

## CALIFORNIA COASTAL COMMISSION

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Staff: Susan Craig  
Staff report: 7/20/06  
Hearing Date: 8/10/06

## PERMIT AMENDMENT

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**Application number** ..... 3-95-043-A2, Beach Management Permit

**Applicant**..... City of Santa Cruz, Parks & Recreation Department, (Contact: Carol Scurich, Recreation Superintendent)

**Local government** ..... City of Santa Cruz

**Project location** ..... Main and Cowell Beaches, City of Santa Cruz, County of Santa Cruz (APNs 005-341-01, 005-341-02, 005-341-03, 005-341-16).

**Project description** ..... Amend project to extend permit life for five years. Previously authorized development activities requested for continuance include: ongoing and seasonal maintenance activities; use of mechanized equipment on beach for maintenance, kelp removal, re-contouring of beach (except along the San Lorenzo River and its sandbar), temporary installation of a beach concessionaire; Boardwalk construction project equipment access; public recreation and education activities; small scale commercial use of beach by concessionaire; installation of Seaside Company bandstand, Seaside Company picnic deck, and safety equipment; special events; flood control/drainage discharge operations at Neary Lagoon outlet; and signing program.

**File documents**..... Certified Beach Management Plan (June 14, 1995); Coastal Permit files 3-95-043 and 3-95-043-A1; Coastal Act; Certified City of Santa Cruz Local Coastal Program (1995); City of Santa Cruz LCP Amendment No. 1-95 (March 1995); *Assessment of Sources of Bacterial Contamination at Santa Cruz County Beaches* (County of Santa Cruz Health Services Agency, March 2006); *Amplification of Indicator Bacteria in Organic Debris on Southern California Beaches* (Weston Solutions, Inc., July 2005)

**Staff recommendation** ..... **Approval with Conditions**

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California Coastal Commission  
August 10, 2006 Meeting in San Pedro

Staff: S. Craig Approved by:

## Summary of Staff Recommendation

The City is requesting to extend the long-term beach management permit for Main and Cowell Beaches. Staff recommends that the Commission **approve** the Coastal Development Permit Amendment, subject to the same conditions contained in the previous permit, as revised to address kelp removal, and extend the duration of the permit for five years, i.e. until August 2011. The beach management permit regulates use and maintenance operations on Main and Cowell Beaches in a manner that protects natural resources, provides for public safety, and enhances the extent and quality of beach recreation opportunities. Development activities covered under this permit include regular maintenance operations (e.g. litter removal, leveling and contouring of sand for volleyball tournaments), seasonal debris removal (e.g. kelp removal, with limitations), limited commercial uses (e.g. concessionaire surfboard rentals), recreational and educational programs (e.g. Junior Lifeguard and beach volleyball programs), the Seaside Company Bandstand and picnic deck, special events, flood and drainage discharge operations, and a signage program. Since the approval of the first amendment to the beach management permit in September of 2000, Staff observes that coastal permits 3-95-043 and 3-95-043-A1 have performed as intended and benefited coastal access and recreational opportunities without any evidence of negative impacts. The permit is conditioned to allow removal of kelp above the mean high tide line between the start of the Memorial Day weekend and Labor Day only if insect infestations due to kelp on the beach are negatively impacting beachgoers. Additionally, kelp below the mean high tide line may only be removed if evidence from the County Health Department is provided showing that the kelp is contributing to bacterial contamination that is negatively impacting water quality.

## Staff Report Contents

I. Staff Recommendation on Amendment .....	3
II. Conditions of Approval.....	3
A. Standard Conditions.....	3
B. Special Conditions .....	4
III. Recommended Findings and Declarations .....	4
A. Project Background .....	4
1. Project Location & Setting .....	4
2. Permit History .....	5
B. Project Description .....	6
C. Coastal Act Issues.....	7
1. Permit Extension .....	7
2. Public Recreation and Access.....	7
3. Marine Resources & Environmentally Sensitive Habitats .....	10
D. California Environmental Quality Act (CEQA).....	12
IV. Exhibits	
1. Regional Location	
2. 3-95-043 Permit Findings & Conditions	
3. 3-95-043-A1 Permit Findings & Conditions	
4. Beach Management Plan	
5. Correspondence from David Meyberg	



6. Correspondence from Glenn Rabenold
7. Beach Management Plan Area Map
8. Correspondence from the City of Santa Cruz
9. "Amplification of Indicator Bacteria in Organic Debris on Southern California Beaches"

## I. Staff Recommendation on Amendment

Staff recommends that the Commission, after public hearing, **approve** the proposed amendment subject to the standard and special conditions below. Staff recommends a **YES** vote on the following motion:

***Motion.** I move that the Commission approve Coastal Development Permit Amendment Number 3-95-043-A2 pursuant to the staff recommendation.*

***Staff Recommendation of Approval.** Staff recommends a **YES** vote. Passage of this motion will result in approval of the amendment as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.*

***Resolution to Approve a Coastal Development Permit Amendment.** The Commission hereby approves coastal development permit amendment 3-95-043-A2 on the grounds that the development as amended and subject to conditions, will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit amendment complies with the California Environmental Quality Act because either: (1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the amended development on the environment; or (2) there are no feasible mitigation measures or alternatives that would substantially lessen any significant adverse effects of the amended development on the environment.*

## II. Conditions of Approval

### A. Standard Conditions

- 1. Notice of Receipt and Acknowledgment.** The permit amendment is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
- 2. Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
- 3. Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
- 4. Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.



- 5. Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

## B. Special Conditions

All conditions of coastal permits 3-95-043 (Exhibit #2, pages 1-3) and 3-95-043-A1 (Exhibit #3, page 1) remain in full force and effect, except that Special Condition III(1)(A)(4) is revised as follows:

### **Revised Special Condition III-1(A)(4) (see Exhibit #3, page 1)**

**III(1)(A)(4).** The following types of development and management provisions as described in the Beach Management Plan (BMP) are approved for a five-year period commencing with the effective date of coastal development permit amendment 3-95-043-A~~2~~:... (4) Kelp removal on dry sand areas above the mean high water mark between the Memorial Day weekend and Labor Day only as necessary to limit impacts of insect infestations on beachgoers. Removal of kelp shall be done by hand with non-mechanized tools. No kelp may be removed above the mean high water mark between Labor Day and the start of the Memorial Day weekend, except as provided below.

If the local health department determines that kelp on the beach is causing bacterial contamination that is creating a health hazard and/or is impacting water quality, the kelp below the mean high water mark may be removed any time during the year. Prior to such removal, the City shall provide written evidence from the local health department to the Executive Director for review and approval that demonstrates that the kelp is causing a health and/or water quality hazard. Removal of kelp below the mean high water mark shall be done by hand with non-mechanized tools. Use of heavy mechanized equipment below the mean high water mark is prohibited.

## III. Recommended Findings and Declarations

The Commission finds and declares as follows:

### A. Project Background

#### 1. Project Location & Setting

The City of Santa Cruz's beach management permit applies to all sandy areas of Main and Cowell Beaches (see Exhibit #1 for location map). Cowell Beach encompasses all sandy areas west of Santa Cruz Municipal Wharf, while Main Beach covers all sandy areas east of the Wharf (See Figure #1 below). In total, these beach areas are approximately 1.3-mile long and vary seasonally in width to as little as 200 feet during the winter months. The beaches are entirely open to the general public. There are multiple pedestrian vertical access ways and lateral access points along the full length of Main and Cowell Beaches. There are no restrictions on the hours of use.

According to the City of Santa Cruz post certification map, all sandy areas of Main and Cowell Beaches are within the Commission's original permit jurisdiction, and hence, the Commission retains coastal development permit authority over these areas and the Coastal Act is the standard of review.



The Santa Cruz Beach Boardwalk, adjoining commercial uses, and Municipal Wharf are located on and adjacent to Main and Cowell Beaches. These areas form the most popular beach destination in Santa Cruz County. It is estimated that well over a million people per year visit the Main and Cowell beaches, mostly during the period between the Memorial Day weekend and Labor Day.



**Figure 1. Aerial View of Depicting Cowell and Main Beaches and Neary Lagoon Discharge Area.**

## 2. Permit History

The Commission approved coastal development permit 3-95-043 on May 11, 1995 for a five-year period. On September 14, 2000, the Commission approved amendment 3-95-043-A1, which extended the permit life for another five years. Subsequent to the Commission's approval of coastal permit 3-95-043, the City received Commission approval (LCP Amendment 1-95) of a Beach Management Plan (BMP) in the form of an amendment to the Land Use Plan (LUP). Coastal development permits 3-95-043 and 3-95-043-A1 provided the mechanism to allow the implementation of the BMP over the sandy areas of Main and Cowell Beaches that are within the Coastal Commission's retained permitting jurisdiction. As such, the BMP and City of Santa Cruz Local Coastal Program serve only as guidance when reviewing coastal development permit applications for the Main and Cowell Beach areas, and the Coastal Act is the standard of review.

The Commission approved amendment 3-95-043-A1 in September of 2000. The approved amendment allowed for a five-year extension of the permit life with no changes to the original project description and one substantive condition regarding Neary Lagoon Discharge Pond Breaching activities (see Exhibit #3, page 1 for this condition). The City submitted the current amendment application (3-95-



043-A2) to the Commission on November 10, 2005. The proposed amendment requests an extension of the permit life with no substantive changes to the original permit conditions or project description. With this permit amendment application, the City also submitted a revised Beach Management Plan (BMP) document that includes some textual changes that provide clarification regarding allowable uses on Main and Cowell Beaches (see Exhibit #4 for revised BMP).

## B. Project Description

Development and management provisions proposed under coastal permit 3-95-043-A2 are for the most part comparable to those previously approved under coastal permits 3-95-043 and 3-95-043-A1, and include:

1. The use of mechanized equipment on the beach for:
  - a) Regular maintenance operations: (1) beach cleaning, e.g., sifting and litter removal; (2) leveling for recreational activities such as volleyball or recontouring to clear stairways et al. after storms; (3) installing lifeguard towers, handicap ramps; (4) garbage removal.
  - b) Seasonal debris removal operations after the last major storms or as necessary depending on weather conditions.
  - c) Marine mammal removal: removal of dead or diseased marine mammals.
  - d) Kelp removal on dry sand areas above high water mark between Memorial Day and Labor Day. **The revised Beach Management Plan submitted with this permit amendment would also allow for kelp removal (without timing or location restrictions) when the local health department determines that bacterial counts exceed state water quality standards due to excess kelp buildup on the beach (see Exhibit #4 page 9).**
  - e) Safety activities including use of lifeguard vehicles or other emergency machines.
  - f) The periodic use of mechanized equipment for construction or installation where project is in City's permit jurisdiction but access is across beach. Access is subject to a City coastal permit.
  - g) Installation of the Seaside Company deck and handicap ramp.
  - h) Installation, removal, and use of the Seaside Company Bandstand.
2. The use of mechanized equipment is subject to the following management provisions:
  - a) The Parks and Recreation Department shall advise other City Departments and shall stipulate in all contracts and agreements with non-City groups that operations or activities that affect the area of the Beach Management Plan area must be undertaken consistent with the Plan. A copy of the Plan or relevant sections of the Plan shall be given to operators.
  - b) All mechanized equipment shall enter and exit the beach at the three (3) points identified on the Beach Management Plan Area Map (Exhibit #7). Except as provided in the BMP, no equipment shall be stored on the sandy beach.
  - c) No mechanized equipment shall operate in the wet sand (below the mean high water mark). Exceptions may occur for emergencies, safety, and for removal of marine mammals.
  - d) Recontouring of the beach along the San Lorenzo River or its sandbar or artificial



- breaching of the sandbar is not permitted by this permit.
- e) Maintenance activities shall be scheduled to prevent conflict with access and use of the beach by the public.
  - f) Debris is disposed of at the City landfill. Disposal at other sites within the Coastal Zone requires a coastal permit.
  - g) The operation of any equipment shall be done with safety as the first consideration.
3. City Recreational/Educational Programs as follows:
- a) 14 Volleyball Courts in designated areas for general public and reserved group use.
  - b) Beach oriented recreational/educational classes, including the Junior Lifeguard Program, with uses limited to no more than 20% of the beach at any time.
4. Commercial Uses as follows:
- a) City operated Portable Ocean Equipment Rental Trailer.
  - b) Concessionaire Operated Portable Ocean Equipment Rental Trailer, which is dropped off onto the beach and removed daily by a 4 x 4 vehicle.
5. Special Events consistent with the Commission's Guidelines.

## C. Coastal Act Issues

### 1. Permit Extension

As discussed, the City is requesting to extend long-term coastal permit 3-95-043-A1. In the past, the beach management permits have been effective for five years. Since initial approval of the beach management permit in May of 1995, coastal permits 3-95-043 and 3-95-043-A1 have performed as intended and have benefited access and recreational opportunities without any evidence of negative impacts.

As conditioned, implementation of the beach management permit for a period of five additional years is expected to provide continuing benefits to public access and recreational opportunities while protecting coastal resources, consistent with the requirements of the Coastal Act.

### 2. Public Recreation and Access

Coastal Act § 30604(c) requires that every coastal development permit issued for new development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and recreation policies of [Coastal Act] Chapter 3." Main and Cowell Beaches are located seaward of the first through public roads (Beach Street and West Cliff Drive) and thus the project must be found consistent with the public access and recreation policies of the Coastal Act.

Coastal Act Sections 30210 through 30214, 30221, and 30223 specifically protect public access and recreation as follows:

*§ 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the*



*need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

*§ 30211: Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

*§ 30212 (a): Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects....*

*§ 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

*§ 30214 (a): The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case....*

*§ 30221: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

*§ 30223: Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

Please see the Public Access and Recreation findings from beach management permit 3-95-043 (Exhibit #2, pages 8-13) and beach management permit amendment 3-95-043-A1 (Exhibit #3, pages 2-5), which are incorporated into this report as set forth in full. The conclusion of these findings was that the proposed uses, activities, and access at Main and Cowell Beaches were consistent with the public access and recreation policies of the Coastal Act. These findings and conclusion remain applicable today.

Staff, however, has received correspondence (Exhibit #5) from a local resident who has concerns about the private concession operated on Cowell Beach. Some of the concerns relate primarily to financial and business issues and do not raise any Coastal Act issues. The correspondent also raises issues regarding public safety in the operation of allowed vehicles on the beach (e.g. lifeguards, maintenance staff, concessionaire). According to City staff, anyone who is allowed to drive a vehicle on the beach is required to complete a beach safety driving program a minimum of one time per year. Also, the correspondent alleges that some of the City's beach activities, i.e., junior lifeguard program, volleyball courts, etc., "are nearing an unreasonable use of the beach." This permit limits use of the beach for recreational/educational programs to no more than 20% of the beach. This ensures that at least 80% of the beach area is available to the general public. In addition, it has been staff's observation over the ten years that the beach management permit has been in effect that these recreational/educational activities do not impact general public access to the beach, including lateral access. Furthermore, the City states that in practice these uses occupy only 5%-10% of the beach. If it is ever demonstrated that these uses



are exceeding 20% of the beach or that they are otherwise inhibiting lateral access of the beach, then the City would be in violation of the beach management permit. The City would be required to limit the scope and extent of the recreational/educational uses to no more than 20% of the beach and ensure, to Commission staff's satisfaction, that lateral access of the beach is not impacted by these activities. Finally, the correspondent takes issue with the periodic closure of surfing areas to the general public, such as those located off of Cowell's Beach or at nearby Steamer's Lane, for surfing contests. These areas are not subject to this permit. This permit, however, requires that the City comply with the Coastal Commission's guidelines for temporary events for such events located on Main or Cowell beaches (see Exhibit 4, pages 14-15).

Staff has received additional correspondence (Exhibit #6) from a local resident who expresses concern about impacts to public access on Main Beach due to natural changes in the course of the San Lorenzo River during the year and regular formation of a lagoon along Main Beach during the non-rainy season. The correspondent recommends shoring up the walls of the lagoon with a sand berm to limit its size and mechanically minimizing sand buildup at the river mouth to reduce lagoon formation, which would result in larger areas of sandy beach for public use.

The width of Main Beach varies seasonally, to as little as 200 feet in some areas during the winter months (the letter in Exhibit #6 was written during the winter of 2006). By summer, however, the beach widens extensively to its typical summer profile. The lagoon often forms during the spring and may extend laterally along Main Beach in front of the Santa Cruz Beach Boardwalk for several hundred feet. Given the considerable size of Main Beach (as seen in Figure #1 on page 4), however, extensive sandy areas remain available on Main Beach, even with sizeable lagoon formation.

Coastal lagoons, such as the San Lorenzo River lagoon, have a high food production potential and thus can act as high quality rearing habitat for juvenile steelhead and salmon, allowing them to grow quickly and increasing their survival rates in the ocean. The San Lorenzo River and its lagoon support two federally endangered anadromous fish: the coho salmon and the steelhead trout. Thus, the San Lorenzo River lagoon is considered environmentally sensitive habitat. Past beach management permits have not allowed re-contouring of the beach along the San Lorenzo River or its sandbar or artificial breaching of the sandbar to avoid impacts to this sensitive habitat. Any alteration or management of the lagoon by berming or other methods would require permits from a variety of other agencies, including but not limited to the California Department of Fish & Game, National Marine Fisheries Service, and the California Coastal Commission. To protect sensitive habitat, this beach management permit will continue to specifically **not** allow re-contouring of the beach along the San Lorenzo River or its sandbar or artificial breaching of the sandbar. As discussed above, Main Beach's large size provides extensive areas of dry sand for unrestricted public use, even when the lagoon is fully formed. By limiting beach maintenance activities to avoid disruptions to the natural functioning of the San Lorenzo River lagoon, the beach management plan is consistent with the Coastal Act directive to maximize public access and recreation opportunities in a manner that protects natural resources.



