

West Maui Watershed Local Leadership & Engagement

Restoring Watersheds, Restoring Reefs

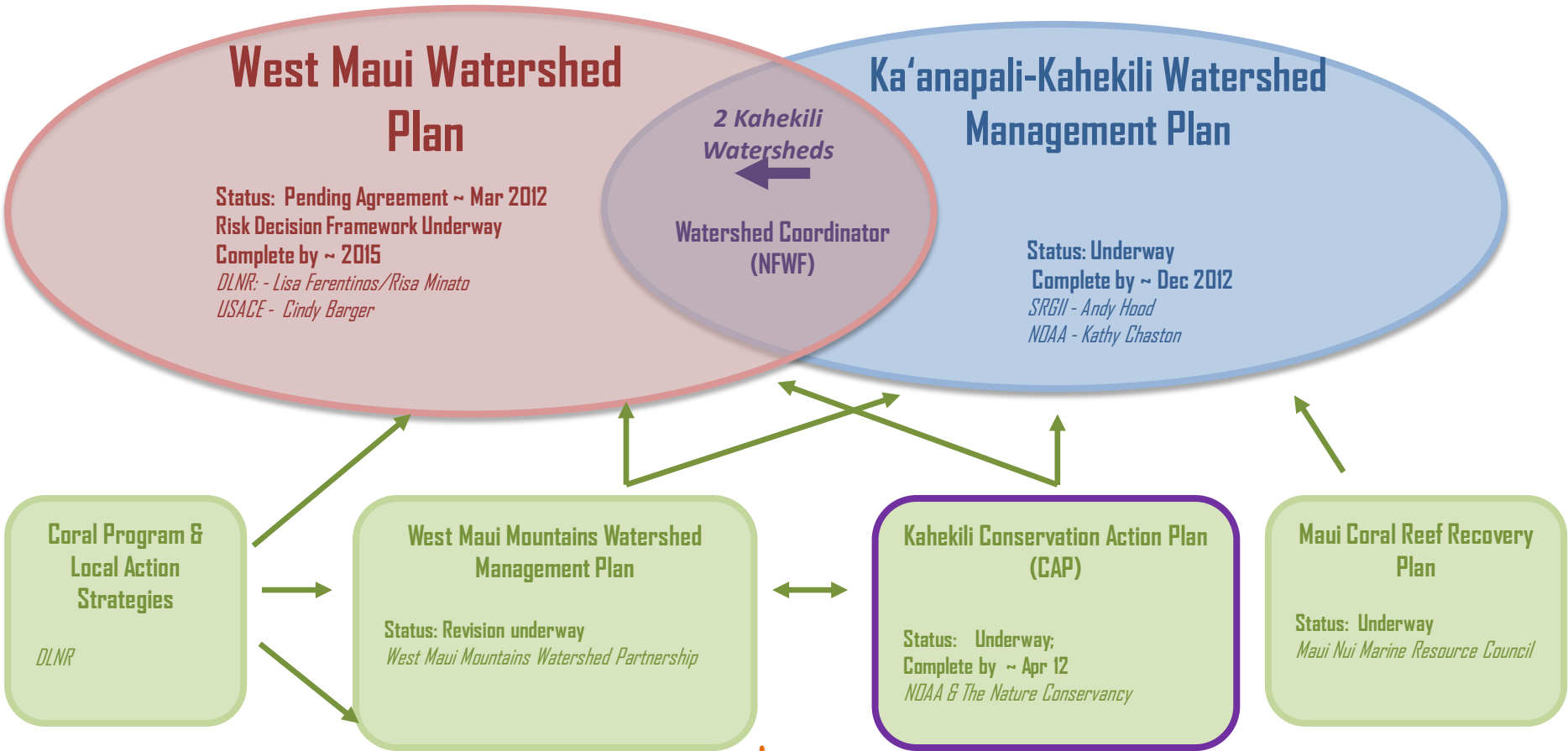




Presentation Outline

- Brief review of site
- Monitoring and Research – how did we get here
- Local Management and Stewardship
 - Kahekili Herbivore Enhancement Area
 - Makai Watch
 - Kahekili Conservation Action Plan
- Looking to the Future

