



WAIKIKI BEACH MAINTENANCE PROJECT

State of Hawaii, Department of Land and Natural Resources

The Hawaii Department of Land and Natural Resources (DLNR) is conducting a three month project to restore sand to approximately 1,730 feet of shoreline from the west end of the Kuhio Beach crib walls, near the Duke Kahanamoku statue, to the existing Royal Hawaiian groin between the Royal Hawaiian and Sheraton Waikiki hotels.

Beach maintenance activities are scheduled to run from January until March 2012 and will require the temporary closure of parts of Kuhio Beach. These relatively small closures are necessary to ensure public safety during periods of active beach maintenance work. The Hawaii DLNR appreciates your patience, understanding and cooperation during this project to improve Waikiki.



Existing Beach



Nourished Beach

Outcomes:

The proposed project will improve Waikiki Beach by restoring a valuable and heavily utilized recreational beach, and will have significant beneficial impacts to recreational activities consistent with protecting the local environment.

The economic value of Waikiki Beach to Hawaii's visitor industry and the economic success of Waikiki as a visitor destination are extremely significant. The estimated socio-economic loss to the state would be quite high if Waikiki Beach is not maintained and is allowed to erode away – a \$2 billion loss in overall visitor expenditures, a \$150 million loss in tax revenue, and a job loss of 6,350 people.



Purpose:

Since 1985 the project area shoreline has experienced significant beach loss due to long-term chronic erosion. The State has recognized that given the chronic erosion potential simply importing sand is not a permanent solution. There is a need to develop a program for regular beach maintenance using nearshore sand as a means for periodic beach nourishment. This “recycling” program offers a more efficient method for maintaining a recreational beach while mitigating some of the environmental effects of imported sand to the Waikiki ecosystem over the past sixty-plus years.



Project Activities:

- Recovery of up to 24,000 cubic yards of sand from deposits located 1,500 to 3,000 feet offshore of the project area in a water depth of about 10 to 20 feet.
- Pumping sand to an onshore dewatering site within the eastern Kuhio Beach crib walls.
- Transport of the sand along the shore in the project area with a low pressure pneumatic sand blower, using a small plastic pipe. Sand will be placed according to design beach profiles to ensure the right amount of sand is located in the correct sections of beach.
- Removal of two deteriorated groin structures located makai of the Duke Kahanamoku statue.



Contractors:

- Design work, permitting, and construction quality assurance by Sea Engineering, Inc.
- Project construction by Healy Tibbitts Builders, Inc.
- Construction Management led by the Department of Land and Natural Resources' Engineering Division.

Frequently Asked Questions:

What is happening?

The Hawaii Department of Land and Natural Resources, with the cooperation and support of the Hawaii Tourism Authority and Kyo-ya Hotels and Resorts, is restoring a valuable and heavily utilized portion of Waikiki Beach by recovering and recycling sand that has eroded from the shoreline over time.

Why does the beach need to be restored?

Since 1985 the project area shoreline has experienced significant beach loss due to long-term chronic erosion. Today, at high tide along much of the area, there is barely sufficient dry sand for even one row of beach mats. The State has recognized that given the chronic erosion potential, simply importing sand is not a permanent solution. There is a need to develop a program for regular beach maintenance using near shore sand as a means for periodic beach nourishment.

How will this happen?

After studying decades of aerial photos and looking at the results of previous beach improvement projects in the area, the State DLNR and Sea Engineering, Inc. designed a maintenance plan that will take some of that eroded sand that is sitting very close to shore and move it back onto the beach. This "recycling" program offers a more efficient method for maintaining a recreational beach while mitigating some of the environmental effects of imported sand to the Waikiki ecosystem over the past sixty-plus years.

How is this project being funded?

This is a great example of a public/private partnership aimed at improving one of Hawaii's most valuable environmental resources and an iconic local amenity. The Department of Land and Natural Resources has taken the lead with sponsoring the project and both the Hawaiian Tourism Authority and Kyo-ya Hotels & Resorts have made significant contributions to the project.

How does the process work?

Like the previous beach restoration project in Waikiki in 2004, a barge will float over a large pocket of sand and pump it through a pipeline to a large basin on the beach. After the sand dries it will be placed in a small, temporary plastic pipe running along the beach and gently blown with air through the pipe to where it needs to be placed.



Which areas of Waikiki Beach will be impacted?

The maintenance activities will require the closure of parts of Kuhio Beach. Additional temporary beach closures will occur during sand placement operations on the project site, which extends approximately 1,730 feet from the west end of the Kuhio Beach crib walls, near the Duke Kahanamoku statue, to the existing Royal Hawaiian groin between the Royal Hawaiian and Sheraton Waikiki hotels.

Why is the project being done during Winter?

Whether you are a resident or a frequent or first time visitor to these islands, you know of Hawaii's world famous waves. During the winter months, the largest waves are typically along the North Shore while the South Shore, including Waikiki, is relatively calm. Calm water is critical for the safe operation of floating equipment that will be operating close to shore, which is why the project is scheduled for January-March 2012.

Why is there equipment on the beach?

The project is designed to take up as little of the existing beach as possible while the team is making the beach larger for everyone, but some equipment is needed to make sure the project work is done as quickly and safely as possible.

What about my favorite beach spot, why is it roped off?

To make sure residents, visitors, and workers all remain as safe as possible during the project, some parts of the beach will be temporarily off limits. The team will be working very closely with the City & County Lifeguards to minimize the amount of beach that is closed at any time. Remember, if your favorite spot is temporarily closed, it may mean that you will have more room to spread out once the area is re-opened.

What can I do to help?

- Please enjoy the open areas of the beach during the project – remember, you are in Waikiki!
- Please obey all signs and any instructions from the Project Team – we want you to be safe.
- Please do not try to sneak past a barricade or fence for a closer look – you should be able to see the work from a safe distance.
- Wear sunscreen – you are at the beach!
- Please pay attention to the lifeguards when you are in the water – they are also there every day to protect you.

MAHALO FOR YOUR COOPERATION AND ENJOY YOUR LARGER WAIKIKI BEACH!!!