Sea Engineering, Inc.
504 N Nimitz Hwy • Honolulu, Hawaii 96817
Phone: (808) 536-3603 • E-mail: hi.engineering@seaengineering.com • Website: www.seaengineering.com

March 25, 2025

Office of Conservation and Coastal Lands
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, HI 96809

Attn: Michael Cain, Administrator

Subject: SSBN MA-15-2, Berm Maintenance Authorization Request
Sugar Cove, Spreckelsville, Maui, Hawaii, TMK (2) 3-8-002:003 (seaward)

The Sugar Cove AOAO (Association) property, located at 320 Paani Place, spans a significant portion of the cove fronting its parcel in Paia, Maui, Hawaii. Beach deflation during the 1980s led to widespread turbidity plumes emanating from the native clay bank that was exposed during beach narrowing and loss. By 1989 the entire beach had disappeared leaving only the clay bank. In an effort to combat chronic coastal erosion and beach loss, the Association started their beach restoration efforts in 1995.

Prior to the Association's restoration efforts, the beach was completely lost and the nearshore waters of the cove were continuously impacted by the release of fine terrigenous material from the natural clay bank. During this period of beach loss, the nearshore waters, nearshore benthic environment, and sandy nearshore ecosystem were heavily impacted, and the sand beach ecosystem was completely lost.

The Association's restoration efforts have restored the public sand beach and its ecosystem within the cove. The restored public beach extends from the public access near coastal armoring structures on the eastern side of the property to the natural, rocky headland on the western side of the cove. This beach restoration program has systematically added sufficient sand volume, over the previous two decades, to re-inflate the entire beach system.

The Association has retained Sea Engineering, Inc. (SE) to assist with their beach berm maintenance program. The Category II Small Scale Beach Nourishment (SSBN) permit, SSBN MA-15-2, authorizes up to 8,000 cubic yards (cy) of sand placement, to be placed as needed during the duration of the 10-year permit, through multiple berm maintenance efforts. We are requesting permission to conduct a seventh berm maintenance at Sugar Cove, Spreckelsville, Maui, Hawaii, seaward of Tax Map Key (TMK) (2) 3-8-002:003 with the same sand source as the sixth maintenance effort, conducted in 2024.

The first placement of sand was in November of 2015, at the beginning of the North Pacific swell

season in Hawaii. There are triggers in the Sugar Cove SSBN maintenance plan for when nourishment should occur. The berm elevation at Transect 5 was deflated to below the trigger elevation of +10 feet. The berm had been below the trigger elevation since before the initial submission of the SSBN application in August of 2014. During the interim period between initial submission of the application and placement of the maintenance sand during the first effort in November of 2015, there were numerous large wave events and several small tsunamis, each of which further deflated the beach face. Maintenance operations resulted in the placement of 892 cubic yards of sand, with nearly 45 cubic yards of sand placed in the public beach access path.

In September 2016, the second berm enhancement was conducted when the elevation at Transect 5 was deflated to below the trigger elevation of +10 feet. Maintenance operations resulted in the placement of 1,115 cubic yards of sand on the beach and access path.

The third berm maintenance effort, as indicated to be necessary by the nourishment triggers and as approved by DLNR-OCCL, was originally scheduled for September 2017. However, it was not accomplished due to availability issues with the local sand source. Subsequently, SE and the Association found a suitable sand source and conducted maintenance nourishment at Sugar Cover on September 15, 2020, three years after the originally scheduled maintenance date. Maintenance operations resulted in the placement of approximately 740 cubic yards of sand on the beach. No sand was placed in the beach access, as it was still sufficiently full of sand at that time.

In September 2021, the fourth berm enhancement was conducted when the elevation at Transect 5 was deflated to below the trigger elevation of +10 feet. Maintenance operations resulted in the placement of 1,111 cubic yards of sand on the beach and public access path.

On August 14, 2023, a previous request to conduct the fifth berm maintenance was approved by DLNR. The client informed SE that the 1,321 cubic yards of sand was placed on the beach at Sugar Cove on September 12, 2023.

On April 2, 2024, a request to conduct the sixth berm maintenance was approved by DLNR. The client informed SE that approximately 685 cubic yards of sand was placed on the beach at Sugar Cove on April 24, 2024.

Via this letter, the Association is requesting permission to conduct the seventh berm maintenance effort in the spring of 2025. Currently, the elevations have deflated below the trigger elevation of +10 feet. The beach width from the accessway to the beach toe at Transect 5 is 80 ft, and the beach slopes at all three transects are lower than the desirable 1V:6H to 1V:8H slope. These three findings all meet triggers in SSBN MA-15-2 for additional routine berm maintenance at Sugar Cove. We propose augmenting the littoral cell with approximately 1,000 cy to 1,400 cy of beach-compatible sand.

A new topographic survey will be accomplished immediately before and after sand placement to document the conditions surrounding the sixth maintenance effort. The sand would be trucked to

Sugar Cove from the stockpile site over one to two days. Placement of the sand on the beach would adhere to the approved methodology used previously and utilize the Best Management Practices Plan for the project. Similar to the previous nourishment efforts, sand would be spread along the back of the beach above the waterline using a small bulldozer.

The proposed nourishment sand is Pacific Aggregate LLC's "Natural Sand Blended," produced at their quarry in Waianae, Oahu. It is calcium carbonate mined from an inland quarry, which is screened and triple-washed. It is not crushed limestone. Grain size information for the stockpile, currently on Maui, is shown in an attached figure. The proposed fill sand is coarser than the existing material. The existing beach sand median grain size (D_{50}) is 0.54 mm, while the proposed fill sand is about 0.56 mm. The overfill ratio is zero for the fill sand, due to its coarser nature. All other SSBN sand fill requirements are met by the proposed fill sand. The coarser sand has helped to extend the residence time of the last maintenance project; however, the littoral cell is still severely deflated due to the prolonged gaps between maintenance efforts.