West Maui Watershed Plan: comprehensive, integrated & collaborative planning process sponsored by DLNR and USACE, Honolulu District; supported by DOH, NOAA, & EPA



Projects and Studies

Kahekili Makai Watch

DAR, CORAL, local volunteers and partners

Previous & Ongoing Research

UH, DAR, SID, USGS, CZM, SeaGrant etc

Groundwater Tracer Study

Status: Completed 2009

USGS

West Maui Watershed Owners Manual

Status: Completed 1997

West Maui Advisory Committee

West Maui

Reconnaissance Study

Status: Completed 2010

DLNR & USACE

Lahaina WWTF Tracer Study

Status: Underway

Complete by Aug 12.

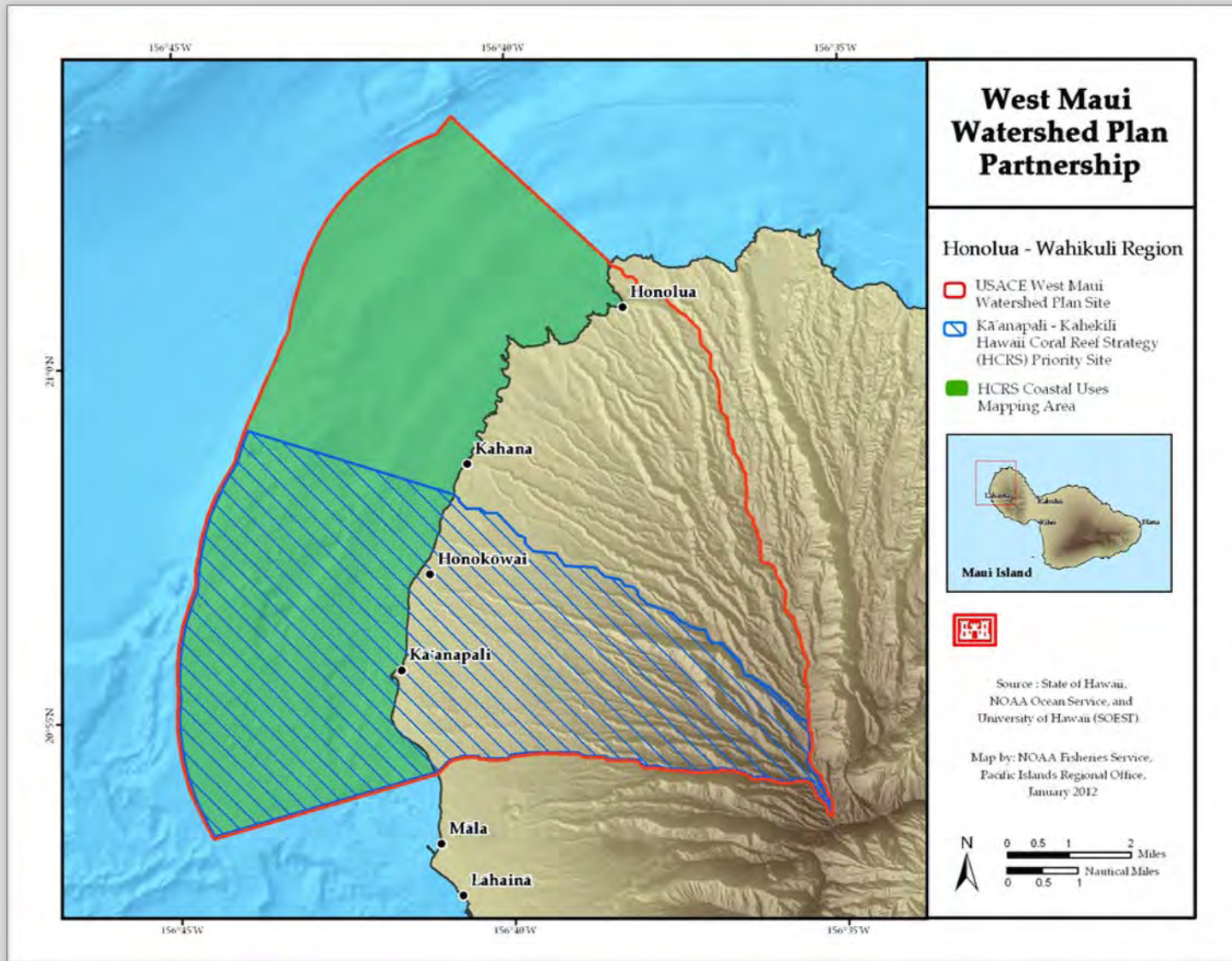
UH, DOH, EPA, & USACE

Maui Coastal Use Mapping

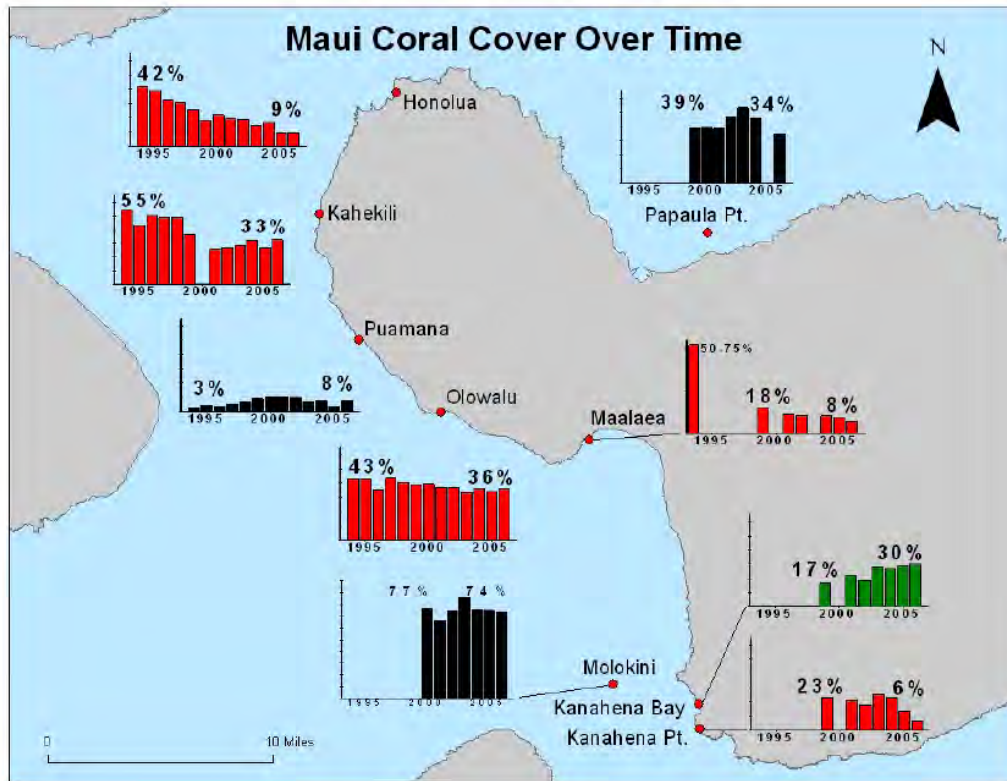
Project

Status: Underway; Complete Sep 12

DAR & NOAA



Monitoring Maui Reefs

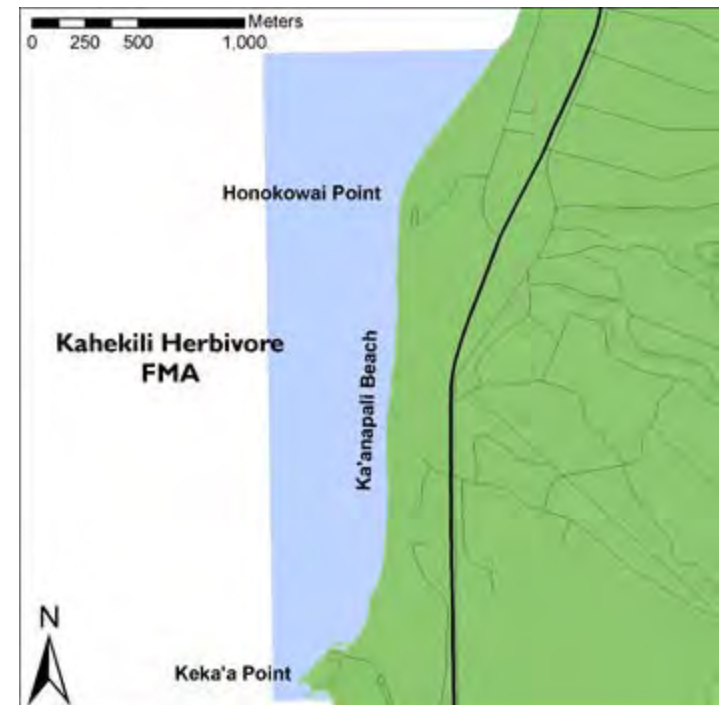


- PWF, CRAMP and DAR surveys over 10+ years
- Algal blooms identified as major problem for Maui reefs
- Reduced grazing and increased nutrients suspected to be aggravating invasive algae problem and degrade reefs
