Press Release

Waimanalo Stream Run Off Smothers Coral Reefs in Bay
Project Funded by the Hawai`i Coral Reef Initiative Research Program

HONOLULU - "Waimanalo Stream is a disaster waiting to happen." That's how Edward Laws of the Department of Oceanography at the University of Hawai`i at Manoa, describes the subject of his current research project funded by the Hawai`i Coral Reef Initiative Research Program.

Waimanalo Stream, on the windward side of O`ahu, is one of the most seriously polluted streams in Hawai`i. It is estimated that at least 42 percent of the streambed is choked with dense grass growth. The natural flow of the water course has been significantly altered and the functions and values of the stream to process nutrients and trap sediments have been reduced. As a result, elevated nutrients and sediments run off into Waimanalo Bay and result in ecological shifts in the nearshore marine environment. An example of this change in community structure is evident in the recent increase of algal species that outcompete other species, such as coral colonies, by smothering them.

"The result of the change in the watershed of Waimanalo Stream is that it no longer behaves like a sponge, where it soaks up rainwater and releases it at a slow rate during dry weather," said Dr. Laws. "Instead, much of the rainwater rapidly enters the stream via storm drains. Hardened portions of the stream have no capacity to process nutrients so the nutrient concentrations rise off the charts and flow downstream into the ocean," he added.

During his research, Laws observed a plume of sediment settling directly off the mouth of Waimanalo Stream extending into deeper water. The fact that no comparable sediment plume can be found elsewhere in the bay suggests that Waimanalo Stream is the principal source of sediment entering the bay.

Restoration of the stream habitat will be essential in alleviating the adverse effects of the stream runoff on coral reefs in Waimanalo Bay. When completed in December 2002,
results of this research project will include recommendations on management practices for land use activities to minimize the impact of stream-delivered nutrients into the ocean. These recommendations could help to bring streams and coastal waters into compliance with state water quality laws.

"Waimanalo Bay is home to coral reefs that, up until the present time, have received very little attention from the scientific community," said Michael Hamnett, Program Director for the Hawai`i Coral Reef Initiative Research Program. "Dr. Laws' research is important because the results can be applied to other watershed and coral reef ecosystems in Hawai`i and throughout the world," Hamnett added.

The Hawai`i Coral Reef Initiative Research Program (HCRI-RP) was established in 1998 to support monitoring and research activities to build capacity in managing Hawai`i's coral reef ecosystems. The Program is currently in its fourth year of operation and has grown to fund several diverse research projects all aimed at managing and protecting Hawai`i's coral reefs. HCRI-RP is cooperatively managed by the State Division of Aquatic Resources and the University of Hawai`i. Further data is available at the Hawai`i Coral Reef Initiative Research Program's web site at http://www.hawaii.edu/ssri/hcri. For more information, please contact the Hawai`i Coral Reef Initiative Research Program office at 808-956-7479.

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(Digital photos of Waimanalo Stream are available for media. Please contact Lori Makiya at 524-6441 or at lori@brightlightmarketing.com)