

CITY OF SANTA BARBARA WATERFRONT DEPARTMENT

MEMORANDUM

Date: January 19, 2012
To: Harbor Commissioners
From: Scott Riedman, Waterfront Director
Subject: **Beach Maintenance**

RECOMMENDATION:

That Harbor Commission receive a report on the City's Beach Maintenance Program.

BACKGROUND:

The City of Santa Barbara maintains the beaches that extend from Leadbetter Point west of the harbor to the Clark Estate opposite the Andree Clark Bird Refuge. Three main beaches provide recreational opportunities for residents and visitors all year. These beaches are commonly known as; 1) **Leadbetter Beach** immediately west of the harbor, 2) **West Beach** located between the harbor and Stearns Wharf, and 3) **East Beach** located between Stearns Wharf and the Clark Estate. The total length of these maintained beaches is approximately 2.9 miles with over 40 acres of dry beach available most of the year for a variety of active and passive recreational uses.

Hundreds of thousands of people enjoy Santa Barbara's beaches year round. On a peak summer day 7,000 or more people may use these beaches making them one of the busiest waterfront areas. In addition to this significant use by the public, coastal storms deposit debris on the beaches requiring a variety of maintenance activities to keep the beaches clean and safe for the public.

BEACH MAINTENANCE:

All City beaches are maintained by the Parks and Recreation Department as defined and regulated under the City's Sediment Management Plan. Beach maintenance is comprised of grooming done by two separate pieces of equipment and hand crew operations. All beach maintenance activities are funded by the City's General Fund. The annual budget for these activities, including biological monitoring for permit compliance, and litter/debris pick-up is \$146,000

Beach Grooming

Grooming beaches is done on a regular basis for both public safety and aesthetic purposes. It is accomplished using two methods (Beach King or Raking) dependent on the season, the need for debris removal, and presence of special status species and required protocol. Beach grooming includes raking, cleaning (sifting sand for debris removal) and recontouring sand accomplished by mechanical and physical labor. All mechanized equipment is restricted to dry sand area only and does not operate any

closer than ten feet from the dry sand side of the wrack line (the dry sand side of the Ordinary High Tide Line (OHTL) where kelp is normally deposited).

Beach King Operation - The Beach king, a mechanism that sorts sand and debris, is pulled by a specialized tractor. A “paddle like” tool drags across sand to a depth of four inches and places the sand and debris onto a conveyor belt. The sand is dropped back to the beach and the debris/trash is released into a hopper. The hopper is emptied into a dump truck and hauled to a local recycling center. The Beach King is used during summer months (April – August) 4 days a week. **The later in the season this activity occurs the lower the weight of debris removal.** Debris removal in weight is approximately 50 tons a month, therefore on an annual basis 250 tons of debris is recycled (based on a five month period).

Raking Operations - Raking the beach is done to remove litter in high use areas such as Leadbetter and East Beach during the time of year when the Beach King is not used. Raking gives the sand a groomed/clean appearance. A tractor drags a rake attachment and the top four inches of sand are cleaned. No debris is removed in this process. The rake is also used to re-level the volleyball courts, as needed during summer, to level out depressions made from normal recreational volleyball activities

There are a total of 16 grooming/raking cycles a year, with grooming occurring more frequently May to October and raking occurring between November and April.

Hand Crew Operations

In addition to mechanical grooming operations, Parks and Recreation Department hand crews pick up debris, including trash along the beaches, creek mouths, and below the wrack line (OHTL) where mechanized equipment is restricted. Hand crews are also used after large events such as the 4th of July, on City beaches upcoast of Leadbetter Point, and to assist in cleaning up beached vessels. Trash is loaded into trucks and disposed of as appropriate. Hand crews clean the beaches at least twice a week year round. The average weight of trash removed by hand crews is 26 tons annually.

Storm Events/Emergencies:

Approximately once every five years there occurs a winter storm event delivering substantially higher than normal loads of debris to the beach from fast flowing debris laden creeks and deposition from high tides and large waves. Debris is primarily composed of green waste, but can also include garbage such as old furniture, car parts, broken boat and vessels parts, fiberglass, metal, broken glass, etc. This type of garbage can pose a safety hazard for beach users and swimmers and requires removal.

In extreme storms, the City will hire a specialized contractor, (due to staff time constraints from other urgent storm related activities), to remove the dense debris deposition and a lack of necessary equipment readily available. The sandy beach areas covered in debris are skimmed by a specially fitted rake attachment to a depth of approximately four to six inches. A dozer pushes debris into centralized piles at various locations on the beach where it is loaded onto trucks and disposed of as appropriate. The weight of storm debris removed can vary from approximately 500 to 1000 tons

during extreme storm years. Depending on the severity of the storms, the cost of debris removal may be reimbursed by emergency response funding such as FEMA and OES.

REGULATORY ISSUES:

As previously mentioned, beach maintenance is included in the City's Sediment Management Plan (SMP). The SMP includes dredging, stormdrain maintenance, and lifeguard tower placement on the beaches as part of the project description in addition to beach maintenance. All of these activities on the City's beaches are highly regulated by a variety of local, state, and federal agencies. The SMP activities have been regulated as a single operation with corresponding permits since 2001 with all the permits having been recently renewed for another 10 years.

The City's beaches are regulated as a valuable biological resource as well as a recreational resource. Several special status or "sensitive" avian species such as snowy plovers and least terns are known to frequent the City's beaches and protection of those species is a condition of all the permits. Although other shorebirds don't receive the same protection or special status designation of "threatened or endangered" as the snowy plover or least tern, their primary food source located on the beaches is protected. A variety of insects and other invertebrates located in decomposing kelp and the intertidal sands provide the main sustenance for these birds. Several permit conditions are designed to protect this food source by requiring that wrack (kelp deposited on the beach) is preserved in place. Beach grooming activities are restricted within 10' of the wrack line and the intertidal zone.

In light of the fact that the shoreline or dry beach position fluctuates seasonally with large swells and tides, the actual area of dry beach available for grooming changes throughout the year. For example, large winter swells frequently erode the beach face causing the shoreline position to retreat. Wave run up from large swells occasionally deposits kelp far up the beach restricting beach maintenance due to the permit requirements to preserve wrack.

SUMMARY:

The City Parks and Recreation Department is dedicated to keeping the City's beach clean and safe. Despite some restrictions on beach maintenance activities required by various permit conditions, hundreds of tons of trash are removed from City beaches every year. Of the over 40 acres of beaches available to the public, the majority is groomed and cleaned throughout the year providing safe access for residents and visitors.

Prepared by: Karl Treiberg, Waterfront Facilities Manager