### 3. Marine Resources & Environmentally Sensitive Habitats

Coastal Act Sections 30230 and 30231 afford protection of marine resources and their associated biological productivity and state,

*§ 30230: Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

*§ 30231: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

The previous beach management permits allowed a variety of maintenance activities, including removal of kelp located above the mean high tide line between Memorial Day and Labor Day only. The City has amended its Beach Management Plan and is requesting that this permit allow for removal of kelp, not subject to location or date restrictions, when the local health department determines that excessive kelp on the beach is causing bacteria counts to exceed state safe water quality standards (see Exhibit #4, page 9). Kelp removal is done by hand with the use of hand tools, such as rakes. The mechanized sifter that the City uses for beach grooming activities is not used for kelp removal because any significant amounts of kelp would clog the sifter.

Regular removal of kelp from beaches as part of beach grooming activities can have negative impacts to birds and other wildlife species that reproduce and forage on the coast by removing food sources important to these species. Many of these coastal species, particularly shorebirds, have already lost a great majority of their native coastal and wetland habitats to development. Along the California coast, beach grooming is particularly prevalent in the southern part of the state, with more than 100 miles of sandy shoreline between Santa Barbara and San Diego being regularly groomed in this manner. A recent study found that grooming has significant repercussions for the natural ecology of sandy beaches by significantly reducing the richness, abundance, and biomass of many species of invertebrates that many species of shorebirds, including the federally protected western snowy plover, feed upon.<sup>1</sup>

In April 2006, the Commission approved a beach and sediment management program for the Santa Barbara Harbor and Waterfront Area (CDP 4-05-155). This approval allowed for beach grooming

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<sup>1</sup> Dugan, Jennifer. *Ecological Impacts of Beach Grooming on Exposed Sand Beaches*. Coastal Ocean Research October 2003.



activities, including raking, cleaning, and re-contouring of sand at three beaches, but required that these activities be done to avoid the removal or disturbance of wrack. To avoid potential adverse impacts to grunion spawning activities and sensitive habitat, the Commission conditioned its approval to require that all beach grooming be restricted to dry sand areas at least ten feet landward of the wrack line or the ordinary high tide line, whichever is further landward. In addition, this approval specifically stated that wrack shall not be removed from the beaches during grooming activities with the exception that debris that is entangled in the wrack, and which poses a clear threat to public safety, may be removed as needed.

The Main and Cowell Beaches are highly urbanized and receive at least a million visitors yearly, mostly during the summer months. These are the only beaches in Santa Cruz County that undergo regular beach grooming activities (pers. comm. Don Hill, Santa Cruz County Public Works Department), including occasional kelp removal using hand tools. Special status species, such as the western snowy plover, are not known to inhabit Main and Cowell Beaches. Also, according to the California Department of Fish and Game, grunion normally occur in southern California from Point Conception, California to Point Abrejos, Baja California. Occasionally, they are found farther north to Monterey Bay or San Francisco, California. However, according to a statewide grunion expert, there have been no reported instances of the presence of grunion at Cowell or Main Beaches in Santa Cruz (pers. comm. Karen Martin, Professor of Biology, Pepperdine University). Therefore, imposition of a similar condition to that required under CDP 4-05-155 regarding protection of grunion is not warranted here.

The City of Santa Cruz has provided a letter (Exhibit #8) requesting that removal of kelp be allowed periodically during the summer months. In this letter, the City states that it has no intention of maintaining a “pristine beach” but would like to be able to remove drying kelp when it causes a fly infestation problem that causes negative impacts to public access and recreation. The City also would like the ability to remove kelp below the mean high tide line when the County Environmental Health Department has determined that kelp at the shore break is contributing to high bacterial counts that exceed water quality standards and create a health risk for the public. The City notes that in June 2006, Cowell Beach was posted by County Environmental Health for almost two weeks and that the public was encouraged to stay out of the water due to high bacterial counts resulting from rotting kelp along the shoreline (this occurred during a period when there was little ocean swell and minimal wave action, which prevented mixing of ocean waters and contributed to the bacterial contamination remaining along the shoreline). In sum, the kelp removal activities proposed in this application are limited to relatively infrequent instances where large piles of kelp are causing insect or water quality problems.

There have been several studies demonstrating that bacteria present on the beach or in the water can be amplified through extended survival and reproduction in organic debris (such as kelp) deposited on beaches. The results of one study (“Amplification of Indicator Bacteria in Organic Debris on Southern California Beaches,” attached as Exhibit #9) found that the wrack line can act as a bacterial reservoir that can negatively impact adjacent waters. Specifically, this study found that the wrack line can provide an environment conducive to the maintenance and the growth of enterococcus and fecal coliform bacteria. Additionally, a study performed by the County of Santa



Cruz also determined that there is the potential for very significant growth of bacteria in accumulations of kelp on beaches or in the water.<sup>2</sup> This study also determined that kelp decomposition can exacerbate bacterial levels, particularly at times of poor water circulation. The Commission's staff water quality specialist concurs that kelp on the beach can contribute to the amplification and growth of bacteria, with resultant negative impacts to water quality and public access.

Given that excessive kelp on the beach can create a bacterial hazard that affects water quality with resultant impacts to public access, this permit allows removal of kelp below the mean high tide line that is causing bacterial contamination. Before such removal takes place, permit conditions require that the City provide Commission staff with written evidence from the local health department that kelp on the beach is causing bacterial contamination that is creating a health hazard and/or is adversely impacting water quality. If no such bacterial contamination or water quality impacts are present, kelp below the mean high tide line may not be removed. This condition also states that use of mechanized equipment below the mean high water mark to remove kelp is prohibited.

As discussed above, Cowell and Main Beaches are highly visited during the summer months. Specifically, Main Beach is located directly adjacent to the Santa Cruz Beach Boardwalk, which is a primary destination for many visitors to Santa Cruz County. A concessionaire and the Junior Lifeguard Program operate on Cowell Beach during the summer months. Heavy recreational use of these beaches during the summer months limit their productivity as a natural habitat, and the limited extent of the kelp removal activities proposed by the City is not expected to diminish their biological productivity. Thus, as conditioned, the permit is consistent with the marine resources policies of the Coastal Act, as well as previously cited access and recreation policies requiring protection of natural resources.

#### D. California Environmental Quality Act (CEQA)

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

The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary of Resources as being the functional equivalent of environmental review under CEQA. This staff report has analyzed the environmental impacts posed by the project and identified changes to the project that are necessary to reduce such impact to an insignificant level. All public comments received to date have

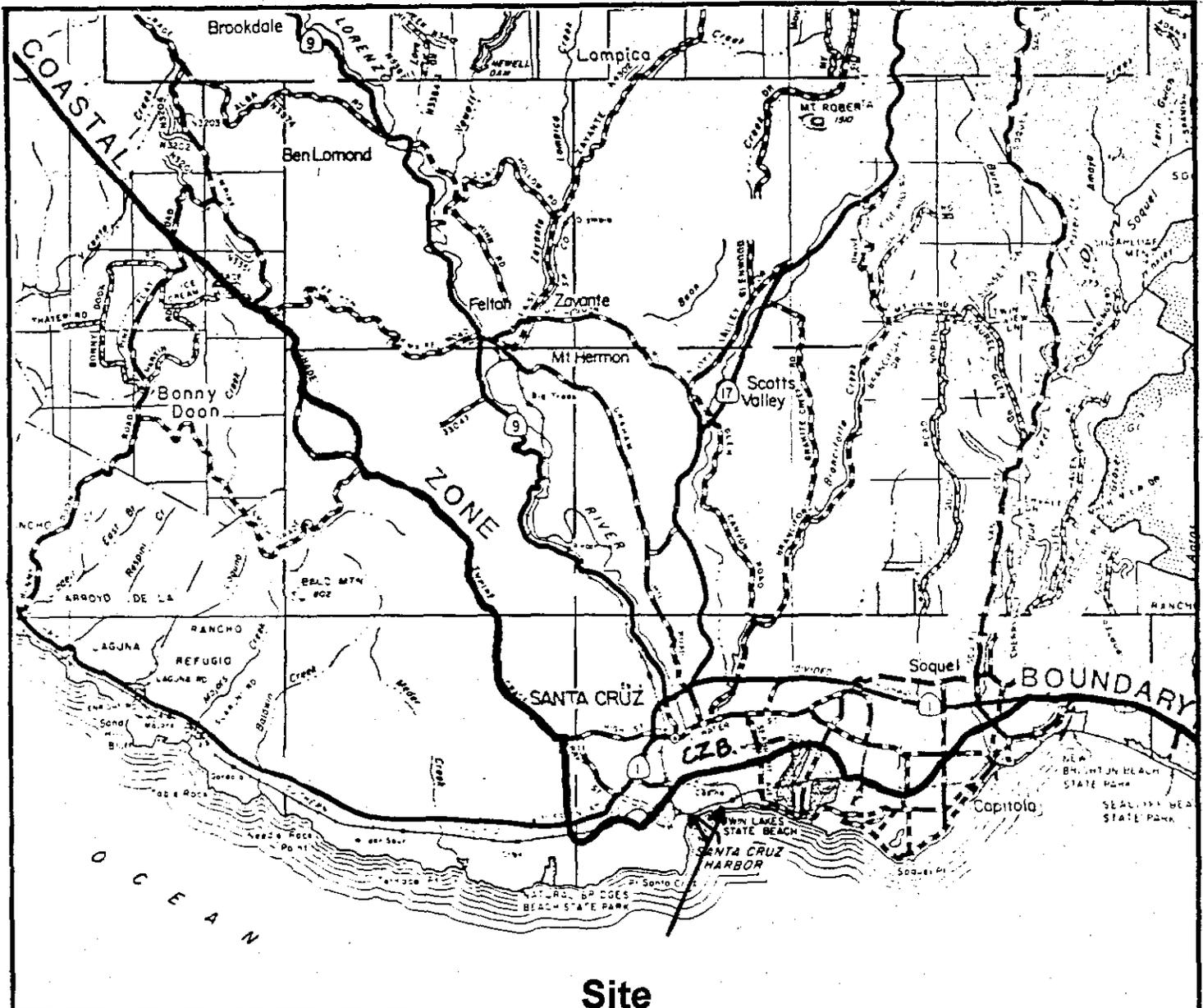
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<sup>2</sup> Ricker, John & Steve Peters. *Assessment of Sources of Bacterial Contamination At Santa Cruz County Beaches*. County of Santa Cruz Health Services Agency, Environmental Health Services Water Resources Program. March 2006. 71 pp.

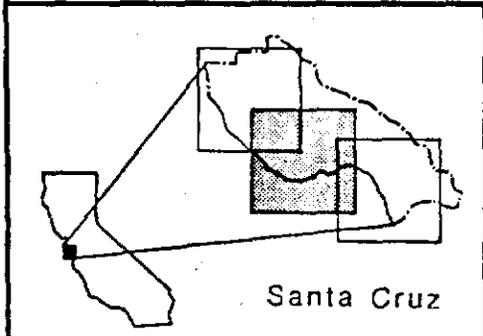


been addressed in the findings above. Based on these findings, which are incorporated by reference as if set forth herein in full, the Commission finds that only as modified and conditioned by this permit will the proposed project avoid significant adverse effects on the environment within the meaning of CEQA.

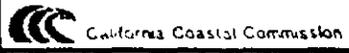




Site



Santa Cruz



LOCATION MAP



County of Santa Cruz

**Exhibit #1**  
**3-95-043-A2**  
**page 1 of 1**

STAFF RECOMMENDATION

The Staff recommends that the Commission adopt the following Resolution:

I. Approval with Conditions between the first Public Road and the Sea

The Commission hereby grants a permit for the proposed development, subject to the conditions below, on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to implement a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located between the sea and the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. Standard Conditions

See attached Exhibit A.

**ADOPTED**

III. Special Conditions:

1. The following types of development and management provisions as described in the Beach Management Plan (BMP) are approved by this permit:

- A. The use of mechanized equipment on the beach for:
- (1) Regular maintenance operations: (a) beach cleaning, e.g., sifting and litter removal; (b) leveling for recreational activities such as volleyball or recontouring to clear stairways et al. after storms; (c) installing lifeguard towers, handicap ramps.
  - (2) Seasonal debris removal operations after the last major storms or as necessary depending on weather conditions.
  - (3) Marine mammal removal: removal of dead or diseased marine animals.
  - (4) Kelp removal on dry sand areas above mean high water mark between Memorial Day and Labor Day.
  - (5) Safety activities including use of lifeguard vehicles or other emergency machines.
  - (6) The periodic use of mechanized equipment for construction or installation where project is in City's coastal permit jurisdiction but access is across the beach. Access is subject to a City coastal permit.
  - (7) Installation of the Seaside Company Bandstand.
  - (8) Installation of the Seaside Co. deck and handicap ramp.
- B. The use of mechanized equipment is subject to the following management provisions:
- (1) The Parks and Recreation Department shall advise other City Departments and shall stipulate in all contracts and agreements with non-City groups that operations or activities that affect the area of the Beach Management Plan area must be undertaken consistent with the Plan. A copy of the Plan or relevant sections of the Plan shall be given to operators.

**Exhibit #2**  
**3-95-043-A2**  
**page 1 of 13**

- (2) All mechanized equipment shall enter and exit the beach at the three (3) points identified on the Beach Management Plan Area Map, Exhibit 2. Except as provided in the BMP, no equipment shall be stored on the sandy beach.
- (3) No mechanized equipment shall operate in the wet sand (below the mean high water mark). Exceptions may occur for emergencies, safety, and for removal of marine mammals.
- (4) Recontouring of the beach along the San Lorenzo River or its sandbar or artificial breaching of the sand bar is not permitted by this permit.
- (5) Maintenance activities shall be scheduled to prevent conflict with access and use of the beach by the public.
- (6) Debris is disposed of at the City landfill. Disposal at other sites within the Coastal Zone requires a coastal permit.
- (7) The operation of any equipment shall be done with safety as a first consideration. Dependent on the piece of equipment, the operator will provide the necessary safety monitors, procedures and equipment to ensure the public safety. In the case of four wheel drive vehicles, the operators will follow guidelines set by the City's Lifeguard Service. The Lifeguard Service will assist with any heavy equipment safety monitoring when requested. Major considerations for safety are: crowd size, weather and environmental conditions, availability of safety monitors, job urgency.

C. City Recreational/Educational Programs as follows:

- (1) 14 Volleyball Courts in designated areas for general public and reserved group use.
- (2) Beach oriented recreational/educational classes limited to 20% of the beach.

D. Commercial Uses as follows:

- (1) City Operated Portable Ocean Equipment Rental Trailer.
- (2) Concessionaire Operated Portable Ocean Equipment Rental Trailer.

E. Special Events consistent with the Commission's Guidelines. The City will provide a schedule of all special events, land and water, to the Executive Director of the Coastal Commission on a yearly basis in January. The Commission staff is notified of any changes. The schedule shall include type of event, date, times, specific location and any fees proposed. Special Events shall not, unless in special circumstances approved by the Executive Director, restrict the beach more than 50%. If the Executive Director determines a potential for significant impacts on coastal resources or access, a separate coastal development permit from the Commission is required. The City shall monitor for irregularities or noncompliance with permits and report to the Executive Director consistent with the BMP.

2. The Parks and Recreation and the Planning Department shall confer with Coastal Commission annually in January on the status of "development" permitted. Significant changes shall require an amendment to this permit.

ADOPTED

3. The Santa Cruz City Planning Department shall develop and submit to the Executive Director of the Coastal Commission by October 31, 1995 procedures for coordinating coastal development permit processing with the Department of Parks and Recreation for all items not listed in condition 1A-E.

4. The City shall submit a coastal permit amendment request to incorporate any modifications to the Beach Management Plan that the Coastal Commission approves that would require a modification to the permit. The request shall be submitted within 90 days of the Commission's notification to the City that an amendment is required.

**IV. Findings and Declarations.**

The Commission hereby finds and declares:

**1. LOCATION, DESCRIPTION, OWNERSHIP, PURPOSE**

**Location:** The Beach Management Plan addresses Santa Cruz City's most popular beach area. It includes the beaches adjacent to the Seaside Company's Santa Cruz Beach and Boardwalk, the Municipal Wharf, and the Dream Inn and extends from the San Lorenzo River/Railroad Trestle at its east end to the west to the bluffs. The beach east or downcoast of the Municipal Wharf is commonly referred to as the Main Beach; the beach west of the Wharf is named Cowell Beach. Hundreds of thousands of recreationalists visit this beach each year. See Exhibit 1 attached.

**Description:** The Beach Management Plan is a required component of the certified Santa Cruz City Land Use Plan. Parks and Recreation Policy 1.7.3 states:

PR 1.7.3 Prepare and implement a beach management plan for Main and Cowell Beaches including all properties, public and private, that addresses drainage onto the beach, litter control and beach maintenance, lagoon levels at Neary Lagoon, special events coordination, distribution of recreational uses, handicapped areas, and interpretive signs to ensure safe public access and protection of environmentally sensitive areas. Any future land division of properties including sandy beach shall contain use restriction consistent with this plan. When a management plan is adopted by the Coastal Commission, it is the City's desire to work with the Coastal Commission to provide for a long term coastal development permit for appropriate elements of the management plan.

The Beach Management Plan was approved by the Santa Cruz City Council on April 28, 1995. It will be reviewed as an LCP amendment by the Commission in June. The uncertified plan provides adequate information to analyze the "development" components of the plan for a coastal permit. The permit has been conditioned to require the City to submit a coastal permit amendment request to incorporate any modifications to the Beach Management Plan that the Coastal Commission might approve that would require a modification to the permit.

Six major categories of development are addressed:

1. Beach maintenance requiring use of mechanized equipment, removal of debris, recontouring of beach, et al.
2. Use of beach for City Recreational/Educational Programs/Public Recreation.
3. Commercial Use of Beach.
  - a. City ocean equipment rental service.
  - b. Concessionaire ocean equipment rental service.
  - c. Santa Cruz Seaside Company bandstand.