- Water quality research (M. Dailer) indicates waste water upwelling may be modifying conditions, impacting reefs



Kahekili Herbivore FMA

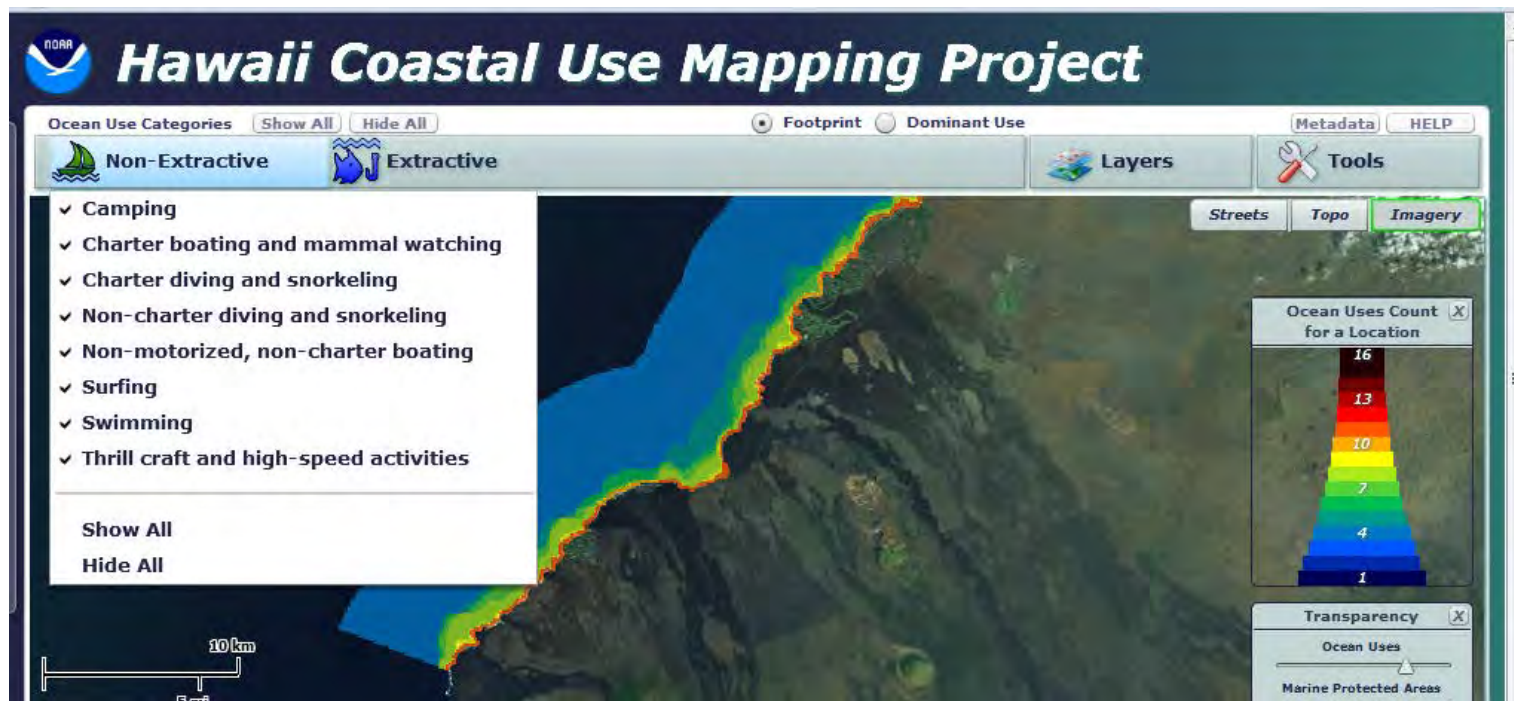
- 2009 DAR: implements Herbivore FMA to address reduced grazing of algae on Kahekili reefs
 - All harvest of nenue, uhu, surgeonfish and urchins is prohibited
 - Monitoring of reefs and fisheries is ongoing
- 2009 Kahekili-Kaanapali selected as priority site as part of Hawaii Coral Strategy development





