Prior to the start of construction, the Corps shall develop a quantitative biological sampling and analysis plan in ~~cooperation~~ consultation with . . . ."

In the final paragraph of Condition 4, Line 6: ". . . prior to each construction phase. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing."~~

Page 7, Modify Condition 5 as follows:

In the final paragraph of Condition 5, Line 7: ". . . construction phase. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing."~~

Page 7, Modify Condition 6 as follows:

Staging Plan Details. The construction staging plans will assure that: (a) temporary easements for staging areas at Moonlight Beach and Fletcher Cove will be obtained; these areas will have fencing for public safety and security; these areas will be the minimum size necessary and will be operated in conjunction with larger upland staging areas; the Corps will avoid storing vehicles and earthmoving equipment in these areas to the maximum extent practicable to avoid potential water quality impacts; any equipment left on the beach overnight will be protected so that any materials that could leak from stored equipment do not enter the ocean; and these areas will be designed not to obstruct or impede public access to or along the shoreline. ~~will avoid public beaches~~; (b) the minimum number of public parking spaces (on and off-street) that are required for the staging of equipment, machinery, and employee parking that are otherwise necessary to implement the project will be used; and (c) staging will avoid using to the maximum extent feasible public beach parking lots, but when the use of these lots is unavoidable to implement the project, only the minimum amount of space in these lots will be used. The construction staging plan will be submitted to the Executive Director for review prior to the start of project construction.

Page 8, Modify Condition 9 as follows:

Out-of-Kind Mitigation. For any biological mitigation shown necessary by monitoring, the Corps will not proceed to implement any out-of-kind mitigation~~s~~ (e.g., using kelp habitat to mitigate surfgrass impacts, or providing mid-water habitat to mitigate for shallow-water habitat impacts) without first ~~showing~~ undertaking ~~that~~ in-kind mitigation ~~is infeasible~~ consistent with the MMP. ~~In addition, if~~ If the Corps later concludes that such in-kind mitigation is infeasible (i.e., failure), it will ~~create~~ proceed to ~~a~~ the ~~proposal~~ approach for out-of-kind mitigation ~~and submit it for Commission review and approval as a subsequent phase of the subject Consistency Determination pursuant to 15 C.F.R. Section 930.36(d).~~ consistent with the MMP and will provide the approach to the

Executive Director for review. The Corps will carefully consider all comments by the Commission's Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated.

Page 8, Modify Condition 11 as follows:

On Line 13: ". . . prior to each construction phase. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing."~~

Page 9, Modify Condition 13 as follows:

On Line 4: ". . . prior to construction. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing."~~

The following are proposed additions to the **Findings and Declarations** of the staff report:

Page 19, paragraph 2 (non-italics), last line: "…Department of Fish and Wildlife. The SO-6 offshore borrow site (proposed for use in the subject Corps project) is located in the extreme southeast corner of the Swami's SMCA and has previously been used as a borrow site for regional beach nourishment projects in San Diego County. Dredging within this SMCA for beach nourishment is allowed under the Marine Life Protection Act, subject to state and federal regulatory approval. Monitoring of potential impacts from dredging at this borrow site, and on the resources and habitat of this corner of the SMCA, is addressed by Condition 11 of this staff report."

Page 24, 2nd complete paragraph, end of line 9: "…and mitigation efficiency. In 2011 the Commission concurred with the Corps' 50-year San Clemente Shoreline Protection Project but did not include a condition for consistency determinations for subsequent renourishment projects at that location. Such a condition is proposed for the Encinitas-Solana Beach project due to the larger geographical extent of this project, the greater volumes of sand to be dredged and placed on the shoreline, the greater widths of beach to be constructed, the predicted impacts to nearshore biological habitats and surfing areas, and the uncertainties noted by the Corps in determining the exact location and severity of project impacts. These factors, in combination with the additional habitat and surfing impacts that could occur with sea level rise, support the need for Condition 2."

Attached to this Addendum are project comment letters received since publication of the staff report.

July 8, 2013

To: Carole Groom

From: Lennie Roberts and Mike Ferreira

Re: Ex parte for Coastal Commission Meeting July 10-12, 2013

Dear Carole, Summarized below are the points that our colleagues at Surfrider San Diego are asking you to consider:

W.12.a. CD-003-13 (U.S. Army Corps of Engineers, Encinitas and Solana Beach) Consistency determination by Corps of Engineers for 50-Year Coastal Storm Damage Reduction and Beach Nourishment Project, Encinitas and Solana Beach, San Diego County. (LS-SF)

This project is a Federal Consistency determination on the Army Corps of Engineers (ACOE) proposed 50-year program of beach nourishment, which would initially place 680,000 cubic yards of sand on the beach in Encinitas and 960,000 cubic yards in Solana Beach. These amounts far exceed the amount that has been placed at these locations historically. The EIR/EIS anticipates "likely" impacts to reef breaks in the project area, turning reef breaks into beach breaks and reducing wave quality; however these impacts were not seen as "significant' and there was no ACOE effort to reduce or mitigate these impacts to unique coastal resources.

Unfortunately the ACOE's arcane cost-benefit ratio has been the driving force behind this project, resulting in increased "towels space" on the beach and protection of private property at the expense of coastal dependent recreational opportunities and habitat. All of the project alternatives exceed the natural sand input into the entire Oceanside littoral cell.

Reef breaks provide recreational opportunities to advanced surfers and also provide essential habitat in this marine protected area. The staff recommendation proposes conditions to address some of these concerns; Surfrider San Diego strongly supports the staff and is asking for additional conditions:

1. Remove "if feasible" from Condition 5a. With the project not starting until 2015, proponents have time to establish the surf-monitoring program and gather at least one year of baseline data.

2. Additional calculations are necessary to determine if Condition 1 (reduced nourishment in Solana Beach segment) is sufficient to avoid triggering the "likely" impacts to Tabletops reef. If it's not sufficient, the sand terminus should be moved further south and the amount of sand should be further reduced. The Commission should provide direction to reduce the amount of sand, as the amount proposed is excessive.

3. Add a new Condition, which states: "Reduce the amount (of sand) sufficiently to convert the "likely" impacts to reef breaks to "unlikely". This will ensure unique protection of coastal dependent recreational opportunities and greater habitat protection as well."

W12a

CORRESPONDENCE

CD-003-13

U.S. Army Corps of Engineers

July 8, 2013

Mary Shallenberger
Commission Chair
California Coastal Commission
P.O. Box 354
Clements, CA 95227-0354

RE: U.S. Army Corps of Engineers 50-Year Coastal Storm Damage Reduction and Beach Nourishment (Consistency Determination No. CD-003-13)

Dear Ms. Shallenberger,

On behalf of the Los Peñasquitos Lagoon Foundation (LPLF), I would like to express deep concern over the 50-year Coastal Storm Damage Reduction and Beach Nourishment project proposed by the U.S. Army Corps of Engineers for the City of Solana Beach and City of Encinitas. The project poses a significant threat to the health of Los Peñasquitos Lagoon (LPL) by cutting off tidal mixing due to increased sediment input into the Lagoon's ocean inlet and elevated beach profiles caused by the north-to-south movement of sand that occurs naturally within the Oceanside Littoral Cell. Recent beach nourishment efforts conducted in 2012 by SANDAG resulted in a massive amount of sand deposited within the inlet at LPL and along Torrey Pines State Beach. As a result, the Lagoon experienced multiple, extended inlet closures that greatly impacted salt marsh vegetation that include 26 sensitive plant species, resulted in deaths of aquatic species, severely degraded water quality, impaired nesting and foraging of listed bird species, and exposed nearby community and park visitors to mosquitos that can transmit West Nile Virus and Equine Encephalitis to human populations. The Army Corp's project currently under review by the Commission will place volumes of sand in an order of magnitude greater than SANDAG efforts within the same locations. LPLF feels that the proposed project is flawed on several fronts that include:

1. The project ignores down-shore impacts to coastal lagoons south of the project area.

2. The Army Corps use of National Economic Development (NED) to justify the economic value of the project is not comprehensive in assessing potential costs associated with project impacts.

3. The proposed monitoring and mitigation program is incomplete and not developed in a manner that would identify and offset impacts to Los Peñasquitos Lagoon.

Designated as a Marsh Natural Preserve and a Critical Coastal Area (CCA #77) by the State, Los Peñasquitos Lagoon (LPL) is afforded the highest level of protection, as it is one of few remaining salt marshes in the southern California. Currently listed as a 303-d Impaired Waterbody under the Clean Water Act due to sediment, Los Peñasquitos Lagoon contains Environmentally Sensitive Habitat Areas (ESHA) that support species endemic to salt marsh lagoons that include three listed birds (Light-Footed Clapper Rail, Western Snowy Plover and Beldings Savannah Sparrow) and 26 sensitive plant species. The Lagoon also serves as an important refuge for migratory birds following the Pacific Flyway and is the closest coastal lagoon to the only Areas of Special Biological Significance (ASBS) located within San Diego County (La Jolla State Marine Conservation Area and the San Diego-Scripps State Marine Conservation Area).

The Project Ignores Down-Shore Impacts To Coastal Lagoons South Of The Project Area.

Termed the Oceanside Littoral Cell, sediment within the nearshore area in North County San Diego follows a southerly migration due to prevailing long-shore current and wave direction that pushes sand from Oceanside to the submarine canyons located south of Los Peñasquitos Lagoon. Based on this scientific fact, it is hard to understand why the Army Corps feasibility study concluded that sediment placed on the beaches of Encinitas and Solana Beach would remain within their proposed project area and not affect Los Peñasquitos Lagoon. While it was expressed within the report that the models indicated no impacts beyond the project area, the report also stated "inherent uncertainties associated with estimating impacts based on model predictions." Clearly there is a large degree of uncertainty as to the overall impacts to Los Peñasquitos Lagoon, which is not listed as one of the coastal lagoons to be monitored under the proposed project.

The project, as proposed, would place up to 1,640,000 cubic yards (cy) of sand on beaches between Encinitas and Solana Beach with additional sand (between 280,000 cy to 420,000 cy) placed in subsequent years. This represents an increase by two orders of magnitude of sand volume placed on north county beaches during annual maintenance activities (e.g. lagoon inlet maintenance) and an order of magnitude increase beyond the 321,000 cubic yards of sand placed by SANDAG in November 2012 within Army Corps' proposed project area. Several lines of evidence have linked beach nourishment efforts conducted by SANDAG to increased sand deposition within the Los Peñasquitos Lagoon inlet and elevated beach profiles along Torrey Pines State Beach. The

massive amount of sand within the Lagoon inlet required two separate efforts between May 2013 and June 2013 to mechanically remove ocean-borne sediments to restore connectivity with the ocean and allow impounded waters to drain. Estimated volume of sand removed from LPL during these two maintenance efforts was 40,000 cy and it is anticipated that a third maintenance effort will be needed before the Fall of 2013 since approximately 20,000 cy of sand still occlude the inlet area. This represents a 41% increase in the amount of sand removed annually from the Lagoon inlet between 2008-2012. Grain size analysis performed at the LPL inlet in May 2013 indicated a greater proportion of coarse to moderately coarse material within the Lagoon than in previous years, which matches the material type used by SANDAG for beach nourishment in November 2012. Furthermore, beach elevations at Torrey Pines State Beach north of the LPL inlet were approximately 3-5 feet higher than in the previous 10 years. Elevated beach profiles reduce tidal mixing within lagoon channels since the Lagoon is cut off from ocean waters for most of the tidal cycle. Furthermore, shoaling processes move sand off the beach and back into the lagoon inlet, further reducing and often negating tidal mixing within Los Peñasquitos Lagoon. Photos taken at Los Peñasquitos Lagoon in May 2013 and June 2013, as well as beach profile elevations using LIDAR are provided in Exhibit A to demonstrated elevated beach profiles (please note that the inlet had been excavated prior to the 5/24/2013 date in the LIDAR profile, but quickly closed again requiring a second maintenance effort in June 2013).

The Army Corps use of National Economic Development (NED) to justify the economic value of the project is not comprehensive in assessing potential costs associated with project impacts.

The Army Corps use of the National Economic Development (NED) to justify the selected project alternative ignores costs associated with multiple efforts to excavate lagoon inlets and the value of human life, since it could result in human cases of brain encephalitis caused by the vector-borne West Nile Virus and Equine Encephalitis. Current costs associated with inlet maintenance at Los Peñasquitos Lagoon averages $120,000 per effort. Funding for this effort is extremely hard to procure as it is often seen as a reoccurring maintenance effort by most, if not all, potential funding sources. Should the Army Corps project proceed as currently depicted, this cost could easily triple at the very least, given what has occurred as a result of SANDAG's beach nourishment efforts in 2012. This would place an undue economic burden on LPLF and California State Parks to maintain the inlet at LPL that range from $360,000 to $500,000 per year over the duration of 50 years. This would incur a cost of $18,000,000 to $25,000,000. Were these costs included in the determination of NED?

LPL is currently a known location of mosquito breeding habitat in San Diego County for *Culex tarsalis,* the species known to transmit West Nile Virus (WNV) and Equine Encephalitis in southern California. *C. tarsalis* is a freshwater mosquito that currently breeds in LPL due to the presence of perennial freshwater inputs from the urbanized watershed. Documented cases of WNV have occurred in both wild and sentinel avian populations, as well as within human populations located near the Lagoon. Open space, urban, and commercial areas that contain sensitive receptors (elderly and young children) surround the Lagoon, presenting a higher risk of complications associated with West Nile Virus infection in human populations. The County of San Diego's Department of Environmental Health has attempted to control populations and breeding habitat of *C. tarsalis* within the Lagoon through methods that include aerial spraying of larvicide over 70 acres in 2011. However, these efforts have not proved successful in reducing overall populations of mosquitos. During prolonged inlet closures, populations of *C. tarsalis* can rapidly increase to the point that local residents cannot leave their houses in the morning and early evening hours. WNV and Equine Encephalitis can lead to brain encephalitis in humans that can leave permanent neurological damage and, in some cases, result in fatalities. In 2010 the Environmental Protection Agency placed the value of human life at $9.1 million per individual. Was this cost included in the determination of NED?

The proposed monitoring and mitigation program is incomplete and not developed in a manner that would identify and offset impacts to Los Peñasquitos Lagoon.

LPLF urges the Coastal Commission to augment the conditions proposed for monitoring and mitigation for the project to meet Federal Consistency requirements since the current conditions suggested by the Commission will not protect Los Peñasquitos Lagoon (LPL) and the public. Given the assumption that no impacts with occur outside of the project area, Army Corps fails to identify potential impacts to the LPL or establish a method to mitigate these impacts. Furthermore, monitoring data collected by SANDAG under their Regional Beach Sand Project II (RBSP II) is insufficient in assessing potential impacts to LPL since established survey transects at Torrey Pines State Beach for RBSP II are located south of the Lagoon inlet and will not provide useful data in assessing the project's potential impacts with regard to shoaling at the inlet and deposition within LPL. Based on these points, LPLF requests that the Coastal Commission add, at the very least, the following additional conditions to the project for Consistency Determination No. CD-003-13:

1. Army Corps will work with LPLF and California State Parks to establish and implement a monitoring program at Los Peñasquitos Lagoon and Torrey Pines State Beach to characterize baseline conditions

and identify potential impacts to the Lagoon inlet from beach nourishment efforts conducted in Solana Beach and Encinitas.

   a. Funding for the monitoring program will be provided by Army Corps and conducted in coordination with LPLF and the Scripps Institute of Oceanography.

   b. Monitoring will be conducted on a monthly basis and following events of large surf and/or storm surges.

2. Mitigation funding will be set aside to pay for inlet maintenance at Los Peñasquitos Lagoon and made available as needed, since inlet closures beyond 2 weeks can be catastrophic for Lagoon resources and expose local residents and park visitors to West Nile Virus and Equine Encephalitis.

   a. Funding will be provided to LPLF for inlet maintenance efforts that include heavy equipment with operators, elevation surveys, permit compliance and reporting.

   b. Funding will be provided to LPLF to maintain inlet maintenance permits through the duration of the 50-year project.

   c. Funding will be set aside prior to beach nourishment activities to guarantee its availability.

Since its creation in 1983, the LPLF has worked closely with the Coastal Commission and other resource agencies to protect and preserve this valuable coastal resource. The Foundation implores the Coastal Commission to continue its dedication to protect Los Peñasquitos Lagoon and work with LPLF and the Army Corps to assure that beach nourishment efforts do not impact this State Marsh Preserve and Critical Coastal Area. Please contact me directly for more information and future coordination - (760) 271-0574 or by email at: mikehastings1066@gmail.com.