**Exhibit #2  
3-95-043-A2  
page 4 of 13**

- d. Santa Cruz City Municipal Wharf/Beach Street Promenade/Ideal Fish Deck (separate coastal development permit 3-92-47).
  - e. Santa Cruz City/Seaside Company Beach Deck and Volleyball Courts (separate permit 3-95-33).
4. Special Events
  5. Signing
  6. Flood Control/Drainage Discharge Operations at Neary Lagoon Outlet as related to the beach.

Ownership/Public Trust: Santa Cruz County Assessor's parcel records indicate four property owners have deeded lands within or directly fronting the mangement plan area: Santa Cruz City, Santa Cruz Seaside Company, Santa Cruz Hotel Associates, and James Gilbert. Most of the Santa Cruz City lands were granted to the City by State Lands pursuant to Chapter 342 of the statutes of 1872. For areas where the State Lands boundary is in dispute, no formal determination has been undertaken by the State Lands Commission and Assessor's records cannot be assumed to legally reflect property ownership. The City also has a recreational easement over a large portion of the sand beach on parcels which are shown on Assessor's Parcel Maps as under the ownership of the Santa Cruz Seaside Company.

All the sand area is within the Coastal Commission original jurisdiction according to the Santa Cruz City certified Local Coastal Program Post Certification Appeal Map. Hence, as currently identified the beach sand areas are public trust lands, and the Coastal Commission retains coastal development permit authority.

Purpose: According to the City the Beach Management Plan (BMP) is to guide the activities of public agencies and private property owners in the use and operations of the City of Santa Cruz Main and Cowell Beach as a means to protect natural resources, provide for public safety, and to maximize the extent and quality of the recreational experience of the residents of and visitors to the City of Santa Cruz.

By describing the existing permanent and temporary facilities and uses which occur on an ongoing and seasonal basis and outlining the most common practices employed by the City staff in regular maintenance and operations duties, the City has provided the information needed to process a long term coastal development permit. The long term permit will streamline interagency processing, reduce redundancy, and provide assurances to the agencies and applicants involved.

Planning: The Beach Management Plan as a planning document begins to provide a picture of how and by whom the beach itself is used. Whether there are actually conflicts between beach activities/users because of a finite beach area and a growing number of users, cannot be assumed. Data on the origin of users, many of whom are outside the immediate area, their activities while in the beach area, length of stay, mode of transportation, and comments on the experience would provide the background to prevent or prepare for managing future demands.

This information can be developed concurrent with the development of the Beach Area Plan for the commercial areas of the beach and the Wharf Management Plan. For planning purposes the Santa Cruz City Main Beach area, the adjacent Beach Area boardwalk and commercial uses and the Municipal Wharf form a beach recreational destination. It is the most popular in Santa Cruz. The Beach Area provides the upland support facilities, e.g., parking, as well as other recreational facilities for the beach user. The City's Beach Area Plan which addresses the boardwalk and commercial uses is currently undergoing a major replanning and a plan for Wharf Management may begin in the near future.

The future completion of these plans and their coordination with the Beach Management Plan will help provide an integrated picture of the downtown beach complex and the availability of support facilities, particularly parking and transit options.

The Neary Lagoon wetland, the San Lorenzo River and its summer Lagoon, and the coastal waters of the Monterey Bay Sanctuary are adjacent or nearby natural resources. Separate planning for these areas include the Neary Lagoon Management Plan and the San Lorenzo River Enhancement Plan.

The Neary Lagoon Management Plan was approved by the Coastal Commission in 1992. The lagoon discharges across Cowell Beach to the ocean, and water quality, discharge standards, and public notification are directly related to the beach area. See Finding 8.

The San Lorenzo River Enhancement Plan is a comprehensive planning document addressing the rivermouth lagoon formation and breaching of the sandbar among others. Though these can directly impact the beach recreationalist, the City has chosen to respond to questions regarding beach impacts in separate city planning and the coastal permit process.

## 2. ONGOING BEACH MAINTENANCE AND SAFETY ACTIVITIES

The BMP provides for the following ongoing activities requiring the use of mechanized equipment on the beach:

(1) Regular maintenance operations: (a) regular beach cleaning, e.g., sifting and litter removal; (b) leveling for recreational activities such as volleyball or recontouring to clear stairways et al.; (c) installing lifeguard towers, handicap ramps.

(2) Seasonal debris removal operations: The City schedules a yearly beach cleaning, typically in the early spring, after the last major storms including removal of logs, pilings, construction materials, stumps etc. from the beach and surfline. The removal generally takes about two or three days and provides a safe and clean recreational area. Additional major debris removal may be necessary depending on weather conditions.

(3) Marine mammal removal: removal of dead or diseased marine animals. Live animals are reported to the appropriate agency for action.

(4) Kelp removal on dry sand areas above mean high water mark between Memorial Day and Labor Day. Periodically kelp is washed ashore in significant quantities. Large numbers of kelp flies may be associated with the kelp. The flies are not a disease vector and do not present a health hazard. The breakdown of the kelp is a natural element of the ecosystem that provides food for intertidal animals which subsequently sustain a number of shorebirds. The flies are aesthetically unattractive and a nuisance to summer visitors.

(5) A full range of safety operations including use of lifeguard vehicles, installation of lifeguard towers, et al.

(6) In addition the BMP allows for the periodic use of mechanized equipment for construction or installation purposes. On occasion the City processes coastal development permits for projects in their jurisdiction that require access and some staging operations from the beach area which is within the Commission's original jurisdiction. For example, the Seaside Company removes old and installs new rides that require equipment access across the beach. Heavy equipment may be used for short periods of time from a few hours to several days. Equipment used includes but is not limited to cranes, front end loaders and tractors.

The BMP provides that the City will include in its review of the larger project the issue of mechanized equipment access and shall provide that it is consistent with access and safety requirements.

To limit impacts on public use and assure protection of habitat resources and provide a safe recreational area the BMP requires:

(1) The Parks and Recreation Department shall advise other City Departments and shall stipulate in all contracts and agreements with non-City groups that operations or activities that affect the area of the Beach Management Plan area must be undertaken consistent with the Plan. A copy of the Plan or relevant sections of the Plan shall be given to operators.

(2) All mechanized equipment shall enter and exit the beach at the 3 points identified on the Beach Area Map. Except as provided in the BMP, no equipment shall be stored on the sandy beach.

(3) No mechanized equipment shall operate in the wet sand (below the mean high water mark). Exceptions may occur for emergencies, for safety, e.g., removal of objects in surfline during spring storm cleanup and for removal of dead animals.

(4) Recontouring of the beach along the San Lorenzo River or its sandbar or artificial breaching of the sand bar is not a part of this plan.

(5) To the greatest degree possible maintenance activities shall be scheduled to prevent conflict with access and use of the beach by the public.

(6) Debris is ordinarily disposed of at the City landfill. Disposal at other sites within the Coastal Zone requires a coastal permit.

(7) The operation of any equipment shall be done with safety as a first consideration. Dependent on the piece of equipment, the operator will provide the necessary safety monitors, procedures and equipment to ensure the public safety. In the case of four wheel drive vehicles, the operators will follow guidelines set by the City's Lifeguard Service. The Lifeguard Service will assist with any heavy equipment safety monitoring when requested. Major considerations for safety are: crowd size, weather and environmental conditions, availability of safety monitors, job urgency.

### Discussion

**Marine Resources:** By restricting the use of mechanized equipment to the sandy beach area above the mean high water mark except in cases of emergencies or removal of animals, impacts to mollusks and other marine organisms that inhabit the intertidal area are limited. By limiting the time and location of kelp removal, enough kelp will remain to provide for flies and other animals. The Department of Fish and Game concurs that the limitations are sufficient to prevent any significant impacts on marine resources.

Therefore, the proposed use of mechanized equipment for the purposes described above is consistent with Sections 30230 and 30231 of the Coastal Act regarding sustaining the biological productivity of marine resources and maintaining optimum populations of marine organisms.

**Access and Recreation:** Specific equipment access entranceways are designated on the BMP Area Map (see Exhibit 2). The BMP schedules most maintenance activities in the morning before visitors arrive to prevent conflicts between uses. The BMP requires that all beach maintenance crews, public or private, be apprised of and shall meet the requirements on use of mechanized equipment. All maintenance and safety activities undertaken by the City are to provide a more aesthetic, healthy, and safe environmental for the public. This improves access and recreational experiences for the public and is consistent with the provisions of the access and recreation policies of the Coastal Act.

Therefore, the proposed mechanized equipment use described above is consistent with the access and recreation policies of the Coastal Act.

### 3. ACCESS AND RECREATION

**Access and Recreation:** The Public Access policies of the Coastal Act (Sections 30210-30214) provide for maximizing public access and recreation, protecting existing public access, and providing for protection, encouragement and provision of lower cost visitor and recreational facilities.

Coastal Act Recreation Policies (Sections 30220-30224) in part provide for protection of coastal areas suited for water oriented recreational activities, of oceanfront land suitable for recreational use and of upland areas necessary to support coastal recreational uses.

The subject beach is public beach wholly devoted to public access and recreational uses and support. Some of the proposed activities have the potential to impact general public use of the beach in favor of commercial or special uses, e.g., special events. The Coastal Act supports the establishment of a balance which optimizes use of the beach and prevents conflicts between users.

Access/Public Works: Coastal Act Section 30252 provides that the location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service,... (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation..., and Coastal Act Section 30254 provides that where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use ... public recreation, commercial recreation, and visitor serving land uses shall not be precluded by other development.

Special events, in particular, have the potential to impact the parking supply for the beach.

A. City Recreational/Educational Programs. The city maintains 14 volleyball courts for public use. The designated area of the courts is shown on the Plan Area Map attached as Exhibit 2. Courts may be reserved by special groups.

The City runs two recreational/educational programs on the main beach: Junior Lifeguards and Recreation classes. Several hundred young people participate in the lifeguard program. The City offers a variety of beach oriented recreational classes to the community including volleyball, surfing and windsurfing. Recreational/educational activities most commonly take place on Cowell Beach. It is City policy that these programs not restrict more than 20% of the beach area and in practice, uses do not often occupy more than 5 or 10% of the beach.

The City offers coastal-related educational/recreational opportunities for the community and region while assuring that general public access and recreation are not significantly impacted. Therefore, the Santa Cruz City Beach Recreational/Educational Programs, as proposed, are consistent with the Access and Recreation Policies of the Coastal Act.

B. The Seaside Company Bandstand. The original bandstand was erected in 1963 and located on the beach in front of the Hurricane ride on the Boardwalk. The bandstand and beach area in front of the bandstand are used for a variety of events, including but not limited to: magic shows, body building contests, Sunday Sunrise Services, tanning contests, Clam Chowder Cook Off, group beach games, music concerts, Band Review awards, cheerleading competitions, DCARA (Deaf Counseling Advocacy & Referral Agency) Day Awards, sand castle contests, the City of Santa Cruz's Birthday celebration as well as the "Summertime, Summer Nights" free public concert series.

The original bandstand was destroyed in the 1989 earthquake; in its place a bandstand is erected seasonally by the Seaside Company, installed each April and removed in October. It is an approximate 2000 square foot stage located in the same area as the original structure.

The Bandstand events are open to the public without fee.

It is the City's policy that the installation and removal of the bandstand be undertaken consistent with the maintenance and safety policies of the Beach Management Plan discussed above. Therefore, the proposed development will not impact natural resources or public access. The events themselves precede the Coastal Act.

C. Commercial Uses, Public and Private. The Santa Cruz City Land Use Plan prohibits coverage of sandy beach with new permanent structures (Parks and Recreation Policy 1.7.2.1). Public Recreation Policy PR 1.7.10 of the certified Land Use Plan limits development on beaches as follows:

PR 1.7.10 Consider only essential public access, low impact recreational improvements and necessary public facility improvements, such as drainage control devices, handicapped ramps, fire rings, non group picnic tables, and ocean equipment rental, etc., as additional conditionally permitted uses on beaches if approved in a beach management plan.

Additionally a public/private seasonal group portable picnic deck may be established as a conditional use in the area of the existing Seaside Company temporary seasonal deck as long as the parameters of the deck's use, size, security, access and significant public benefit are established in the City's Beach Management Plan.

The area is zoned OF-R Ocean Front (Recreational) District. Principal permitted uses are limited to beach access not including buildings or structures except stairways and handrails; outdoor classes, parking areas, picnic grounds with tables, benches, barbeque pits but not including other structures, public fishing facilities, safety structures. Administrative use permits are required for beach, surfing and fishing equipment, fish markets, signs, navigation aids not including structures, walls or fences 3 1/2 feet or less. Special use permits are required for navigation aids involving structures, public restroom facilities or temporary structures.

These limitations provide protection against encroachment on sandy beach by structures and non-public uses.

(a) Ocean Equipment Rental Services. Two rental services operate on the beach. A City operated rental service on the Main Beach rents boogie boards, wetsuits, fins, and beach umbrellas which are stored on a trailer which is moved daily on and off the beach by a 4x4 vehicle. This service operates during the times the Lifeguard Service operates. A private concessionaire rents ocean equipment including sailboards and surfboards on Cowell Beach. The trailer is also installed daily. Sail and surf boarding are restricted to the west side of the Municipal Wharf off of Cowell Beach.

**Exhibit #2**  
**3-95-043-A2**  
**page 10 of 13**

These small portable rental units provide water oriented recreational equipment for the public, supporting and enhancing recreational use of the coast consistent with access and recreation policies of the Coastal Act.

Other Commercial Uses: Two other commercial uses are major development projects which are undertaken with cooperative agreements between the City and the private property owners. Both projects are covered in the Beach Management Plan but are complex projects which require individual permit review. They are described here to provide a comprehensive view of the BMP.

(a) Santa Cruz City/James Gilbert Promenade/Deck: The Coastal Commission approved a permit for Santa Cruz City/James Gilbert (3-93-47) to develop a public walkway/deck from the Municipal Wharf along the ocean side of the Ideal Bar and Grill diagonally 200 feet east to the Beach Street Promenade. The deck will surround the Ideal Restaurant and a public restroom. The approximately 15,000 square foot deck will have public picnic tables to accommodate 30 visitors and benches and lighting which will be maintained by the Ideal Fish Restaurant. An approximate 1500 sq.ft. area of the deck adjacent to the restaurant will have 15 additional tables and will be reserved for restaurant use while the restaurant is in operation.

Pursuant to the conditions of coastal development permit 3-93-47 the permittee shall offer to dedicate a permanent non exclusive easement to the restaurant deck area to the City and the City shall provide an operational plan for both the restaurant area and the public area as part of its zoning permit. These documents shall govern the management and use of the deck.

(b) Santa Cruz City/Seaside Company Beach Deck and Volleyball Courts. The Santa Cruz Seaside Company constructs a temporary 3500 square foot deck over the sandy beach just off from the arcade. There are approximately 42 picnic tables on the deck which can seat approximately 476 people. The deck is set up May 1st and is removed October 30th. From June 1 through October 30, Seaside Company installs two sets of volleyball standards for use by groups who reserve the beach deck area.

The BMP consistent with LCP Parks and Recreation Policy 1.7.10 provides that an agreement between the Seaside Company and the City include: 1) parameters for the public's ability to use the deck and limit the city's liability when the deck is in use, 2) requires the Seaside Company to reserve at least one full midweek day for use by the public only and on the remaining days the Seaside Company will have the right to reserve the deck for private use as long as no more than 40% of the available days are scheduled, 3) establishes the Seaside Company's responsibility for the design, acquisition, installation, maintenance, removal and storage of a handicap accessible ramp which extends from the grassy knoll area to the deck and an accessible ramp extension from the deck to the water line, 4) development of a signage program by Seaside Company that encourages public use, 5) Seaside Company will be responsible for the security, collection of garbage, and other short term deck and ramp maintenance.

This development was discussed separately in permit 3-95-33 approved by the Commission in April 1995.

**Exhibit #2**  
**3-95-043-A2**  
**page 11 of 13**

#### 4. SPECIAL EVENTS

The Santa Cruz City Beach is the site of many special events. Most are held annually, such as beach volleyball tournaments. All special events in the Beach Management Plan area are processed by the Parks and Recreation Administration Office and the City Council. The permit for events conform to the City's Municipal Code Chapters 10.64 Commercial Events and 10.65 Non-Commercial Events to ensure conflicts, overlap and impacts are minimized. These codes prevent substantial interference with the community's peace and safety and review the event based on traffic, security, safety, and cleanup and other requirements. The City procedures require coordination of Police, Fire and Public Works Departments for special events.

In addition to the standards in the Chapters 10.64 and 10.65, special (temporary) events are subject to the City zoning ordinance Section 24.08.230.2 V which requires that all special events in the Coastal Zone be evaluated for exclusion status pursuant to Coastal Commission Guidelines for the Exclusion of Temporary Events from Coastal Commission Permit Requirements. The Guidelines are incorporated into the BMP as Appendix E. Under the guidelines temporary events must be reviewed for, among other things, significant impacts on general public use of public recreational areas including parking and traffic and fees associated with the event.

The BMP provides that a schedule of all special events, land and water, shall be submitted to the Executive Director of the Coastal Commission on a yearly basis in January. The Commission staff is notified of any changes. The schedule includes type of event, date, times and specific location and any fees proposed. Special Events shall not, unless in special circumstances, restrict the beach more than 50%.

The Director of Parks and Recreation reviews the applications for special events held within the Beach Management Plan Area for their status under the Guidelines. Events which have not been previously permitted or excluded by the Coastal Commission are identified. The Executive Director of the Coastal Commission reviews the schedule. If any events are identified as having a potential for significant impacts on coastal resources, at the request of the Executive Director the City submits more detailed information for a determination of Commission permit review status. If the Executive Director determines a potential for significant impacts on coastal resources or access, a separate coastal development permit from the Commission is required.

The Parks and Recreation Department is responsible for monitoring and maintaining records of any negative impacts on coastal resources.

