

U.S. Army Corps of Engineers -- West Maui Watershed Study Stakeholder Kick-off Meeting

Location: Maui Arts and Cultural Center Alexa Higashi Room

Time: 3-5 pm

Date: November 13, 2008

Introductions and Presentation

Cindy Barger welcomed attendees and had everyone introduce themselves. She then presented a PowerPoint presentation on the US Army Corps of Engineers environmental initiatives related to the West Maui Watershed Study and reviewed the overall Army Corps project process. The presentation will / is be available at <http://www.poh.usace.army.mil/CW/CWProjects.htm#HIMa>

In addition to the US Army Corps Projects listed in the presentation, there is also a project for with Friends of Moku'ula to restore that area.

She noted that all watershed related issues and concerns are being gathered at this time in the study. Ultimately there may be multiple agencies with solutions to the issues. The West Maui Watershed Study is in the Reconnaissance Phase the earliest project phase and prior to any feasibility analysis. The Army Corps will continue along the process toward possible project(s) if there is a demonstrated Federal interest.

Project Prioritization Process

- Army Corps Reconnaissance is the initial prioritization to determine federal interest
- Prioritization can change later
- If a major data gap is identified, may be able to address earlier in corps process
- Need to show federal interest for future funding
- Target for future funding and data gathering now

Non-Federal sponsors must be a government or non government agency (not private landowners). The non-federal sponsor may be responsible for matching funds (can be in-kind resources).

The Army Corps has similar watershed studies in Chesapeake Bay, Great Lakes Region and the Los Angeles area. Links to examples of similar types of the Army Corps projects were sent to meeting participants on November 17, 2008. The links provided are:

- Urban restoration project in California where the Corps and the non-federal sponsor removed a concrete channel to restore the natural stream channel.
http://calabasas.granicus.com/MediaPlayer.php?view_id=21&clip_id=1727
- A small dam removal on the Sisquoc in California removed for fish passage that Jill Komoto of Malama Kai worked with: http://www.stoeckerecological.com/pr_horse_creek_damolition_video_project.html
- The Los Angeles District has been very progressive in watershed plans with ecosystem restoration goals. Attached is a link to their project lists. You can click on any of the watershed studies to get a concept of what they covered in their studies. Honolulu District is working closely with Los Angeles District to gain from their experiences.
http://www.spl.usace.army.mil/cms/index.php?option=com_content&task=category§ionid=5&id=14&Itemid=71
- For Honolulu District - Ala Wai Watershed is our main other watershed project. Attached are the links to the Ala Wai Watershed reconnaissance study. Because of it's size it was separated into sections.
<http://www.poh.usace.army.mil/CW/CWProjects.htm#HIOa>

<http://www.poh.usace.army.mil/CW/reports/R-HIOa-20030700IR2-Ala%20.pdf>

<http://www.poh.usace.army.mil/CW/reports/R-HIOa-20030700IR3-Ala%20.pdf>

<http://www.poh.usace.army.mil/CW/reports/R-HIOa-20030700IR0-Ala%20.pdf>

Description of the Process

This is beginning of a year long project. Two parts are currently underway – creation of a map book and stakeholder consultation process which will result in a study. The group was asked to think about additional desired outcomes e.g. lit review, modeling, community process, etc.

Next Steps: Email / phone contact with stakeholders and information gathering. Also, future meetings to discuss problems and opportunities at other locations and at different times

Meeting attendees were asked to submit:

- Further Watershed Concerns, Issues and Opportunities
- Known / Available Watershed Studies
- Names of groups and individuals to include in the process

Jeff Overton of Group 70 International facilitated input from the group. The issues, concerns, and suggestions are summarized below and have been grouped by the various issues.

WATER / WASTEWATER SYSTEMS

Wastewater Infrastructure

- Priority for Maui County (over water infrastructure)
- Enforcement concerns
- Funding is a constraint; projects are funded by sewer users - including reuse projects

Reuse Wastewater

- Instead of using injection wells – for example possible for West Maui Waste Water Treatment Plant.

Aquifer recharge

- An issue throughout study area with many changes affecting the watersheds.
- Basal lens- salt water interaction is occurring.

Water Systems: Dam, Reservoirs and Irrigation Systems

- DLNR-have not yet looked at dams and reservoirs yet -- What are threats?
- Issue for both public and privately owned systems
- Irrigation ditches and reservoirs need an assessment

Diversions and Terraces

- Check as lands become idle
- Inspect conditions on all lands, not just MLP lands

Water Banking

- Some water previously used for agricultural irrigation is no longer being used, but is not being made available for other uses. Perhaps it being saved for development?

Abandoned Wells

- Need to be identified and capped
- Can be sources of contamination

Water Storage

- Could build large reservoirs to hold water from storm events

3rd Year of Drought - not enough water in streams for all uses.

