

An



Agent's View of Community-
Based Watershed
Management in Hawai'i

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MĀLAMA
MAUNALUA





UNDERCOVER MISSION

CLASSIFIED

**Assist Mālama Maunalua,
a community-based organization with
defining and implementing its
watershed objectives.**



Intelligence Report:

Maunalua Bay Oahu, Hawai'i

- 28 Sq. mi. area
- 7+ Miles of Shoreline
- Urbanized (60,000)
- 10 Streams
- Many Recreational Activities
- Culturally & Socially Diverse



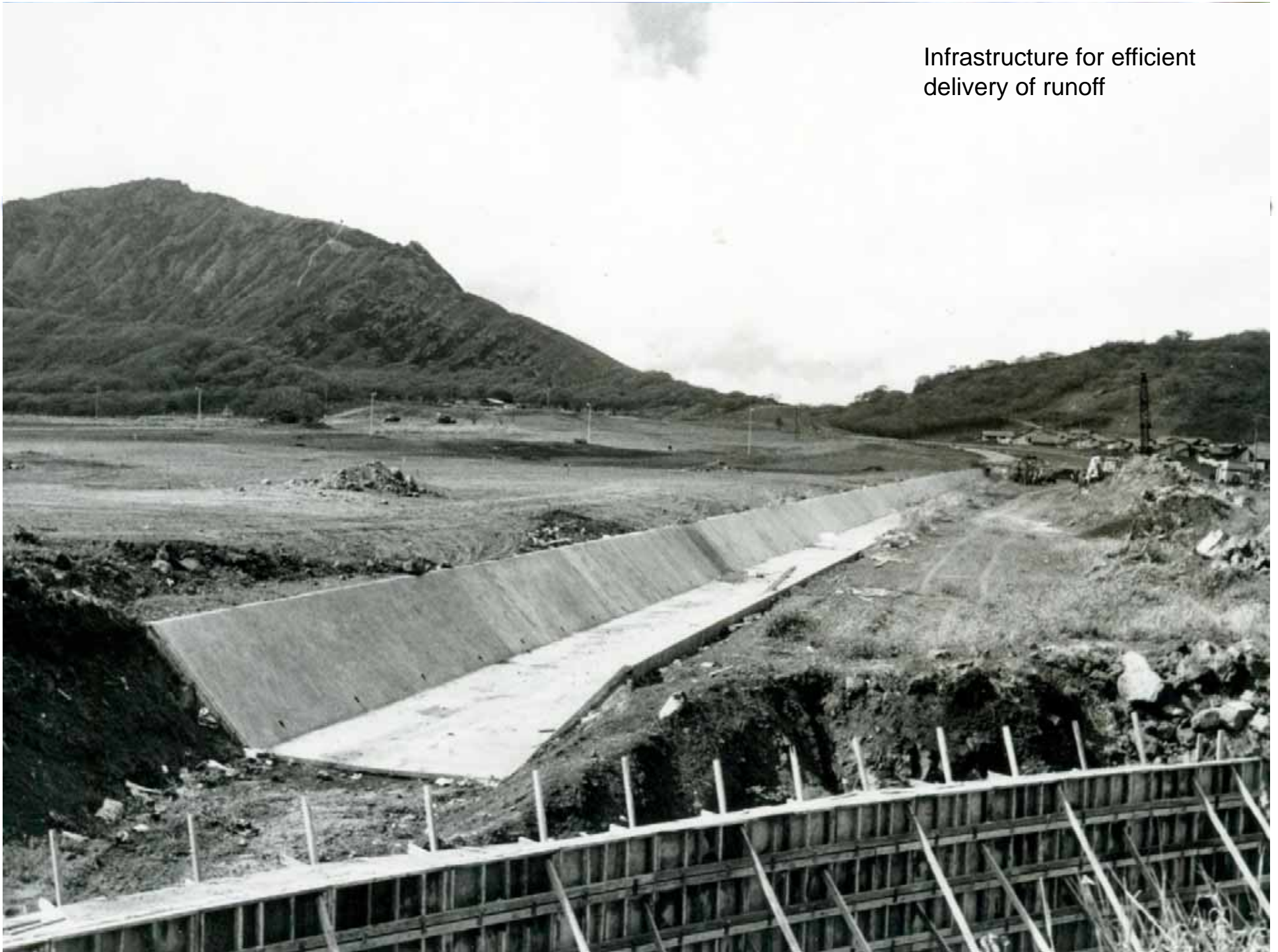
View from Koko Crater at Kuapa Pond and
Diamond Head in distance, Marconi Wireless
Station in foreground; Oahu, Hawaii/L.E.
Edgeworth/
ca.1915
Bishop Museum Coll.