West Maui Participatory Use Mapping Project

- Methods developed by MPA Center, piloted on Hawaii; then on Maui with NOAA support
- Workshop series with 6 groups of users and local experts
- Mapped extractive and non-extractive uses for coastline
- Map Book and interactive tool completed this year





Kahekili Makai Watch Program

- **Leads:** Department of Land and Natural Resources, Aquatics (Luna Kekoa and Darla White) and Coral Reef Alliance Maui (Liz Foote)
- **Education and Outreach**
 - On-site events and workshops
 - Roving volunteers and stations
 - Partnerships with hotels
- **Monitoring**
 - Creel and human use surveys
 - Herbivore monitoring protocols
 - Web Portal
- **Observation and Compliance**
 - Observation Compliance Training







Kahekili Conservation Action Plan

- Coordinated by The Nature Conservancy Hawaii with funding from CRCP
- Lead: Luna Kekoa, DLNR Aquatics Division
- 3 workshop series completed: targets, threats, draft strategies
- CAP document to be completed in 2012
- DLNR Aquatics leading implementation





Continuing efforts

DLNR continuing stewardship through watershed partnership, ongoing monitoring and outreach, & with help from residents and local partners



- **Previously discussed planning efforts**
- **Continuation of Makai Watch and citizen science initiatives**
- **Ongoing research regarding water quality concerns, characterization of “dead zones” (UH)**
- **Website:**

<http://hawaiicoralreefstrategy.com/index.php/prioritysites/westmaui>



STRATEGY PRIORITY SITES LOCAL ACTION STRATEGIES MONITORING CONTACT

South Kohala
West Maui



Strategy

Welcome to HCRS online

The State of Hawaii Department of Land and Natural Resources (DLNR), Division of Aquatic Resources (DAR) is the primary agency responsible for coordinating Hawaii's reef management efforts in the main Hawaiian Islands. The Coral Reef Working Group (CRWG), made up of key state and federal partners involved in coral reef management, was established to help provide guidance for the State of Hawaii's coral program.



Many Thanks:

Luna Kekoa

Liz Foote (& photos)

Darla White (& photos)

Risa Minato

Petra MacGowan

Kathy Chaston

Cindy Barger

Russell Sparks

...and to the many individuals and agencies who made all these projects possible and who continue to work to restore the reefs of West Maui



HAWAII
~coral reef~
STRATEGY

Questions?