Coastal issues are displacement of general public from the beach and potential traffic and parking impacts. The beach is approximately 1 1/3 mile in length and during the summer varies in width up to 200 feet. The City informally restricts events to no more than 50% of the beach. This is an urban beach fringed by commercial visitor serving uses. The City discussed special events

with the Seaside Company Boardwalk and the Wharf businesses to assess potential conflicts with the Bandstands or other activities but there are no formal arrangements. The compilation of special event data will begin to develop data which can be used in the future for managing any conflicts which might arise. Business opportunities appear to be enhanced by the events. Traffic and parking congestion impacts are unclear since adequate baseline data is not available. Completion of a City's parking/traffic study is expected in two years.

Therefore, as conditioned, to require reporting to the Commission on special events, the proposed development is consistent with the access and recreation policies of the Coastal Act.

#### 5. SIGNING PROGRAM

Information and interpretive signage has been placed at all access points to the beach. Primary among these are signs which delineate the rules and laws on the beach and basic safety principles. Additional signage for locations of rest rooms, disabled access, specific safety issues and acknowledgement of beach improvement contributions will be placed as needed. All signs will be reviewed a minimum of once a year for consistency and appropriateness to the beach area. Signs which restrict public access, except for health and safety reasons or special events, shall require a coastal permit. The BMP signing program is consistent with the access and recreation policies of the Coastal Act.

#### 6. FLOOD CONTROL AND DRAINAGE DISCHARGE OPERATIONS

The major discharge across the Main Beach is the San Lorenzo River. The BMP does not allow for breaching or management of the San Lorenzo River Lagoon which is subject to the policies of the San Lorenzo River Management and Enhancement Plan.

The second largest flow of water on to the City's main beach is the discharge from Neary Lagoon. The 14 acre lagoon is surrounded by urban development. The Santa Cruz Waste Treatment Plant is located on its shore as are residential complexes. Neary Lagoon management is regulated by the Neary Lagoon Management Plan (NLMP), a component of the City's General Plan/Local Coastal Program (GP/LCP). The lagoon is managed as a unique natural habitat with important recreational and educational resources for residents and visitors.

The Neary Lagoon discharge regulated by the Neary Lagoon Management Plan and Regional Water Quality Control Board permits.

#### 7. LOCAL COASTAL PROGRAM/CEOA

The Santa Cruz City Local Coastal Program was certified in 1985. It was completely restructured and revised by the City and approved by the Commission in 1994. The development site is in the Commission's original jurisdiction and the primary standard of review for development is the Coastal Act. A coastal permit for the "developments" in the beach area will facilitate and reduce processing.

## Coastal Development Permit Amendment 3-95-043-A1 Adopted Staff Report

Beach Management Permit

Page 4

perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### Special Conditions

All conditions of coastal permit 3-95-043 remain in full force and effect, except that Special Condition Number III-1 is revised as follows and an additional subsection F is added:

### Revised Special Condition

III-1. The following types of development and management provisions as described in the Beach Management Plan (BMP) are approved for a five-year period commencing with the effective date of this permit-coastal development permit amendment 3-95-043-A1.

### New Special Condition Subsection

III-1-F Neary Lagoon Discharge Pond Breaching. The City of Santa Cruz may only breach ponding at Cowell Beach caused by the Neary Lagoon discharge pipe under the following circumstances: (1) all sand moving or breaching activities must remain landward of the mean high water mark (i.e. mechanized equipment shall not be permitted in the wet sand areas); (2) when possible non-mechanized equipment (i.e. shovels) is shall be used; (3) under no circumstances is sand moving or breaching allowed if the San Lorenzo River has migrated and formed a joint water body with the pond created by the Neary Lagoon discharge; (4) the City shall notify the Commission prior to breaching activities.

## 3. Recommended Findings and Declarations

The Commission finds and declares as follows:

### A. Project Background

#### Project Location & Setting

The project area of coastal development permit 3-95-043 is comprised of all sandy areas of Main and Cowell Beaches in the City of Santa Cruz, Santa Cruz County. Cowell Beach encompasses all sandy areas west of Santa Cruz Municipal Wharf, while Main Beach covers all sandy areas east of the Wharf (See Figure 1 Below). In total, these beach areas are approximately 1.3-mile long and vary seasonally in width to as little as 200 feet. The beaches are entirely open to the general public. There are multiple pedestrian vertical access ways and lateral access points along the full length of Main and Cowell Beaches. There are no restrictions on the hours of use.

According to the City of Santa Cruz post certification map, all sandy areas of Main and Cowell beaches are within the Commission's original permit jurisdiction, and hence, the Commission retains coastal



**Coastal Development Permit Amendment 3-95-043-A1 Adopted Staff Report**

Beach Management Permit

Page 7

If the applicant or objector so requests, the Commission shall make an independent determination as to whether the proposed amendment is material (14 California Administrative Code Section 13166).

The subject application is being forwarded to the Commission because the Executive Director has determined that the proposed amendment is a material change and affects conditions required for the purposes of protecting coastal resources or coastal access.

## **C. Coastal Act Issues**

### **1. Permit Extension**

As discussed, the City is requesting to extend long-term coastal permit 3-95-043 for five additional years. To date, coastal permit 3-95-043 has helped to guide public agencies and private owners in the regulation, use, and operations at Main and Cowell Beaches in a manner which protects natural resources, provides for public safety, and enhances the extent and quality of the recreational experience of residents of and visitors to the City of Santa Cruz. Since its approval in May of 1995, the Commission observes that coastal permit 3-95-043 has performed as intended and acknowledges the benefits created under said permit. However, one new Coastal Act issue has arisen since the permits original approval and is discussed in detail below.

The Commission finds that, with **the incorporation of one new special condition** addressing the newly identified issue, the extension of coastal permit 3-95-043 for a period of five additional years will result in a permit that remains consistent with the requirements of the Coastal Act.

### **2. Public Recreation and Access**

Coastal Act § 30604(c) requires that every coastal development permit issued for new development between the nearest public road and the sea "shall include a specific finding that the development is in conformity with the public access and recreation policies of [Coastal Act] Chapter 3." Main and Cowell Beaches are located seaward of the first through public road (Cliff Street), and thus, the project must be found consistent with the public access and recreation policies of the Coastal Act.

Coastal Act Sections 30210 through 30214 and 30220 through 30224 specifically protect public access and recreation. In particular:

*§ 30210: In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

*§ 30211: Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

*§ 30212 (a): Public access from the nearest public roadway to the shoreline and along the*



**Coastal Development Permit Amendment 3-95-043-A1 Adopted Staff Report**

Beach Management Permit

Page 8

*coast shall be provided in new development projects....*

*§ 30213: Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred.*

*§ 30214 (a): The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case....*

*§ 30221: Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.*

*§ 30223: Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.*

**Nearby Lagoon Discharge**

There are two large water discharges across Main and Cowell Beaches. The first discharge is the San Lorenzo River that crosses the far-eastern portion Main Beach. Coastal Permit 3-95-043 does not allow for breaching or management of the San Lorenzo River Lagoon. The second discharge is the Nearby Lagoon discharge pipe that drains winter storm water flows across the eastern portion of Cowell Beach (west of the Municipal Wharf). See Figure 1 below for discharge locations.



**Figure 1. Aerial View of Depicting Major Water Discharges Across Cowell and Main Beaches.**



**Coastal Development Permit Amendment 3-95-043-A1 Adopted Staff Report**

**Beach Management Permit**

Page 9

Before urban encroachment, Neary Lagoon was a natural body of shallow water on the San Lorenzo River flood plain, with its own outlet to the sea. During the past one hundred years, however, the lagoon has been surrounded by urban development, and its outlet channel reduced to a covered storm drain that empties at Cowell Beach. The discharge of Neary Lagoon across Cowell Beach is not constant and only occurs once the lagoon has reached an established elevation. Typically, the established elevation is reached only during winter months. However, once the lagoon has reached the established elevation, the City employs a pump in order to facilitate the flow of the lagoon to the sea by force of gravity.

However, irrespective of lagoon elevations, discharge to the sea is prohibited, under the conditions of Regional Water Quality Control Board (RWQCB) Order Number 94-99 (Case No. CAS049883), from April 1 to October 31 in order to avoid impacts to public access during the high use season. Conditions of RWQCB Order Number 94-99 also require the routing of all lagoon flows, regardless of the time of year, to the wastewater treatment facility when capacity is available.

**Restrictions to Public Access and Recreation**

Staff has observed that, occasionally over the course of the past five years, the Neary Lagoon discharge pipe has caused a large pond to form at Cowell Beach. In addition to forming after lagoon discharge events, City staff indicates that large wave incidents coupled with high tides have also contributed to the formation of this large pond as well. Under normal circumstances the flow of water from Neary Lagoon to the Monterey Bay is of sufficient velocity to prevent ponding. However, the occurrences of pond formation appear to coincide with a combination of coastal processes that lead to a sand elevation that is higher at the front of the beach than that at the rear. Thus, the resulting berm serves to trap water at the rear of the beach and create a moat that is sometimes many feet deep.

While coastal permit 3-95-043 implies that the breaching of a pond created by the Neary Lagoon discharge is consistent with the permit's terms and conditions, the permit does not contain specific provisions allowing such to occur. As detailed above, coastal permit 3-95-043 allows the use of mechanized equipment for beach cleanup and maintenance activities and allows for beach contouring above the mean high water line. However, in order to protect identified environmentally sensitive species and habitats, the permit does not allow for breaching or management of the San Lorenzo River and Lagoon. Overall, coastal permit 3-95-043 authorizes the City to physically modify the sandy beach areas except when environmentally sensitive species or habitats are present.

As discussed, the lagoon discharge pipe pumps water for a short period time in order to establish a natural flow by force of gravity to the Monterey Bay. The primary function of the discharge pipe is to reduce the elevation of Neary Lagoon and prevent flooding of adjacent development. Since water flow from the Neary Lagoon discharge is not constant and is restricted to a very limited number of instances under the conditions of RWQCB Order Number 99-49, the formation of a natural stream or lagoon environment at Cowell Beach is not possible.

As mentioned, the discharge of Neary Lagoon across Cowell Beach is prohibited between April 1 and October 31 and, furthermore, occurs only when the wastewater treatment plant can not handle its flow volume. The formation of this large pond at Cowell Beach has, in the past, created a restriction upon the public's ability to access the sea. Coastal Act § 30211 addresses this restriction of public access and



**Exhibit #3**  
**3-95-043-A2**  
**page 4 of 6**

**Coastal Development Permit Amendment 3-95-043-A1 Adopted Staff Report**

Beach Management Permit

Page 10

states,

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

Coastal permit 3-95-043 does not directly address the restriction of public access caused by the Neary Lagoon discharge. Past occurrences indicate that the discharge has the ability to create an interference with, "the public's right of access to the sea, [...] including but not limited to, the use of dry sand." In addition, if left to stagnate, the formation of such a pond contains the potential to allow human exposure to water that may be unsafe for human contact. Therefore, the Commission finds that, under certain circumstances, the breaching of this pond would be prudent in order to facilitate the maximum provision of public access to the sea, and is consistent with the public access and recreation policies of the Coastal Act. However, while breaching of this pond would be consistent with the public access and recreation policies of the Coastal Act, it is important to note that under certain circumstances the breaching of such a water body would be unacceptable and inconsistent with other provisions of the Coastal Act (See discussion below).

**3. Marine Resources & Environmentally Sensitive Habitats**

Coastal Act Sections 30230 and 30231 afford protection of marine resources and their associated biological productivity and state,

*§ 30230: Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

*§ 30231: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.*

As discussed, the San Lorenzo River and Neary Lagoon discharge are the two major water discharges across the project area. Coastal permit 3-95-043 does not allow for the breaching or management of the San Lorenzo River or Lagoon. The San Lorenzo is a State Protected Waterway and provides habitat for anadromous fish, including Coho Salmon and Steelhead Trout. Furthermore, the San Lorenzo is recognized as one of the most important steelhead streams south of San Francisco.

**Exhibit #3  
3-95-043-A2  
page 5 of 6**



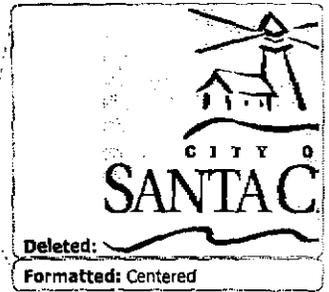
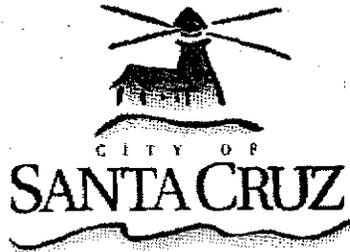
On rare occasions in the past, the San Lorenzo has migrated west along Main Beach as far as the Santa Cruz Municipal Wharf before exiting into the Monterey Bay. In addition, Staff has observed on a few occasions in the past that the San Lorenzo has migrated down Main Beach and connected with the large pond created by the Neary Lagoon Discharge. If this situation was to occur at a future date, then it would be inappropriate to breach a waterbody in the vicinity of the Neary Lagoon Discharge that is hydrologically connected to the San Lorenzo River. To do so, would interfere with identified environmentally sensitive species and habitats.

Therefore, the Commission finds that, in order to protect environmentally sensitive species and habitats, that only as modified by Special Condition F, can the requested amendment be found consistent with the marine resource and environmentally sensitive species and habitat policies of the Coastal Act.

#### **D. California Environmental Quality Act (CEQA)**

Section 13096 of the California Code of Regulations requires that a specific finding be made in conjunction with coastal development permit applications showing the application to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. The Coastal Commission's review and analysis of land use proposals has been certified by the Secretary for Resources as being the functional equivalent of environmental review under CEQA. Accordingly, the Commission finds that as conditioned the proposed project will not have significant adverse effects on the environment within the meaning of CEQA; that there are no feasible alternatives which would significantly reduce any potential adverse effects; and, accordingly, the proposal, as conditioned, is in conformance with CEQA requirements.





**BEACH MANAGEMENT PLAN  
MAIN AND COWELL BEACHES**

**RECEIVED**

OCT 31 2005

CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

May 2005

Deleted: January 2000

Prepared by:  
City of Santa Cruz  
Parks and Recreation Department

**Exhibit #4  
3-95-043-A2  
page 1 of 20**

## TABLE OF CONTENTS

Beach Management Plan Area Map  
City of Santa Cruz Functional Organizational Chart

- Section I. INTRODUCTION**  
Description of Plan  
Purpose  
Planning Process  
Jurisdictions
- Section II. BEACH MAINTENANCE OPERATIONS**  
A. Regular Maintenance Operations  
City of Santa Cruz  
Seaside Company  
B. Seasonal Debris Removal  
C. Marine Mammal Removal  
D. Kelp Removal  
E. Parameters for Ongoing and Seasonal Maintenance Activities  
F. Miscellaneous
- Section III. SAFETY FACILITIES AND OPERATIONS**
- Section IV. CITY RECREATIONAL/EDUCATIONAL PROGRAMS**  
A. Junior Lifeguard Program  
B. Beach Recreational Classes  
C. City Volleyball Courts
- Section V. COMMERCIAL USES - PUBLIC AND PRIVATE**  
A. Concessionaire Ocean Equipment Rental Service  
B. Seaside Company Bandstand  
C. Seaside Company/Santa Cruz City Beach Deck and Volleyball Courts  
D. Municipal Wharf/Beach Street Promenade Walkway/Ideal Fish Deck
- Section VI. SPECIAL EVENTS COORDINATION**
- Section VII. SIGNING PROGRAM**
- Section VIII. FLOOD AND DRAINAGE DISCHARGE OPERATIONS**  
A. San Lorenzo River  
B. Neary Lagoon  
C. Private Property

**Section IX. INTERDEPARTMENTAL AND INTERAGENCY COORDINATION**

- A. Adopt-A-Beach
- B. Seabright Beach Coordination
- C. Wharf Coordination
- D. Private/Public Coordination

**Section X. APPENDICES**

- A. Seaside Company - City of Santa Cruz Beach Maintenance Agreement
- B. San Lorenzo River Enhancement Design Plan
- C. Nearby Lagoon Management Plan
- D. Ocean Sports Ordinance

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- F. Recreational Easement
- G. Wharf Pedestrian Deck Plan
- H. Assessors Parcel Maps
- I. Regional Water Quality Board Permit

Section I. INTRODUCTION

The City of Santa Cruz is fortunate to have a multitude of natural resources including several miles of coastal beaches. These Santa Cruz beaches, along with the San Lorenzo River and the ocean waters of the Monterey Bay are natural conditions caused by the interaction of river flows, winds, tides, geologic process and sand drifts. These processes build and erode beaches, sandbars and ocean bottom trenches, which exist on and off-shore of the Santa Cruz beaches and the San Lorenzo River mouth. This management plan is intended to guide the activities of persons using the natural environment in Santa Cruz and to manage uses and activities to ensure protection of public access opportunities.

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**Description of Plan Area:** For the purposes of this plan, the beach is considered to be the areas of sand and adjacent bay waters from the San Lorenzo River/Railroad Trestle to the western portion of Cowell Beach. This area includes the beaches adjacent to the Seaside Company's Santa Cruz Beach and Boardwalk, the Municipal Wharf, and the Coast Santa Cruz Hotel. The beach east or down coast of the Municipal Wharf is commonly referred to as the Main Beach; the beach west of the Wharf is named Cowell Beach.

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The sandy beach is approximately 1 mile in length and varies seasonally in width, to as little as 200 feet wide in some areas during the winter months. The sandy beach sustains heavy recreational use. The area is entirely open to the general public with multiple pedestrian vertical access ways and lateral access the full length. There are no restrictions on hours of use. Overall, the entire length of shoreline within the city limits of the City of Santa Cruz has almost 100% of potential maximum physical access open to the public. Access has been greatly increased over the years with the addition of stairwells, pathways and access ramps.

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The Santa Cruz City beach area adjacent to the Boardwalk and the Municipal Wharf is visited by hundreds of thousands of recreationalists each year. These beaches are located in an urban setting. The population of the City of Santa Cruz is over 50,000. Many of those residents visit the local beaches throughout the year. In addition the local beaches are inundated with tourists throughout the year, but in particular the summer months. It is estimated that well over a million people visit the Main and Cowell Beaches per year. The beach sustains, heavy recreational use.