Hardening shoreline
Impervious surfaces
Hawaii Kai 1959



Infrastructure for efficient
delivery of runoff







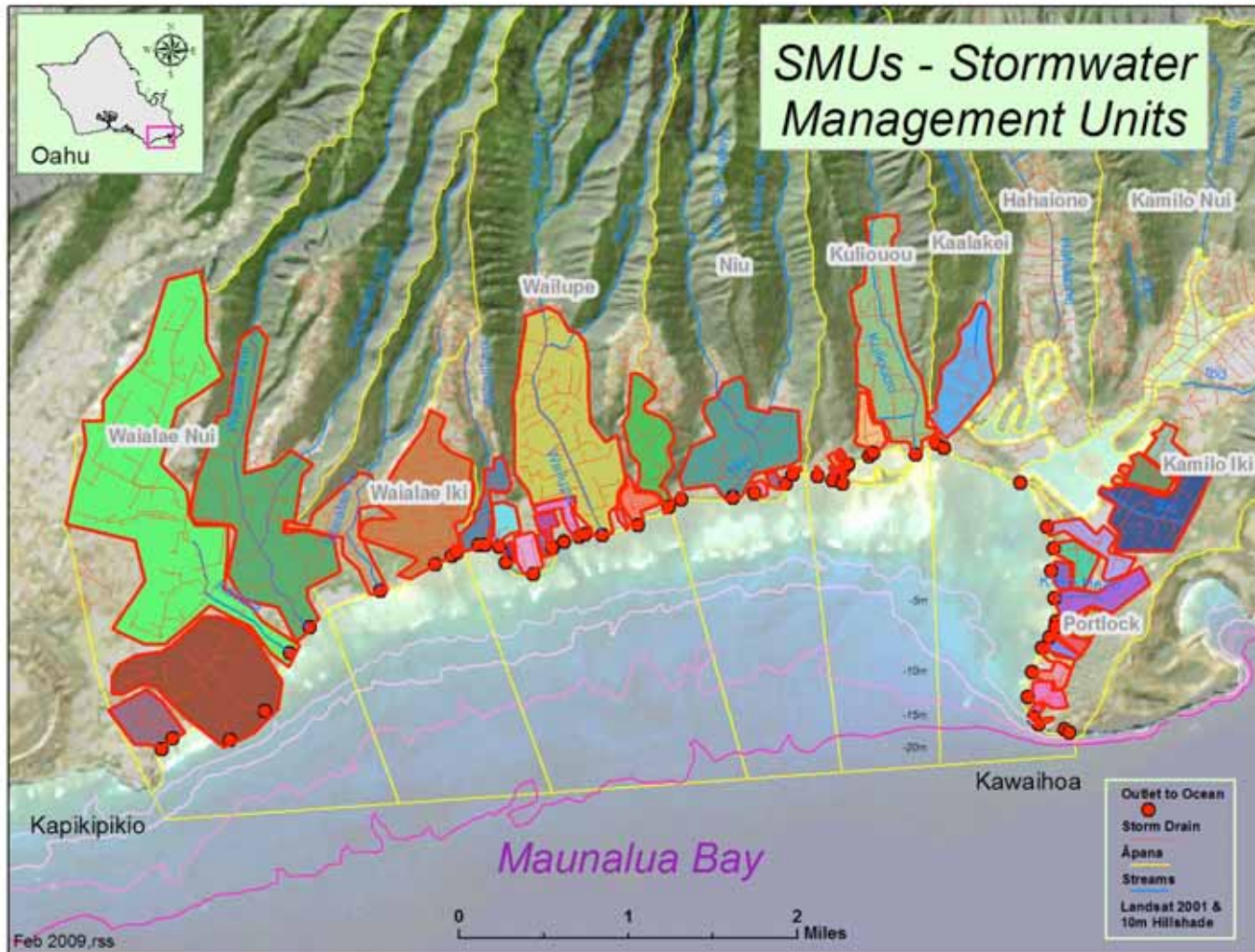