Regards,

Mike Hastings, Executive Director

Los Peñasquitos Lagoon Foundation

Cc:

Sherri Lightner, Councilmember for District One, City of San Diego

Bob Filner, Mayor, City of San Diego

Dave Roberts, Supervisor for District 3, County of San Diego

Clay Phillips, San Diego Coast District Superintendent, California State Parks

Lee McEachern, San Diego District, Coastal Commission

Exhibit A
Photos of Elevated Beach Profiles at Los Peñasquitos Lagoon Inlet
Beach Elevation Data at Torrey Pines State Beach - LIDAR

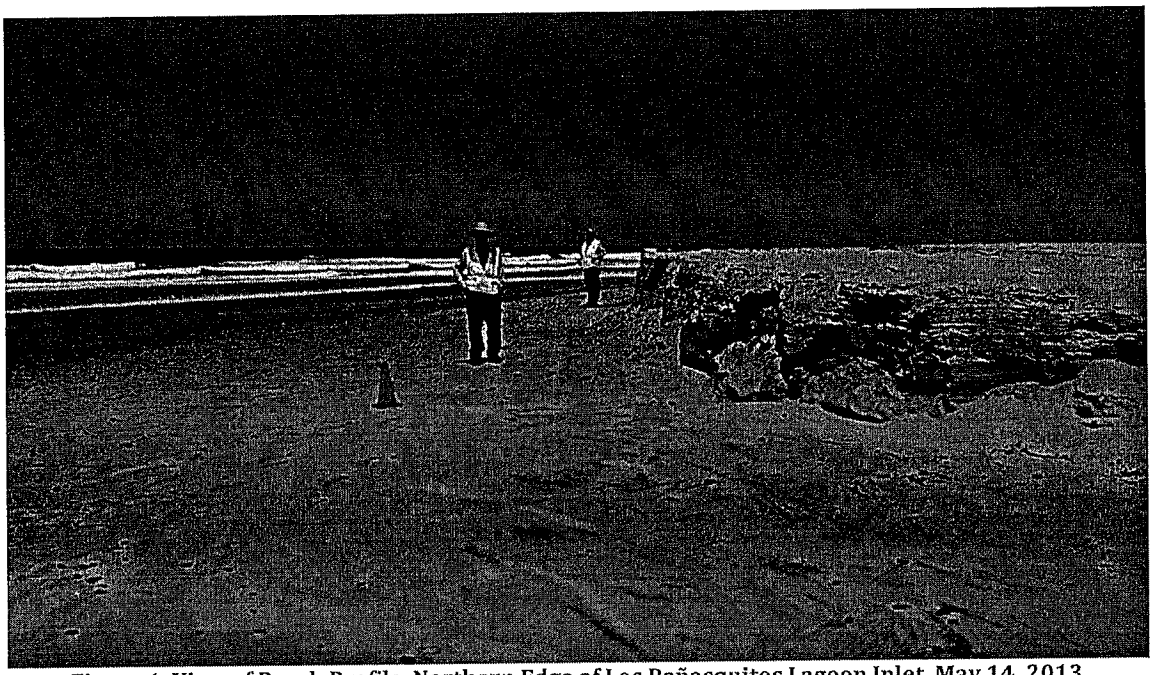


Figure 1. View of Beach Profile, Northern Edge of Los Peñasquitos Lagoon Inlet. May 14, 2013.

Figure 2. View of Beach Profile, Northern Edge of Los Peñasquitos Lagoon Inlet. May 14, 2013.

Exhibit A
Photos of Elevated Beach Profiles at Los Peñasquitos Lagoon Inlet
Beach Elevation Data at Torrey Pines State Beach - LIDAR

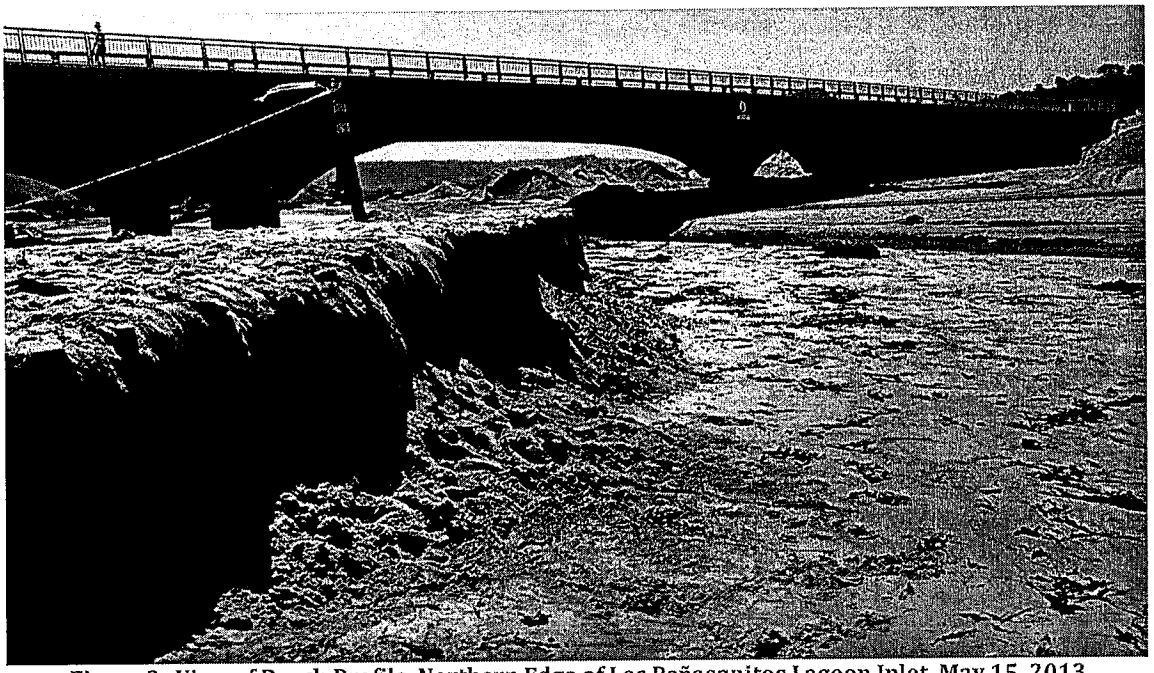


Figure 3. View of Beach Profile, Northern Edge of Los Peñasquitos Lagoon Inlet. May 15, 2013

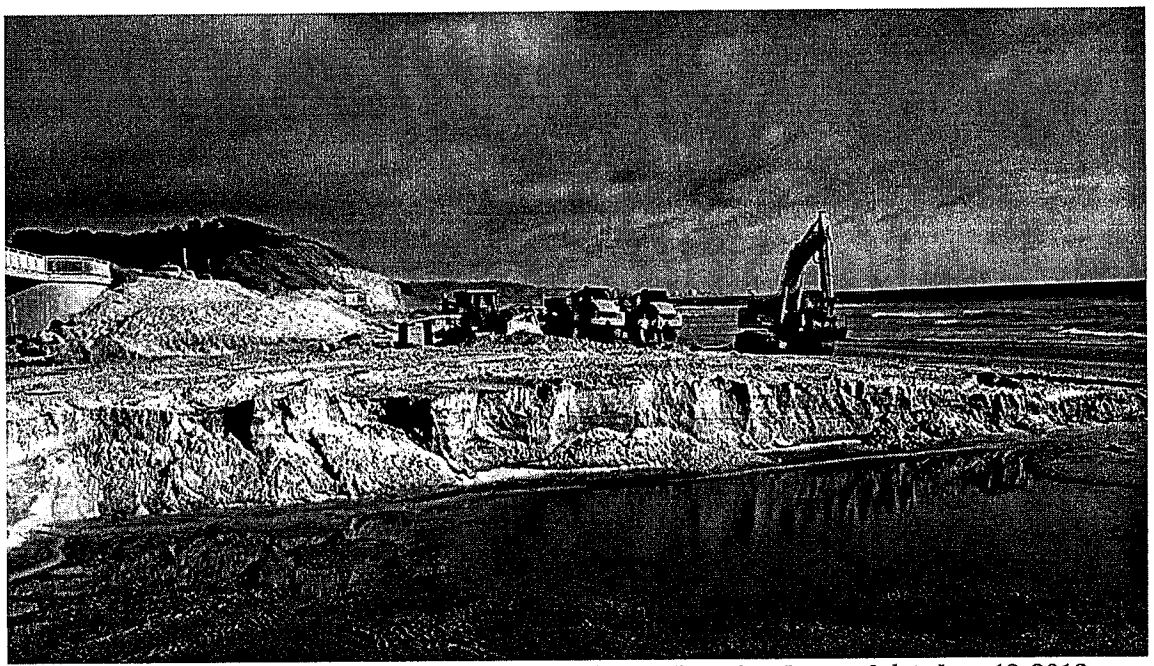


Figure 4. View of Beach Profile, Southern Edge of Los Peñasquitos Lagoon Inlet. June 12, 2013. Approximately 3-6 feet of additional sand above the lagoon inlet waterline.

Exhibit A
Photos of Elevated Beach Profiles at Los Peñasquitos Lagoon Inlet
Beach Elevation Data at Torrey Pines State Beach - LIDAR

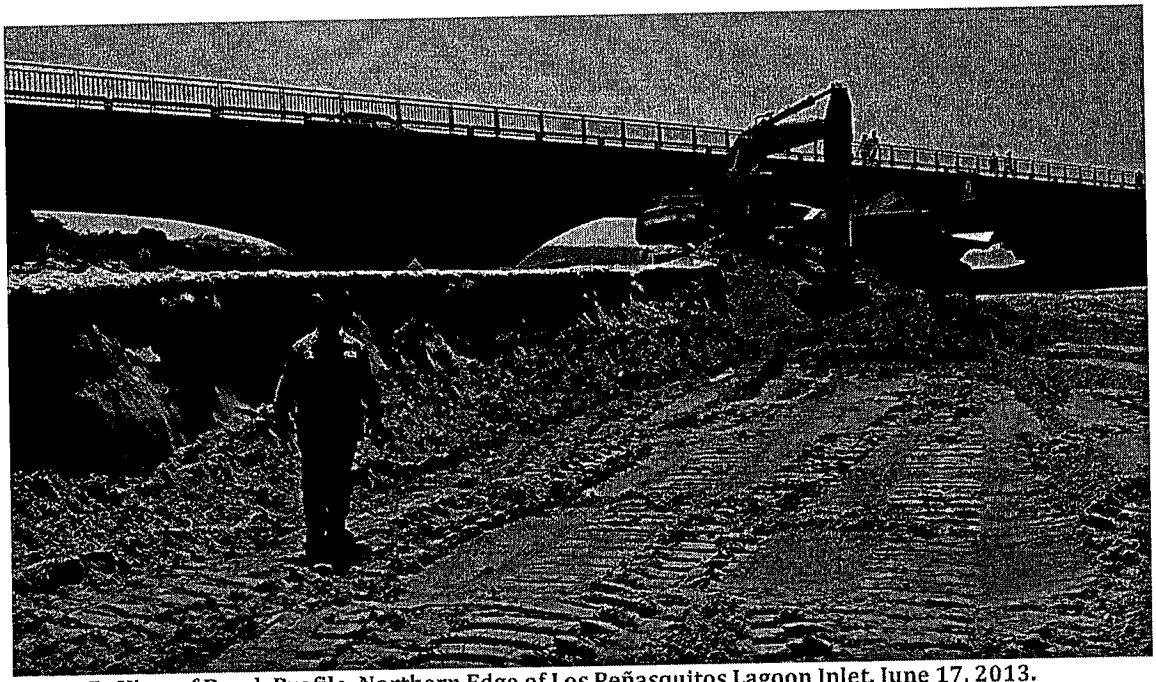


Figure 5. View of Beach Profile, Northern Edge of Los Peñasquitos Lagoon Inlet. June 17, 2013. The inlet area had already been excavated multiple times prior to this photo.

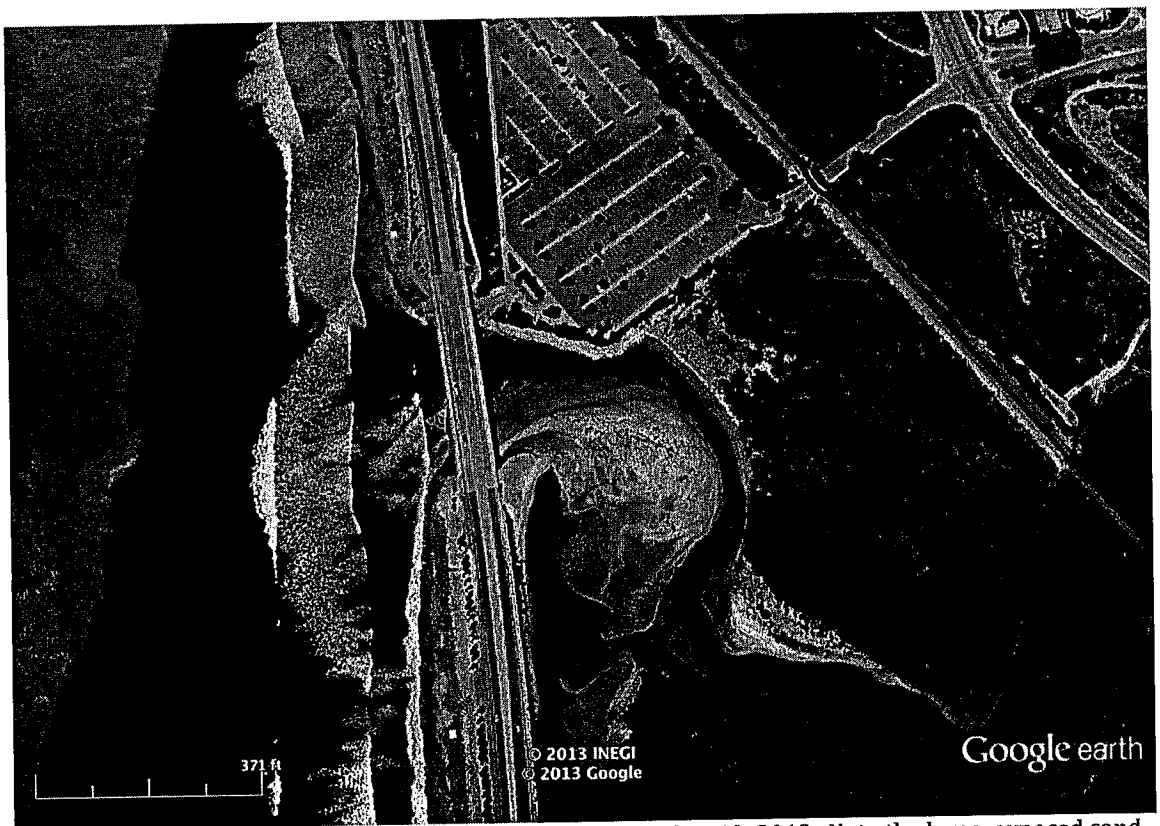
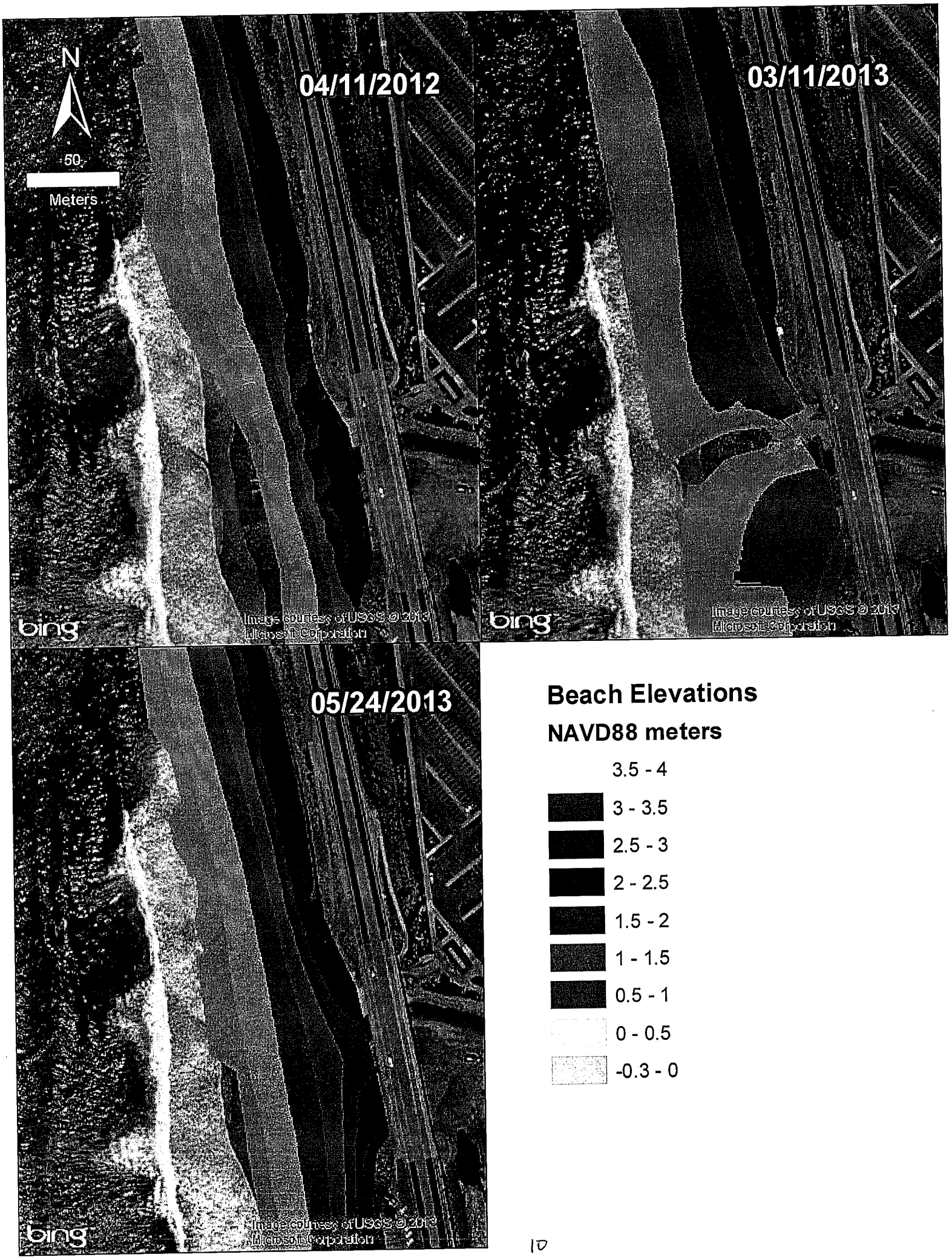


