



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

STAFF SUBMITTAL

for the meeting of the
COMMISSION ON WATER RESOURCE MANAGEMENT

August 15, 2012
Honolulu, Hawaii

Approval of Revised Project Description for
Updating the Maui County Water Use and Development Plan

SUMMARY OF REQUEST:

The Maui County Department of Water Supply requests that the Commission on Water Resource Management ("Commission") approve a revised Project Description to update the Maui County Water Use and Development Plan.

BACKGROUND:

The State Water Code, Hawaii Revised Statutes, Chapter 174C ("Water Code"), requires that the Commission implement and use comprehensive water resources planning in its regulation and management of Hawai'i's water resources. The Water Code sets forth the requirement for the initial development and updating of the Hawaii Water Plan ("HWP") to guide the Commission in executing its general powers, duties, and responsibilities to assure economic development, good municipal services, agricultural stability, and environmental protection.

The HWP serves as a continuing long-range guide for water resource management. The HWP consists of five major components ("plans") 1) Water Resource Protection Plan, 2) Water Quality Plan, 3) State Water Projects Plan, 4) Agricultural Water Use and Development Plan, and 5) County Water Use and Development Plans (WUDP). The Water Code mandates that these individual plans be prepared and integrated into a comprehensive "master plan" to provide for effective coordination and long-range planning between state and county agencies.

To meet this mandate, the HWP components must be updated on a regular basis. The initial 1990 HWP adopted by the Commission addressed multiple issues, including estimated sustainable ground water yields by island, aquifer sectors/aquifer systems, and estimated current and projected water needs for the State and the Counties.

An updated HWP is essential to coordinate and integrate State and County actions related to sustainable water resource development. The HWP enables the Commission to implement the statutory objectives in the State Water Code. Without current information, plans will be inadequate and unrealistic and the development of competing water resources may be uncoordinated. Ultimately, Hawai`i's limited water resources would be threatened. Outdated supply and demand projections and strategies to meet those demands would limit the State's and Counties' ability to address future water development and resource protection issues.

State and County agencies all agree that a comprehensive water resource planning process is needed to address the supply, demand, and conservation of water. Accordingly, HWP should be updated to evaluate and assess a number of planning scenarios that integrate uncertainties, environmental externalities, and public needs into a strategic decision-making process.

Under a comprehensive resource planning approach, all types of resources are assessed. Each is weighed in the context of new/existing supply-side resources, alternative source development such as wastewater reuse, conservation, alternative rate structures, and demand-side management methods. Least-cost planning can be pursued while balancing supply-side and demand-side management issues. The principal outcome will be the development of coordinated strategies to meet future water demands, including greater use of alternative water sources, wherever possible.

STATEWIDE FRAMEWORK:

Updating the Hawaii Water Plan must consider statutory objectives, including maximum reasonable-beneficial uses of water; protection of existing water rights and traditional and customary Hawaiian practices; protection and procreation of fish and wildlife; and the maintenance of proper ecological balance, scenic beauty, and recreation.

Current projections, planning principles, and water resource planning and development are refined. Potential new sources are identified. More realistic demand projections/forecasts and operational improvement to existing systems are studied. Screening criteria/analyses are revisited. Demand- and supply-side resource options and greater coordination between State and County water use and development plans is analyzed.

A facilitated public participation process involving the community, public interest groups, and government agencies is undertaken. Stakeholder and/or community groups may be formed to scope issues and address water-related concerns using a collaborative (as opposed to an adversarial) process.

These planning objectives are outlined in "The Statewide Framework for Updating the Hawaii Water Plan" adopted by the Commission in February, 2000. The HWP recommends planning elements for each component, including issues to ensure a comprehensive process.