Even in 1959 the
results can be
seen

-NOAA 1959





Plumbed Watersheds

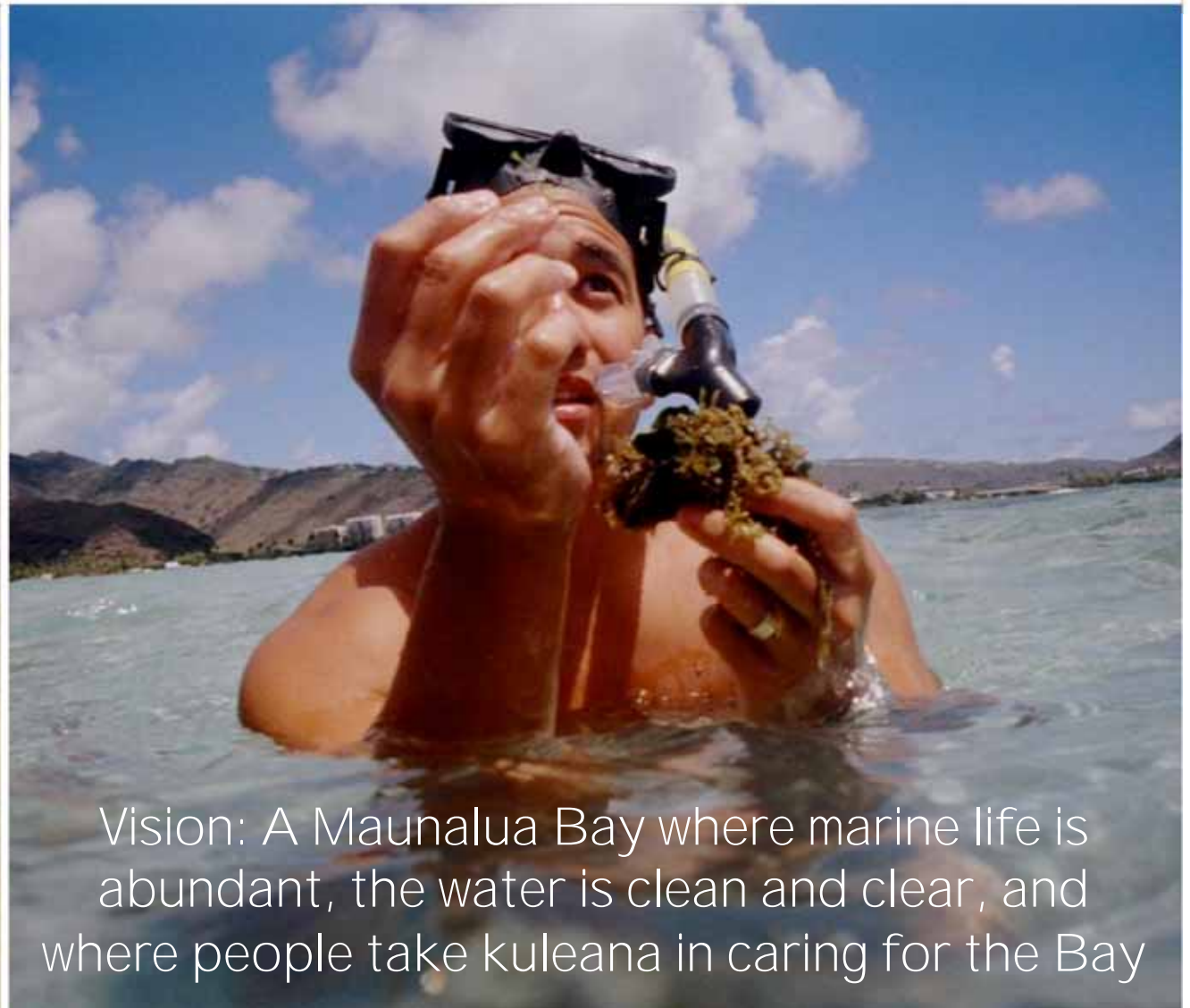


Mālama Maunaloa's Mission:

*To Conserve and Restore a Healthy and
Productive Maunaloa Bay through
Community Kuleana*

MULTIPLE PARTNERS:

COMMUNITY
SCHOOLS
CHURCHES
SEA GRANT
TNC
NOAA
USACE
DLNR
USEPA
DOH
C & C OF HONOLULU
USGS
CASTLE FOUNDATION
PACIFIC MARINE LIFE
FOUNDATION
HUI NALU
PVS
NRCS
WHOLE FOODS
UH-KEWALO
USFWS



Vision: A Maunaloa Bay where marine life is abundant, the water is clean and clear, and where people take kuleana in caring for the Bay



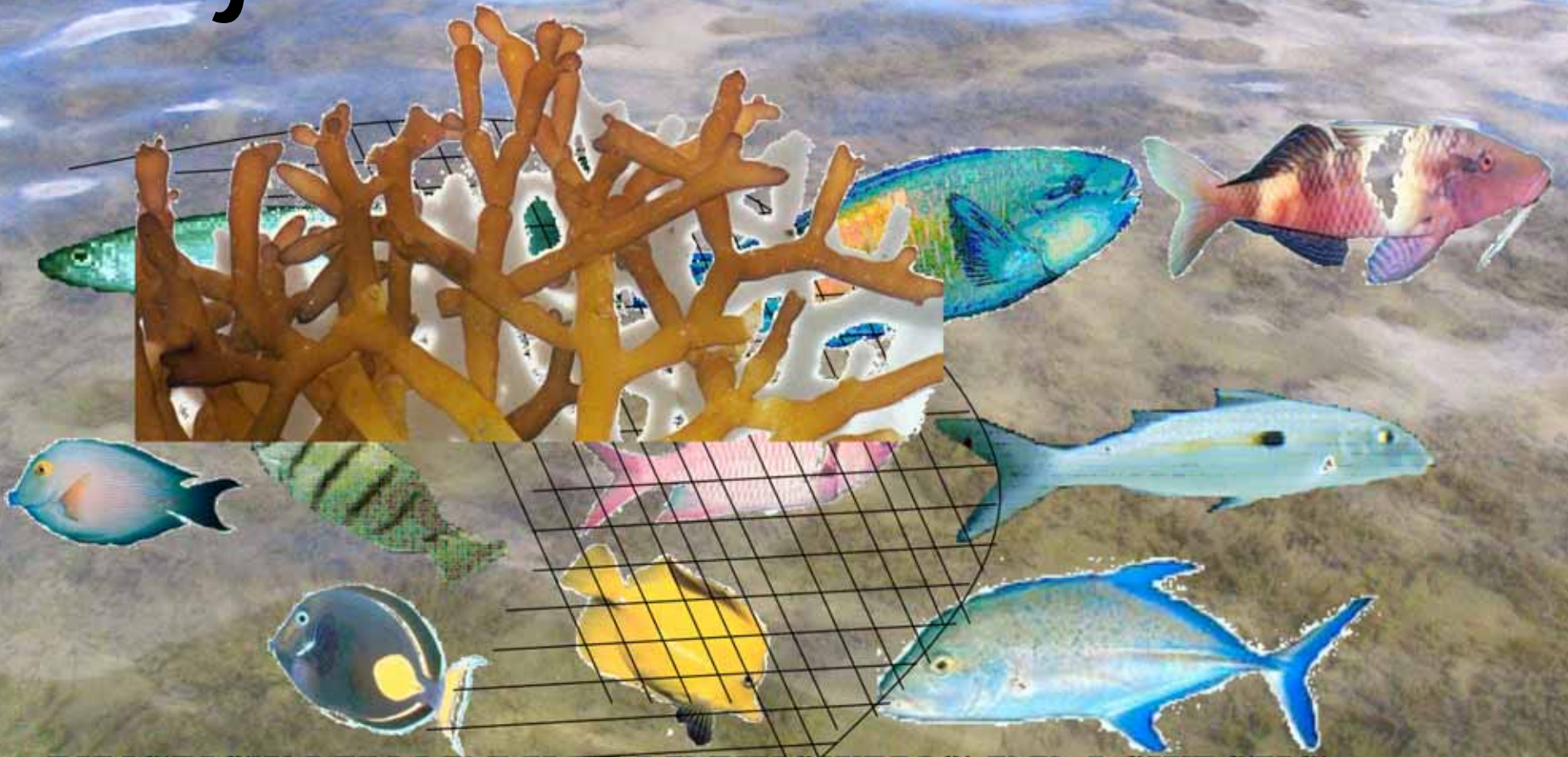
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Maunaloa Bay Co-Management Model