Figure 6. Overview of Los Peñasquitos Lagoon Inlet. November 12, 2012. Note the large, exposed sand spit within the Lagoon that occludes the inlet and restricts tidal mixing.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City of Del Mar

July 5, 2013

Mary K. Shallenberger, Chair,
California Coastal Commission
45 Fremont Street, Suite 219
San Francisco, CA 94105-2219

Copy sent via scanned e-mail

Re: CD-003-13 (U.S. Army Corps of Engineers, Encinitas and Solana Beach)

Dear Ms. Shallenberger,

This letter contains comments from the City of Del Mar (the City) on the Consistency Determination (CD) review referenced above for the U.S. Army Corps of Engineers/Solana Beach/Encinitas 50-year Coastal Storm Damage Reduction and Beach Nourishment Project (the Project). In preparing this letter, the City relied on the description, analyses and other information on the Project contained in the Draft Environmental Impact Report/Environmental Impact Statement DEIR/EIS for the Project. Much of the same information is also included in the report prepared by your staff for this agenda item. As such, this letter makes numerous references to that DEIR/EIS. Del Mar City staff also attended a public meeting on the Project conducted on February 7, 2013 at the Solana Beach City Hall. Our staff also relied on input from representatives of the City's Community Services Department who oversee the daily operations of the City's lifeguard services and, thereby, have intimate knowledge of Del Mar's shoreline.

1. OVERVIEW OF CITY'S COMMENTS.

The City appreciates the opportunity to respond to the referenced CD and the opportunity to generally comment on the Project. The overall comments from the City of Del Mar are that:

A) The City is generally supportive of efforts to replenish sand along areas of Encinitas and Solana Beach, for the various reasons cited for the Project in the DEIR/EIS.

B) Despite this general support, the City has concerns that the Project calls for a large portion of the replenishment sand for beaches in Encinitas and Solana Beach to be dredged from a sand borrow site located immediately offshore Del Mar (Sand Borrow Site SO-5).

C) The relatively shallow depth of Sand Borrow Site SO-5 and its proximity to the Del Mar shoreline raises concerns about the long-term and construction-phase impacts of multiple future dredging operations. The most notable of the potential long-term impacts include: 1) the loss of sand from Del Mar beaches; 2) alteration of wave action; and 3) changes to the bathymetry at the mouth of the San Dieguito Lagoon where a major wetland restoration project was completed in 2012.

D) The Project holds the potential for construction-phase noise impacts, especially if the sand dredging were to be carried out using cutter-head dredge, rather than hopper-type dredge equipment.

The following segments of this letter contain more specific comments about the issues noted above. The City requests that the Coastal Commission, as well as the project proponents, consider all of the comments and questions contained in this letter.

2. IMPACT ON DEL MAR'S SAND LEVELS DUE TO DREDGING OF SAND FROM BORROW SITE SO-5.

The Project identifies a sand borrow site offshore of the north end of the Del Mar beach, designated as Borrow Site SO-5. Borrow Site SO-5 is approximately 279 acres in size and is located, at its closest point, approximately 1,800 feet offshore from Del Mar's beach shoreline at the northern end of the City. The DEIR/EIS indicates that cumulatively, up 7.8 million cubic yards of sand is available at SO-5 and could be dredged from this borrow site in five events over the 50-year life of the Project. The DEIR/EIS anticipates that the dredged sand would be transported, mostly by barge, to beaches in Encinitas and Solana Beach. The DEIR/EIS indicates that the top sand elevation in the borrow site ranges in elevation from minus 34 feet to minus 62 feet Mean Lower Low Water (MLLW). The borrow site off Del Mar (SO-5) is the largest of the three borrow sites identified for the sand replenishment Project.

Borrow Site SO-5 is in the same location as the sand borrow sites used in two other area beach sand projects, SANDAG's 2001 and 2012 Regional Beach Sand Replenishment Projects (RBSP I and II). As was the case when the City commented on the environmental document for SANDAG's RSBP II, the City has questions and concerns about whether dredging at Borrow Site SO-5 will affect sand levels on the Del Mar beach. The specific concern is whether the volume of sand to be removed from Borrow Site SO-5 would, over time, be replenished (back-filled) by virtue of near-shore sand migrating to the dredged borrow site. This would result in an adverse loss of sand from near-shore beach areas. The potential for adverse impacts would increase if this sand borrow site is repeatedly used over a 50-year period.

The DEIR/EIS indicates that the dredging of sand from Borrow Site SO-5 will not have an adverse impact on the levels of sand in the littoral cell in this area. The justification for this conclusion is that the depth of closure, the seasonal movement of sand along the beach, both on-shore and off-shore, extends only to a depth of minus 30 feet mean lower low water (-30 MLLW). However, the DEIR/EIS also indicates that the sand

elevation level in Borrow Site SO-5, at its closest point to the shoreline, is at an elevation of minus 35 feet mean lower low water (-35 MLLW). That elevation leaves only a four-foot vertical differential between these two critical contour elevations. This is a very narrow margin when considering that the borrow site, at its closest point to the area of the depth of closure, is only 1,800 feet away (horizontally). As a result, there is the potential that the extent of dredging at Borrow Site SO-5 could cause changes in the near-shore wave regime and consequently on the shoreline. These changes could include: 1) higher waves at certain locations, and 2) changes in wave breaking angles. This would, in turn, lead to a change in the longshore sediment transport, divergence of drift, and a change in the shoreline configuration. Some of the beach areas in the vicinity of the borrow site could accrete, and others could erode.

As is the case with the cities of Encinitas and Solana Beach, protection of the beach and shoreline in Del Mar is critical. So, although the City is supportive of beach sand replenishment in its neighboring communities for the reasons cited in the DEIR/EIS, the City is insistent that improvement to conditions at those beaches should not come at the expense of sand loss from Del Mar's beach.

It appears that a great deal of the information in the DEIR/EIS is similar to that gathered for the referenced SANDAG RBSP II project's environmental documents. However, that previous environmental document did not address the question of whether there was any back-fill that occurred in the borrow area between the time of completion of the 2001 SANDAG RSBP and planning for RSBP II. This is of special concern in that the borrow site off Del Mar's beach used for RBSP II (SO-5) was larger and closer to shore than the borrow site used in RBSP I.

Little numerical modeling is provided in the DEIR/EIS to address the impact of Borrow Site SO-5 on City of Del Mar beaches. No information is provided in the DEIR/EIS about whether Borrow Site SO-5 will likely be "filled in" by migrating sand in the future. This issue should be addressed before authorization is granted for dredging at Borrow Site SO-5. Equally important, the Project should be conditioned to include mitigation to address the noted impacts, should they occur.

Based on these factors, the City believes that the Project should be conditioned to require more information on the issue of potential impacts of dredging at Borrow Site SO-5 on Del Mar's beach sand levels. It should also be conditioned to include monitoring and management to ensure that all dredging operations are confined to the approved area of the Borrow Site(s) and that operations are compliant with all conditions attached to the CD.

3. RELIANCE ON BORROW SITE SO-5 FOR NUMEROUS RECEIVER SITES - ALTERNATIVES AND MITIGATION MEASURES.

The City believes that the Project should include alternatives for a broader range of sand borrow sites, both to minimize the potential impacts of multiple dredging operations involving such a large amount of material from Borrow Site SO-5. The City

also believes that if Borrow Site SO-5 continues to be identified as the source for the majority of dredged sand, the Project should include a program for monitoring sand levels along the Del Mar beach and in the borrow site itself so as to gauge impacts on sand levels in the near shore area and also to track the rate of backfill of sand in the borrow site. The City further believes that if Borrow Site SO-5 continues to be identified as the source for multiple sand dredging operations, there should be conditions attached for creation of a mitigation program to off-set any loss of sand at Del Mar beaches that may occur. As with any mitigation measure, it would be important not only to identify the appropriate mitigation measures but also to identify their source(s) for funding. This is especially true for a project that includes multiple dredging events over the course of a half century.

4. IMPACT OF USE OF BORROW SITE SO-5 ON DEL MAR'S ABILITY TO PURSUE BEACH REPLENISHMENT PROJECTS.

Like Encinitas and Solana Beach, Del Mar's beachfront is subject to wave impacts, especially during winter storms. And as is the case with the entire region, the City faces the potential impacts of sea level rise. These factors increase the likelihood that Del Mar may need to pursue a replenishment project for its own beaches. The extensive use of Borrow Site SO-5 raises the concern that this area, which has been identified as being a desirable source of sand for beach replenishment projects, would be depleted if and when the City of Del Mar pursues its own sand replenishment project. The existence of a sand-borrow site immediately offshore would dramatically reduce the costs of such a project for Del Mar. Even if the sand available in SO-5 were not fully depleted by the Project, the extensive near-shore dredging proposed would result in result a more difficult and expensive future dredging project for Del Mar.

For these reasons, the City requests that a mitigation measure be included as a condition of approval of the CD requiring that the other borrow sites for the Project be used before reliance on dredging from Borrow Site SO-5. The City further requests that any Project approvals also include a mitigation measure specifying that any dredging from SO-5 for this Project be restricted so that operations start at those portions of the borrow site farther from the Del Mar shoreline, thereby leaving the sand in the areas closer to shore available for future sand replenishment projects pursued by the City.

5. IMPACTS TO TIDAL FLOWS OF THE SAN DIEGUITO LAGOON AND RIVER CORRIDOR HAVE NOT BEEN ADEQUATELY ADDRESSED.

A major restoration of the San Dieguito Lagoon intended to restore historic tidal flows in the area adjacent to Borrow Site SO-5 was completed in 2012. Considering that proximity, the Project raises the following question: How will the quantity of sand extracted from Borrow Site SO-5 affect the tidal flows of the San Dieguito Lagoon project? The DEIR/EIS contains virtually no analysis of these potential impacts. The concern here is that a depletion of beach sand in the area of the Lagoon's mouth could skew the tidal flows and post-project beach profiles identified in the Lagoon Restoration Project. Such skewed results would have a detrimental effect on the long-term success

of the Lagoon Restoration project. The requested CD should be conditioned to address this issue.

6. CONSTRUCTION-PHASE IMPACTS.

The City is concerned about the construction-phase impacts of dredging at borrow site S0-5, specifically the duration of future dredging operations and the potential noise impacts of such dredging. With reliance on a major portion of sand using Borrow Site SO-5, the extent of such impacts would be concentrated in one location rather than being distributed to a number of dredging sites. On this issue of potential noise impacts, the City also notes the major increase in potential noise impacts if dredging were to be accomplished using cutter-head equipment rather than hopper type equipment. For this reason, the City requests that the Project be conditioned for the use of hopper versus cutter-head type dredging equipment in Borrow Site SO-5.

7. CONCLUSION.

The City is concerned that the Project will create adverse impacts on the sand levels and/or wave action along Del Mar's beaches and that it could also limit the City's options for its own future sand replenishment project. The Project should be conditioned to address the very real potential of such impacts. Specifically, mitigation measures should be attached, along with a requirement for monitoring and funding of the mitigation measures should impacts occur. These issues should be addressed in the conditions of approval of the CD.

Thank you for the opportunity to comment.

Sincerely,

Adam Birnbaum AICP, Planning Manager
City of Del Mar

cc: Del Mar City Council
Scott W. Huth, City Manager
Kathleen A. Garcia, Planning and Community Development Director
File

Simon, Larry@Coastal

From: Smith, Lawrence J SPL <Lawrence.J.Smith@usace.army.mil>
Sent: Wednesday, July 03, 2013 4:05 PM
To: Simon, Larry@Coastal
Cc: Delaplaine, Mark@Coastal; Clifford, Jodi L SPL; Ming, Susan M SPL; Schlosser, Heather R SPL; Moriarty, Elizabeth A SPL; Axt, Josephine R SPL
Subject: CD-003-13 Encinitas/Solana Beach (UNCLASSIFIED)
Attachments: W12a-7-2013_USACE Revisions to address cooperation staging and surveys.docx; W12a-7-2013_USACE Revisions to address cooperation staging and surveys-clean.docx; W12a-7-2013_USACE Revisions to address cooperation staging and surveys-rationale.docx

Classification: UNCLASSIFIED
Caveats: NONE

Attached to this email are three files. The first is a track changes version of the staff report for CD-003-13 showing changes that the Corps recommends be made to the staff report and to the conditions included. The second is a clean copy incorporating all changes, which is easier to read. The third is a brief description of the basis for the requested changes.

We plan to make an initial presentation at the Commission hearing. What time limits should we plan on for the presentation and to reserve to respond to questions?

We intend to work closely with the Coastal Commission and the other federal and state resource agencies throughout the life of this project to maximize benefits and minimize environmental impacts. Please let me know if you have any questions on the attached. If needed, we can set up a conference call and include our management and legal.

Larry Smith

Classification: UNCLASSIFIED
Caveats: NONE

CD-003-13
Proposed Revisions to Conditions
July 3, 2013

1. Title of Condition 1 will be changed by Larry Simon to reflect that it is a clarification only meant to reinforce the boundaries of the fill area, not a reduction in the project area.

2. The Corps will work closely with the Commission over the life of the project, but the Corps cannot agree that there is phased agency decision-making for this project such that phased review would be appropriate. The language has been revised to reflect that, while acknowledging the Corps' intent to cooperate closely with the Coastal Commission during initial nourishment and each subsequent renourishment event. The Corps has a continuing responsibility to maintain consistency and welcomes input from the Commission. The Corps has proposed language in the revised condition to indicate that the Corps and Commission have regulation-consistent avenues available to identify consistency issues over the life of the project and resolve them through discussions, supplemental consistency determinations, and/or mediation as appropriate.

The "Phased Review" process pursuant to 15 CFR 930.36(d) is intended to be used "[i]n cases where federal decisions related to a proposed development project or other activity will be made in phases based upon developing information that was not available at the time of the original consistency determination, with each subsequent phase subject to Federal agency discretion to implement alternative decisions based upon such information...." The Corps is not proposing to make decisions in phases based upon developing information. The Corps has proposed a 50-year project with initial nourishment followed by renourishment cycles triggered by beach widths. Under 15 CFR 930.36(d), "In cases where the Federal agency has sufficient information to determine the consistency of a proposed development project or other activity from planning to completion, the Federal agency shall provide the State agency with one consistency determination for the entire activity or development project."

During Preconstruction, Engineering and Design (PED) for the initial nourishment, the Corps will develop detailed engineering and construction plans, finalize monitoring efforts (pre-, during, and post-construction), and lay out a plan to adaptively manage the project throughout the 50-year time period. The participation of the resource agencies and stakeholders will be essential in determining how the project can be adaptively managed, if needed, with each subsequent nourishment cycle, based on results of the extensive monitoring plan. The monitoring reports will give results on project performance and/or project impacts. Such minor design adjustments are part of the project, not new decisions under a phased decisionmaking process.

