Ecology, Restoration, and Management of Hawaiian Stream and Riparian Systems

Windward Community College,
Hale Akoakoa, Rooms 103 & 105
20-22 May 2008

Workshop Overview and Objectives

This 3-day workshop will address a wide variety of topics relevant to the ecology, restoration, and management of Hawaiian stream and riparian ecosystems. The intent is to transfer information and technology from past, present, and future work to interested parties, and to provide a broad array of ideas, tools, and techniques that may be useful to individuals or organizations interested in improving the management of streams and riparian systems in Hawaii. The format will include PowerPoint presentations along with open discussion and question/answer sessions. Funding and support for this effort comes from the U.S. Army Corps of Engineers, Engineer Research and Development Center, Water Operations and Technical Support Program, Vicksburg, MS.

Organizers

Dr. Richard Fischer, US Army Corps of Engineers, Engineer Research and Development Center, Environmental Laboratory, Engineer R&D Center, Vicksburg, MS

Mr. David Derrick, US Army Corps of Engineers, Engineer Research and Development Center Coastal and Hydraulics Laboratory, Engineer R&D

Center, Vicksburg, MS

Ms. Cindy Barger, Civil and Public Works Branch, US Army Corps of Engineers, Honolulu District

Ms. Jody Smith, University of Hawaii- Manoa

Tuesday, 20 May, 2008

Opening Oli. Dr. Sam ʻOhukaniʻōhiʻa Gon III, The Nature Conservancy, Hawaii.

Welcome and housekeeping. Dr. Richard Fischer, USACE, Engineer Research and Development Center, MS.

Plenary Session – Historical, Current, and Future Perspectives on Stream and Riparian Management in Hawai'i

A Multi-Functional Perspective on Stream and Riparian Systems. Dr. Richard Fischer, U.S. Army Engineer Research and Development Center, Vicksburg, MS.

Native Hawaiian Cultural Perspectives on Water and Streams. Dr. Sam ʻOhukaniʻōhiʻa Gon III, The Nature Conservancy, Hawai'i.

Corps of Engineers Perspective on Stream and Riparian Management in Hawai'i. Ms. Cindy Barger, USACE, Honolulu.

Session 1 – Hydrology

Overview of the Surface Hydrology of Hawai'i Watersheds (Dr. Ali Fares, Associate Professor of Watershed Hydrology, University of Hawai'i- Manoa)

Surface water issues facing the Water Commission (Mr. Ed Sakoda, DLNR - Commission on Water Resource Management, Stream Protection and Management Branch)

Interim Instream Flow Standards in Hawai'i (Mr. Dean Uyeno, DLNR – Division of Water Resource Management)

Streamflow and aquatic species habitat studies in East Maui (Stephen Gingerich, USGS)

The Importance of Boundary Conditions in Channel Stability and Ecology (Dr. Tim Abbe, Entrix Inc., Seattle, WA)

Addressing Stormwater Impacts on Hawaiian Streams (Stephen Blanton, Entrix, Inc., Seattle, WA)

Overview of Low-Impact Development Methods (Dr. Kathy Chaston, NOAA)

Session II: Riparian Vegetation and Soils

Riparian Restoration Plants Database (Dr. Christopher F. Puttock, University of Hawaii- Manoa)

Native plant materials for stream/riparian restoration Projects in Hawai'i. Matt Schirman

Wednesday, 21 May

Session III: Water Quality Issues

Water quality degradation issues in Hawai'i (Dr. Carl Evensen – UH-Manoa)

Watershed development and stream/riparian degradation (Don Heacock, DLNR, Division of Aquatic Resources, Kauai)

NRCS programs and practices for riparian areas in Hawai'i (Dr. Gregory Koob, NRCS)

Efficiency of riparian buffers to impact sediment and pollutants transport in Hawaiian watersheds (Dr. Ali Fares, Univ. of Hawaii)

The New CREP program in Hawai'i (Missy Irene Sprecher, Hawaii DLNR)

Contaminants in estuaries and impacts to marine systems (Wendy Wiltse, USEPA)

Session IV: Streambank Restoration Challenges

Overview and history of stream restoration (Kauaoa Fraiola, University of California – Berkeley and USDA Forest Service)

Overview of bioengineering approaches to stream stabilization (Dave Derrick, ERDC)

Unique challenges to stream restoration in Hawaii (Matt Rosener, Hydrologist, Hanalei Watershed Hui)

Session V: Stream Assessment Tools

Recent history of stream bioassessments in Hawai'i (Reuben Wolff, USGS)

DoH protocols and tools for determining stream condition in Hawai'i (Linda Koch, Hawai'i Dept. Of Health)

Atlas of Hawaiian watersheds and their aquatic resources – an important tool to aid in statewide stream and watershed management (Glenn Higashi, DLNR – Division of Aquatic Resources)

Session VI: Riparian and In-stream Fauna

Atlas of Hawaiian stream species - a description of habitat and distribution for the main stream animals. (Dr. James Parham, Bishop Museum)

Benthic Macroinvertebrates as Indicators of Stream Quality in Hawaii (Reuben Wolff, USGS)

Linking stream invertebrates to stream restoration (Dan Polhemus, DAR)

Thursday, 22 May, 2008

Session VII: Watershed Approaches and Case Studies

Ala Wai Watershed case study (Dayan Vithanage, OCEANIT).

Waipi'o Valley, Big Island. Stream management plan to integrate traditional taro farming with modern-day stream requirements (Dudley Kubo, NRCS)

Precision Riparian Buffers. (Todd Cullison, Kailua Bay Advisory Council)

Effects of Riparian Vegetation on Channel Hydraulics and Flow Conveyance (Andrew Hood, Sustainable Resources Group International, Inc., Hawaii)

Stream and riparian restoration success on Marine Corps Base Hawai'i. (Dr. Diane Drigot, USMC)

Hawaii Fish Habitat Partnership under the National Fish Habitat Action Plan (Gordon Smith, USFWS)

Permitting, monitoring and BMP requirements for stream restoration projects (Alec Wong, State of Hawaii Department of Health, Clean Water Branch)