

# U.S. Coral Reef Task Force

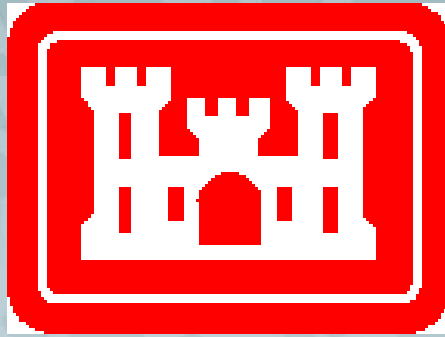


*Watershed Partnership Initiative*

*Ka'anapali, West Maui*

*Kathy Chaston, NOAA, Feb 23 2012*

# Partnership Agencies



USACE



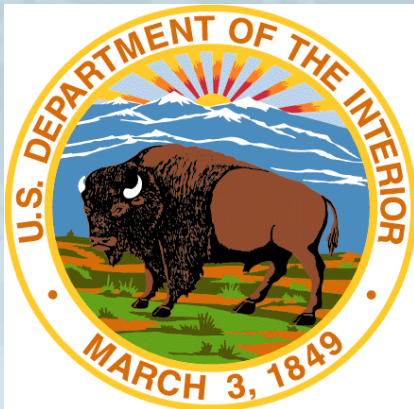
USEPA



NOAA



Hawaii



DOI-USGS



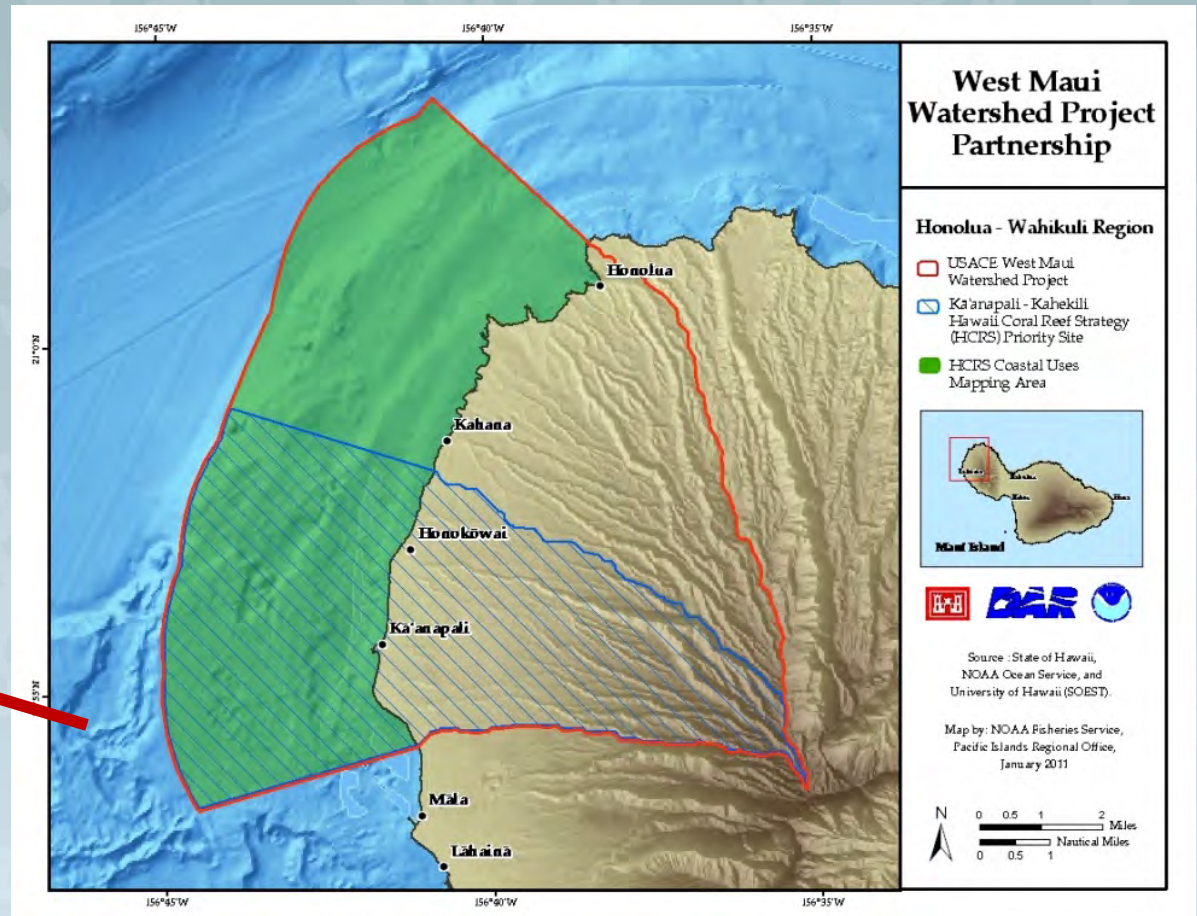
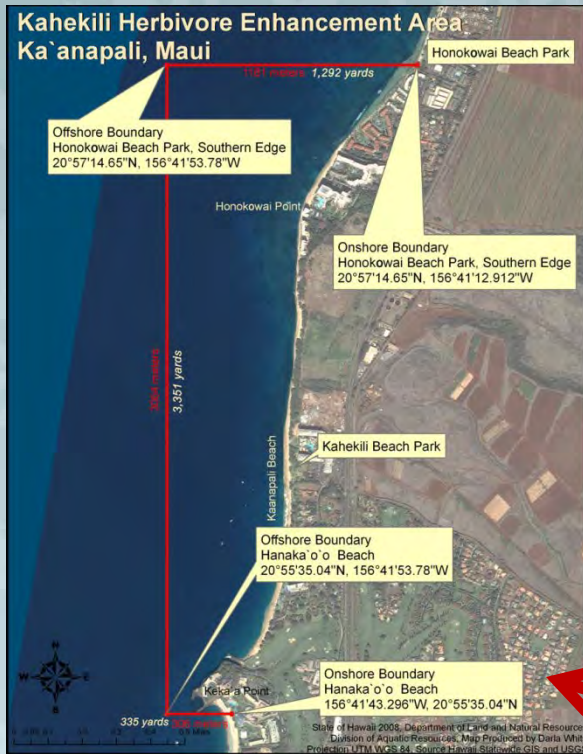
USDA-NRCS