The Corps will notify the Executive Director of the Commission prior to initiating each renourishment event and will timely provide to the Executive Director all monitoring reports, including biological monitoring (and biological mitigation monitoring if required); surfing monitoring; turbidity; spill prevention and response monitoring; long-term shoreline monitoring; and cultural resource surveys. The Corps has a continuing responsibility to be consistent to the maximum extent practicable and work cooperatively with the Commission.

If substantial changes are later identified such that the project would be conducted or have an effect on coastal resources substantially different than described, then the Corps would develop a new decision document and potentially seek reauthorization from Congress, and a supplemental consistency determination would be prepared to address the proposed decision consistent with 15 CFR 930.46. Similarly, the Commission can raise consistency concerns to the Corps and request remedial actions. In the event of a substantial disagreement regarding consistency, the Corps and Commission can seek mediation by NOAA's Office of Ocean and Coastal Resource Management or the Secretary.

3. We are requesting deletion of the last sentence. The Corps is committed to working closely with the Commission to resolve concerns, but the regulations provide dispute resolution mechanisms if needed.

4. We are requesting that the two years of pre-construction monitoring be revised to one year, which is consistent with the study documents and which are the basis for costs and benefits. Conducting such a long-term study would be difficult given the Corps' authorization, funding, and contracting mechanisms. Additionally, the other resource agencies accepted the single year of pre-construction surveys, which will be broken up into separate spring and fall surveys.

5. We are requesting deletion of the last sentence. The Corps is committed to working closely with the Commission to resolve concerns, but the regulations provide dispute resolution mechanisms if needed.

6. Avoiding staging on public beaches is not possible. We will minimize to the extent practicable and ensure that safety and access are protected. Access to these beaches is vertical and is not like other beach nourishment sites. Additionally, we will be building beach as we go, in areas that currently have no beach at high tides.

7. No change.

8. No change.

9. The only potential out-of-kind mitigation would be for surf grass impacts. Currently there are no impacts predicted. The procedures spelled out in Appendix H were worked out in consultation with the NMFS in case there were any unexpected impacts. The revisions allow us to move forward with consultation should the need arise. The procedure to implement out-of-kind mitigation does not represent a new phase of decision-making. The "review and approval" provision in the original has been removed from other draft Consistency Determinations made for Corps' Civil Works projects.

10. No change.

11. We have revised to limit borrow site monitoring to the initial nourishment event. Repeating this monitoring for each subsequent renourishment event is not warranted. The initial renourishment will provide information on impacts and recovery rates that would only be repeated for each subsequent renourishment event. Seeing as the borrow sites are in the same or

similar area, the results are expected to be the same and represent an unneeded expenditure of public funds.

12. No change.

13. We are requesting deletion of the last sentence. The Corps is committed to working closely with the Commission to resolve concerns, but the regulations provide dispute resolution mechanisms if needed.

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W 12a

Filed:	1/3/13
60th Day:	3/4/13
75th Day:	3/19/13
Extended to:	7/16/13
Staff:	L. Simon-SF
Staff Report:	6/26/13
Hearing Date:	7/10/13

STAFF REPORT: REGULAR CALENDAR

Consistency Determination No.: **CD-003-13**

Federal Agency: **U.S. Army Corps of Engineers**

Location: Encinitas and Solana Beach, San Diego County, specifically Segment 1 from the 700 block of Neptune Avenue south to the approximate end of West H Street in Encinitas; and Segment 2 from Tide Park south to the southern city limit at the western extent of Via de la Valle in Solana Beach (**Exhibits 1-4**)

Project Description: 50-Year Coastal Storm Damage Reduction and Beach Nourishment Project

Staff Recommendation: Conditional Concurrence

SUMMARY OF STAFF RECOMMENDATION

The U.S. Army Corps of Engineers (Corps) has submitted a consistency determination for the Encinitas-Solana Beach Coastal Storm Damage Reduction Project, a 50-year program to nourish two shoreline segments in the cities of Encinitas and Solana Beach (San Diego County) with sand dredged from offshore borrow sites. The purpose of the program is to reduce wave-induced erosion at the base of coastal bluffs in these two segments and reduce the need for additional armoring of the shoreline in these segments. At Encinitas, 680,000 cubic yards of sand would

be placed on a 7,800-foot-long section of shoreline to extend by approximately 100 feet the existing base year beach width of 110 feet at mean sea level. Renourishment with 280,000 cu.yds. of sand would occur every five years. At Solana Beach, 960,000 cubic yards of sand would be placed on a 7,200-foot-long section of shoreline to extend by approximately 200 feet the existing base year beach width of 70 feet at mean sea level. Renourishment with 420,000 cu.yds. of sand would occur every thirteen years. Implementation of the Encinitas and Solana Beach project would take approximately 103 and 139 days, respectively, and the Corps anticipates commencing project construction in late 2015.

The Commission finds the project is an allowable use as the offshore borrow sites and the beach disposal sites are not environmentally sensitive habitat areas, and the proposed dredged materials are suitable for beach nourishment. While the project holds the potential to adversely affect coastal resources, given the limited utility of the other alternatives, and the anticipated negative consequences of the no-project alternative (i.e., further armoring of the shoreline), the Commission finds that the proposed project represents the least environmentally damaging feasible method of addressing the inevitable need to reduce storm damage in the project area.

The project would create significant adverse effects on adjacent sensitive marine habitats and resources as sand placed on the beach moves into nearshore areas through the action of waves and currents. The project includes a preliminary monitoring and mitigation program but the extent of project impacts requiring mitigation will not be determined until two years after nourishment is completed. ~~In addition, the 50-year time period of the consistency determination and the effects of sea level rise over that time period support the need for phased review by the Commission of future renourishment projects to ensure that project assumptions made today can be reexamined in light of future environmental conditions, monitoring results, and mitigation efficiency.~~ The Commission has adopted conditions which provide in part for modifications to the project to ensure protection of sensitive habitat areas, adequate monitoring of project implementation and impacts, and mitigation of project impacts~~, and phased review of future renourishment projects~~. If the Corps were to agree to implement these conditions, the proposed project could be found consistent with the enforceable policies of the California Coastal Zone Management Program concerning marine resources, beach nourishment, dredging and filling, found at sections 30230, 30231, and 30233 of the ~~marine resources, beach nourishment, and dredging and filling policies of the~~Coastal Act ~~Sections 30230, 30231, and 30233~~).

The project will adversely affect several unique surfing areas as a result of reefs being covered with sand as the widened beaches reach an equilibrium state. However, determining the degree of impact is complicated by uncertainty due to the dynamic nature of this segment of shoreline, changes in beach width and composition since the 1980s, future shoreline changes inherent with sea level rise, and the seasonal movement of sand within the littoral zone. The Commission has adopted conditions to assure that project impacts on surfing are minimized, adequately monitored, and if impacts occur, project modifications implemented. If the Corps were to agree to implement these conditions, the proposed project could be found consistent with the enforceable polices of the California Coastal Zone Management Program concerning public access and recreation, found at ~~policies of the Coastal Act (S~~sections 30210, 30211, 30212, 30213, and 30220 of the Coastal Act.

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APPENDICES

EXHIBITS

I. FEDERAL AGENCY'S CONSISTENCY DETERMINATION

The U.S. Army Corps of Engineers has determined the project consistent to the maximum extent practicable with the California Coastal Management Program (CCMP).

II. MOTION AND RESOLUTION

Motion:

*I move that the Commission **conditionally concur** with consistency determination CD-003-13 by concluding that the project would be fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program (CCMP), provided the Corps agrees to modify the project consistent with the conditions specified below, as provided for in 15 CFR§930.4.*

Staff recommends a **YES** vote on the motion. Passage of this motion will result in a concurrence with the determination of consistency, provided the project is modified in accordance with the recommended conditions, and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution:

*The Commission hereby **conditionally concurs** with consistency determination CD-003-13 by the U.S. Army Corps of Engineers on the grounds that the project would be fully consistent, and thus consistent to the maximum extent practicable, with the enforceable policies of the CCMP, provided the Corps agrees to modify the project consistent with the conditions specified below, as provided for in 15 CFR §930.4.*

Conditions:

1. ~~Reduced~~ Nourishment in Solana Beach Segment. Prior to the start of project construction, the Corps will submit ~~revised~~ construction plans to the Executive Director illustrating that beach nourishment in the Solana Beach segment will not extend north of Tide Beach Park, specifically the northern edge of the small cove located at the base of the stairway that connects the beach with the top of the bluff at the end of Solana Vista Drive.

2. ~~Phased Review for~~ Renourishment ~~Projects~~Events. Consistent with the Corps' responsibility to ensure its activities remain consistent with the enforceable policies of the CCMP over the life of the project, the Corps will coordinate and cooperate in efforts to make certain that the contemplated activities continue to be undertaken in a manner consistent with the CCMP, including providing the mitigation and monitoring data and reports as they are developed. Consistent with the Commission's continuing review authority under 15 CFR 930.45, the Commission will continue to monitor approved federal activities in order to make certain that such activities continue to be consistent

with the CCMP. The Commission may request that the Corps take appropriate remedial action following a serious disagreement resulting from the project, if the Commission maintains the project is being conducted or is having an effect on coastal uses or resources substantially different than originally described and, as a result, is no longer consistent to the maximum extent practicable with the enforceable policies of the CCMP. If, after a reasonable time following a request for remedial action, the Commission still maintains that a serious disagreement exists, either party may request Secretarial mediation or OCRM mediation services, consistent with 15 CFR 930.45.

If the Corps identifies that substantial changes to the project are needed for performance or to address unforeseen impacts, requiring a post authorization decision document, the Corps will submit to the Commission a supplemental consistency determination to address the consistency of the proposed changes pursuant to 15 CFR 930.46(a). Similarly, the Commission may notify the Corps of activities which the Commission believes should be subject to supplemental coordination when the Commission identifies and provides information on substantially different coastal effects than originally described, pursuant to the requirements of 15 CFR 930.46(b).

Prior to each renourishment ~~project~~event, the Corps will notify the Executive Director and provide~~submit to the Commission a consistency determination (pursuant to 15 CFR § 930.36(d)) that includes~~, for his review,~~:~~ the results of all monitoring required since completion of the previous nourishment ~~project~~event (e.g., physical, biological, surfing), including copies of all required monitoring reports; an explanation of the status of completed and/or ongoing mitigation projects associated with ~~previous~~ the initial nourishment ~~projects~~event; and the ~~proposed~~ sand volume, beach width, and borrow site location for the upcoming ~~proposed~~ renourishment event. The Corps will carefully consider all comments by the Commission's Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated. ~~prior to each construction phase~~cycle.

~~2.~~3. Final Monitoring Plans. To continue to work cooperatively throughout the final project planning and construction ~~phases~~ efforts, the Corps will provide, prior to commencement of construction of the initial dredging and nourishment project, a copy of the final Preconstruction Engineering and Design (PED) ~~phase~~ surveys and the monitoring plans to the Commission's Executive Director for review. The Corps will carefully consider all comments by the Commission's Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated prior to ~~the~~ construction ~~of this phase~~. ~~If there is significant disagreement between the Corps and the Executive Director, will be brought before the Commission for a public hearing.~~

The PED surveys and monitoring plans will include:

(a) the final Biological (reef/surfgrass) Mitigation and Monitoring Plan (MMP), including all surveys conducted in preparation of that plan;

(b) the Surfing Monitoring Plan;

(c) the Turbidity Monitoring Plan;

(d) the Stormwater Pollution Prevention Plan (SWPPP);

(e) the Oil Spill Prevention and Response Plan (OSPRP); and

(f) the Shoreline Monitoring Plan.

~~3.~~4. Biological Mitigation and Monitoring Plan Details. The final MMP (referenced in Condition 3) shall assure: (a) that biological monitoring of all offshore potential impact areas shall be for a minimum of ~~2~~1 years pre-construction and 2 years post-construction; (b) that monitoring and analytical methods are adequate to identify and accurately measure all short- and long-term impacts from all aspects of the dredging and nourishment effort; (c) that appropriate mitigation sites are available to address potential impacts; and (d) that the ~~sucessperformance~~ criteria and analytical methods used are adequate to demonstrate a difference between impact/mitigation site and control sites and shall include the following:

(i) clear and specific identification of the potential impact areas that will be monitored before and after the beach nourishment efforts, including intertidal reef and nearshore reefs, and change criteria that will be used to establish thresholds of impacts for mitigation;

(ii) schedule and frequency of monitoring efforts and monitoring reports;

(iii) discussion of the monitoring and analytical methods that will be used to evaluate the sites based on the change criteria for both short- and long-term impacts;

(iv) delineation and characterization of the potential mitigation sites that will be used if short- or long-term impacts are identified that meet the threshold triggering the mitigation requirement;

(v) clear and specific criteria for identifying impacts and for evaluating the ~~sucessperformance~~ of any necessary mitigation. If statistical tests are proposed, then the plan must specify biologically meaningful effect sizes (i.e., a difference between the control and the impact site, or between the control and the mitigation site) and specify alpha and beta, with alpha equal to beta. The field sampling plan must include sufficient replication to provide a statistical test with at least 80% statistical power (beta=0.2) to detect an effect of the stated size with alpha = 0.2. The proposed replication must be based on preliminary sampling data and a statistical power analysis. Smaller alpha and beta may be used. Alternatively, in the absence of a statistical analysis, project impacts will be measured as the change in the average metric of interest (e.g., area or density) at the potential impact site relative to the reference site. Prior to the start of construction, the Corps shall develop a quantitative biological sampling and analysis plan in

~~cooperation~~consultation with the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, Commission staff, and the Corps Engineering Research and Development Center (ERDC). This plan will include clear criteria to determine whether impacts to natural resources have occurred and whether any necessary mitigation has been successful. Such determinations will not be based simply on "best professional judgment."

(vi) Identification of the control or reference sites that will be used and the results of a preliminary field sample at both control and potential impact sites demonstrating that the control sites are appropriate.

To continue to work cooperatively throughout the final project planning and construction ~~phases~~efforts, the Corps will provide a copy of the final MMP to the Commission's Executive Director for review, prior to commencement of construction of the ~~first phase of~~initial ~~the dredging and~~ nourishment ~~project~~event. The Corps will carefully consider all comments by the Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated prior to ~~each~~ construction ~~phase. Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing.~~

~~4.~~5. Surfing Monitoring Plan Details. The Corps will submit to the Executive Director a Surfing Monitoring Plan to include and implement the following features:

(a) adequate baseline data collection, including, if feasible, a full year of pre-construction monitoring to determine the baseline condition (conditions at the project area and, as appropriate, at control sites).

(b) identification of locations to be monitored, the length of the pre-project monitoring, and interest groups to be involved in establishing the monitoring effort to identify surfing or surf quality changes that might be attributable to the nourishment project, including identifying criteria for a determination of what constitutes a significant alteration or impact. Another location within the region might also be chosen to act as a control site to help determine if there are changes within the region to surfing conditions that could be attributable to other factors other than project implementation.

(c) supplementing the "wave observation" component of the surf monitoring with observations about the surfing activities, including a usage scale of surfers in the water, both morning and mid-day, and describing the average and maximum ride lengths.

(d) given that video recordings are included, if observer counts are too difficult for one observer, video may be used to augment observer counts.

(e) when collecting user data, the analysis should be disaggregated into weekday and weekend data.

(f) for mid-day observations on days when surfers are kept out of the water by lifeguards, these should be recorded as restricted use days (not zero use days).

(g) establishing mechanisms for informing the local community about the project, and encouraging public comments on surfing quality (or other recreational concerns), including but not limited to: (i) a web site, (ii) pre-construction notifications to the public; and (iii) signs.

To continue to work cooperatively throughout the final project planning and construction ~~phases~~efforts, the Corps will provide a copy of the final Surfing Monitoring Plan to the Commission's Executive Director for review, prior to commencement of construction of the ~~first phase of the~~initial ~~dredging and~~ nourishment ~~project~~event. The Corps will carefully consider all comments by the Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated prior to ~~each~~ construction ~~phase~~. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing.~~

~~5.~~6. Staging Plan Details. The construction staging plans will assure that: (a) temporary easements for staging at each beach (Moonlight Beach and Fletcher Cove) will be obtained and will have fencing for saftey and security; ~~will avoid public beaches;~~ (b) the minimum number of public parking spaces (on and off-street) that are required for the staging of equipment, machinery, and employee parking that are otherwise necessary to implement the project will be used; and (c) staging will avoid using to the maximum extent feasible public beach parking lots, but when the use of these lots is unavoidable to implement the project, only the minimum amount of space in these lots will be used.

