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West Hawai'i Today / Diana Duff's Master Gardener By-line

In August, a land-focused non-profit received over two million dollars from an ocean-focused federal agency. It was the first time this agency had made such a large investment in this type of project in Hawai'i, signaling a new understanding of the intrinsic connection between land and sea. This project is unique in that the benefits to an historic bay will be a result of restoration efforts focused on land. For truly, what happens at the source point, our watersheds, has direct impact on the end point, our bays.

The non-profit recipient is the Kohala Watershed Partnership (KWP), a voluntary coalition of private land owners and state land managers. Their mandate is to manage the forested watershed of Kohala Mountain and protect it from threats. The federal agency is the National Oceanic and Atmospheric Administration (NOAA). Using funds from the American Recovery and Reinvestment Act (ARRA), NOAA solicited grant proposals nationwide. It received 814 proposals and awarded 50, with only two of those coming to the State of Hawai'i. KWP was one of those fortunate recipients: \$2.67 million dollars for the restoration of the Pelekane Bay Watershed.

Pelekane Bay is adjacent to Kawaihae Harbor, on the leeward coast of Kohala Mountain. The Pu'ukohola National Historical Park overlooks the bay, and the popular Spencer's Beach Park is to the south. The two main streams that feed into the bay, Luahine and Waiakamali, originate 5400' above, in the rainforest of Kohala Mountain.

It is what's happened upslope, on the lands, and along these two stream corridors, that has turned Pelekane Bay, from a once functioning and bio-diverse estuary into a sediment-filled and nearly barren ecosystem. There is no single factor that has caused this degradation, nor has it been caused willfully or intentionally. It has instead resulted from an interrelated series of natural occurrences and land-use practices, the consequences of which could never have been foreseen. In geologic time, it happened in a blink. Now the last native plant remnants are literally clinging to the walls of the gulches, one flood away from losing their foothold forever.

The journey to this point began over 10 years ago with the Mauna Kea Soil and Water Conservation District doing a baseline survey of this watershed. That began the long process of pinpointing areas and elements of concern. This led to a comprehensive plan, written in May 2005, which addressed threats including erosion and fire, and recommended remedial actions like prescribed grazing and native plant restoration. This NOAA grant will now allow key parts of the management plan to be put into action.

What is significant is that NOAA not only recognizes the extreme degradation of the watershed and its intimate connection to the coastline, but they also understand that with

support, ingenuity and a dedicated organization, damage can be repaired and balance can be restored.

KWP's project goals are impressive: restoration of 400 acres of native vegetation along 6 miles of stream corridors and 100 critically-eroding sites; 13 acres of erosion control fabric and native grass plantings; a minimum of 100 check dams filtering sediment from the stream flow; installation of 100,000 native plants; and construction of 20 miles of goat-proof fencing to create 11,750 acres free of feral goats.

To this end, KWP has created 15 full-time positions through November 2010. There is a restoration crew responsible for construction of sediment dams, invasive plant eradication, and native plant propagation; a fencing crew; field technicians, who are responsible for monitoring and tracking restoration activities; and an assistant administrator/ outreach coordinator.

There are many exciting and singular aspects to this project. For example, this watershed has the steepest rainfall gradient of any summit-to-coast watershed in the world. It begins at 5480' elevation, in true bog, with an average annual rainfall of over 150" and finishes just eleven miles below, along a barren "moonscape" receiving less than 10" of rain.

Volunteers will become a large component of continuing restoration and maintenance efforts. The plan is to schedule regular work days specifically for volunteers to get on site, and not only participate in the field work, but learn about the watershed and gain valuable insights into ecosystem restoration.

For further information and volunteer opportunities, please contact Barrie Moss at 443-2751 or pelekaneadmin@kohalawatershed.org.

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