***COMMUNITY
SCIENCE
MANAGEMENT***



Major Threats

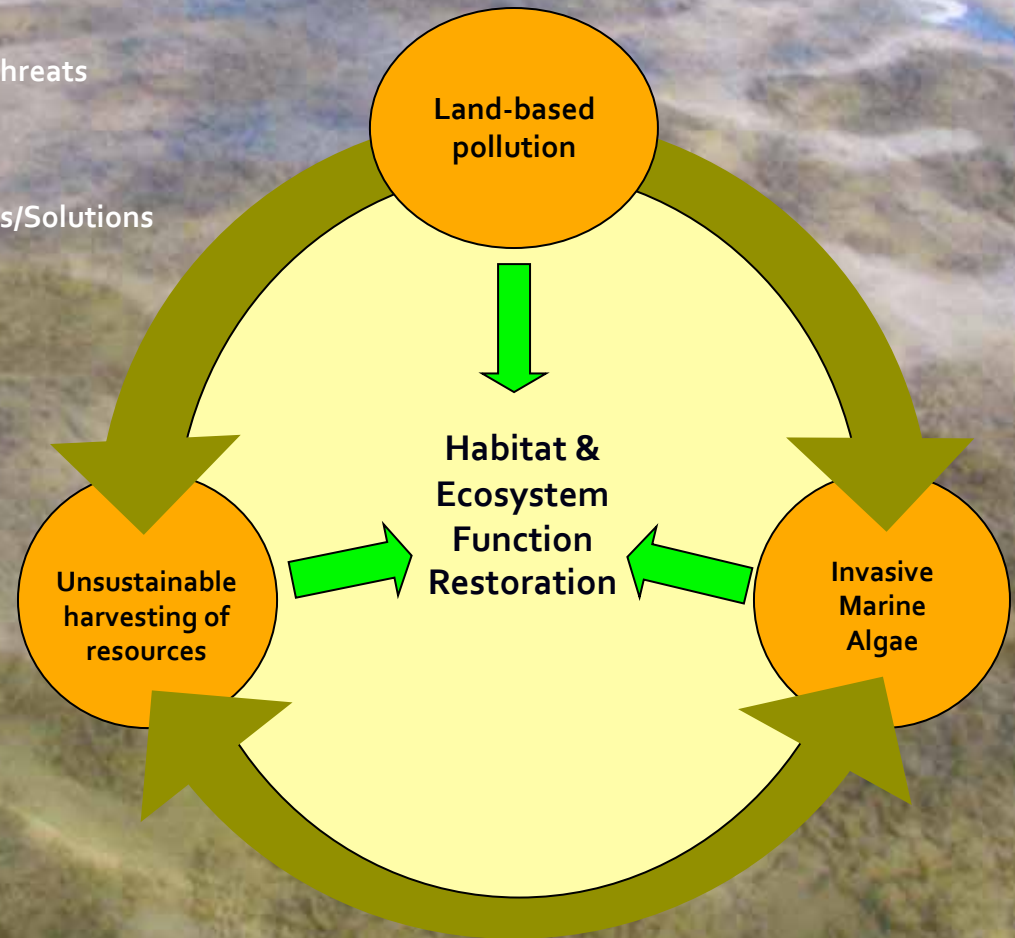
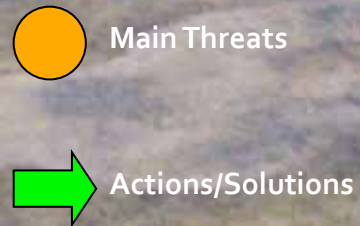