~~6.~~7. Water Quality Plan Details. The SWPPP will assure that: (a) the contractor will not store any construction materials or waste where it will be or could potentially be subject to wave erosion and dispersion; (b) no machinery will be placed, stored or otherwise located in the intertidal zone at any time, except for the minimum necessary to implement the project; (c) construction equipment will not be washed on the beach; (d) where practicable, the contractor will use biodegradable (e.g., vegetable oil-based) lubricants and hydraulic fluids, and/or electric or natural gas powered equipment; and (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.

~~7.~~8. On-Going Monitoring Reports. The Corps will provide to the Executive Director copies of all the ongoing monitoring reports required under Condition 2~~3~~, when they are published.

~~8.~~9. Out-of-Kind Mitigation. For any biological mitigation shown necessary by monitoring, the Corps will not proceed to implement any out-of-kind mitigations (e.g., using kelp habitat to mitigate surfgrass impacts, or providing mid-water habitat to mitigate for shallow-water habitat impacts) without first ~~showing~~undertaking ~~that~~ in-kind mitigation ~~is infeasible~~ consistent with the MMP. ~~In addition, if~~If the Corps later concludes that such in-kind mitigation is infeasible (i.e., failure), it will ~~create~~ proceed to ~~a~~ the ~~proposal~~ approach for out-of-kind mitigation ~~and submit it for Commission review and approval as a subsequent phase~~

~~of the subject Consistency Determination pursuant to 15 C.F.R. Section 930.36(d).~~consistent with the MMP and will provide the approach to the Executive Director for review. The Corps will carefully consider all comments by the Commission's Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated.

~~9.~~10. Dredging. All offshore dredging at Borrow Sites SO-5, SO-6, and MB-1 to obtain beach nourishment materials will occur below the depth of closure (i.e., outside the littoral drift zone and no shallower than -40 feet mean lower low water) at those locations, and only dredged materials physically compatible with receiver beaches will be placed at those locations.

~~10.~~11. Borrow Site Monitoring. Prior to the start of initial project construction, the Corps will submit a borrow site monitoring plan to the Commission's Executive Director for review. The plan will include measures to document the actual areas dredged during initial nourishment ~~and each subsequent re nourishment project~~event, the biological community affected, and the physical and biological temporal changes, including physical (multibeam sonar) and biological (benthic and infaunal sampling) monitoring of the borrow sites and nearby reference sites. The plan will include provisions for pre- and post-dredging surveys of all borrow areas used during initial nourishment ~~and renourishment events projects~~. Prior to the start of construction of the ~~first phase of the~~initial ~~dredging and~~ nourishment ~~project~~, the plan will be reviewed by representatives from the California Department of Fish and Wildlife, National Marine Fisheries Service, and the Commission. The Corps will carefully consider all comments by the Executive Director and will make all reasonable efforts to ensure that the concerns expressed are resolved and any necessary revisions incorporated. ~~prior to each construction phase. Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing.~~

~~11.~~12. Monitoring between Encinitas and Solana Beach Segments. Prior to the start of the project monitoring required by Condition 3, the Corps will submit evidence that shoreline, biological, and surfing monitoring for the project will also occur in the geographical area between the Encinitas and Solana Beach segments of the project, in order to accurately document potential project impacts to this area from possible downcoast movement of sand placed in the Encinitas segment.

~~12.~~13. Timing. As the Corps develops the final construction calendar for the project, the Corps will make every practicable effort to schedule beach nourishment activities outside the peak summer recreation season in order to minimize project impacts on public access and recreation. The Corps will submit the draft construction calendar to the Commission's Executive Director for review, will carefully consider the comments made by the Executive Director, and will make all reasonable efforts to ensure that the concerns expressed regarding construction scheduling and timing are resolved prior to construction. ~~Any significant disagreement between the Corps and the Executive Director will be brought before the Commission for a public hearing.~~

III. APPLICABLE LEGAL AUTHORITIES

A. Standard of Review. The federal Coastal Zone Management Act ("CZMA"), 16 U.S.C. § 1451-1464, requires that federal agency activities affecting coastal resources be "carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved State management programs." Id. at § 1456(c)(1)(A). The implementing regulations for the CZMA ("federal consistency regulations"), at 15 C.F.R. § 930.32(a)(1), define the phrase "consistent to the maximum extent practicable" to mean:

> *... fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.*

This standard allows a federal activity that is not fully consistent with California's Coastal Management Program ("CCMP") to proceed if full compliance with the CCMP would be "prohibited by existing law." The Corps, in its consistency determination, did not argue that full consistency is prohibited by existing law or provide any documentation to support a maximum extent practicable argument. Therefore, the standard before the Commission remains full consistency with the enforceable policies of the CCMP, which are the policies of Chapter 3 of the Coastal Act (Cal. Pub. Res. Code §§ 30200-30265.5).

~~**B. Phased Review.** The CZMA allows (and encourages) "phased federal consistency review" in cases where federal decisions to implement an activity are also made in phases. Section 930.36 (d) of the CZMA implementing regulations provides:~~

> ~~*(d) Phased consistency determinations. ... In cases where federal decisions related to a proposed development project or other activity will be made in phases based upon developing information that was not available at the time of the original consistency determination, with each subsequent phase subject to Federal agency discretion to implement alternative decisions based upon such information (e.g., planning, siting, and design decisions), a consistency determination will be required for each major decision. [15 CFR Section 930.36(d)]*~~

~~As noted in Section IV.A of this report, the Commission has determined that this is an appropriate mechanism to use to enable Commission review of future beach nourishment projects and out-of-kind mitigation plans to be carried out under the subject consistency determination as discussed in **Conditions 2 and 9**. Corps agreement with **Conditions 2 and 9** would provide for this mechanism.~~

BC. Conditional Concurrences. The federal consistency regulations (15 CFR § 930.4) provide for conditional concurrences, as follows:

> *(a) Federal agencies, ... should cooperate with State agencies to develop conditions that, if agreed to during the State agency's consistency review period and included in a Federal agency's final decision under Subpart C ... would allow the State agency to concur with the federal action. If instead a State agency issues a conditional concurrence:*

(1) The State agency shall include in its concurrence letter the conditions which must be satisfied, an explanation of why the conditions are necessary to ensure consistency with specific enforceable policies of the management program, and an identification of the specific enforceable policies. The State agency's concurrence letter shall also inform the parties that if the requirements of paragraphs (a)(1) through (3) of the section are not met, then all parties shall treat the State agency's conditional concurrence letter as an objection pursuant to the applicable Subpart . . . ; and

(2) The Federal agency (for Subpart C) ... shall modify the applicable plan [or] *project proposal, ... pursuant to the State agency's conditions. The Federal agency ... shall immediately notify the State agency if the State agency's conditions are not acceptable; and*

...

(b) If the requirements of paragraphs (a)(1) through (3) of this section are not met, then all parties shall treat the State agency's conditional concurrence as an objection pursuant to the applicable Subpart.

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July 2, 2013

Delivered via email

Larry Simon
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Federal Consistency Hearing, CD-003-13

Dear Mr. Simon,

Please accept these comments on behalf of the Surfrider San Diego County Chapter. The Surfrider Foundation is an organization representing 250,000 surfers and beach-goers worldwide that value the protection and enjoyment of oceans, waves and beaches. For the past decade, the San Diego Chapter of the Surfrider Foundation has reviewed and commented on coastal construction projects and policy in San Diego County. We take a project of this size and expense very seriously. As stakeholders in this project, our staff and volunteers have dedicated hundreds of hours in meetings with the local cities and consultants as well as reviewing the over 1500 pages of the draft EIR/EIS and its fourteen appendices.

We were impressed by the Coastal Commission (CCC) Staff report released on June 28, 2013, which takes the right approach and is an excellent start to addressing some of our concerns. We support the acceptance of the thirteen proposed conditions as a minimum, and would advocate for additional conditions to make this project comply with the Coastal Act. The staff report was clear with its assertion that impacts to unique surfing resources must be avoided, which we applaud. However, we are perplexed as to why staff only made recommendations to correct these impacts at "Tabletops" and not the other reef breaks with anticipated impacts.

We urge the Commission to add further conditions to ensure all "likely" impacts to surfing are prevented. We especially request that those areas already identified in the Corps EIR as having likely impacts be reduced to no or unlikely impact. The identified likely impact areas include, Stonesteps and Fletcher Cove. In addition, several surf breaks like Cherry Hill and Rockpile were not considered in the impact analysis and should also be considered as well as other relevant breaks in the area.

Reducing the amount of sand to prevent the impacts to surfing resources would avoid many of the habitat impacts as well. We feel the initial sand placements are still far too large. All of the proposed project alternatives exceed the natural sand input into the entire Oceanside littoral cell. In other words, the project proposes to place significantly more sand in two small segments (approximately 4 miles), than naturally enters the entire system (52 miles). Furthermore, this project proposes to place 960,000 cubic yards in Solana Beach alone, while the last RBSP II project placed 1.5 million cubic yards over eight locations throughout San Diego County. This includes 460,000 cubic yards placed in Imperial Beach which had unintended negative consequences, including damage to private property and loss of surfing resources.

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches through a powerful activist network. Founded in 1984 by a handful of visionary surfers in Malibu, California, the Surfrider Foundation now maintains over 250,000 supporters, activists and members worldwide. For an overview of the Surfrider Foundation San Diego Chapter's current campaigns, programs and initiatives go to www.surfridersd.org or contact us at info@surfridersd.org or (858) 622-9661.

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Additional calculations must be conducted to determine if Condition 1 (reduced nourishment in Solana Beach segment) is sufficient to not trigger the "likely" impacts to Tabletops reef. If not, the sand terminus should be moved further south and the amount of sand should be further reduced. Furthermore, it is unclear from this condition if the amount of sand will be reduced or just moved south. The Commission should provide direction to reduce the amount of sand in this segment based on the factor of 3 deviations from the natural sand input for the entire cell.[1]

The CCC staff report correctly acknowledges that surfing resources stand to lose the most if this project moves forward as proposed. To make matters worse, the negative impacts to surfing have been significantly underestimated and dismissed by the Corps. Illustrating this fact is a discrepancy in a statement on surfing attendance from Army Corps reported in the CCC Staff report (p 34-35):

> "In a response to a May 2013 Commission staff inquiry regarding potential project impacts to surfing identified in the *Feasibility Study*, the Corps stated that:
>
> *"The surfing analysis done for this feasibility study demonstrates a change in surfing quality along five key measures but does not conclude the overall impact is beneficial or detrimental. Given that this detailed analysis of surfing does not indicate an overall direction from surfing impacts (positive or negative) and given that surfing visits presently make up a relatively small share of total beach visitations to the study area estimated at less than 10% of total visits to the study area shoreline, the overall impact to recreation values from surfing is not expected to affect plan selection if quantified. Further, surfing visits are not expected to increase as much as other recreation visits in the future due to the significant beach-based recreation that would be supported by the project. Consequently, surfing impacts have not been quantified to establish recreation benefits but have been analyzed to develop a qualitative understanding of how surfing could potentially be impacted to aid stakeholders. Surf breaks are expected to change in character in those areas where shallow reefs are covered in sand, but the number of surfing opportunities is not expected to change."*

The estimate provided in the Army Corps response letter that less than 10% of total visits to the study area are due to surfers is in conflict with the beach attendance data and survey conducted in Solana Beach in 2009[2]. In this report (data compiled using both beach counting and surveys), at least 26% of beach users are there to surf (see excerpt below from page 3-7).

> "Beach Visitor Survey

---

[1] Carla Chenault Grandy, Gary B. Griggs, July 22 to 26, 2007, Variability of Sediment Supply to the Oceanside Littoral Cell, *Proceedings of Coastal Zone 07, Portland, Oregon,* p 4 Table 2, University of California, Santa Cruz, Earth and Planetary Science Department and Institute of Marine Sciences. http://www.csc.noaa.gov/cz/CZ07_Proceedings/PDFs/Poster_Abstracts/3150.Chenault%20Grandy.pdf Notes 343,000 as the Natural sand input to the cell before channelization and dams.

[2] City of Solana Beach, DRAFT LAND LEASE/RECREATION FEE STUDY REVISED JULY 2010 Prepared by PMC, 6020 Cornerstone Court West, Suite 350, San Diego, California 92121 www.pmcworld.com

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"For one year, starting in July 2008, ~~462~~ 563 beach visitors were interviewed. Over one~~A~~ quarter (~~25~~26%) said that their primary purpose for being at the beach was surfing (Table 3-6). This was closely followed by sunning/lying on the beach (24%) and walking/running on the beach (~~21~~22%)."

TABLE 3-6
PRIMARY PURPOSE FOR BEACH VISIT

Primary Purpose	Percent
Surfing/Water sports	26%
Sunning/lying on beach	24%
Walk/run on beach	22%
People watching	9%
Swimming/play in water	7%
Collecting shells, beachcomb, etc.	5%
Fishing	3%
Special event	3%
Picnic	1%
Total	100%

Source: CIC Research, July 2009

Below are the estimated 2008-9 attendance figures for Solana Beach (Table 3-9, page 3-10 to 3-11). Note the total estimated adult attendance of 101,414.9 of which over 26,446.9 are estimated as surfers.

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TABLE 3-9
ESTIMATED ANNUAL VALUE PER SEGMENT

Segment	AdultVisitorDaysPerYear				ChildrenVisitorDaysPerYear				EstimatedValue@$19.82/1.15PerVisitorPerDay			
	Beach	Wading	Surfing	Total	Beach	Wading	Surfing	Total	Beach	Wading	Surfing	Total
4	2,300.4	489.5	2,920.4	5,710.3	425.2	170.1	-	595.3	$48,654	$10,352	$61,767	$120,773
5	3,409.9	440.5	946.3	4,796.7	1,176.4	496.1	-	1,672.5	$72,119	$9,317	$20,014	$101,449
6	1,174.7	195.8	65.3	1,435.7	141.7	255.1	14.2	411.0	$24,845	$4,141	$1,380	$30,366
7	652.6	130.5	97.9	881.0	85.0	70.9	28.3	184.3	$13,803	$2,761	$2,070	$18,634
8	652.6	32.6	114.2	799.4	14.2	14.2	-	28.3	$13,803	$690	$2,415	$16,908
9	685.2	146.8	130.5	962.6	14.2	28.3	-	42.5	$14,493	$3,106	$2,761	$20,359
10	473.1	32.6	32.6	538.4	28.3	-	-	28.3	$10,007	$690	$690	$11,387
11	668.9	65.3	-	734.2	127.6	-	-	127.6	$14,148	$1,380	$-	$15,528
12	212.1	16.3	-	228.4	56.7	14.2	-	70.9	$4,486	$345	$-	$4,831
13	2,088.3	163.2	1,403.1	3,654.6	283.5	14.2	-	297.6	$44,168	$3,451	$29,676	$77,295
15	7,390.8	1,419.4	4,046.2	12,856.3	1,842.6	1,233.1	70.9	3,146.5	$156,315	$30,021	$85,576	$271,911
16	8,516.5	1,908.9	930.0	11,355.3	3,019.0	1,573.3	42.5	4,634.8	$180,124	$40,373	$19,669	$240,165
17	1,223.6	293.7	440.5	1,957.8	269.3	170.1	-	439.4	$25,880	$6,211	$9,317	$41,408
18	1,370.5	375.2	440.5	2,186.2	70.9	212.6	-	283.5	$28,985	$7,937	$9,317	$46,239
19	538.4	277.4	342.6	1,158.4	56.7	127.6	-	184.3	$11,387	$5,866	$7,246	$24,500
20	81.6	81.6	114.2	277.4	28.3	14.2	14.2	56.7	$1,725	$1,725	$2,415	$5,866
21	587.3	32.6	163.2	783.1	42.5	70.9	-	113.4	$12,422	$690	$3,451	$16,563
22	668.9	163.2	114.2	946.3	85.0	42.5	-	127.6	$14,148	$3,451	$2,415	$20,014
23	913.6	114.2	179.5	1,207.3	70.9	70.9	-	141.7	$19,324	$2,415	$3,796	$25,535
24	766.8	114.2	97.9	978.9	28.3	14.2	-	42.5	$16,218	$2,415	$2,070	$20,704
25	1,680.5	228.4	195.8	2,104.7	198.4	70.9	-	269.3	$35,542	$4,831	$4,141	$44,513
26	2,316.8	310.0	587.3	3,214.1	326.0	184.3	-	510.2	$48,999	$6,556	$12,422	$67,978