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**Purpose:** The purpose of the Beach Management Plan (BMP) is to guide the activities of public agencies and private property owners in the use and operations of the City of Santa Cruz Main and Cowell Beach as a means to protect natural resources, provide for public safety, and to maximize the extent and quality of the recreational experience of the residents of and visitors to the City of Santa Cruz. Though the public use area has remained the same, beach use has increased.

The Plan describes the existing permanent and temporary facilities and uses, which

SANTA CRUZ CITY BEACH MANAGEMENT PLAN

occur on an ongoing and seasonal basis. It is not a plan for future development or new commercial use of the beaches. It is designed to provide sufficient detail of the uses and facilities which are "development" under the Coastal Act to allow for review for a long term coastal development permit which will streamline interagency processing, reduce redundancy and provide assurances to applicants. The BMP will also provide assurance to the City, Coastal Commission and private interests to provide clear direction and prevent misunderstandings.

The main beaches described in the BMP are an integral part of the City's major beach recreation area, which includes the Beach Boardwalk, the Municipal Wharf, and supporting beach commercial and residential uses located in the nearby vicinity. This plan is a part of the more comprehensive planning effort envisioned for the beach area.

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Other planning documents have been adopted for nearby natural resources including the Neary Lagoon wet land and the San Lorenzo River. These documents include the Neary Lagoon Management Plan and the San Lorenzo River Enhancement Plan. The BMP references these documents for policies on specific interactions with the main beaches.

The Plan outlines the most common practices employed by staff in regular maintenance and operations duties. It describes and sets parameters for major and minor facilities, provides for special events, beach related recreational pursuits, support concessions, and educational opportunities. The City also maintains and is committed to improving access to facilities and its interpretive and safety signage programs.

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**Planning Process:** The City of Santa Cruz General Plan/Local Coastal Program 2005, Parks and Recreation Policy 1.7.3, directed the preparation and implementation of a beach management plan for Main and Cowell Beaches including all properties public and private. The Plan, addresses drainage onto the beach, litter control and beach maintenance, lagoon levels at Neary Lagoon, special events coordination, distribution of recreational uses, handicapped access and interpretive signing to ensure safe public access and protection of environmentally sensitive areas. Policy 1.7.3 also provides that future land division of properties, which include sand beach, shall contain use restrictions consistent with the Beach Management Plan.

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The BMP was written by the Santa Cruz City Parks and Recreation Department for submittal to the Santa Cruz City Council for review and approval. Subsequently, the plan will be submitted to the California Coastal Commission as an amendment to the Local Coastal Program and as an application for a 5-year coastal development permit. The plan is reviewed annually for updates to operational procedures. Any proposed amendments would be processed through the City and subsequently the Coastal Commission.

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**Jurisdictions:** Santa Cruz County Assessor's parcel records indicate four property owners have deeded lands within or directly fronting the Beach Management Plan area: Santa Cruz City, Santa Cruz Seaside Company, Santa Cruz Hotel Associates, and James Gilbert (Appendix G & H). Most of the Santa Cruz City lands were granted to

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the City by State Lands pursuant to Chapter 342 of the statutes of 1872. For areas where the State Lands boundary is in dispute, no formal determination has been undertaken by the State Lands Commission and the assessor's parcel maps and deeds cannot be assumed to legally reflect property ownership. The City also has a recreational easement over a large portion of the sand beach on parcels, which are shown on Assessor's Parcel Maps as under the ownership of the Santa Cruz Seaside Company.

All of the sand area is within the Coastal Commission original jurisdiction according to the Santa Cruz City certified Local Coastal Program Post Certification Map. Hence, as currently identified the beach sand areas are public trust lands, and the Coastal Commission retains coastal development permit authority.

Other public entities which do or may have jurisdiction over various development or activities include the State Regional Water Quality Control Board, State Lands Commission, California Department of Fish and Game, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries, and the Monterey Bay National Marine Sanctuary.

## Section II. BEACH MAINTENANCE OPERATIONS

The majority of City operations on the City's beaches are maintenance operations performed by the Parks and Recreation Department. The City also maintains an agreement with the Santa Cruz Seaside Company for cooperative beach maintenance. This agreement is reviewed each spring with representatives from each entity. Occasionally, at the request of the Parks and Recreation Department, other departments or private businesses perform limited services on the beaches.

A copy of the most current beach maintenance agreement with the Santa Cruz Seaside Company is included as Appendix A.,

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The most common maintenance operations include regular beach and facility cleaning and upkeep and installation of recreational, accessibility and safety equipment.

Public facilities include public restrooms which are located at the Cowell Beach parking lot and the east side of the Ideal Bar and Grill Restaurant on Beach Street. They are maintained by the City and are available for public use. The Beach Street restrooms and the Cowell Beach restrooms, are open year round.

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Access to the beach for the physically challenged is maintained through a combination of access ramps and specialized equipment. A permanent ramp, located at the entrance to Cowell Beach, runs from the parking lot and extends out toward the ocean for approximately 50 feet. A temporary ramp is installed at the end of the permanent ramp from May through October depending on the surf and weather conditions. The ramp extends from the permanent ramp out towards the ocean, ending near Lifeguard Tower 1. Specialized "surf chairs" (wheelchairs designed to move on the sand) are located at Lifeguard Towers 1 and Lifeguard Headquarters when personnel are on duty.

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The Seaside Company installs another access ramp as part of their approved development of a public/picnic deck at the west end of the Boardwalk (see page 13, Santa Cruz City/ Seaside Company Beach Deck and Volleyball Courts). This ramp will come off of Beach Street at the grassy area on the west side of the Casino and extend out over the sandy beach almost to the surf line.

**A. Regular Maintenance Operations**

City of Santa Cruz: Regular maintenance of the majority of the sandy beach and facilities is the responsibility of the City. Limited regular maintenance occurs during the late fall, winter and early spring months. Staff is added and maintenance operations increase during the late spring and summer high use season. Most cleaning, general work, and installation of safety and recreational equipment occur in the morning hours.

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The primary duties include:

- Litter removal
- Small debris removal
- Restroom cleaning
- Graffiti removal
- Sweeping/cleaning walkways
- Recreational equipment upkeep (Lifeguard towers, volleyball courts)
- Installation and removal of the access ramp at Cowell Beach and at the west end of the Boardwalk at the Main Beach.
- Leveling and contouring of sand for volleyball tournaments and other similar recreational uses where sand has been displaced
- Maintaining planted areas including tree wells, medians and landscaped areas

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Both manual labor and mechanized equipment are used to accomplish the duties. The methods include but are not limited to:

- Hand picking litter
- Garbage removal by 4x4 vehicle
- Garbage removal by small tractor trailer/loader
- Sand sifting machinery
- Recreational and safety equipment installation and removal by tractor/4x4 vehicle including but not limited to Lifeguard Towers, handicap access ramp, and volleyball courts
- 4x4 vehicle general maintenance (towing/mechanical services if a vehicle breaks down or becomes stuck)
- Sand leveling/smoothing by loader/sand sifting machinery
- Leaf blowers
- Pressure washer

Santa Cruz Seaside Company: Other maintenance duties are performed by the Santa Cruz Seaside Company. Beach maintenance performed by Seaside Company extends

from the San Lorenzo River to the west end of the Casino Building. This consists of cleaning trash from the beach and emptying garbage cans on the beach (depending on the time of the year, there can be between 25 to 65 cans on the beach), sifting the above mentioned area when needed and occasional removal of sand buildup along the Boardwalk frontage.

The methods used include but are not limited to:

- garbage removal by 4x4 vehicle or small tractor trailer
- front end loader
- sand sifting machinery

## B. Seasonal Debris Removal Operations

The San Lorenzo River and other up coast watersheds deposit large quantities of debris on the beaches after large storms and runoff. While this debris is generally small branches and logs it may also include trees, pilings, construction materials, tires, and other debris. This debris is deposited throughout the winter months. The City schedules a yearly beach cleaning, typically in the early spring, after the last major storms pass through but before spring break. Additional major debris removal may be necessary depending on weather conditions.

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The debris can pose a potential public safety problem and should be removed prior to the high use season. Whether in the surf line or as an obstacle on the beach, the debris is incompatible in the primary recreation area of the city.

Removal of the debris requires the use of heavy equipment on a seasonal basis. Most commonly, the task is performed by the City Parks and Recreation and Public Works Departments. If the volume is exceptionally high, the City may opt to contract with outside companies for removal.

Typically, the removal of this debris takes from four to ten days. At this time contouring of the beach may occur. Specifically, the beach may be smoothed out to eliminate large berms or gullies which have formed as well as the removal of large deposits of sand which have built up and barred stairs (ie. leading from the beach onto the boardwalk) or any other permanent structures. Contouring does not include restructuring to control the natural discharge or to breach the sand berm of the San Lorenzo River. The most common pieces of equipment used are:

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- Front loaders
- Tractors
- Dump trucks
- Sand sifters
- Beach rakes

From time to time, special pieces of equipment such as saws or cranes might be required.

**C. Marine Mammal Removal**

Dead or diseased marine mammals frequently wash up on City's beaches. Hurt or diseased animals are referred to Native Animal Rescue or Marine Mammal Rescue. The Parks and Recreation Department is responsible for the removal of dead animals to maintain the health and safety of the beach area.

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**D. Kelp Removal**

Periodically kelp is washed ashore in significant quantities. Large numbers of kelp flies may be associated with the kelp. The flies are not a disease vector and do not present a health hazard. However, they are aesthetically unattractive and a nuisance. Removal of the kelp from sand areas (mean high water mark) will only be done between Memorial Day and Labor Day. Approval and permits must be obtained from the Coastal Commission and other responsible agencies for removal all other times of the year.

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When bacteria counts exceed state safe water quality standards, the City is notified by the Health Department and then the City posts temporary advisory signs. The signs are posted according to direction by the Health Department, to warn the public of potential disease causing bacteria in the water. When the Health Department advises the bacteria counts exceed state safe water quality standards due to excess kelp buildup on the beach, the City will remove the kelp with a front end loader and dispose of the kelp in a landfill dumpster.

**E. Parameters for Ongoing and Seasonal Maintenance Activities:**

1. The Parks and Recreation Department shall advise other City Departments and shall stipulate in all contracts and agreements with non-City groups that operations or activities that affect the beach area as outlined in the Beach Management Plan must be undertaken consistent with the Plan. A copy of the Plan or relevant sections of the Plan shall be given to operators.
2. All mechanized equipment shall enter and exit the beach at the 3 points identified on the Beach Area Map. Except as provided in the BMP, no equipment shall be stored on the sandy beach.
3. Contouring of the beach along the San Lorenzo River or its sandbar or artificial breaching of the sand bar is not a part of this plan. The Parks and Recreation Department is not responsible for flood control, breaching or water quality, but coordinates with other departments and agencies to assure protection of the public through signing and beach closure. See Appendix D for Marine Safety operations policies on this subject.
4. To the greatest degree possible maintenance activities shall be scheduled

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to prevent conflict with access and use of the beach by the public.

- 5. Debris is ordinarily disposed of at the City landfill. Disposal at other sites within the Coastal Zone requires a coastal permit. During the spring months, the City may apply for a burn permit required by the Monterey Bay Air Pollution Control District to burn wood debris left on the beach from winter storms.
- 6. The operation of any equipment shall be done with safety as a first consideration. Dependent on the piece of equipment, the operator will provide the necessary safety monitors, procedures and equipment to ensure the public safety. In the case of four wheel drive vehicles, the operators will follow guidelines set by the City's Marine Safety Division. The Marine Safety Division will assist with any heavy equipment safety monitoring when requested. Major considerations for safety are: crowd size, weather and environmental conditions, availability of safety monitors, job urgency.

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**F. Miscellaneous**

The Seaside Company removes old and installs new rides and may do construction projects that require equipment access across the beach. Heavy equipment may be used for short periods of time from a few hours to several days. Equipment used includes but is not limited to cranes, front-end loaders and tractors.

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The installation/removal/construction processes are done in conjunction with projects reviewed and approved by the City. It is the policy of the City that beach access for equipment shall be reviewed as part of the larger projects and shall follow the parameters of the Beach Management Plan policies of the Local Coastal Program. The City coastal permit shall require permittee to be responsible for the implementation of a safety program which provides for the safety of the public and staff while operations are conducted in the area listed in the permit.

**Section III. SAFETY FACILITIES AND OPERATIONS**

The City of Santa Cruz conducts regular seasonal Marine Safety operations along its main beach and Cowell Beach. The operations provide the following functions related to the management plan. 1) The Marine Safety Division provides lifeguard coverage on spring weekends, spring break, summer months and fall weekends. 2) In the same time period, code enforcement is performed by the division's Beach Ranger program. 3) During the off season, rescue capability is maintained by the division's Marine Rescue Unit, staffed daily by two on-call lifeguards who respond to water rescues using Lifeguard vehicles, personal watercraft (PWC) and other lifesaving equipment.

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The central operations for the Marine Safety Division is located in Lifeguard Headquarters, which is the first building on the Municipal Wharf. Most division equipment, vehicles, boat and supplies are stored there. A central lifeguard tower is

located upstairs, with communication capability to all Lifeguard Towers, Police, Fire, Harbor Patrol, Boardwalk Security and other related agencies. This building also houses staff locker rooms and offices.

The Marine Safety Division is integral to the safe operation of the beach for the public. By monitoring the areas of rescue, enforcement, medical aid and maintenance, the City strives to provide a safe and enjoyable recreational opportunity for all. The division functions with a number of different tools to achieve the City's goals including:

- 4 wheel drive emergency vehicles
- lifeguard towers
- rescue boats
- safety signage
- public address systems
- maintenance vehicles
- vehicle access ramps and lanes
- communication systems

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Five lifeguard towers are positioned along the Main Beach (see map at front of document). They are generally installed each spring and removed in the fall. Tower 1 is stored at the back of the beach next to the Coast Santa Cruz Hotel and Towers 2 through 5 are stored on the sand along the sea wall near Beach Street at Westbrook Street. A greater or lesser number of towers may be installed at the discretion of the Director of Parks and Recreation.

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As shown on the BMP Map, Service vehicles can access the beach at three points: Cowell Beach, Westbrook ramp and the Third Street parking lot, whichever is closest to the area in which work is being conducted. City staff generally works in pairs when operating equipment and when working in vehicles. One employee operates the machinery while the other assists in safety precautions such as spotting for members of the public, marking off areas in which work will take place and monitoring the movement of the equipment. Since each operation varies depending upon the location, beach attendance and beach conditions, the methods used to ensure safety will vary accordingly. However, the City is constantly adjusting to make the beach as safe as possible not only for the public but for employees as well.

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**Section IV. CITY RECREATIONAL/EDUCATIONAL PROGRAMS**

The City runs two recreational/educational programs on the Main Beach: Junior Lifeguards and Recreation classes.

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**A. Junior Lifeguard Program**

The City runs a Junior Lifeguard program for approximately nine weeks in the summer. This program enrolls over 1,100 children ages 6 through 17 years. Classes are scheduled in the mornings and afternoons between 9 a.m. to 4 p.m., Monday through Friday. The Junior Lifeguard Headquarters is located at the edge of the Cowell Beach

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parking lot, next to the Coast Santa Cruz Hotel. Program equipment is stored in the Junior Lifeguard Building, which is located in the Cowell Beach parking lot. The building also serves as a central check-in for lifeguards assigned to the program. Showers are located on the outside of the building and are available to the public throughout the year.

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The Junior Lifeguard program operates primarily in the Cowell Beach area. Certain activities in the program require participants to be on other parts of Main Beach.

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**B. Beach Recreational Classes**

The City offers a variety of beach oriented recreational classes to the community. Some of those classes include volleyball, surfing, and kayaking. The volleyball classes take place on the public courts on Cowell Beach and on the Main Beach. The surfing classes are held on Cowell Beach. Generally, the classes are scheduled from April through October and structured so they do not interfere with the public's use of the areas. These classes are conducted by qualified instructors who are independent contractors and have an approved permit as required by the City's Municipal Ordinance Code and commercial liability insurance.

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To insure beach availability for general public use, it is City policy that Recreational/Educational Programs will at no time restrict more than 20% of the beach area. In practice, the uses do not often occupy more than 5 to 10% of the beach. These programs are a service to the community and generate limited revenue, which is returned to the City's general fund.

**C. City Volleyball Courts**

The City maintains 14 volleyball courts for public use. The courts may be reserved by special groups. In order to insure beach availability for general public use, recreational uses such as beach volleyball courts are restricted to designated areas. See Use Map.

**Section V. COMMERCIAL USES, PUBLIC AND PRIVATE**

The beach also is the scene of public/private commercial recreation activities. These uses are recognized operations subject to local and state law governing such activities. In 1933, the City of Santa Cruz and the Seaside Company entered into an agreement for ownership of the beach. At that same time a zone was created on City property (roughly 150 feet in width) from the Seaside Company property towards the ocean. This Recreational Easement Zone extends from the San Lorenzo River to the beach area at the end of Westbrook Street. The agreement states neither the City nor the Seaside Company may use this area for commercial purposes, only recreation. Typical events which occur in this zone include free concerts at the seasonal bandstand, volleyball tournaments, company picnics, races, special group events, and recreation programs. These uses are subject to any land title restrictions, property ownership and agreements such as the "1933 Recreation Easement" established on the Main Beach. (see Appendix F).

The BMP addresses existing permanent and ongoing seasonal commercial uses. New commercial uses, beyond the scope of the Plan, require the City of Santa Cruz, California Coastal Commission and state and federal permits or inputs as appropriate.

**A. Concessionaire Ocean Equipment Rental Service**

The City has entered into an agreement with a private concessionaire to operate an ocean equipment rental concession. The concession trailer is dropped off onto the beach and removed daily by a 4x4 vehicle. In addition to wetsuits, fins, and boogie boards, this concession also rents surfboards. Surfing is generally restricted to the far west end of Cowell Beach during the summer months to safely separate surfers and swimmers during peak visitation.

