

# **Maui County**

## **Water Use and Development Plan**

# **Update & Approach**

*Commission on Water Resource  
Management Briefing*

June 24, 2015  
Water Resources & Planning Division  
Maui County Department of Water Supply

# Status of WUDP Update

- WUDP for each island
  - Lana'i – 2011
  - Maui – 2016
    - *Central Maui, previously not approved, incorporated*
  - Moloka'i – 2016 ...

# Lessons - Central WUDP Process

- Comprehensive water planning / not DWS centric
- Native Hawaiian issues & DHHL planning
- Implement Maui Island Plan island-wide
- Planning by hydrologic units
- Climate adaptation



**Revised Project Description**

# Integrated Planning Process

- Updated data, ground & surface water investigations, climate models, court cases
- Planning objectives
- Base year 2014, planning horizon 2015-2035
- Land use/development scenarios: Full build-out based on land use (zoning) & 20 year population-based scenarios
- DWS Water Optimization Studies/Optional strategies for privately owned public water systems
- Ongoing public process

# Planning Objectives

- 2013 Maui Island Plan growth projections & Urban Growth Boundaries
- State Land Use Plan, Hawaii Water Plan, Maui Island Plan, Watershed Management Plan objectives
- Water resource issues & objectives (surface & ground water)
- Community, stakeholder & policy board meetings and outreach

# Effect of Legal Decisions

- Settlement of Na Wai 'Eha contested case → incorporate decision on interim instream flows
- Ongoing East Maui contested case →
  - Affects comprehensive strategy
  - Evaluate status quo and various scenarios

# Impacts of Climate Change on Ground Water Availability

## Maui Groundwater Project

- Interdisciplinary research – Pacific RISA lead, UH, USGS, East-West Center, over 50 stakeholders
- New hydrologic model assesses the impact of changing climate and land cover on groundwater recharge
- Assess & inform decision-making

# Preliminary Findings

Future climate projections for Maui island include:

- Temperature increases at all elevations
- Wet areas get wetter
- Dry regions are mixed (some wetter, some drier)
- Mean annual rainfall increases (seasonal patterns show May-September drying in Central Maui)
- Mean annual reference evapotranspiration increases
- Little change in cloud-base elevation and trade-wind inversion height



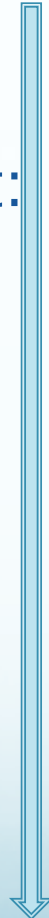
# Schedule

## Maui Island

- Internal Review: -Summer 2015
- CWRM Status Report: -Fall 2015
- Council Committee/  
Community Input: -Fall 2015 – Winter 2016
- County Council: -Spring 2016
- CWRM Review: -Summer 2016

## Moloka'i

- Commence draft -Spring 2016



# Resource Preservation

## *Ongoing*

- ✓ Watershed Partnerships
- ✓ Wellhead Protection Program & Ordinance
- ✓ Interdepartmental Well Siting Criteria

# Resource Efficiency

## *Ongoing*

- ✓ Conservation
- ✓ Operational Efficiency
  - Leak detection,
  - Pump efficiency
  - Storage Capacity

# CIP Highlights

## Upcountry Source Augmentation

- ✓ Waikamoi flume rehabilitation
- ✓ High lift booster pumps at Kamole Water Treatment plant
- ✓ Olinda sedimentation basin relining
- ✓ Waikamoi reservoir improvements

## Upcountry Water Quality Improvement

- ✓ Granular Activated Carbon installation at Pi'iholo water treatment plant

## Central Source and Aquifer Management

- ✓ Well development for redistribution of pumpage within 'Iao aquifer
- ✓ Well development in Waihe'e aquifer
- ✓ 'Iao treatment plant design

## West Maui Source Augmentation

- ✓ Exploratory well

## Hāna Source reliability

- ✓ Wakiu well backup/source reliability

# In Sum...

- One island-wide document
- “Sister” document to Maui Island Plan
- Hydrologic unit based
- Not DWS-centric
- Previous studies, data collection to be used
- New models, data, court cases, issues addressed
- Continuation of extensive public process

**Mahalo**