(table continues on next page)

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Segment	AdultVisitorDaysPerYear				ChildrenVisitorDaysPerYear				EstimatedValue@$19.8321.15PerVisitorPerDay			
	Beach	Wading	Surfing	Total	Beach	Wading	Surfing	Total	Beach	Wading	Surfing	Total
27	2,169.9	424.2	473.1	3,067.2	481.9	411.0	-	892.9	$45,894	$8,972	$10,007	$64,872
28	1,925.2	489.5	587.3	3,002.0	680.3	595.3	-	1,275.6	$40,718	$10,352	$12,422	$63,492
29	1,778.4	440.5	571.0	2,789.9	439.4	510.2	28.3	978.0	$37,612	$9,317	$12,077	$59,006
30	1,468.4	489.5	1,011.5	2,969.4	609.5	453.6	-	1,063.0	$31,056	$10,352	$21,394	$62,802
31	1,811.0	424.2	1,011.5	3,246.7	141.7	241.0	14.2	396.9	$38,302	$8,972	$21,394	$68,668
32	2,072.0	244.7	1,158.4	3,475.1	70.9	170.1	14.2	255.1	$43,823	$5,176	$24,500	$73,499
33	995.2	130.5	1,305.2	2,431.0	155.9	70.9	-	226.8	$21,049	$2,761	$27,605	$51,415
34	881.0	195.8	897.3	1,974.1	113.4	113.4	-	226.8	$18,634	$4,141	$18,979	$41,753
35	571.0	65.3	750.5	1,386.8	70.9	56.7	14.2	141.7	$12,077	$1,380	$15,873	$29,331
36	1,925.2	146.8	701.6	2,773.6	283.5	170.1	-	453.6	$40,718	$3,106	$14,838	$58,661
37	2,153.6	261.0	2,121.0	4,535.6	326.0	155.9	14.2	496.1	$45,549	$5,521	$44,858	$95,928
38	6,232.4	1,337.8	2,121.0	9,691.2	1,715.0	1,431.5	-	3,146.5	$131,815	$28,295	$44,858	$204,969
39	750.5	179.5	375.2	1,035.2	127.6	198.4	14.2	340.2	$15,873	$3,796	$7,937	$27,605
Total	63,107.0	11,861.1	26,446.9	101,414.9	13,606.7	9,425.4	269.3	23,301.4	$1,334,713	$250,862	$559,351	$2,144,926

This data is relevant to data used in the Corps study as we can compare attendance from the Solana Beach survey to data used by the Corps. The data compiled in the Solana Beach report concurs with data provided by the Army Corps Data in their Encinitas Solana Beach Draft Main Report (p 305-306) showing estimated attendance in 2008-2009 as 101,075, which is very close to the more scientifically estimated data from the City of Solana Beach.

"4.13.4 Beach Attendance Estimates

"Table 4.13-1 provides beach attendance estimates compiled for Cardiff State Beach, San Elijo State Beach, and by the Cities of Encinitas and Solana Beach for local beaches. There are four state beaches within the City of Encinitas. Cardiff State Beach and San Elijo State Beach are managed by the California Department of Parks and Recreation. The other two state beaches, Leucadia and Moonlight State Beaches are managed by the City of Encinitas. Beach attendance counts are normally people recreating in the water or on the sand, and at adjacent picnic areas, parking lots, recreation concessions and bike paths. They do not include people that merely transit on bikes or in cars. This is an estimate by lifeguards on duty (USLA 2012)."

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Table 4.13-1 Beach Attendance by Jurisdiction, 2001-2011

Fiscal Year	San Elijo State Beach	Cardiff State Beach	Year	City of Encinitas	City of Solana Beach
2001/02	766,100	1,189,445	2001	3,414,129	850,000
2002/03	801,096	1,315,308	2002	0	0
2003/04	857,860	1,274,876	2003	0	0
2004/05	858,859	1,225,631	2004	-	-
2005/06	996,646	1,715,856	2005	2,502,345	-
2006/07	840,932	1,330,007	2006	-	-
2007/08	1,016,013	2,221,668	2007	2,891,026	0
2008/09	960,683	2,264,552	2008	2,992,331	101,075
2009/10	860,706	1,538,338	2009	3,027,050	202,275
2010/11	973,238	1,392,097	2010	3,440,422	207,300
-	-	-	2011	0	210,500

Source: USACE 2003, USLA 2012 (United States Lifesaving Association) Available at http://www.usla.org/?page=STATISTICS, California Department of Parks and Recreation 2012b

If the data concerning total beach attendance between the Solana Beach report and the Army Corps draft EIS/EIR is so similar, why is the Corps so drastically under-estimating the percentage of beach-goers who go to the beach to surf? This discrepancy in data is another example of how project proponents have been dismissive of the true impacts this project poses to surfing resources and surfers in general. Additionally, the beach-going public is for the most part unaware of the potentially irreversible impacts this long-term project stands to impose. Over the past few months, Surfrider San Diego has been working diligently to inform the beach-going public. Please see this four-minute video, which captures the reactions of local surfers and members of the surf industry to this proposed project. Furthermore, 270 San Diegans submitted letters of support echoing our comments to both cities and the Army Corp of Engineers, and in the last month we have collected more than 200 local signatures on a petition demanding a "locally preferred alternative" to this project that does not trigger the "likely" impacts to our treasured surfing resources.

Please do not hesitate to contact me at 619-246-8881 or Julia@surfridersd.org for more information or with questions.

Best Regards,
Julia Chunn-Heer
Campaign Coordinator, San Diego County Chapter of the Surfrider Foundation
Resident of Encinitas

Jim Jaffee
Advisor, San Diego County Chapter of the Surfrider Foundation
Resident of Solana Beach

Kristin Brinner
Beach Preservation, San Diego County Chapter of the Surfrider Foundation

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of our world's oceans, waves and beaches through a powerful activist network. Founded in 1984 by a handful of visionary surfers in Malibu, California, the Surfrider Foundation now maintains over 250,000 supporters, activists and members worldwide. For an overview of the Surfrider Foundation San Diego Chapter's current campaigns, programs and initiatives go to www.surfridersd.org or contact us at info@surfridersd.org or (858) 622-9661.

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Resident of Solana Beach

Attached:
Surfrider's comments submitted in response to the Notice of Preparation (NOP)

Surfrider Foundation, San Diego County Chapter
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Phone (858) 622-9661 Fax (858) 622-9961

June 26, 2013 **Delivered via email**

Larry Simon
California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Federal Consistency Hearing, CD-003-13

Dear Mr. Simon,

The National Economic Development (NED) alternative and other proposed alternatives of the Encinitas-Solana Beach Coastal Storm Damage Reduction Project (the Project) cannot be found consistent with the public access, recreation, and surfing policies (Sections 30210-30213, and 30220) of the Coastal Act. (CD-003-13 (U.S. Army Corps of Engineers, Encinitas and Solana Beach)) According to the draft Environmental Impact Report/ Environmental Impact Statement (EIR/EIS) (Appendix B Table 11.4.7: Changes to Reef Breaks), the amount of sand used in this project will "likely" impact Stone Steps, Table Tops, and Pillbox in ways detrimental to surfing with the likely transformation of these surf spots from reef breaks to beach breaks. Page B-303 of the EIR/EIS goes on to say:

> "Table Tops is a hollow right reef break and is best represented by profile SD-610. Bottom contours for this reef are relatively prominent as shown in Figure B9-4-11. The total profile volume is greater than the profile volume standard deviation, so measurable reef changes are likely. If this surf site were measurably changed to more like a reef-beach break, it is expected that the reef exposure above the sandy bottom would become less pronounced and the break would become somewhat less hollow, with lower breaker intensities. This could be considered an improvement for intermediate surfers, but would likely be a detriment to more advanced surfers. If the sand thickness were further increased, the reef could become completely buried, changing the surf site to a beach break. If this were to occur, the rather unique albeit fickle nature of this surf site would be lost, changing it to yet another beach break. Since this is currently an advanced surf site and it is far from shore, beginning surfers are not likely to attempt this surf site and would not

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experience any change to their surfing experience. For other surfers however this would likely result in more closeouts, shorter rides, and reduced surfability."

There are several errors in their description of the existing break and the effects transformation of this reef break into a beach break would have on surfing. While Table Tops is a right at times in the winter, the prized left breaking waves that occur during long period south swells are not given any mention. Along with burial of the reef that would significantly and likely degrade the right, we believe the left breaking wave will also be damaged. It should also be noted that both waves are in the Marine Protected Area. A picture of the left on the long period south swell of June 8th 2013 is shown below.[1]

[1] Photo from Tabletops gallery at http://ascip.smugmug.com/SurfPix2013/Seaside/Tabletops-6-8-13/29871360_SX6ZNZ#!i=2565290761&k=RC2DPkk Additional galleries are available on the parent site by searching for Tabletops.

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of oceans, waves and beaches through a powerful activist network. 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 http://sandiego.surfrider.org/ or contact us at info@surfridersd.org or (858) 622-9661.

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In addition to the statement about likely degradation of Tabletops, similar statements are in the EIR/EIS regarding Stone Steps and Pillbox.

No impact analysis of other reef breaks in the area such as Rockpile or Cherry Hill was conducted.

In addition to the likely significant alteration of surf breaks, all alternatives of the proposed project will have "significant" impacts to biological and cultural resources through burial of reefs, as shown on page S-9 of the EIS.

Alternative	Biological Resources	Cultural Resources
Solana Beach		
SB-1A: Beach Nourishment (200/300 ft; 13/14-yr cycle)	**Significant** Sand introduced into the system would indirectly impact up to 8.4 acres of marine biological resources (benthic habitat) as a result of burial or degradation of sensitive habitats and resources, under the low sea level rise scenario. Mitigation in the form of a 16.8-acre artificial reef would be required.	**Significant** The sensitivity of prehistoric resources within each borrow site may vary laterally based on the occurrence of submerged landforms, and vertically, based on the types of sediments revealed by the vibracore sample. While the sensitivity of contexts around the borrow sites are generally assessed as low, there is the potential for discovery and/or loss of sensitive cultural resources during dredging activities. A monitoring program will be implemented to avoid potential impacts associated with discovery of resources.
SB-1B: Beach Nourishment (150 ft; 10-yr cycle) and SB-2A: Hybrid (150 ft; 10-yr cycle)	**Significant** Sand introduced into the system would indirectly impact up to 6.8 acres of marine biological resources (benthic habitat) as a result of burial or degradation of sensitive habitats and resources, under the low sea level rise scenario. Mitigation in the form of a 13.6-acre artificial reef would be required.	**Significant** Consequences are similar to SB-1A, however, since the volume of material to be dredged under these alternatives is reduced; the potential for discovery and impact to prehistoric resources is incrementally reduced. A monitoring program will be implemented to avoid potential impacts associated with discovery of resources.
SB-1C: Beach Nourishment (100 ft; 10-yr cycle) and SB-2B: Hybrid (100 ft; 10-yr cycle)	**Significant** Sand introduced into the system would indirectly impact up to 1.6 acres of marine biological resources (benthic habitat) as a result of burial or degradation of sensitive habitats and resources, under the low sea level rise scenario. Mitigation in the form of a 3.2-acre artificial reef would be required.	**Significant** Consequences are similar to SB-1A, however, since the volume of material to be dredged under these alternatives is reduced; the potential for discovery and impact to prehistoric resources is incrementally reduced. A monitoring program will be implemented to avoid potential impacts associated with discovery of resources.
SB-3: No Action	Less than significant	Less than significant

The main reason for the degradation of surf breaks and burial of reefs is the excessive amount of sand being injected into the project area and sensitive areas. **Figure 1** shows data from

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Grandy and Griggs (2007)[2] indicating that beach nourishment projects have kept the sand volume input above the natural condition when considering projects from 1950-2002.

Source	Average Natural Inputs (m^3/yr)	Actual Inputs 1950-1979 (m^3/yr)	Actual Inputs 1980-2002 (m^3/yr)
Rivers/Streams	220,000	100,000	100,000
Cliff Erosion	103,000	86,000	86,000
Gullying	20,000	20,000	20,000
Beach Nourishment	0	438,000	260,000
Total:	343,000	644,000	466,000

Figure 1: Natural sand volume to the Oceanside Littoral Cell has been exceeded by nourishment projects.

Since 2002, additional sand has been added that would approach the natural inputs. In sharp contrast, all of the proposed alternatives in the Project exceed all natural sand input to the Oceanside littoral cell in each of the two project reaches in a single event. This is shown in Table ES-1 Final Alternatives 1, page S-6 of the EIR/EIS.

[2] Carla Chenault Grandy, Gary B. Griggs, July 22 to 26, 2007, Variability of Sediment Supply to the Oceanside Littoral Cell, *Proceedings of Coastal Zone 07, Portland, Oregon*, p 4 Table 2, University of California, Santa Cruz, Earth and Planetary Science Department and Institute of Marine Sciences. http://www.csc.noaa.gov/cz/CZ07_Proceedings/PDFs/Poster_Abstracts/3150.Chenault%20Grandy.pdf

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Encinitas (EN)		Alternative EN - 1A: Beach Nourishment (100 ft; 5-yr cycle)	Alternative EN - 1B: Beach Nourishment (50 ft; 5-yr cycle)		Alternative EN-2A: Hybrid (100 ft; 10-yr cycle)	Alternative EN-2B: Hybrid (50 ft; 5-yr cycle)	Alternative EN -3: No Action
Initial Placement Volume (cy)	High SLR	730,000	390,000		800,000	390,000	Assumes that the continued practice of emergency permitting for seawalls along the segment would continue.
	Low SLR	680,000	340,000		700,000	340,000	
Re-Nourishment Cycle	High SLR	5-yr	5-yr		10-yr	5-yr	
	Low SLR	5-yr	5-yr		10-yr	5-yr	
Added Beach MSL Width	High SLR	100 ft	50 ft		100 ft	50 ft	
	Low SLR	100 ft	50 ft		100 ft	50 ft	
Solana Beach (SB)		**Alternative SB - 1A: Beach Nourishment (200 ft; 13-yr cycle)**	**Alternative SB - 1B: Beach Nourishment (150 ft; 10-yr cycle)**	**Alternative SB-1C: Beach Nourishment (100 ft; 10-yr cycle)**	**Alternative SB-2A: Hybrid (150 ft; 10-yr cycle)**	**Alternative SB-2B: Hybrid (100 ft; 10-yr cycle)**	**Alternative SB-3: No Action**
Initial Placement Volume (cy)	High SLR	1,620,000	790,000	540,000	790,000	540,000	Assumes that the continued practice of emergency permitting for seawalls along the segment would continue.
	Low SLR	960,000	700,000	440,000	700,000	440,000	
Re-Nourishment Cycle	High SLR	14-yr	10-yr	10-yr	10-yr	10-yr	
	Low LSR	13-yr	10-yr	10-yr	10-yr	10-yr	
Added Beach MSL Width	High SLR	300 ft	150 ft	100 ft	150 ft	100 ft	
	Low SLR	200 ft	150 ft	100 ft	150 ft	100 ft	

Table ES-1 Final Alternatives 1

In addition to excessive volumes of sand, the Project proposes to make beach widths exceed the natural widths in all Solana Beach alternatives except for 2B. Table 4.2-2, Page B-43, Appendix B of the EIR/EIS shows Mean Sea Level beach widths from 1996-2009. The widest the beach at Fletcher Cove over this period was immediately after the SANDAG project in 2001 when it became 171 ft.

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Transect	Mean Sea Level (MSL) Beach Widths [feet]											
	Spring 1996	Spring 1998	Spring 2000	Fall 2000	Spring 2001	Fall 2001	Spring 2004	Spring 2005	Spring 2006	Spring 2007	Spring 2008	Spring 2009
Stone Steps												
SD-670 Moonlight Beach	106	101	136	227	124	271	148	130	174	158	180	187
Stone Steps												
SD-670 Moonlight Beach	106	101	136	227	124	271	148	130	174	158	180	187

Table 4.2-2 Recent Mean Sea Level Shoreline Beach Widths Within The Encinitas and Solana Beach Study Area

Otherwise it was below 113 ft every year including prior to the El Niño of 1998. The El Niño was attributed to causing the "erosion problem" in various places in the EIR/EIS. The lowest width was 71 ft after the El Niño of 1998.