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**B. The Seaside Company Bandstand**

The original bandstand was erected in 1963 and located on the beach in front of the Hurricane ride on the Boardwalk. This bandstand was destroyed in the 1989 earthquake; in its place a bandstand is erected seasonally by the Seaside Company, installed each April and removed in October. The Bandstand is an approximate 2000 square foot stage. It is located in the same area as the original structure. The bandstand and beach area in front of the bandstand are used for a variety of events, including but not limited to: magic shows, body building contests, Sunday Sunrise Services, tanning contests, Clam Chowder Cook Off, group beach games, music concerts, Band Review awards, cheerleading competitions, DCARA (Deaf Counseling Advocacy & Referral Agency) Day Awards, sand castle contests, the City of Santa Cruz's Birthday celebration as well as the "Summertime, Summer Nights" free public concert series. City policy prohibits charging for events, which occur in the recreational easement zone. It is the City's policy that the installation and removal of the bandstand be undertaken consistent with the maintenance and safety policies of the Beach Management Plan.

**C. Santa Cruz City/Seaside Company Beach Deck and Volleyball Courts**

The Santa Cruz Seaside Company constructs a temporary 3500 square foot deck over the sandy beach due south from the arcade. There are approximately 42 picnic tables on the deck, which can seat approximately 476 people. The deck is set up May 1st and is removed by October 30th. The deck is used by the Seaside Company for private large parties on approximately 47 of the 150 calendar days it is up.

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To insure that the public has access to this facility the City has entered into an agreement with the Seaside Company. The agreement and the coastal development permit must be approved by the Coastal Commission. The agreement: 1) establishes parameters for public's ability to use the deck and limits city's liability when the deck is in use, 2) requires the Seaside Company to reserve at least one full midweek day for use by the public only and on the remaining days the Seaside Company will have the right to reserve the deck for private use as long as no more than 60% of the available

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days are scheduled, The Seaside Company, provides in April a list of all reserved dates to date and, follows up in writing with any deletions or additions as soon as possible. City staff, monitors the use on a monthly basis. 3) establishes the Seaside Company's responsibility for the design, acquisition, installation, maintenance, removal and storage of a handicap accessible ramp which extends from the deck to the water line, 4) development of a signage program by Seaside Company that encourages public use 5) Seaside Company will be responsible for the security, collection of garbage, and all other deck and ramp maintenance.

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From June 1 through October 30, the Seaside Company installs two sets of volleyball standards for use by groups who reserve the beach deck area. One court is positioned in front of the rotunda, the other between the two sets of steps on the promenade.

**D. The Municipal Wharf/Beach Street Promenade Walkway/Ideal Fish Deck Connection**

A permit was approved by the City and the California Coastal Commission (3-93-47) to develop a public walkway/deck from the Municipal Wharf along the ocean side of the Ideal Bar and Grill diagonally approximately 200 feet east to the Beach Street Promenade. The deck, surrounds the Ideal Restaurant and the public restrooms and showers (Appendix G). The approximately 8600 sq. ft. deck was designed to improve access to the area and connects the Municipal Wharf, Wharf intersection, and Beach Street. The deck has public tables to accommodate 30 people along with benches and lighting. Approximately 1800 sq. ft. of the deck adjacent to the restaurant is reserved for restaurant use while the restaurant is in operation. This area can accommodate approximately 60 people and is maintained by the restaurant.

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The walkway/deck is managed by the Parks and Recreation Department and the right of public access to and use of the promenade is limited in time, place and manner as the City restricts the use of the City beach which it adjoins.

Pursuant to the conditions of coastal development permit 3-93-47 the permittee, dedicated a permanent non exclusive easement to the restaurant deck area to the City and the City shall provide an operational plan for both the restaurant area and the public area as part of its zoning permit. These documents, govern the management and use of the deck.

**Section VI. SPECIAL (TEMPORARY) EVENTS COORDINATION**

The Santa Cruz City Beach is the site of many special events. Most are held annually, such as beach volleyball tournaments. All special event permits in the Beach Management Plan area are processed by the Santa Cruz Police Department and in conjunction with the Parks and Recreation Marine Safety Division. All permits for events conform to the City's Municipal Code Chapters 10.64 Commercial Events and 10.65 Non-Commercial Events (Appendix C) to ensure conflicts, overlap and impacts are minimized. These codes prevent substantial interference with the community's peace and safety and review the event based on traffic, security, safety, and cleanup

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and other requirements. In addition to the standards in the Chapters 10.64 and 10.65, special (temporary) events are subject to the City zoning ordinance Section 24.08.230.2 V (Appendix C) which requires that all special events in the Coastal Zone be evaluated for exclusion status pursuant to Coastal Commission Guidelines for the Exclusion of Temporary Events from Coastal Commission Permit Requirements. Under the guidelines, temporary events must be reviewed for, among other things, significant impacts on general public use of public recreational areas including parking and traffic and fees associated with the event. The guidelines are attached as Appendix E.

A schedule of all special events, land and water, is posted on the City's Parks and Recreation Department website as a service to the public and all adjacent agencies. In addition a schedule of events shall be submitted to the Coastal Commission on a yearly basis in January. The Commission is notified as soon as possible of any additions, deletions or changes in the schedule. The schedule shall include type of event, date, times and specific location. The schedule shall include any proposed fees. Special Events shall not, unless in special circumstances, restrict the beach more than 50%. The Director of Parks and Recreation shall review the applications for special events held within the Beach Management Plan Area for their status under the Guidelines. Events, which have not been previously permitted or excluded by the Coastal Commission, shall be identified.

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The Executive Director of the Coastal Commission shall review the schedule. If any events are identified as having a potential for significant impacts on coastal resources, At the request of the Executive Director the City shall submit more detailed information for a determination of Commission permit review status. The Parks and Recreation Department shall be responsible for monitoring and maintaining records of any negative impacts on coastal resources. Any irregularities or noncompliance with the permits shall be reported to the Coastal Commission.

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**Section VII. SIGNING PROGRAM**

Enforcement and safety signage has been placed at all access points to the beach. These signs delineate the rules and laws on the beach and basic ocean safety principles. Additional signage for locations of rest rooms, disabled access, specific safety issues and acknowledgement of beach improvement contributions will be placed as needed. All signs will be reviewed a minimum of once a year for condition, consistency and appropriateness to the beach area. Signs which restrict public access, except for health and safety reasons or special events, shall require a coastal permit

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**Section VIII. FLOOD AND DRAINAGE DISCHARGE OPERATIONS**

The City Parks and Recreation Department performs most of the regular operations on the City's beaches. The City Public Works Department also has an impact through regular operations, which fall under its jurisdiction. These range from flood and drainage control to debris removal. Not all functions are performed by the City's Public Works Department; the City also utilizes contracted service operations for Public Works type functions.

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Several flood and drainage flows discharge onto the City beaches. These flows have different origins and management of the major flows is detailed in plans developed by the City. The plans as they relate to the Beach Management Plan area are discussed below.

**A. San Lorenzo River**

By far the most significant water flow through the City's beach is the San Lorenzo River. Ranging from high flow events during the rainy season to low flow in the summer months, the river continually impacts the beaches. The lagoon which forms behind the sand berm at the river mouth has significant natural resource values. The waters which rise behind the berm in the rainy season can pose a flood hazard. The San Lorenzo River Enhancement Plan (SLREP) addresses these issues.

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**B. Neary Lagoon Discharge**

The second largest flow of water on to the City's Main Beach is the discharge from Neary Lagoon. The 14-acre lagoon is surrounded by an 850-acre urban drainage basin. Neary Lagoon management is regulated by the Neary Lagoon Management Plan (NLMP), a component of the City's General Plan/Local Coastal Program (GP/LCP). The lagoon is managed as a unique natural habitat with important recreational and educational resources for residents and visitors.

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An important function of the lagoon is the retention of storm water runoff and flood control. The Neary Lagoon Management Plan and the Beach Management Plan interface when the Neary Lagoon storm water discharges across Cowell Beach to the Pacific Ocean. GP/LCP Parks and Recreation Policy 1.7.3 directs the Beach Management Plan to address lagoon levels at Neary Lagoon and drainage onto the beach.

The NLMP Goals and Objectives 1-5 discuss goals and objectives and action to address lagoon levels, flood potential and public safety.

Improved water quality, better managed releases, and more efficient public notification of proposed discharges are issues the City is working to resolve.

A dry weather storm water bypass line has been installed which diverts flows from the lagoon to the wastewater treatment plant for process and discharge to the ocean outfall rather than discharge across Cowell Beach during the heavy public beach use season.

The Regional Water Quality Control Board required the City to prepare a Lagoon Storm Water Pollution Prevention Plan and establish new flood control test pumping operations. Standard operating procedures (SOP) for the future have been developed.

A copy of the RWQCB permit is included in this report as Appendix I.

**SANTA CRUZ CITY BEACH MANAGEMENT PLAN**

To facilitate effective and efficient management of the beach, the most relevant policies and procedures from the NLMP and new directives formulated subsequent to the NLMP adoption are incorporated into this plan. Amendments to the Neary Lagoon Management Plan shall concurrently modify the BMP without additional formal review.

**C. Private Property Drainage**

Three major private property holders (Seaside Company, Coast Santa Cruz Hotel, Ideal Bar and Grill Restaurant) are located along the Main Beach. These property holders may, for various reasons, be in a position to discharge water onto the beaches. Examples of this may be washing decks or windows. Seaside Company also has a drainage pipe at the east end of the Boardwalk facing the San Lorenzo River that discharges ocean water from below the basement via a pump. This line was installed in 1981 when the Boardwalk was expanded. There are also two emergency bypass discharge pipes, used in flood situations only, located by the Pirate Ship facing the ocean and underneath the Coconut Grove. In these cases of discharges of small quantities of water, staff will monitor the discharge and intervene in cases of misuse or inappropriate discharge. Drainage will also enter the beach from outdoor showers, both private and public.

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The issues related to private drainage on the beach are very minor and occur generally on an emergency basis such as during a flood, or during high water levels in the San Lorenzo River lagoon. Other discharges such as deck washing, shower overflow and associated issues are not a significant impact. The plan indicates that staff will monitor other discharges to make sure they do not violate the established standards of the Coastal Act.

**Section IX. INTERAGENCY COORDINATION**

This section deals primarily with common interactions the City maintains with other public and private businesses. The City encourages cooperation and consultation with internal and external groups to enhance the viability of recreational experiences for visitors and residents alike.

**A. Adopt-A-Beach**

The City is an original participant in the California Coastal Clean-up and Adopt-A-Beach programs. The programs are effective in assisting the City in maintaining the beach as well as offering the public the opportunity for public service. Historically, the City has donated staff, access to the landfill and has been active in encouraging groups and individuals to participate in the program. The Parks and Recreation Department, through the office of the Marine Safety Chief, acts as the beach manager for the City of Santa Cruz Beaches.

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**B. Seabright Beach Coordination**

Twin Lakes State Beach, also known as Seabright Beach, is located within the city

**Exhibit #4  
3-95-043-A2  
page 17 of 20**

limits but is operated by the California State Department of Parks and Recreation. The City's Lifeguard and maintenance services maintain a close working relationship with the State Parks Service on matters of mutual concern. Communication is maintained through the Santa Cruz City Marine Safety Division and the State Lifeguard office. These issues may include but are not limited to:

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1. San Lorenzo Point Maintenance
2. Mott Street Access Maintenance
3. San Lorenzo River Issues
4. Public Safety Issues

**C. Wharf Coordination**

Issues relating to the Wharf and Beach operations are handled through an in-house staff process. The City follows all guidelines currently established by agencies such as the Coastal Commission relating to both operations. The Marine Safety Division and Wharf Operations will continue close association with both the Police and Fire Departments for security and public safety.

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**D. Private/Public Coordination**

The City will continue to inform the public of significant projects or impacts and encourages input into the decision making process in a timely matter. This is most commonly handled by the Parks and Recreation Commission through meetings and public hearings or through City Council meetings. The Parks and Recreation Department regularly meets with major beach property holders to cover issues of mutual interest on the beach.

**Section X. Appendices**

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- A. Seaside Company - City of Santa Cruz Beach Maintenance Agreement

**Exhibit #4  
3-95-043-A2  
page 18 of 20**

CITY OF SANTA CRUZ  
SANTA CRUZ SEASIDE COMPANY  
BEACH MAINTENANCE AGREEMENT  
June 19, 1991

ATTACHMENT A

City Responsibilities:

- a) Provide beach cleaning services for the area of the Main Beach from the Casino to the Municipal Wharf. Cleaning services will consist of emptying trash cans and handpicking. These services will be provided on an as-needed basis throughout the off season and daily during the summer months.
- b) Provide minimal maintenance services on an as-needed basis during the fall and winter months for the entire Main Beach area. This includes handpicking water line areas from Cowell Beach to the Southern Pacific Trestle.

Seaside Company Responsibilities:

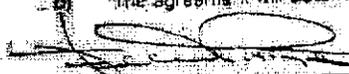
- a) Provide beach cleaning services for the area from the Casino to the Trestle from Easter Week through Labor Day. These services could include any combination of handpicking, sifting or other methods which are effective for the job at hand. During the off season, the Seaside Company will continue to empty trash cans for this area from Labor Day to Easter. At their own discretion, the Seaside Company could schedule beach sifting during this time.
- b) Sift the area of the main beach from the casino to the Pier four times per year. The dates will be mutually scheduled by the Seaside Company and the Parks and Recreation Department. These siftings will be provided at no charge to the City.
- c) Sift Cowell Beach or other Main Beach areas at other times mutually scheduled and charge the City for labor and operating costs at a rate set annually by the Seaside Company.

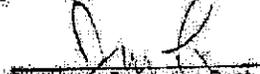
Other Duties:

- a) The City will be responsible for clean-up of extraordinary problems such as storm debris. The Seaside Company may assist if necessary to protect their property or in emergency situations.
- b) Any mutual concerns between the City and the Seaside Company should be regularly communicated to ensure proper cleaning of the beach and execution of the agreement.

c. Cancellation:

- a) Either party may cancel this agreement with thirty (30) days written notice, at which time negotiation will begin to develop a new agreement.
- b) The agreement will automatically be renewed year to year unless canceled by either party.

  
 Seaside Company Date 6/21/91

  
 Parks and Recreation Dept. Date 7/2/91

B. San Lorenzo River Enhancement Design Plan

C. Neary Lagoon Management Plan

D. Ocean Sports Ordinance

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David K. Meyberg, Esq.  
223 Walnut Ave. Suite D  
Santa Cruz, CA 95060

(801) 469-4509

July 22, 2005

California Coastal Commission  
Central Coast District Office  
725 Front Street, Suite 300  
Santa Cruz, CA 95060

**Re: City of Santa Cruz's Beach Management Plan**

Coastal Commission:

In the event individuals or legal representatives are allowed to participate in the Coastal Commission's approval process of City Government's Beach Management Plans, I respectfully request to be included.

My name is David Meyberg and on behalf of myself, a City of Santa Cruz resident and on behalf of my client(s), who are City of Santa Cruz businesses, I would like an opportunity to raise the issues identified below before the Coastal Commission adopts or grants the City of Santa Cruz another Coastal Development Permit or Beach Management Plan. To begin with, I find the existing language and the City's interpretations to be problematic. I believe the conduct of the City under the existing Coastal Development Permit and under City Code has created unfair business practices. Moreover, the City may have engaged in discriminatory conduct and promoted dangerous conditions to public safety.

The City of Santa Cruz under contract with its licensee(s), acts like a silent twenty percent (20%) partner with private business operations on Cowell's Beach. This business, to my knowledge, does not pay rent, maintenance or property tax. Also, they do not pay operating expenses on days they choose not to show up due to poor weather conditions, or seasonal conditions. This unfair advantage promotes the City's licensee business to the detriment of other nearby competing businesses. The Coastal Commission should not be facilitating this type of conduct when allowing City involved businesses to operate on the beach.

Under the Santa Cruz City Beach Management (page 11), the City's private concessionaire is described to rent equipment including sailboards and surfboards but omitted is the list of all the other types of equipment rented that directly competes with nearby businesses' sales and rental business.

The City is potentially engaging in unfair business practices through its conduct of discrimination. The City Beach Lifeguard Service and/or Beach Ranger Service, with Peace Officers, has informed my client, a competing businesses, they are not allowed to cross over the public beach in the vicinity of the City's Licensee's business operations. Also, my client was informed they could not occupy areas located by the water line or wet sand below the mean high

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JUL 25 2005

CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

**Exhibit #5**

**3-95-043-A2, page 1 of 3**

tide mark with their students. This rule was not applied to all people but only to businesses competing with the City. It is our contention that every person is entitled to access the beach, cross over the beach and occupy areas of the beach below the high tide mark as guaranteed under State of California law. We believe California law affords the public an easement below the mean high tide mark, free from discrimination.

On behalf of my client, I assert the City has no lawful basis to deny water use and access to waves on a discriminatory basis. If competitors of the City's licensee are banned from the water, then we demand all people engaged in the same activity in the same area must also be banned. We object to the City's current threat of unfair and bias application of law.

Regarding dangerous conditions, the City's Licensee reportedly has run an electricity conducting extension cord across the beach from a beach-front Hotel's power outlet to the Licensee's beach business location. Holding a California State Fire Marshall Office Training Certificate in Fire Prevention and having performed fire code inspections, it is my opinion that running an extension cord across a public beach, in a marine environment is not a safe or prudent practice when considering the public's safety. If not properly buried, it could also pose a tripping hazard, or an electrical shock hazard to people (children) digging with shovels.