National Fish and Wildlife Foundation



# Ka'anapali, West Maui





# Key Issues

Feral animals

Agricultural runoff and land use change

Urban runoff

Injection wells

Increased tourism

Lack of coordination

**Decreasing coral cover**

**Nuisance algae blooms**

# Watershed Priority Needs



1. Integrated reef to ridge planning
2. Source and fate of pollutants
3. Coordination & community engagement
4. Project implementation



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

## West Maui Watershed Plan

Status: Pending Agreement ~ Mar 2012  
 Risk Decision Framework Underway  
 Complete by ~ 2015  
 DLNR: - Lisa Ferentinos/Risa Minato  
 USACE - Cindy Barger

## Ka'anapali-Kahekili Watershed Management Plan

2 Kahekili Watershed

Watershed Coordinator  
 (Tova Callendar)

Status: Underway  
 Complete by ~ Dec 2012  
 SRGII - Andy Hood  
 NOAA - Kathy Chaston

Coral Program & Local Action Strategies

DLNR

NRCS Restoration Grant Outreach

Status: Proposed  
 NRCS

West Maui Mountains Watershed Management Plan

Status: Revision underway  
 West Maui Mountains Watershed Partnership

Conservation Action Plan (CAP)

Status: Underway; Complete  
 by Apr 12  
 NOAA /The Nature Conservancy

Maui Coral Reef Recovery Plan

Status: Underway  
 Maui Nui Marine Resource Council

### Projects and Studies

Maui County General Plan

Status: Draft Under Consideration  
 Maui County Dept Planning

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

Low Flow Stream Analysis

Status: Underway Complete 2014  
 CWRM & USGS

Update to Groundwater Recharge Studies

Status: Underway Complete 2014  
 CWRM & USGS

West Maui Watershed Owners Manual

Status: Completed 1997  
 West Maui Advisory Committee

Other Previous & Ongoing Academic Research

UH, DAR, SIO, USGS, CZM, SeaGrant etc

Groundwater Tracer Study

Status: Completed 2009  
 USGS

West Maui Reconnaissance Study

Status: Completed 2010  
 DLNR & USACE

Groundwater Recharge & Availability Studies

Status: Completed  
 CWRM & USGS

# West Maui Watershed Vision:

Improve the overall quality of the West Maui Watershed, from the summit of Pu`u Kukui to the outer reef, incorporating holistic management aspects of traditional Hawaiian land and natural resource management (such as *ahupua`a* principles) at the watershed level within a modern context.

# West Maui Watershed Plan Goals

Project will be driven by stakeholder participation and will:

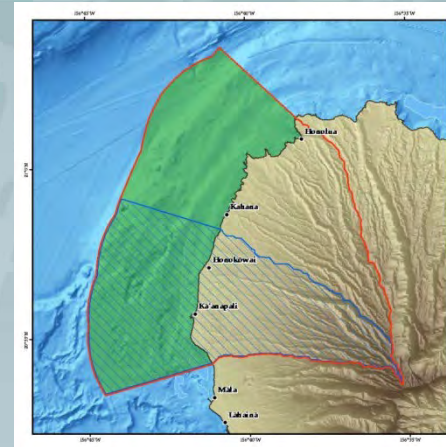
- Build of existing & ongoing activities
- Identify critical threats to reefs and watershed health
- Evaluate solutions to these threats from ridge to reef
- Prioritize actions, and implement restoration or remedial actions thru multiple partners





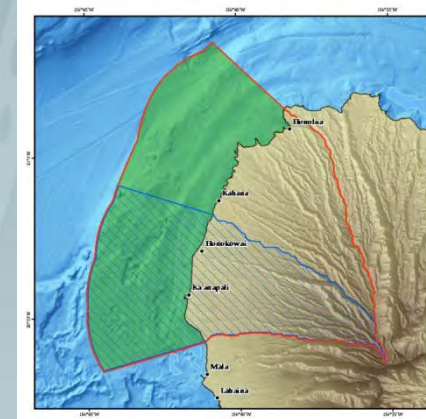
# West Maui Watershed Plan

- Sponsors - USACE and State of Hawai'i
- Status - Pending execution of Cost Share Agreement
- Scope – Ka'anapali to Honolulu
- Current Actions - Under USACE Response to Climate Change program, developing a risk informed decision and planning framework to guide the Plan. Framework considers all threats, including climate change.
- Coastal use mapping (NOAA/DLNR)



# Ka'anapali Watershed Plan

- Lead: NOAA, SRGII
- Scope: Ka'anapali's 2 coastal watersheds (Honokowai and Wahikuli)
- Current Actions:
  - Draft watershed characterization end of Feb
  - Plan completed by October 2012
  - Watershed Coordinator hired (NFWF, DLNR, NOAA)

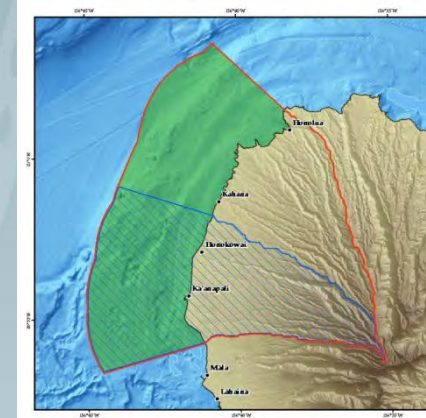


Web-site: <http://www.kaanapaliwmp.com>



# Conservation Action plan

- Lead: DLNR, TNC
- Sponsor: NOAA
- Scope: Ka'anapali's 2 coastal watersheds (Honokowai and Wahikuli)
- Goal: Healthy coral reef ecosystem (>50% coral cover, good fish species diversity & abundance, appropriate levels of nutrients and sediments)
- Current Actions:
  - Draft CAP complete