Appendix C, pages C-20 to C-21 details data relating to cliff retreat prior to man's influence. For example in Solana Beach the retreat rate is 0.116/ft/yr according to Table 4.1-1 Geologic (Pre-Anthropengic) Rate of Coastal-Bluff Retreat. The EIR/EIS then goes on to state:

> "A retreat rate of 0.11 to 0.14 foot per year would suggest an equilibrium beach width of about 90 4 to 100 ft, based on the relationship developed by Everts (1991). This may represent the long-term average pre-anthropogenic beach width during the last 6,000 years. The significant and fairly pervasive loss of the protective sand beach over the last 20 to 30 years has significantly increased the pre-anthropogenic average coastal bluff retreat rate, primarily affecting the area 8 south of Beacons in Encinitas and the majority of the Solana Beach coastline."

It appears therefore that the observed beach width between 1996-2009 was within the historical estimated widths of 90-100 ft except when it was exceeded due to erosion. The project as proposed will widen the beach to 200 ft. Worse than this, with sea level rise, the Project will also drastically increase the volume of sand in the nearshore thus burying the

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reefs because the shoreline historically eroded due to sea level rise. As discussed on page C-20 of the EIR/EIS, sea level rise alone causes erosion of the sea cliff and is what forms the shore platforms such as Table Tops reef.

> "Before anthropogenic changes in the 20th Century, the coastal bluffs retreated in accordance with long-term sea level rise since the last glacial maximum. By approximately 6,000 years ago, sea level had rapidly risen to within 12 to 16 ft of the present level. The rate then slowed by an order of magnitude to approximately 0.002 foot per year from an earlier rate of 0.028 foot per year. The configuration of the bluffs was similar to the pre-anthropogenic configuration throughout the more recent period of slow sea level rise, consisting of a transient sandy beach, sea cliffs and upper bluffs. Using this history of sea level rise, the geologic retreat rate before anthropogenic changes can be estimated by finding the distance on the shore platform between the sea level or the sea cliff and the 12- and 16-foot depth contours. Where the base of sea cliff is below sea level, an assumption is made that the same condition existed previously and the depth below sea level is used to adjust the 12-foot or 16-foot depth downward."

Further complicating the shoreline dynamics is that the rate of sea level rise is in excess of the 0.002 foot per year over the last 6,000 years. The rate of sea level rise over the last 100 years is 0.68 ft per century or 0.0068ft/yr a full factor of 3 higher than the long term 6000 year average. The rate of rise is expected to accelerate. Appendix B, page B-24 of the EIR/EIS summarizes this well:

> "A trendline analysis of yearly Mean Sea Level (MSL) data recorded at La Jolla in San Diego County 1924 to 2006 indicates that the MSL upward trend is approximately 0.0068 feet per year, as shown in Figure 3.2-1.
>
> "According to the Intergovernmental Panel on Climate Change (IPCC), global average sea levels have risen approximately 0.3 feet to 0.8 feet over the last century and are predicted to continue to rise between 0.6 ft and 2.0 ft over the next century (IPCC, 2007)."

The preceding discussion is meant to point out that the important issue of the natural shoreline dynamics is the retreat rate of the shoreline associated with sea level rise. The

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Project as proposed is meant to stop this shoreline retreat process by placing large volumes of sand on the beaches. This will result in the burial of reefs and shore platforms with volumes of sand far greater in magnitude than historically was supported. These burial will have severe and unmitigated impacts on coastal access, recreation, and resources (reefs included). As the main purpose of this project is the protection of property and not the protection of resources, this project cannot be found consistent with the Coastal Act as proposed.

We also wish to share our Notice of Public Comments where we included historical photos of Solana Beach showing caves in the 1920s as well as cliffs without vegetation or substantial beach width.

Picture of Sea Caves from Solana Beach Civic and Historical Society website Circa 1924

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of oceans, waves and beaches through a powerful activist network. 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 http://sandiego.surfrider.org/ or contact us at info@surfridersd.org or (858) 622-9661.

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Aerial View of Solana Beach in 1920s showing lack of vegetation on bluff face and undercutting. Lack of vegetation indicates active erosion as compared to bluffs around the lagoon of same geologic constitution as those fronting the ocean. Also evident is wave runup directly to the base of the bluffs and lack of a wide sandy beach. Photo from Solana Beach Civic and Historical Society website.

In addition to our comments, we have reviewed the Final Independent External Peer Review Report of the Project prepared by Battelle Memorial Institute, as well as other agency public comments, and hope these are given weight in the Consistency Hearing. We are attaching both of these documents to our comments.

The Surfrider Foundation is a non-profit grassroots organization dedicated to the protection and enjoyment of oceans, waves and beaches through a powerful activist network. 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 http://sandiego.surfrider.org/ or contact us at info@surfridersd.org or (858) 622-9661.

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Regards,

Jim Jaffee
Advisor, San Diego County Chapter of the Surfrider Foundation
Resident of Solana Beach

Kristin Brinner
Beach Preservation Committee Communications Chair, San Diego County Chapter of the Surfrider Foundation
Resident of Solana Beach

Julia Chunn
Campaign Coordinator, San Diego County Chapter of the Surfrider Foundation
Resident of Encinitas

Attached:

ACOE agency comments.pdf

EIR_EIS Independent Review.pdf

Simon, Larry@Coastal

From: Dennis Lees <dennislees@cox.net>
Sent: Tuesday, June 18, 2013 10:27 AM
To: Dixon, John@Coastal; Simon, Larry@Coastal
Subject: Re: USACE Coastal protection program for Encinitas and Solana Beach
Attachments: ACOE EIS-EIR comment ltr.docx; Addendum to Lees comments for USACE EIS-EIR.docx; ACOE Encinitas-Solana Beach Presentation2-1.pptx

Hi, John and Larry,

Thanks for the response, John. I really appreciate it. What I've sent you both are the two comment letters that I sent to the Corps, as well as a PowerPoint presentation that summarizes some of the major points in what I sent the Corps, and then the web addresses of a blog series that adds some other thoughts, especially on the way the consultants' conclusions were used to its advantage by the Corps to slant the Cost: Benefits Analysis from negative to barely positive. If you add in the costs for lost resources, mitigation, and transporting sand from borrow sites that are not in the recently created Swami's Marine Protected Area, the project has a negative benefit. The sand "budget" is shown in the attached spreadsheet described below.

http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program
http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program-part-2
http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program-part-3

I've also included an analysis of the sand requirements for the project that details the data provided by ACOE and calculations that I've made based on its data showing the actual capability of the three indicated borrow sites to provide sand. The important calculations are shown in red. An important indication is that SO-6, off San Elijo Lagoon, probably can only be dredged to 18 feet. Considering that SO-6 is in a filled river valley, like SO-5, which has about 39 feet of sand, (both were river valleys before they were submerged), the thinness of the sand lens in SO-6 is likely because of previous dredging in that borrow site, especially the recent SANDAG program. The sand placed on the beach at Moonlight Beach actually contained a substantial amount of large pebbles and cobble which not reflected in the sediment analysis for that borrow site, which apparently only represent the upper couple of feet of sediment, not the entire sediment column.

Another new concern that I have relates to to Pismo clams. As you can see in photo in the addendum comments, Pismo clam provided the most abundant fragments contained in the replenishment sand from which we collected (bottom center in the photo). The living offshore clam populations act as brood stocks for the sparse juvenile intertidal and inshore populations of Pismos. These intertidal and shallow populations were probably decimated by the 1982-83 El Niño storms, like the littleneck clam populations at San Onofre and, like the littlenecks, still have not recovered. Dredging reduces the offshore stocks to a degree. More important, however, is the fact that the sand placed on the beach generally buries the young Pismos that have recently recruited to the new sands very deeply. It is likely they are unable to burrow upward in the sand so they probably are unable to regain contact with the water column and therefore perish. Consequently, if this program is allowed to proceed, age of the intertidal and shallow subtidal populations will never exceed ≈4 years. Mature populations will not be able to develop for at least 50 years.

OK, gents, I look forward to seeing CCC's decision on this project. The environmental issues and the manipulated Cost: Benefits Analysess are just two of the several perspective in which this is a very flawed project.

Cheers, Dennis

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

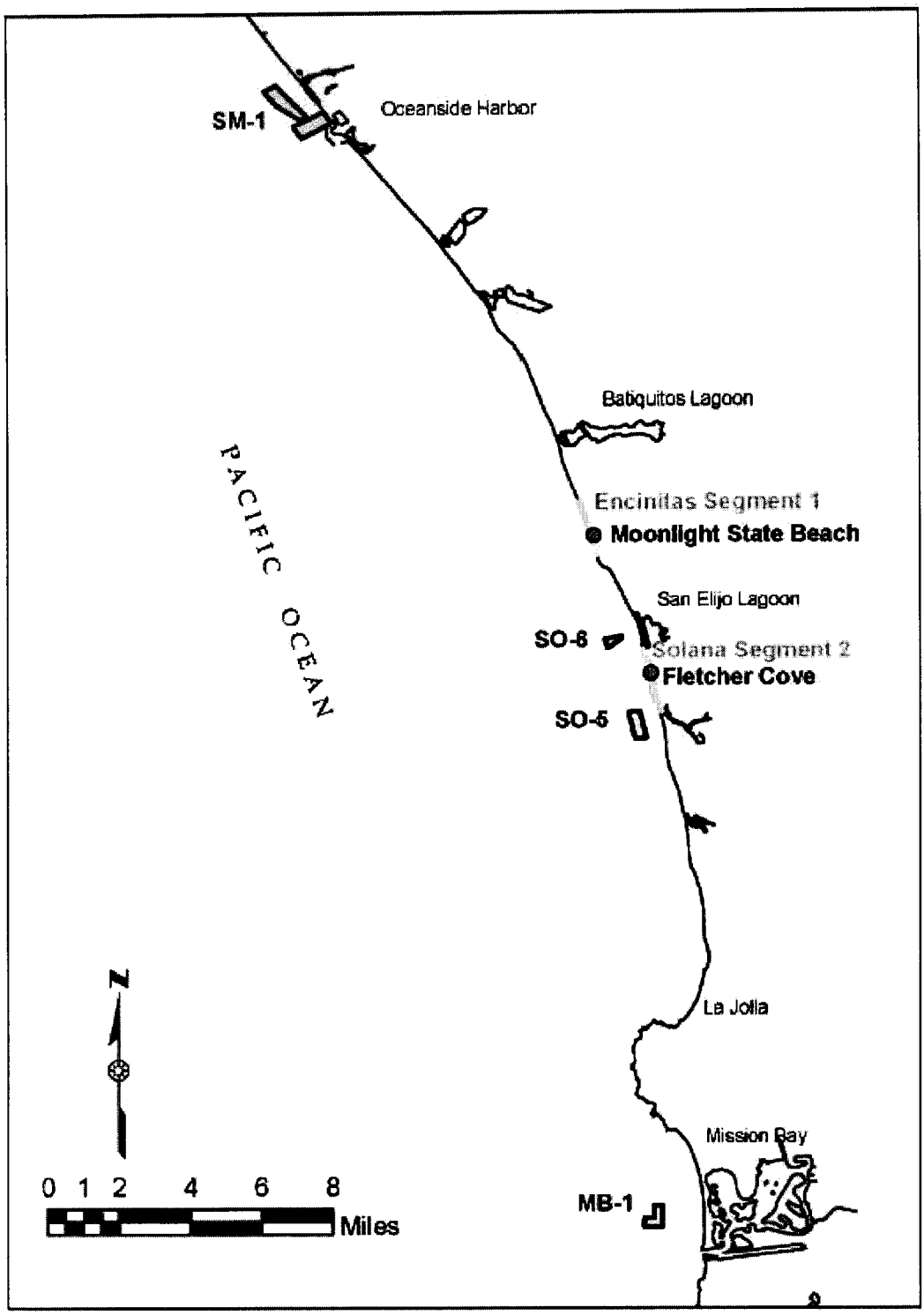

Figure 12.1-1 Potential Offshore Borrow Sites

On Jun 17, 2013, at 9:24 AM, Dixon, John@Coastal wrote:

Hi Dennis,

Larry Simon is the analyst in Federal Consistency who is following this project. Please send us a copy of the comments you submitted to the Corps. Your data and perspective are very helpful.

Regards,

John

John D. Dixon, Ph.D.
Ecologist
California Coastal Commission
1385 8th Street, Suite130
Arcata, CA 95521
707-826-8950 ext 210
John.Dixon@coastal.ca.gov

From: Dennis Lees [mailto:dennislees@cox.net]
Sent: Wednesday, June 12, 2013 5:06 PM
To: Engel, Jonna@Coastal; Dixon, John@Coastal
Subject: USACE Coastal protection program for Encinitas and Solana Beach

Hi, folks,

John, it's been too long since we talked. I hope you are having fun!!

As Jonna knows, I'm very interesting in the above cited program and have been campaigning vigorously to get the Corps to modify the program. However, I've run up against a brick wall with the Corps. I believe I've made some headway with the city council members in Emcinitas but they don't make their final decision for a couple of months.

I understand the EIS/EIR is going to the Coastal Commission soon and I wanted to contact the staff member that will be reviewing the environmental side of that badly flawed document. I have reviewed it reasonably well and submitted 28 pages of comments to the Corps detailing inconsistencies and flawed analyses. I've spoken before the council and at the local briefing by the Corps, and have been pretty proactive in trying to get the attention of the decision-makers.

I'm providing links to a blog series that I've posted in the Encinitas Patch that discusses several aspects on this program, I've discussed at length some of the environmental problems it will create in the nearshore environment. To cut to the chase, if the Corps implements this program, it will create approximately 150 acres of 20-foot deep basins that will become dead zones in what are probably some of the more productive nearshore habitats in the region, off San Elijo and San Dieguito Lagoons. These will persist for a period substantially exceeding the 50-year duration of the program. This is an aspect that the consultants writing the environmental sections of the EIS/EIR completely missed. This has fisheries implications as these areas are probably important forage areas for local fishery resources such as halibut, lobster, and crabs. Moreover, the site off San Elijo Lagoon is in the newly created Swami's Marine Protected Area, a critical link in the southern California MPA system.

http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program
http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program-part-2
http://encinitas.patch.com/blog_posts/why-you-should-oppose-the-proposed-army-corps-50-year-shoreline-protection-program-part-3

As part of my comments on the EIS/EIR, I did a quick and dirty survey on recently placed sand at Moonlight Beach, here in Encinitas (last November) to see what that sand from a nearby borrow site contained. I've attached a photo of what my wife and I collected while walking on the beach for about 1.5 hours, just picking up shell fragments that were large enough that I thought I might be able to identify. What I found was 19 species of large clams and 6 species of large snail. And the kicker - not a single one of those was on the list of species used by the consultants to determine that the project would have no impact, that the habitat had no ecological value, that resource loss was insignificant, and that no mitigation was required to offset the lost resources. In the photo, the largest pile (bottom center) comprises Pismo clam fragments!! You should note that these were large shells. You should also be aware that these shelled species probably represent less than 50% of the other long-lived critters (sand dollars, tubicolous worms, crabs and shrimp, etc., that live hand are dominants in this ecosystem. This quick little survey really cuts into the heart of the analyses that have been provided in the EIS/EIR - the approach employed is very flawed and misleading. But it did feed directly into swaying the Cost: Benefit Analysis from negative to barely positive. No costs for lost resources, no costs for impacts, no costs for mitigation, and greatly reduced costs for sand transport based on using the nearest borrow sites.

OK, I'll get off my soapbox. Please let me know if I can share my interpretations and findings with the staffers that will be evaluating the Corps project. It is a bad project that should not be allowed to go forward. In the end, 50 years from now, all that effort and money will have gone for naught - the program does not implement any solutions for the problems these communities face right now; it merely treats the symptoms. But much productivity will be lost in the nearshore habitats for many more decades than the 50-year duration of the program.

Cheers, Dennis

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

Each pile is a different species - 19 clam species and 6 snail species.
<image001.jpg>

MAJOR CONCERNS WITH USACOE DRAFT EIS/EIR FOR ENCINITAS-SOLANA BEACH COASTAL PROTECTION PROJECT

ISSUES OF CONCERN:

Types of alternatives considered – Band-Aids.

Does not provide a permanent "Fix".

Decisions on beach & nearshore biota based on "Weeds" rather than "Trees" in the ecosystems.