UNSUSTAINABLE HARVESTING PRACTICES
INVASIVE MARINE ALGAE
RUNOFF AND SEDIMENTATION



The Three-Legged Stool

Systemic problems require comprehensive solutions



TWO GUIDING DOCUMENTS



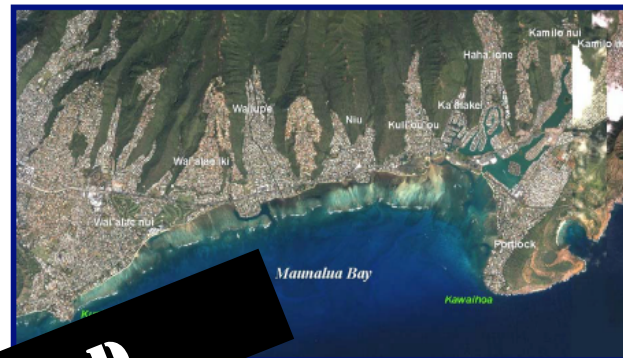
MAUNALUA BAY REGIONAL WATERSHED STRATEGY

A COMMUNITY APPROACH

2009

Vision

*A Maunalua Bay where Marine Life is Abundant, the Water is Clean and Clear,
and People take Kuleana in Caring for the Bay.*



Maunalua Bay Conservation Action Plan *A Community's Call to Action*



The Mālama Maunalua Vision:
A Maunalua Bay where marine life is abundant, the water is clean and clear,
and people take kuleana in caring for the Bay.

September 2009

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Comprehensive Strategy

**Inventory &
Understand
Problems**

**Kuleana:
Reconnect
residents w/place**

**Provide Tools and
Opportunity for
Community
Restoration**

**Partnerships for
Management**

The Nature
Conservancy 
Protecting nature. Preserving life.™

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MAUNALUA

 PONO
PACIFIC



NOAA



4.7 acres cleared or 342 tons of invasive algae have been removed as of May 27, 2010



Photo: Manuel Mejia©

Inventory & Understand Problems

land-based sediment and pollution is killing the Bay

Small, urbanized watersheds with high percent impervious cover = Efficient delivery system.

Invasive alien algae thrives in/ holds sediment

Unsustainable harvesting reduces ability of grazers to manage algae.

What the Community Has Learned



Community

Community continues to monitor and inventory:

- ✓ Nearshore fish, invertebrates and sea grass cover.
- ✓ Watersheds
- ✓ Water Quality
- ✓ Rainfall

To help inform management decisions

Inventory & Monitoring



Kuleana

- ✓ Community “Huki” Events
- ✓ Algae composting
- ✓ Makai Watch – Reporting & Compliance
- ✓ School service learning programs.
- ✓ Building recognition and awareness for Maunaloa region
- ✓ Support for other community efforts