In an effort to stay abreast of the maintenance requirements for the beach, we respectfully request to place the sand during a low tide cycle in the spring of 2025. We propose a placement of approximately 1,000 cy to 1,400 cy. This volume can be successfully placed on the existing beach profile, has been sufficient to stabilize the small littoral cell for several seasons, and leaves the beach and nearshore usable and accessible for the general public. Operations at the beach will be limited to several days, with pre- and post-placement surveys, water quality observations, turbidity testing, and installation and maintenance of best management practices.

Please contact me directly should you desire additional information, or have any questions or comments. You can reach me at (808) 460-3436, or by email at aagustin@seaengineering.com.

Sincerely,

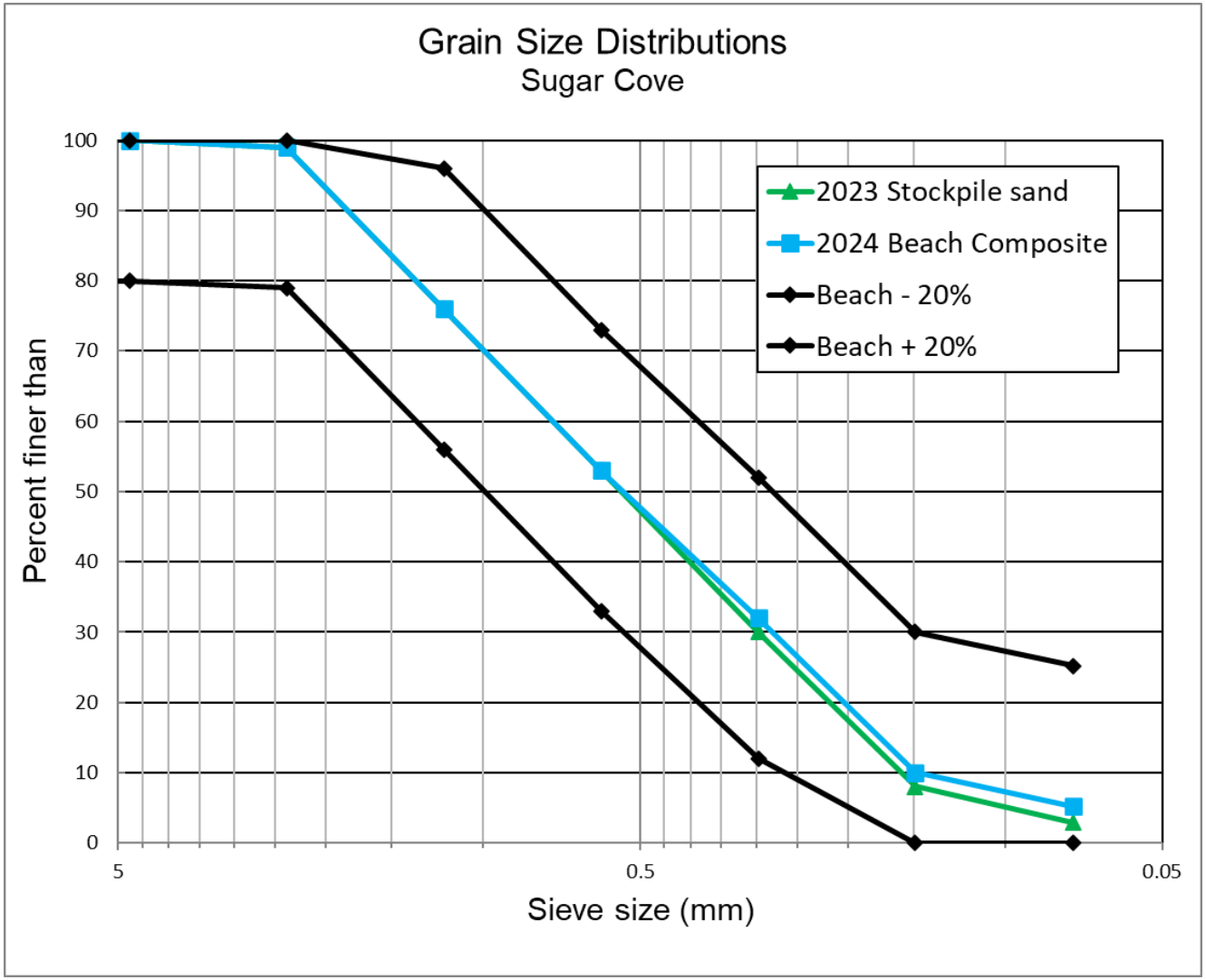
Alyssa Agustin

Alyssa Agustin
Oceanographer, Project Manager

Enclosure
Sugar Cove Berm Maintenance Monitoring Report

Cc: Richard Salem, Sugar Cove AOAO President

Sea Engineering, Inc.
504 N Nimitz Hwy • Honolulu, Hawaii 96817
Phone: (808) 536-3603 • E-mail: hi.engineering@seaengineering.com • Website: www.seaengineering.com



Comparison of Sugar Cove beach sand and the proposed fill sand

Sea Engineering, Inc.
504 N Nimitz Hwy • Honolulu, Hawaii 96817
Phone: (808) 536-3603 • E-mail: hi.engineering@seaengineering.com • Website: www.seaengineering.com

Comparison of proposed fill sand and Sugar Cove beach sand