

## Waimānalo Farmers Implement Best Management Practices for Improved Water Quality

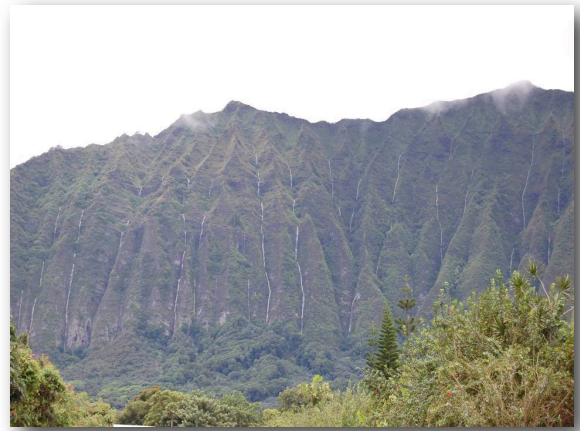
*Jean Brokish, O'ahu RC&D*

Waimānalo's agriculture community is diverse, with a variety of fruit, vegetable, flower, landscape, and livestock operations tucked next to the Ko'olau Mountains on O'ahu's windward side. This location provides Waimānalo's farmers the right amount of sun and gentle rains.

The Waimānalo agriculture community is also committed to protecting local water resources. Storms on the windward side bring large amounts of rain that runs off the steep slopes and can cause serious erosion. In order to reduce soil erosion and decrease the amount of sediment and nutrients entering Waimānalo streams, farmers utilize a variety of conservation practices.

A recent project led by the O'ahu Resource Conservation and Development Council (RC&D) evaluated water quality in Waimānalo and provided funds to help farmers implement priority conservation practices in the watershed. Funding for the project came from the Clean Water Act of the Environmental Protection Agency, administered locally by the Hawaii Department of Health - Clean Water Branch.

During the three-year project, more than two dozen conservation practices were installed. Practices included simple remedies like mulching the soil surface and planting vetiver at field edges, to more complex activities like composting green waste and animal manure. Field observations and analysis show that these activities reduced the amount of sediment entering Waimānalo waters by 320 tons per year, and also reduced annual loads of nitrogen by 5700 lbs and phosphorus by 1200 lbs. Secondary benefits of conservation practices included re-



*Waterfalls off the Koolau Mountains are seen from a Waimānalo farm. Large rain events generate a lot of runoff and can cause severe erosion in the Waimānalo watershed.*



*(Before) Bare soil is left vulnerable to runoff and severe erosion.*



*(After) Application of mulch reduces soil erosion, conserves moisture and suppresses weeds.*



duced herbicide use, increased crop yields, utilization of local waste products (tree trimmings), and deterrence of dumping.

The project included field days on erosion control, irrigation water management, sustainable agriculture, and annual stream / community clean-ups. A significant number of community residents participated in the outreach events and increased their understanding of water quality issues.

The project would not have been successful without the commitment of the individual farmers who took steps to protect water quality. Other partners on the project include: Waimānalo Agriculture Association, Hui O Ko'olaupoko, Hui Mālama O Ke Kai, City and County of Honolulu, Windward O'ahu Soil and Water Conservation District, USDA-Natural Resources Conservation Service, and the Department of Health.

Information about the project and services offered by O'ahu RC&D can be found at [www.oahurcd.org](http://www.oahurcd.org)

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*Vetiver grass is planted along the field's edge to capture runoff.*



*(Before) Roadside ditches are sites of severe erosion, and left untreated can result in road damage.*



*Frank Sekiya (Frankie's Nursery) points out various conservation practices used on the farm during a field day.*



*(After) Establishing vegetation along the roadside controls erosion, invites less trash, and, when combined with trees or shrubs, offers an attractive border to the farm operation.*