Reconnecting residents with place



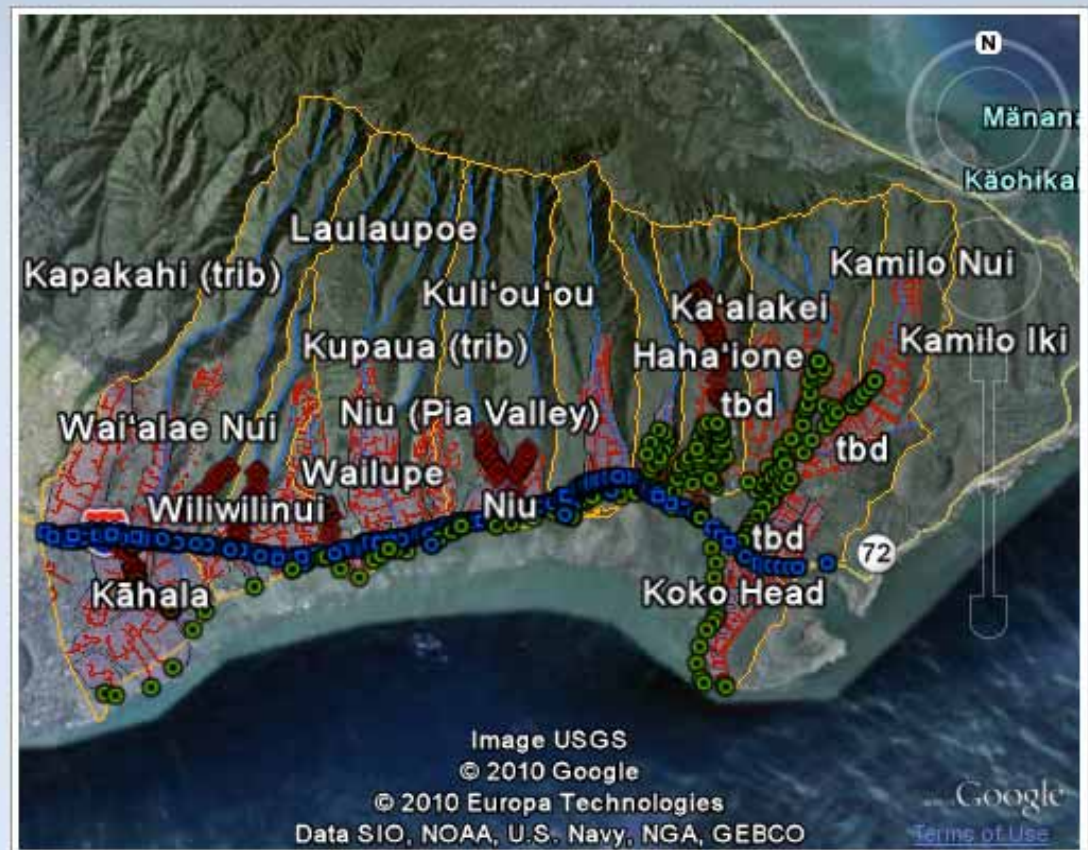
EVERY DROP COUNTS

Display Data & Info on the Web so people can:

- ✓ Spy on their neighbors
- ✓ Find their house and zoom in to their closest storm drain to trace where their runoff empties into the Bay
- ✓ Track water quality and rainfall data over time.
- ✓ See the full range of MM activities in space

Infiltrating the Community With Tools & Information

Embedded KML Viewer



Gadgets powered by Google

EVERY DROP COUNTS

Workshops for Industry and Community

Land Use decisions in Maunaloa will focus on property management.

- ✓ Commercial Centers
- ✓ Multi-family Residences



EVERY DROP COUNTS

Healthy Watershed Ambassador Program

- ✓ Train Volunteer Ambassadors
- ✓ Offer Home Assessments as a Community Service
- ✓ Incentives



