Saving Pelekane Bay | West Hawaii Today, Kailua-Kona, Hawaii

By Chelsea Jensen

West Hawaii Today

cjensen@westhawaiitoday.com

Tons of sediment — possessing the potential of wreaking havoc on Pelekane Bay at Kawaihae — remains far from the shore on Kohala Mountain thanks to the efforts of a local nonprofit and nearly two dozen volunteers.

The Kohala Watershed Partnership, which is helping to restore native forests in the watershed above Pelekane Bay, spent Saturday with 20-plus volunteers in“moon country” — a dry, barren oasis where infrequent, short-lived heavy rains flush thousands of pounds of sediment from the slopes into the sea.

Waimea resident Robin Simon volunteered for the daylong project out of his love for nature and the need to give back for all the destruction humans have done to Kohala Mountain.

“It’s hard work that needs to be done,” he said. “We’ve got to fix up what we’ve messed up. Every little bit helps.”

Despite 40 mph winds and dirt blowing from all directions, volunteers laid wire mesh in a gully, covered it with ground cloth and then stacked rocks atop before rolling it into a burrito-like contraption known as a sediment check dam. The dams are an attempt to keep sediment, which is plentiful on the slopes because of deforestation, drought, fires, and ungulate and cattle grazing, from reaching the bay.

The dams, which are not placed in streams or riverbeds, have held back 900 tons of sediment since the project began in early 2010, said Melora Purell, KWP coordinator. One of the 100-some dams they’ve constructed can hold up to 10 tons of sediment, which is flushed down the slopes in a single, localized rain that often lasts just 15 minutes and dumps about a ¼ inch of water, she said.

The dams also help slow the flow of water, allowing moisture to penetrate the parched surface and, hopefully, Purell said, vegetate and reforest the land. Just a few hundred years ago, before the sandalwood trade blossomed in the 1800s, the slopes were covered with iliahi, or sandalwood, the leaves and roots of which helped capture water and hold the soil, respectively.

University of Hawaii at Hilo student Sanford Baranyi, who took part in the event for his watershed class, expressed concern about the amount of sediment being washed down hill after seeing a 10-ton dam filled to its brim after just one rainstorm.

“It scares me. How much does get into the ocean?” he asked rhetorically.

That is something that is hard to determine because no baseline research was conducted beforehand at Pelekane Bay, Purell said.

“But, we know we are holding back this amount that would never have been held back before,” she

said in reference to the 900 tons of sediment the partnership has stopped with the dams and subsequently used to create plots where native flora is planted.

Pelekane Bay has for some time been the depository for sediment from Kohala Mountain via Makeahea Stream, Purell said. The bay, which was created when Kawaihae Harbor was built in 1960s, is considered home to chronically impaired near-shore waters, she said referring to a 2010 marine monitoring program by the partnership.

Kawaihae Bay was once a flourishing marine area that offered some of the richest fishing grounds along the leeward coast, she said. However, after the harbor was constructed the area's natural flushing ability was reduced, resulting in impacts to both coral and marine resources.

"It stopped all the natural recycling and cleaning of sediment that would have come in there," she said. "We hope to balance out that (with the dams and projects) so that the natural flushing action will not be overwhelmed by the amount of sediment that is coming in."

Just reducing the amount of sediment reaching Pelekane Bay could have an enormous impact on the marine and coral life there, she said. Marine biologists, she said, indicate that the reef, including coral, has the capacity to recover with some help.

"As soon as the sediment is flushed out, Pelekane still has the potential, a great potential, to recover," Purell said.