# Water Quality Monitoring

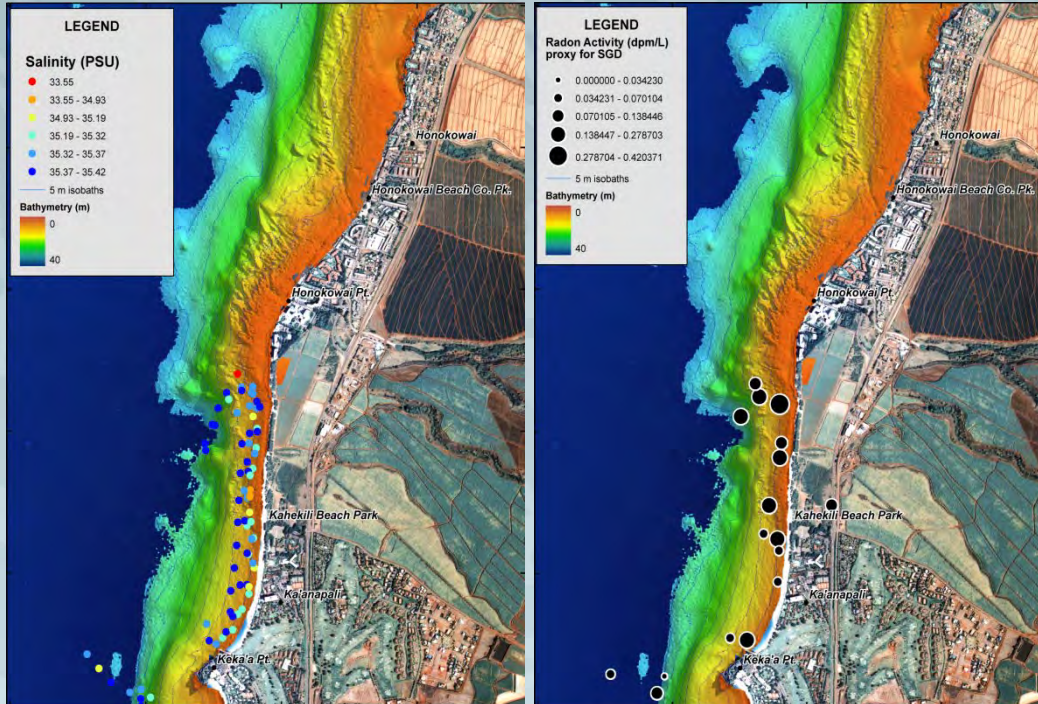
1. Wastewater plume tracer study (EPA, USACE, HI DOH, UH): Determine time of travel between injection well & ocean seeps, and measure groundwater flux and nutrient flux
2. Submarine groundwater discharges, ambient marine water and groundwater wells (EPA): Measure nutrient and contaminant levels





# Integrated Geologic & Oceanographic studies

1. Baseline high resolution benthic habitat mapping
2. Physical Oceanography
3. Submarine groundwater discharge studies



# Community Engagement

1. Watershed Coordinator hired thru NFWF starts March 5<sup>th</sup> (Co-managed by DLNR, NOAA and NFWF)
2. Small grants program Fall 2012





# Project Implementation

## Agriculture Best Management Practices

- USDA-NRCS offering cost-share incentives thru volunteer land conservation programs
- \$1.2 million in priority funding thru farm-bill cost-share funds in FY12 -14 (outreach late March)
- Technical assistance in identifying & evaluating conservation practice & land management alternatives



# Project Implementation

- Rain garden installation workshop (NOAA, Horsley Witten, Center for Watershed Protection)
- Placeholder for Ka'anapali Watershed Management Plan (DLNR/NOAA)



# Next Steps & Opportunities



1. Implement low hanging fruit
2. Implement Ka'anapali WMP
3. Small grants program
4. Replicate model to rest of West Maui



# Questions?

## Contacts:

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- Luna Kekoa ((HI DLNR): [Edward.L.Kekoa@hawaii.gov](mailto:Edward.L.Kekoa@hawaii.gov)
- Tova Calender (NFWF)