EVERY DROP COUNTS

Young Ambassadors in Schools

Learn About Runoff
On Their School
Property

Assess Runoff At
Home As Homework

Assess A
Neighborhood Using
Survey & Google
Earth Tools



TOURISM AUTHORITY MALAYSIA



EVERY DROP COUNTS

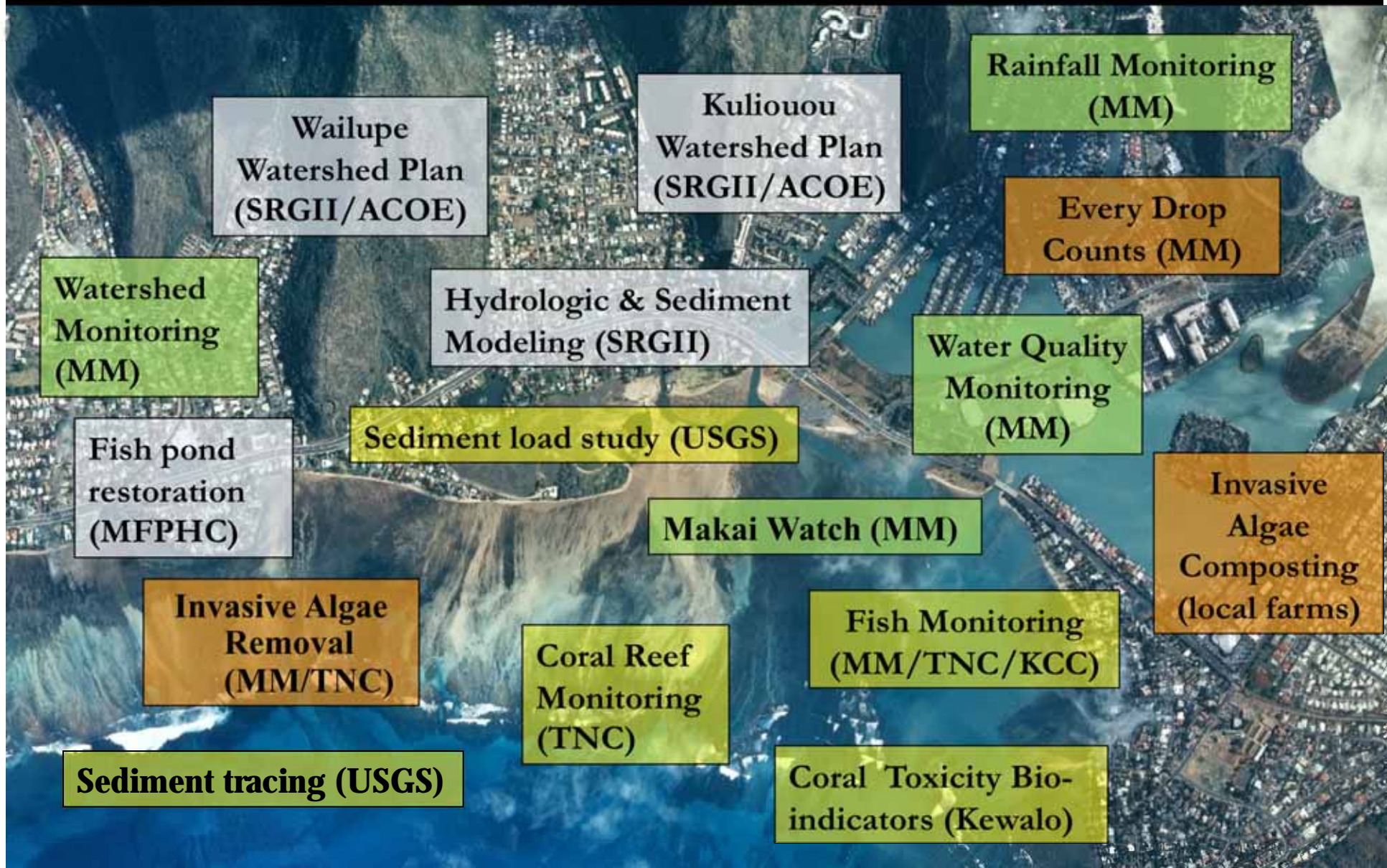
Demonstration Projects

Looking to partner with local agencies, schools or landowners to install highly visible demonstration projects

Example: Boat ramp washdown- water flows directly to Bay



Partnerships for Management



Mahalo



HAROLD K.L. CASTLE
FOUNDATION

HAWAII
TOURISM AUTHORITY



CZM Hawaii
Coastal Zone Management



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Sea Grant



SCHOOL OF OCEAN AND EARTH
SCIENCE AND TECHNOLOGY
UNIVERSITY OF HAWAII AT MĀNOA