County Water Use and Development Plan (WUDP)

- Addresses issues from County perspective
- County working with DOH Wellhead protection program (underway) which provides data on land uses and possible contaminants at the wellhead area.

STREAMS**Stream Diversions**

- The benefits of stream restoration are many:
- Restoration of Stream habitat
- Aquifer recharge
- Water for kuleana parcels and other farming

Stream Flow Standards

- Stream flow standards need to be set by CWRM
- Lacking research to set scientific ally based stream flow standards
- USGS Data/Studies done to support effort for Na Wai Eha stream flow standards

Wai Stream

- Community and others are seeking stream restoration
- Channelization is an issue and barrier to stream restoration (CWRM)
- Army Corps project is pending restoration of stream flow.
- Both projects need water and stream restoration
- The US Army Corps in the Pacific Northwest has removed dams and restored streams. Removal of channelization is a possibility.

ECOSYSTEM PROTECTION / RESTORATION**Fire**

- Affects urban, agriculture and forest areas –especially the urban/forest interface
- When drought, the risk is everywhere; the southern portion of W. Maui is more susceptible and SW portion of W. Maui is the most susceptible to fire.
- Limited means to address
- Soil erosion/nutrient discharge related issues
- Debris from fires can exacerbate flood issues
- Could be driver for reforestation, and increased capacity to engage in fire protection prevention, and post mitigation measures

Feral Ungulates / Invasive Species

- Examples – goats, pigs, deer, weeds (and motorcycles)
- The West Maui Mountains Watershed Partnership (WMMWP) is working in the conservation area.
- More funding is needed for fencing
- Rare Species need to be protected; fire is an issue

Invasive Species Management

- Weeds are detrimental to the forest's ability to recharge and retain water
- WMMWP works to remove, preserve and protect the existing forest and native vegetation
- Threat is weeds such as *Clidemia hirta*, strawberry guava, etc.
- Biological control has had an unfair reputation and can be used to target weed species

Ecosystem Restoration

- Important to restore the functionality of the ecosystem such as nutrient control, management of invasive species, etc.
- Functions are what matters
- Restoration to past condition may not be as relevant as how project address future conditions

Restoration Opportunities

- Need an analysis of opportunities for reforestation on public and private lands
- Also for stream and wetland restoration

FLOODING/SEDIMENTATION/NEARSHORE WATERS

Water quality improvement projects (many implemented), however, implementation has slowed due to lack of funding. **Ha`akea Gulch** does not have a retention basin. However, it is on the West Maui Soil & Water Conservation District priority list.

Consider the use of the **EPA nine elements for watershed-based plans**

Effectiveness and Benefits of Desiltation Projects vs. Reforestation

- Reforestation should be considered as tool to retain soil
- Riparian zones can be used to increase recharge
- Some conservation lands are vacant
- And with increasingly vacant ag lands, need to look at having a ground cover

Drainage Inlets

- Culverts, often in flood path, fill with debris, and the blockage creates problems
- Example: Kahana drainage- neighbors throwing yard waste in- flooding
- Need to identify who is responsible for the culverts (varies)
- Maintenance schedule for clearing and cleaning is needed especially after storm events

Nearshore Water Quality

- Issues need to be attributing to specific sources to aid in management
- Sources need to be quantified with scientific data – i.e. Load
- True for both Point and Nonpoint sources
- Coastal discharge is affected by the lack of aquifer recharge

MULTIPLE CATEGORY ISSUES

Development

- Issues as it increases in flood plains
- Impacts watershed

What is the carbon footprint?

- The forest could be used for carbon emissions offset

Climate Change

- Army Corps has been directed to take climate change into account in all studies; however, no specific Army Corps guidance issued
- Each project does look at the 50-year alternative without project
- Pacific Disaster Center Modeling might be useful
- Need models for local conditions

Land Ownership/Title

- Ownership of Land – Need to know to determine responsibility
- Who has clear land title? There are conflicting claims

Traditional knowledge

- Needs to be integrated
- Bring in cultural practitioners

Oversight/Transparency for regulation enforcement

- Ability to monitor locally

PROCESS SUGGESTIONS

Capture Efforts of Other Organizations in the Watershed

- Need to identify existing efforts and study
- Important not to duplicate work
- Example is West Maui Conservation Project Mapping (DOH)
- Can we link programs to level of effectiveness?

Community Representation

- Need more community involvement / meetings
- Early evening meetings better for community participation

Where will data go to/ be used?

- To be used to see how to address problems whether federal or non federal project/solution
- Example could be to provide knowledge and projects to non-Army agencies/community
- Water resource management focus
- Cindy to provide links to national projects that are similar to this project