Also, having worked as both a City of Santa Cruz Beach Lifeguard and a State of California Beach Lifeguard II (seasonal lifeguard supervisor), it is my professional opinion that untrained beach vehicle operators pose a significant risk to public safety. I believe the operation of a full size pick-up truck towing a loaded equipment trailer gathering speed to make it off the beach is potentially a dangerous condition. This activity is occurring in a cramped area near a lifeguard tower and handicap access ramp. The City has a history of its beach lifeguards running over people on the beach. Even posing more risk are the City's Licensee business' "Independent Contractors," who, to my knowledge, have no formal beach driving training and little to no experience driving on crowded beaches. As a former State of California employee who trained, evaluated and signed approval of skills tests for State of California beach driving operations, I believe the City's of Santa Cruz's Licensee(s) beach vehicle operations are untrained and unsafe and therefore a danger to beach goers. Merely being provided City Lifeguard beach driving guidelines is wholly inadequate. Additionally, the City's Licensee beach vehicle operators appear to be prohibited from operating on the beach altogether under City Code Section 13. Please note that the City's Licensees (Independent Contractors) are neither performing maintenance or emergency functions to the City. Relevant City Code is as follows:

Santa Cruz City Code 13.08.040 (Vehicles Restricted on Beaches and Parks) states: "No person shall operate a motor vehicle on any public beach or in any public park or recreation area except on the paved streets and roads and designated parking areas therein; provided however, that the provisions hereof shall not apply to maintenance or emergency vehicles used in the performance of a public function by a public officer, or by a person otherwise authorized to operate the maintenance or emergency vehicle thereof."

Please consider that collectively the City activities are nearing an unreasonable use of the beach. The City now has specific areas for: 1) volleyball courts, 2) outside boardwalk dining, 3) the bandstand, 4) junior lifeguards program, 5) beach operations including lifeguard towers, watercraft, an abandoned washed-up sailboat, lifeguard vehicle access routes and driveways and now, 6) rental business. The City's Policy is inadequate in the case of the Junior Lifeguard's use of the beach. The City's policy claims its Jr. Lifeguard program does not often occupy more than 5% or 10% of the beach. By appearance, I question whether the program conforms to the twenty percent maximum use of the beach rule. At some point, there will only be a trivial portion of the

**Exhibit #5**

**3-95-043-A2, page 2 of 3**

beach remaining for public use. I and other long-time local residents are feeling squeezed out. Neither on the Main beach side due to 14 volleyball courts or the Cowell's side with hundreds of junior lifeguard kids does there remain a traditional and relaxing area of the beach. The beach should not be treated like just another City Park. In light of the area of public beach that is located under the Santa Cruz Beach Boardwalk, special consideration should be made to this concern and to any remaining portion of the beach. Please reestablish the balance between public use and commercial (special) uses. The Junior lifeguard program should be relocated to its original location on the Main Beach between the wharf and behind Lifeguard Tower Two. This would achieve one area of the beach for recreational activity and the other side for traditional beach uses including: relaxing, sunbathing, picnics and socializing free from the chaos of recreation activities.

Lastly, I take issue with the City's interpretation and unfettered discretion to determine what constitutes "occasional special events" under City Code Section 13.08.030 (b). Historically, the first Surfing in California began in Santa Cruz. The intent, tradition, freedom and beach lifestyle is not unto itself a commercial enterprise. I strongly believe the world renown surfing breaks known as Cowell's and Steamer Lane should not be subject to shouldering the City's alleged financial crisis by the selling of use permits in exchange for fees. I challenge the City's jurisdictional basis to regulate the water area and waves in the tidal zone. I assert this area is below the mean high-tide mark and that it is open to the public without discrimination or priority based on paying money. If, in the event my argument does not prevail, please conservatively establish an actual number of total days that replaces the current vague language, namely "occasional." People such as myself are not happy with public recreational areas such as the Lane or Cowells' being closed for entire weekends at a time.

Therefore, on behalf of my clients and myself, I respectfully request notice and an opportunity to be heard to address these and other issues when you are considering the City of Santa Cruz's Coastal Development Amendment Permit. I will also be contacting the City to address these issues.

Sincerely,



David K. Meyberg  
Attorney at Law

cc: City of Santa Cruz Parks and Recreation Director  
File

**Exhibit #5**  
**3-95-043-A2**  
**page 3 of 3**

February 28, 2006

Susan Craig  
California Coastal Commission  
725 Front St.  
Suite 300  
Santa Cruz, CA  
95060

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FEB 28 2006

CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

I am writing the Coastal Commission to assist in improving the City's Beach Management Plan for the upcoming year and subsequent years concerning the issue of beach sand retention of the main Boardwalk beach.

I have been running 15 miles once a week, faithfully, at the main beach, for a solid year. I have been able to watch the changes in the course of the River (San Lorenzo) over this year. I am also familiar with the longstanding status quo of the beach since I have resided here for quite some time.

There is an alarming new development that needs to be addressed and will need to be addressed in the near future. Due to an

Exhibit #6  
3-95-043-A2  
page 1 of 4

unprecedented deviation of the course of the River, at the mouth, we are at risk of losing a large amount of sand from our main public beach.

I am quite sure of my facts. Previously, a lagoon formed at the mouth of the river, when the river flow reduced from peak winter run off. Currently, the walls of the lagoon are breaking a little "inland" of the mouth and forming a parallel course with the ocean front. This parallel course has already washed away a lot of sand, far in excess of replacement. This parallel course tends to lengthen, instead of shorten. The entire beach is at severe risk. The Volleyball Courts were breached this last year, despite a "levy" built up around them (made out of sand). Sand has already eroded from underneath the pier. Instead of returning to the original deposition location the

Exhibit #6  
3-95-043-A2  
page 2 of 4

sand being washed away is being deposited at the other end of the main beach, across from the pier, at the location regularly used by surfers.

My reason for addressing the issue at this time is that I have strong indications that the amount of sand already lost will endanger the yearly formation of the lagoon and will instead automatically form a parallel course in the depression caused by the erosion of sand. This will mean the loss of our main beach, the loss of our Olympic quality Volleyball Courts, and the potential loss of the pier due to undermining of the pillars. It will undoubtedly have to be repaired.

Exhibit #6

3-95-043-A2, page 3 of 4

I am proposing that a very modest amount of beach maintenance work be done to shore up the "walls" of the lagoon and to minimize sand build up at the river mouth itself. Considering the number of hours spent grooming the already clean sand (in the summer), a very few hours can be spent

replacing necessary dyke sand around the desired lagoon perimeter. By desired, I mean designated diameter of the lagoon.

In maintenance of the lagoon, some small concern should be placed as to the outflow of the basement "sump pump" drainage so as not to cut into lagoon perimeter maintenance (at the end of the Boardwalk)

Please do not lose our beach. Just because the public has not been vociferous does not mean that they wouldn't complain once the beach was fully lost.

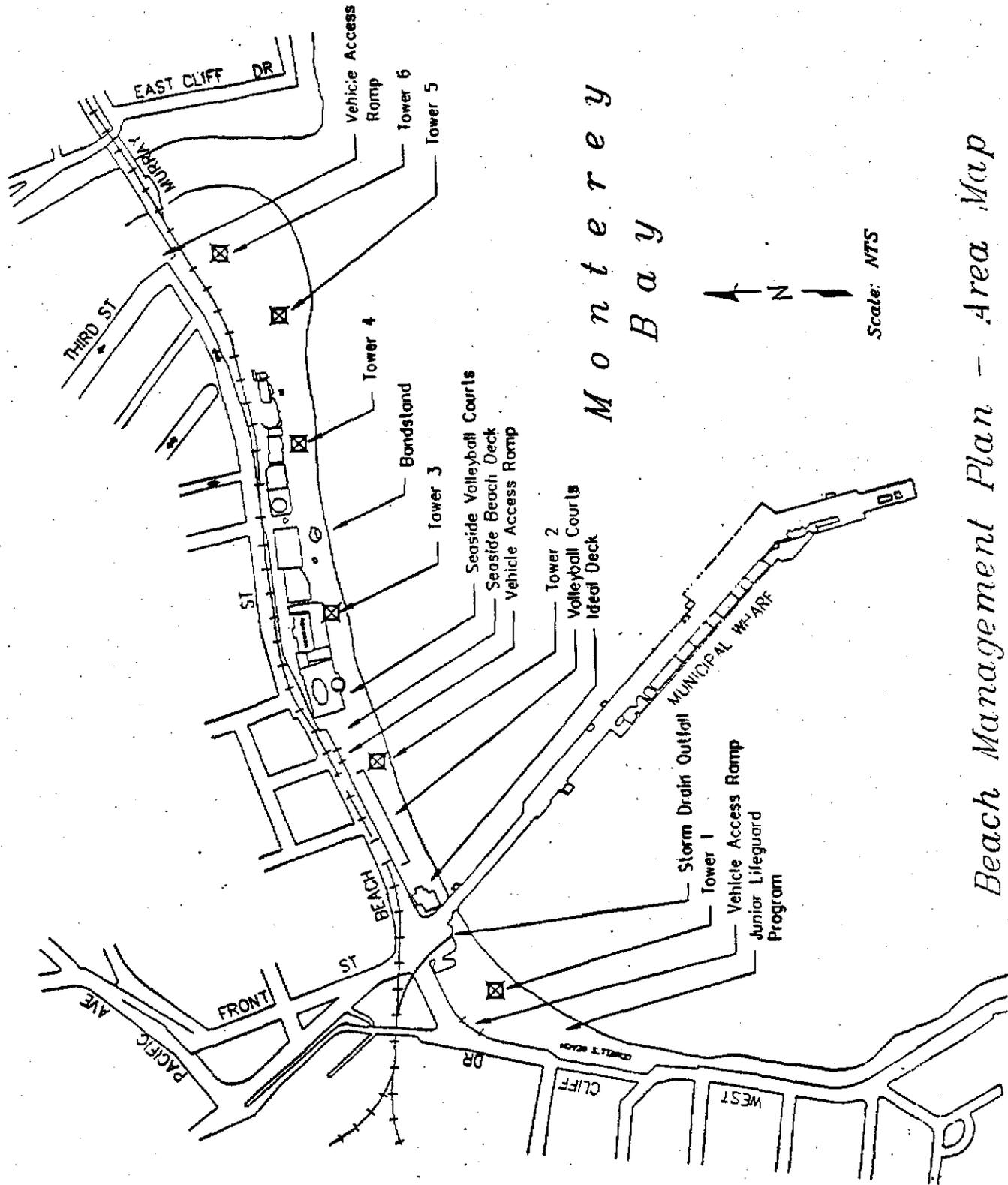
Also, I request that careful observation be done by the CA Coastal Commission of this fragile zone so as to protect this natural resource. It does require an educated eye. I hope and assume the problem will be rectified and so this observation will be part of the preservation of the main beach.

Sincerely,

Glenn Rabenold

Glenn F. Rabenold

Exhibit #6  
3-95-043-A2  
page 4 of 4



**Exhibit 7**  
**3-95-043-A2**  
**page 1 of 1**

*Beach Management Plan - Area Map*



PARKS & RECREATION DEPARTMENT

323 Church Street, Santa Cruz, California 95060  
831-420-5270 • Fax 831-420-5271 • www.santacruzparksandrec.com

**RECEIVED**

JUL 14 2006

CALIFORNIA  
COASTAL COMMISSION  
CENTRAL COAST AREA

Susan Craig  
California Coastal Commission  
Central Coast District Office  
725 Ocean Street, Suite 300  
Santa Cruz, CA 95060

RE: Extension of the City of Santa Cruz Beach Management Permit

Dear Ms. Craig:

This letter is in response to the Coastal Commission's discussion over the possible deletion of kelp removal from the City of Santa Cruz's Beach Management Plan (BMP). Removal of dried kelp has been included in the City's BMP for the past ten years and we request that it remain in the document as an option. We are also requesting that the very sporadic removal of the wet kelp be included as well.

The area of beach governed by the BMP is an approximately one mile in length, the majority of which is bordered by the Santa Cruz Boardwalk, a commercial amusement park owned by the Seaside Company. The City, along with support from the Seaside Company maintains the beach. In general, the regular cleaning of the beach occurs April through October and the beach is left in its natural state for the rest of the year. To our knowledge, the City of Santa Cruz is the only city within Northern California with a BMP and so it is our assumption that this one mile of beach is the only area which has been authorized to remove kelp. This is a relatively small area with minor effect on the marine life yet with major effect on public access.

The City focuses on maintaining the beach in a safe and healthy manner not only for the visitors but for marine life as well. The City has no intention of maintaining a "pristine" beach, preferring a balance that the existing BMP has created. Maintaining this balance can be challenging at times and kelp maintenance is one of those challenges. One of the largest kelp beds in the region sits about a half mile off the shore of Cowells Beach. Kelp is continually breaking off from the bed and coming up on shore. However, the City is only concerned about limited removal of kelp from Memorial Day to Labor Day, when the beach is heavily used by the community, large numbers of visitors and the Junior Lifeguard Program.

**CCC Exhibit 8**  
**(page 1 of 2 pages)**

Large swells occur during this time which results in a great amount of kelp being deposited on the beach. The kelp can also become trapped at the shore break. The drying kelp causes fly an infestation problem which precipitates health-related complaints and limits the use of the beach. The kelp which becomes trapped at the shore break has contributed to high bacterial counts which exceed water quality standards and create a health risk for the public. This past June, Cowells Beach was posted by County Environmental Health for close to two weeks. The public was directed to stay out of the water due to high bacterial counts resulting from rotting kelp at the shore. A portion of Cowells Beach is still posted more than a month later, directing the public to keep out of the area west of the wharf to lifeguard tower number one. This has a major impact on the Junior Lifeguard Program and the general public.

In order to maintain the beach in a safe and healthy manner and keep the beach and water open for public access, the City would like to maintain the option to remove kelp as necessary on a very limited basis. The removal occurs so infrequently that we would be willing to work with Coastal Commission staff to inform them any time we would be conducting a removal.

Thank you for your consideration.

Sincerely,



Carol Scurich  
Recreation Superintendent



# AMPLIFICATION OF INDICATOR BACTERIA IN ORGANIC DEBRIS ON SOUTHERN CALIFORNIA BEACHES

Prepared by:

Andrew Martin  
Stephen Gruber  
Weston Solutions, Inc. (WESTON®)

For Presentation at:

StormCon® 2005

July 18-21, 2005  
JW Marriott Grande Lakes  
Orlando, FL, USA



**CCC Exhibit** 9  
(page 1 of 7 pages)

# **AMPLIFICATION OF INDICATOR BACTERIA IN ORGANIC DEBRIS ON SOUTHERN CALIFORNIA BEACHES**

Andrew Martin and Stephen Gruber, Weston Solutions, Inc., Carlsbad, CA

## **INTRODUCTION**

Certain recreational beaches in southern California frequently exceed state water quality standards for indicator bacteria (total coliform, fecal coliform, and enterococcus). In San Diego County, two sites have been particularly problematic: Mission Bay, a large coastal embayment; and Dog Beach at the mouth of the San Diego River. Recent studies designed to investigate sources of indicator bacteria at these sites suggested that densities of indicator bacteria can be amplified through extended survival and reproduction in organic debris deposited on area beaches. This process was most prevalent in two common features of recreational beaches: organic debris deposited on the beach in the form of a wrack line and tidally influenced storm drains where organic debris frequently accumulates. Field investigations showed that the wrack line acts as a bacterial reservoir that can impact receiving waters. Indicator bacteria were concentrated in the organic debris deposited on the beach during spring tides, maintained in the wrack above the water line during neap tides, then released back to the receiving waters during subsequent spring tides. At some locations, this process was considered to be a significant cause of bacterial water quality standard exceedances. In laboratory experiments that simulated tidally influenced storm drains, bacterial amplification was even more dramatic. Fecal coliform and enterococcus bacteria were shown to reproduce rapidly under conditions typical of coastal storm drains, with densities increasing three to four logs in 48 hours. The results have potential implications for managing recreational beach water quality in southern California.

## **HIGH-TIDE WASHING SURVEYS**

The appearance that bacterial levels increased following high tides resulted in a study that focused sampling efforts around the high tide. High tides tend to wash the wrack line collecting on the beach (the wrack line is composed of marine vegetation, typically kelp and eelgrass, and other debris found deposited at the extent of the last high tide). Observations on the beach showed that dog feces tend to be within the wrack line as well. Therefore, it seemed that the source of elevated bacteria levels may be the washing of dog feces in the wrack line. On Dog Beach, four surveys were conducted that collected samples approximately 3 hours prior to high tide, during high tide, and approximately 3 hours following high tide. Samples were also collected in three specific regions of the beach, west (surf influenced), north (strong tidal current flow, steep beach, narrow river channel), and east (variable tidal current flow, flat beach, mudflats). The west and north regions were further segmented into areas with observed higher and lower concentrations of dog feces in the wrack line.

The results showed a significant difference between pre- and during high-tide samples. Samples collected at high tide were significantly higher than those collected 3 hours prior, with concentrations of all three bacterial indicators typically greater by an order of magnitude or more (Figure 1). Interestingly, samples collected in areas with high concentrations of dog feces versus areas with low concentrations of dog feces were not significantly different from each other. Regrowth of bacteria on the wrack line with an unknown mechanism of transport (i.e., flies or tidal washing) was assumed to be the likely cause of elevated bacterial concentrations in areas without apparent dog feces. Consequently, tidal washing of the wrack line was a contributing factor to elevated bacterial levels.

