

# Wahikuli-Honokōwai Agricultural Road Drainage Improvement Project

West Maui Soil & Water Conservation District, Sept.30, 2014

## PROJECT OVERVIEW

This pilot project worked on two stretches of agricultural roads in Wahikuli and Honokōwai watersheds that were identified as problem areas for sediment erosion leading to stress on coastal ecosystems. Working with landowners and an engineer, specifications were created for where the construction contractors should put water bars, and reestablish terraces. Improvements were made to 3.2 miles of road and have resulted in more functional water diversion systems that will slow and divert runoff and sediment accumulated in rain fall events, preventing it from continuing into the gulches and down to coastal waters where it stresses reefs. The capacity of two local contractors has been increased, and this pilot scale project has facilitated an understanding of the steps that will be required for the larger-scale Phase II project to follow this fall.

## PROJECT GOALS AND OBJECTIVES

**Goal:** To improve coastal water quality and coral ecosystem function and health by reducing land-based pollution.

**Objective:** Reduce pollutant load to surface water and groundwater through site-specific actions and best management practices on two sections of eroding agricultural roads. Specifically;

1. Solidify the relationships and build local equipment operator capacity in maintaining road BMPs.
2. Reduce the amount of sediment generated off two earthen access road surfaces and associated terraces.
3. Reduce sediment loads carried by the road network to the near-shore ocean waters.

## RESULTS

- *Improvements were made on 3.2 miles of eroding agricultural land*
- *On Puka Camp Rd. in Dept. of Hawaiian Home Lands, 1.7 miles of road was improved and ~6000 linear feet of terraces were opened and modified from a traditional design to a reef friendly design by preventing hydrologic connectivity to the gulches*
- *On General Finance Group road, 1.5 miles of road was improved by grading, and through the addition of water bars at specified intervals to allow the energy of the water and accumulated sediment to dissipate into the fields*



*Example of water bar to dissipate water and sediment into the field in Wahikuli watershed*

## MANAGEMENT OUTCOMES

1. *Capacity of local contractors to install and maintain earthen road BMPs was increased.*
2. *Project steps were piloted to inform larger scale effort to follow funded by EPA/DOH which will be able to address the majority of eroding earthen roads in Wahikuli and Honokowai.*