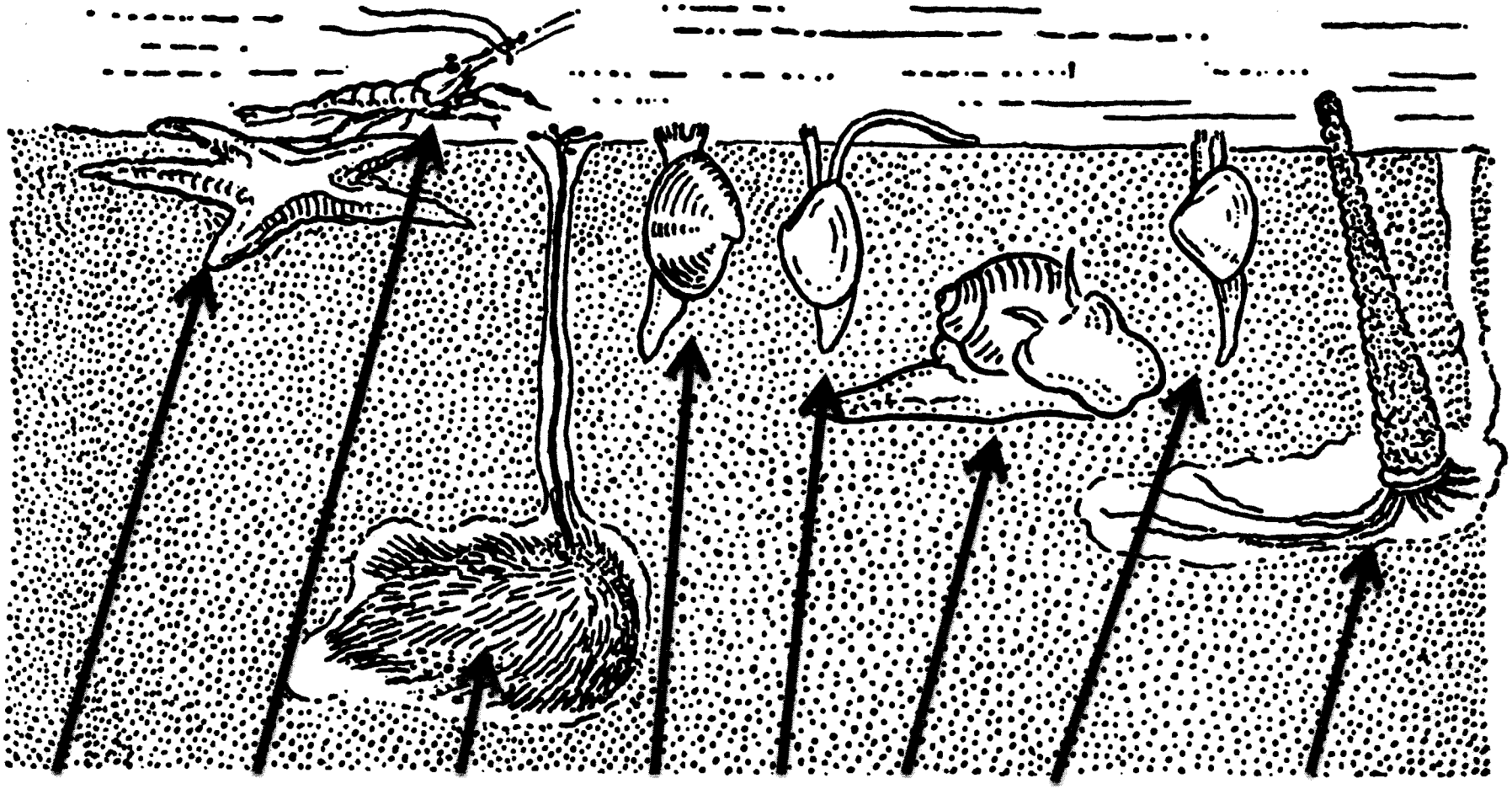
Process produced flawed and inaccurate estimates for ecological impacts of dredging program and underestimated time required for recovery of ecosystems in borrow sites.

S7

1. Preferable to Evaluate "Trees" Rather than "Weeds"

1. "Trees" approach is the Classic approach developed in early 1900s.
2. Same approach is used in evaluating nearly every other ecosystem.
3. Replaced by "Weed" approach in early '70s, when implementation of NEPA required numerous surveys around all offshore outfalls. Expediency!!
4. Consequently, importance of "trees" in ecosystems lost priority to numbers in predicting impacts.

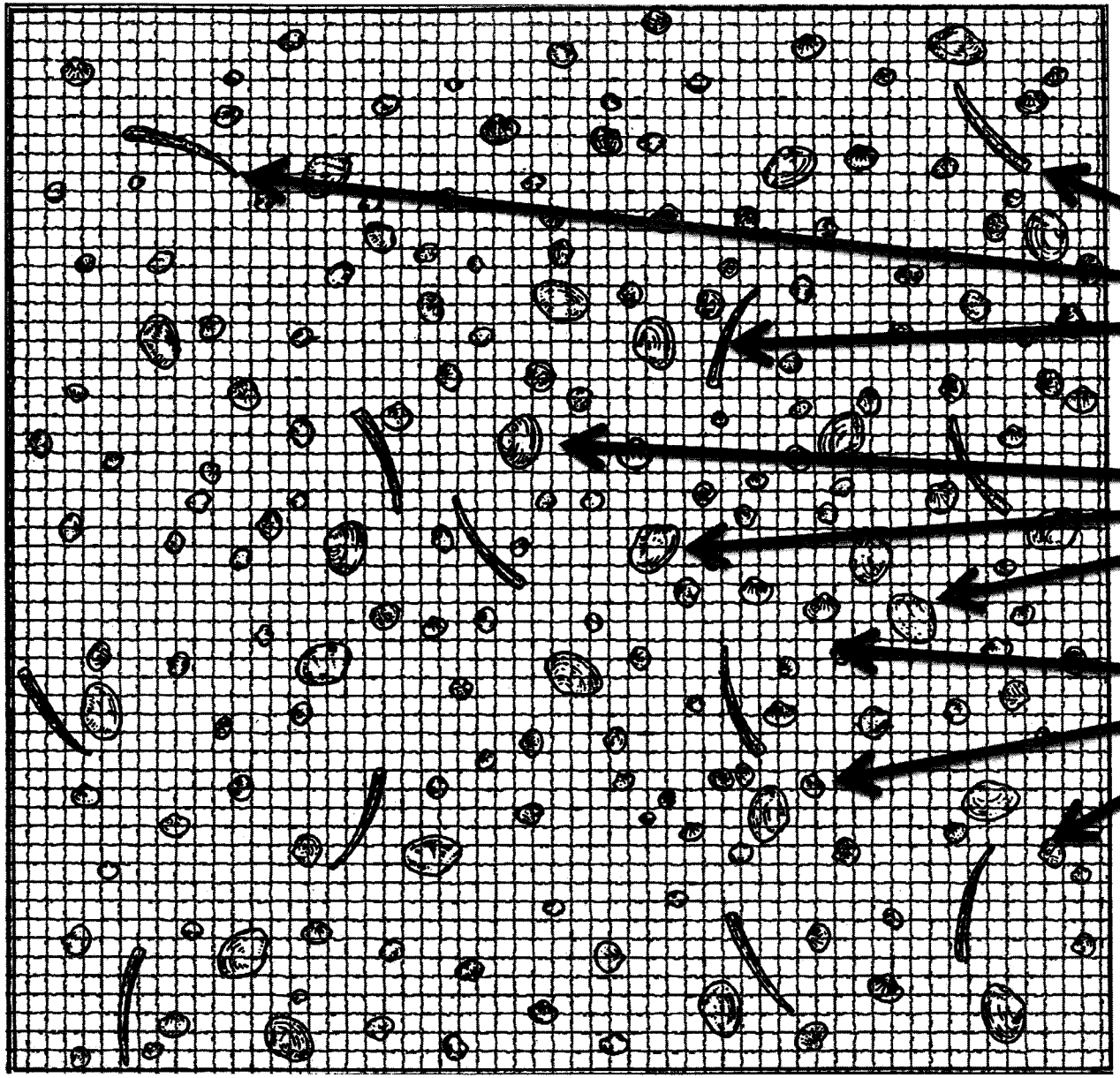
Comparisons of Size & Abundance for "Trees" & "Weeds", as represented by stipple marks



Starfish *Astropecten* | Shrimp *Leander* | Heart Urchin *Echinocardium* | Clam *Venus* | Clam *Tellina* | Snail *Natica* | Clam *Spisula* | Ice Cream Cone Worm *Pectinaria*

"Trees"

From Thorson (1950)



"Trees" in 0.25 m^2 of Seafloor

From Miyadi (1941)

Tuskshells

≈12 indiv.

***Macoma* clams**

≈25 indiv.

***Cardium* clams**

≈140 indiv.

Est. Number of "Weeds" (grid intersections)

≈4,225

Total "Trees" (177 indiv.) = 4.2% of "Weeds"– Usually eliminated from statistical analysis in "Weeds" approach

Descriptions of "Trees" and "Weeds"

"Trees" – Large, long-lived animals (5-30 years); populations are stable, representative of long-term conditions; relatively less common; important forage items for fisheries resources; many are "habitat engineers"; establish robust age structure; large worms, clams, crabs, sand dollars; poorly sampled by current methods.

"Weeds" – Small, very abundant; ephemeral, live several months to 2-3 years; species change dramatically on seasonal basis; tiny worms & crustaceans; sampled in great numbers by current methods.

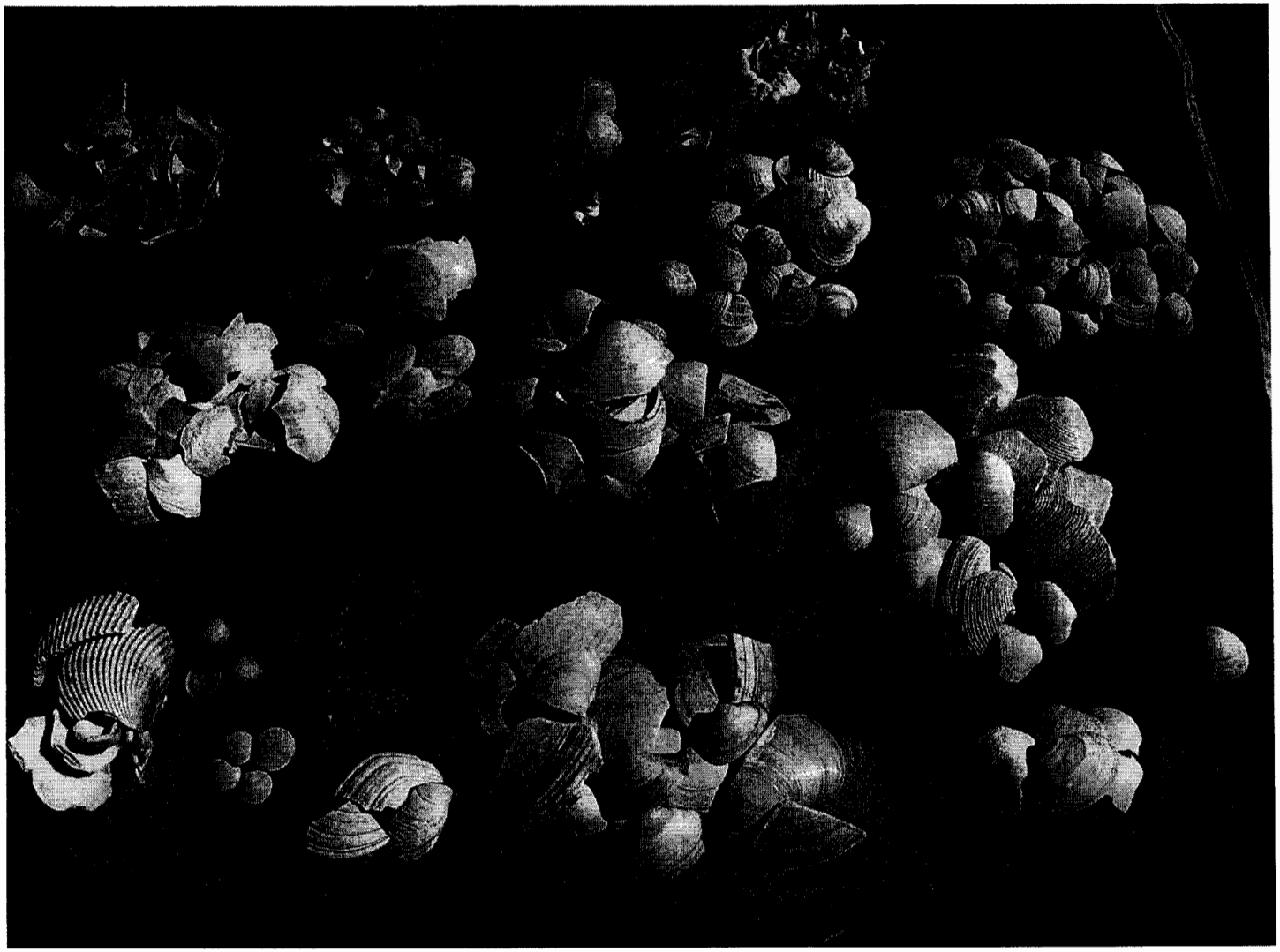
AN ANALOGOUS APPROACH

Assessing effects of a clear-cut project in redwood forest on basis of grasses & shrubs on forest floor rather than on basis of redwoods & other trees in the forest.

Projections of impacts & recovery would be grossly underestimated!

Recovery in nearshore sand habitats takes decades rather than the 2-3 years that is generally projected.

2. "Tree" Species Contained in Recent Dredged Sand



Not one of these clam or snail species is in species list used to make decisions of "No Impacts" or "No Value"

Nature of These "Trees", 26 Species in All

Most numerous were mature Pismo clams, which can live about 50 years.

Other important species included littleneck and butter clams, surfclams, Venus clams, which can live up to 25 years.
Also scallops and cockles.

These species have considerable ecological value & WILL NOT RECOVER in 1-3 years!!
They require several generations.
Clearly shows the fallacy of "Weeds" approach.

3. Predicted Long-term Impacts in 20-foot Deep Basins in Borrow Sites

- EIS concludes erroneously that infaunal assemblages will recover in 1-3 years.
- With basin depths of 20 feet below grade, sediments at bottom will not be washed by wave action or currents.
- Basins will collect large quantities of drifting debris.
- Lacking natural circulation from wave action & currents:
  - Suspension-feeding "trees" will be unable to re-colonize;
  - Debris will decompose and basins will become anoxic;
  - Bottom sediment will become anaerobic (sulfide-dominated).
- Areas dredged to near design depth <u>will be virtually unproductive</u> for more than the 50-year life of program.

4. Decisions Based On Using "Weeds"

- Consultants concluded that Infaunal impacts of dredging and value of Lost Resources NOT SIGNIFICANT!
- Infaunal assemblages will recover in 1-3 Years.
- So, MITIGATION NOT REQUIRED.

Cost: Benefit Analysis Consequences

- Consequently, no values for Lost Resources for 50 years or costs of Mitigation Projects are included in Cost: Benefit Analyses.
- These omissions probably skew results of CBA from Negative to Positive

CBA Benefit of Using Local Borrow Site in Swami's Marine Protected Area

- Dredging is prohibited activity in Marine Protected Areas.
- Oddly, USACE was granted waiver for Swami's MPA.
- This waiver jeopardizes the newly created So. California Marine Protected Area System.
- However, since other borrow sites evaluated are off Mission Beach and Oceanside, this choice greatly reduces costs of transporting sand, again probably skewing results of CBA from Negative to Positive.

CONCLUSIONS

- Impact assessment badly flawed & inadequate.
- Clearly shown by abundance of "trees" in our quick Moonlight Beach survey.
- Current alternatives evaluated in ACOE EIS/EIR are inadequate, incomplete, and overkill, would cause considerable environmental damage.
- Recent Imperial Beach experience clearly shows that beach replenishment techniques used by coastal engineers are imperfect.
- Positive CBA numbers are questionable.
- Project, as currently framed, is unacceptable.

5. RECOMMENDATIONS

- **IF ACOE will commit to considering changes and negotiate revisions to Preferred Alternative, Council may wish to approve current funding request.**
- **If ACOE agrees to negotiate, add "Soft" Coastal Engineering approaches as project alternatives and seek advice from outside experts on "soft" engineering approaches and validity of ACOE's long-term funding projections.**
- **Focus project on tourist-sensitive areas (Moonlight Beach and Fletcher Cove) and the Restaurant Row/PCH/San Elijo strand areas.**

RECOMMENDATIONS

- Reduce injury to nearshore ecosystems.
- Conduct new comprehensive biological studies in current & additional borrow sites using "naturalist" trained biologists to estimate impacts to "Trees".
- Rank borrow sites based on ecological value.
- Use new data to recalculate Cost: Benefit Analyses on basis of realistic ecosystem values.
- However, if ACOE remains opposed to considering other, more realistic & effective alternatives, and reducing damage to nearshore ecosystems, VOTE NO on extending the program.