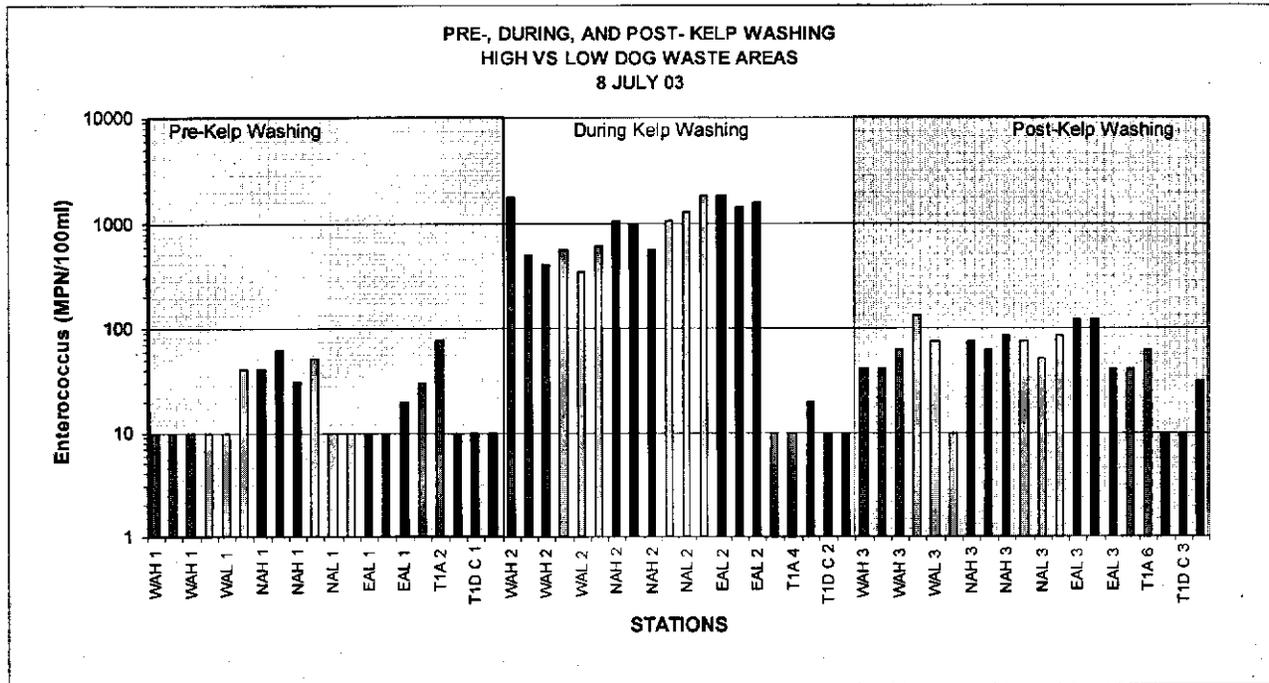


Figure 1. Results of High-Tide Washing Survey, enterococcus, July 8, 2003.

**WRACK LINE SAMPLING**

The results of the high-tide washing studies suggested that the washing of the wrack material at high tide was resulting in elevated bacterial densities in the nearshore water quality. Therefore, wrack line material at Dog Beach and beaches in Mission Bay was sampled and analyzed to determine the range of bacterial densities present on this medium. At Dog Beach, samples were collected of freshly deposited and decomposing kelp and eelgrass from the wrack line. Samples were further segregated into those with and without the apparent presence of dog fecal matter. Samples of freshly deposited and decomposing wrack material were also collected at a reference beach where dogs were not permitted to be on the beach.

The analytical results showed that decomposing marine vegetation, with or without the apparent presence of dog feces, had levels of bacterial contamination that were among the highest levels observed during the entire year-long study at Dog Beach (maximum of 144,527 MPN/gram for total and fecal coliforms and 40,268 MPN/gram for enterococcus) (Figure 2). Wrack material collected from the reference beach also had elevated levels of bacterial indicators (maximum of

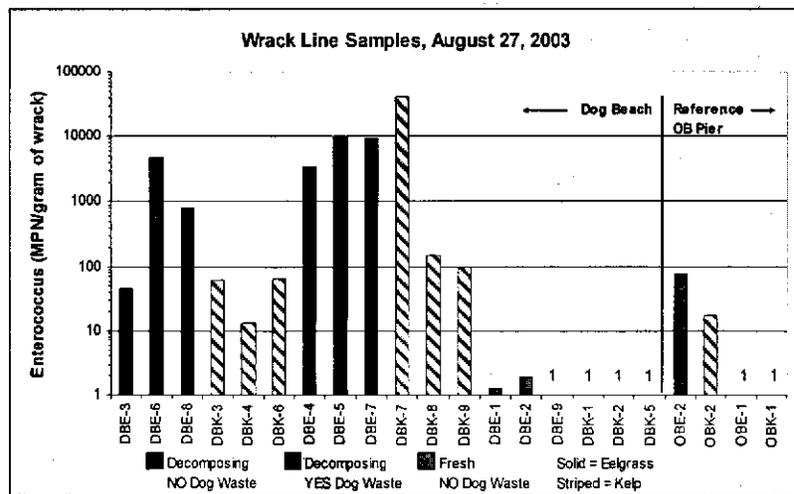


Figure 2. Enterococcus densities in wrack at Dog Beach, August 27, 2003.

9,255 MPN/gram for total coliform, 1,329 MPN/gram for fecal coliform, and >2,327 MPN/gram for enterococcus). At both Dog Beach and the reference beach, freshly deposited marine vegetation did not have similarly elevated levels of bacterial contamination (results were typically non-detect).

In a similar study at Mission Bay, sampling of the wrack line was conducted in order to determine the extent to which bacterial densities increased or were maintained within the wrack line environment and to assess the potential for the wrack line to contribute bacteria to the receiving waters. Five stations were sampled at each of two beaches: Riviera Shores and Visitors' Center for 11 days during a neap tide. At Riviera Shores and Visitors' Center, bacterial densities in the wrack material were maintained during the entire study period. Most notably, enterococcus levels were consistently greater than 10,000 MPN/gram. Bacterial densities at Riviera Shores were also maintained; however, they were typically an order of magnitude less than at the Visitors' Center. These studies confirmed the wrack line provides an

environment conducive to the maintenance and possibly the growth of both enterococcus and fecal coliform bacteria. Figure 3 illustrates the results for sampling conducted at the Visitors' Center.

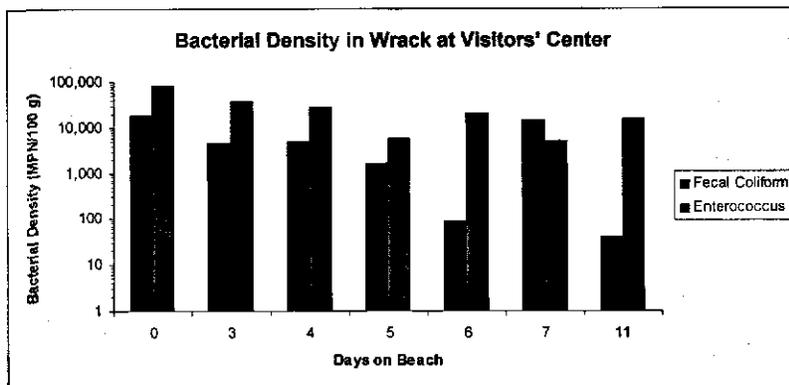


Figure 3. Mean Fecal Coliform and enterococcus densities in wrack at Visitors' Center from February 6 through 17, 2004.

In both studies at Dog Beach and in Mission Bay, the source of the bacterial contamination to the marine vegetation was assumed to be dog or bird feces. Tidal washing of wrack material could be the primary mechanism for transporting bacteria in high

concentrations into the water column. Although these field studies did not specifically quantify the ability of bacteria to regrow in this environment, a laboratory-controlled study assessed the potential for bacterial amplification under conditions typically found inside a coastal storm drain.

### LABORATORY EXPERIMENT

The objective of the laboratory experiment was to assess the potential for bacterial amplification under conditions typically found inside a coastal storm drain. Microcosms were created, representing three environments: 15%, 70%, and 100% seawater. Organic material was added to half of the microcosms representing each environment. Eelgrass obtained from a clean beach was rinsed and soaked in sterile deionized water and UV irradiated for 10 minutes. A total of 25 g was then aseptically transferred to two flasks of each water type, leaving two flasks from each water type with sterile water only (Table 1). One negative control of 15% seawater without eelgrass was also created. The microcosm design is summarized in Table 1.

Table 1. Summary of storm drain simulation microcosm. Percentages refer to the salinity in each flask.

15% Seawater (salinity = 5ppm)	70% Seawater (salinity = 23ppm)	100% Seawater (salinity = 32ppm)	Negative Controls
3 replicates with eelgrass	2 replicates with eelgrass	2 replicates with eelgrass	--
2 replicates without eelgrass	2 replicates without eelgrass	2 replicates without	1 sterile water only

Indicator bacteria were added to all flasks except the negative controls in the following approximate concentrations: fecal coliform at 10,000 MPN/100 mL and enterococci at 1,000 MPN/100 mL. All flasks were wrapped in aluminum foil to block out ultraviolet light and maintained at 15° C. Samples were collected for bacterial enumeration immediately after inoculation (time/day 0), 12 hours later, then each 24 hours thereafter for the first 5 days, and every 2 to 4 days for the remainder of the 27-day study.

Figure 4 shows the results of the laboratory study. In summary, prolonged survival of enterococcus in the presence of eelgrass in all three salinities tested was maintained at a density slightly above the state's AB411 water quality criteria of 104 MPN/100 mL. In the 70% and 100% seawater microcosms without the presence of organic material, bacterial densities declined rapidly to non-detect levels within 4 days. In the 15% seawater environment without the presence of eelgrass, bacterial densities were maintained or slightly decreased over the 27-day study. Similarly, bacterial densities were maintained or slightly decreased in the 70% and 100% seawater environments with the presence of eelgrass. In the 15% seawater microcosm with eelgrass present, bacterial densities increased by several orders of magnitude during the first 3 days. These elevated densities were maintained for 1 week before declining; however, elevated densities were observed throughout the duration of the study.

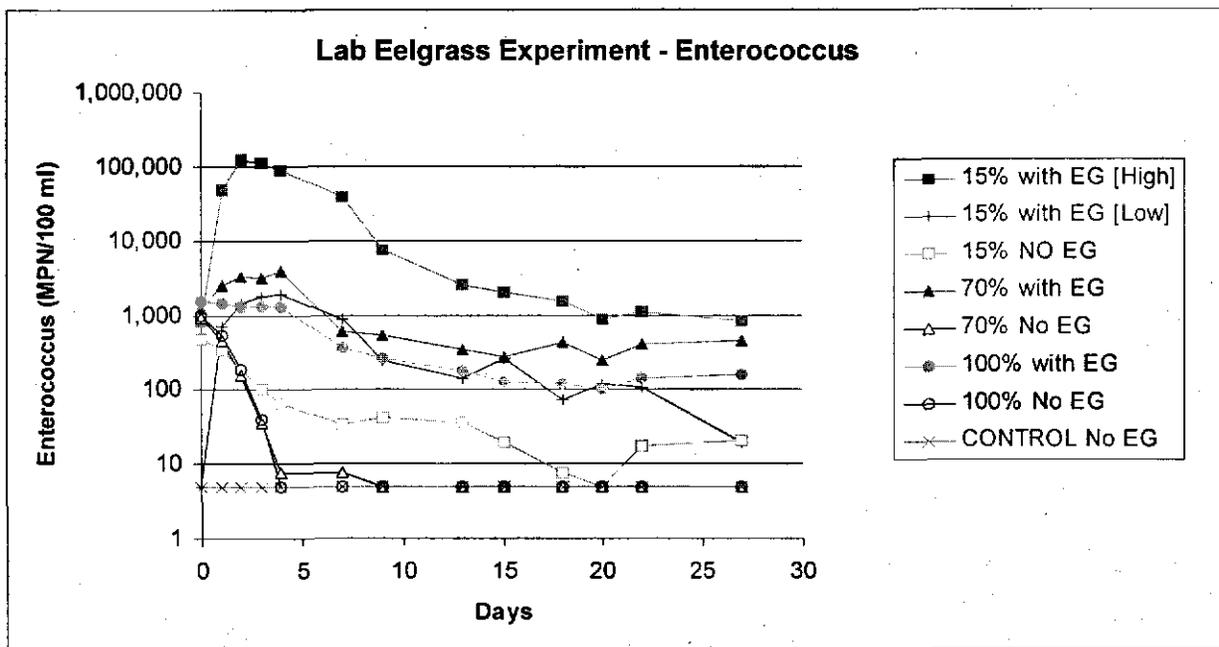


Figure 4. Enterococcus densities over time under simulated storm drain conditions. The dashed red line represents the AB411 criterion for enterococcus of 104 MPN/100 mL.

### RIBOTYPING ANALYSIS

Microbial source tracking (MST) was performed to determine the animal hosts that contributed bacteria to receiving waters and wrack line. MST was conducted using *E. coli* Ribotyping by a contracted laboratory at the University of Washington's Institute for Environmental Health. To accomplish this, wrack-derived *E. coli* isolates were analyzed by the Ribotyping assay, and identifier codes based on the genetic fingerprint pattern were assigned to each Ribotype derived from the sample. The following results were found:

- A total of 80% of isolates obtained in receiving waters at Riviera Shores originated from avian sources. The remaining 20% originated from mammals (11%) or other unknown sources (9%).
- A total of 67% of isolates obtained in receiving waters at Visitors' Center originated from avian sources (Figure 5). The remaining 33% originated from canine (13%), mammal (8%), or other unknown sources (12%).
- A total of 45% of isolates obtained from the wrack line at Visitors' Center originated from avian sources. Canine sources accounted for 26% of the isolates. The remaining isolates originated from mammal (6%) or other unknown sources (23%).
- A pair-wise comparison found 64% of the receiving water isolates at Visitors' Center matched wrack line isolates. Seventy-three percent of these matches were consistent with avian, canine, or other animal-derived isolates, suggesting these hosts as the original input of bacteria to the wrack line.

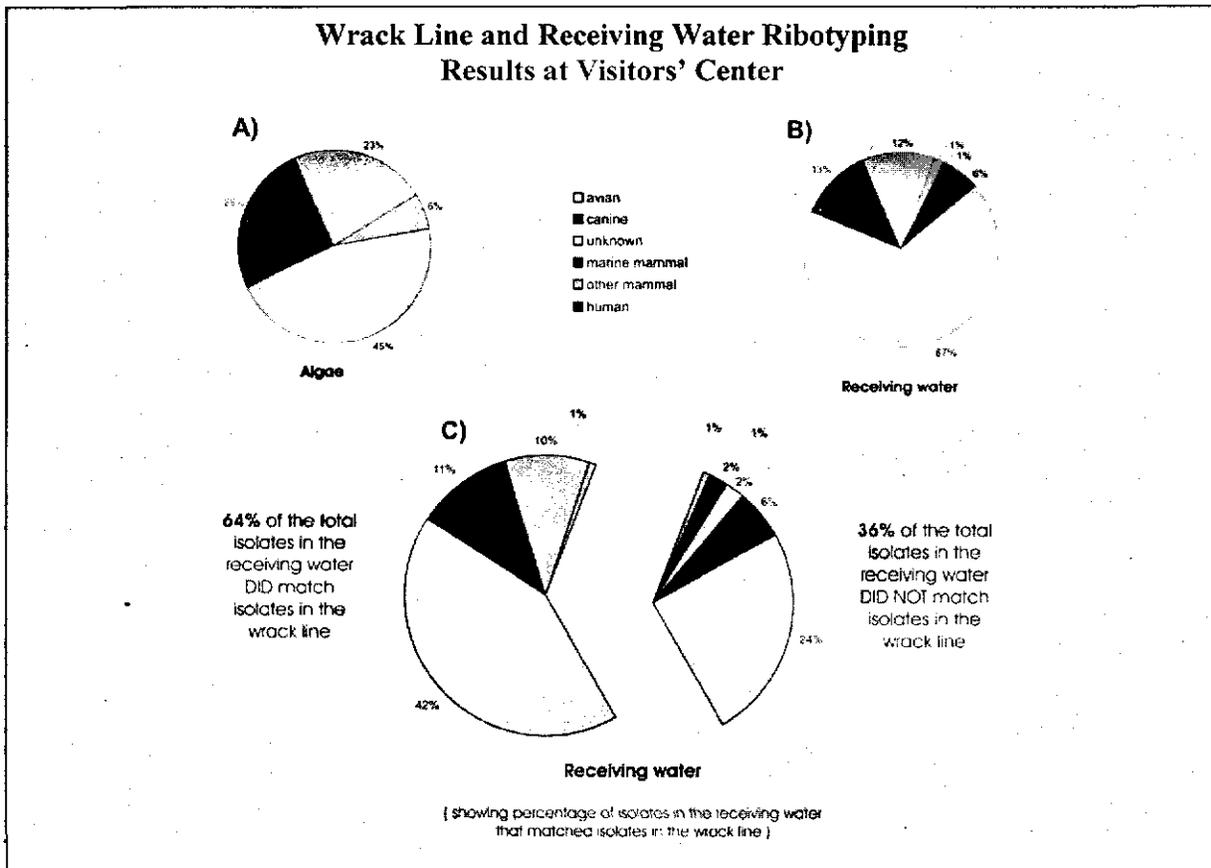


Figure 5. Results of Ribotyping analysis at Visitors' Center showing the origin of bacterial isolates in the wrack (A), receiving water (B), and the proportion of isolates in receiving water that matched those in wrack (C).

## CONCLUSIONS

Visual observations and laboratory analysis of water samples collected at Dog Beach and throughout Mission Bay Park led to the hypothesis that decaying eelgrass and kelp deposited during peak flooding spring tides may be acting as amplifiers and could potentially be contributing to indicator bacteria exceedances to the accompanying receiving water. Samples of organic debris collected at several beaches confirmed elevated bacterial densities were present on the wrack material.

Simulation of storm drain conditions in the laboratory showed that growth and maintenance of fecal coliforms and enterococcus was significant in fresh water and brackish environments. In addition, survival of fecal coliform and enterococcus was significantly greater in brackish and saltwater when organic debris (i.e., wrack material) was present. Tidal flushing of the wrack line at high tide and storm drains could transport these elevated bacterial densities into the marine environment and potentially degrade water quality.

The strong isolate match between the bacteria identified in the wrack material and the bacteria in the receiving waters during washing of the wrack line identifies tidal washing of the wrack line as the transport mechanism for elevated bacterial densities into the water column.