DISCUSSION/ANALYSIS:

The key elements of the statewide framework include (but are not limited to):

- A. Submission of a County-Specific WUDP Project Description for review and approval by the Commission. The Project Description shall:

1. Identify specific issues relating to land use, water use and resource development, and the relative priority of the issues to be addressed in the WUDP update;
2. Outline the County's plan for establishment of planning objectives and evaluation criteria;
3. Describe the public/stakeholder participation and public information program;
4. Describe the County's plans for identification of: water demand forecasts (and the consideration of future uncertainties) within the hydrologic units identified by the Commission, conservation and demand-side management programs, source development options and any potential impacts to the resource, and the development and integration of resource development strategies;
5. Schedule for the County's WUDP update , which shall:
 - a. Outline the different stages and activities of the County's planning effort;
 - b. Indicate the approximate times and anticipated duration for public participation activities;
 - c. Indicate the approximate timeframe for County approval of the WUDP and submission of the WUDP to the Commission for adoption;
6. Describe how information from the State Water Projects Plan and the Agricultural Water Use and Development Plan will be integrated and used in updating the WUDP.

Each County shall brief the Commission and its staff regarding its approach for any planned updates of the County WUDP; and

Maui County shall provide periodic milestone briefings to the Commission as part of the WUDP update process.

- B. The WUDP update shall include the following statutory requirements:
1. Consistency with:
 - a. The Water Resource Protection Plan and Water Quality Plan;
 - b. County land use plans and policies; and
 - c. State land use classification and policies.
 2. The status of water and related land development including an inventory of existing water uses;
 3. Future land uses and related water needs;
 4. Regional plans for water developments including recommended and alternative plans, costs, and adequacy of plans;
 5. Consultation and careful evaluation of recommendations of concerned Federal, State and County agencies;
 6. Incorporation of the current and foreseeable development and use needs of the Department of Hawaiian Home Lands; and
 7. Updating and modification of the WUDP as necessary to maintain consistency with its zoning and land use policies.

The statutory and framework provisions described above set forth the minimum requirements for updating the WUDP component of the HWP, including the overall-planning framework that should be followed by the Counties in updating their respective WUDPs. The required elements are consistent with the goals and policy of the State Water Code and the Commission's mandate to manage and protect the State's water resources. The envisioned outcomes, benefits, and products directly support the Commission's duties and responsibilities set forth in Haw. Rev. Stat. section 174C-5, and the requirements of the Hawaii Water Plan described in Haw. Rev. Stat. section 174C-31.

MAUI COUNTY WUDP PROJECT DESCRIPTION:

On February 18, 2004, the Commission approved Maui County's Project Description to update its 1990 WUDP (covering the islands of Maui, Molokai, Lanai, and Kahoolawe).

Lanai

Under this Project Description, Maui County updated its WUDP for the island of Lanai. The Maui County Council adopted the Lanai WUDP under Ordinance No. 3885 Bill No. 60 (2011). The Lanai WUDP is scheduled for adoption by the Commission on this month's agenda.

Central Maui

Maui County completed an update for its Central Maui planning district. The Maui County Council adopted the Plan by Ordinance No. 3804 Bill No. 92 (2010). However, the Central District WUDP only considered the needs of the county municipal water system. There is competition for water resources in the Central district (municipal uses, agricultural uses, native Hawaiian traditional and customary rights, and environmental needs). These were not included. A more comprehensive WUDP is needed to fulfill the intent and achieve the objectives of the Hawaii Water Plan. The Department of Water Supply ("DWS"), the principal preparer of the Central District WUDP, and the CWRM staff have decided not to submit the Central District WUDP to the Commission at this time. DWS will revise its Project Description and submit it for CWRM approval. On August 8, 2012, the DWS submitted a revised Project Description. The CWRM staff evaluated the revised Project Description (Exhibit 1) and the planning elements. The CWRM staff finds that the revised process meets the provisions and guidelines in the State Water Code and the Commission's Statewide Framework.

Staff expects Maui County will develop a robust evaluation and assessment process, integrate appropriate planning scenarios, and address uncertainties, environmental externalities, and public needs into a strategic decision-making process.

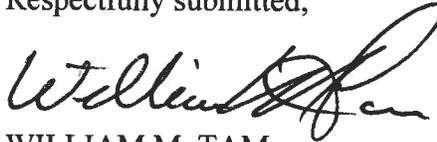
Staff looks forward to receiving and reviewing the County's comprehensive WUDP. The WUDP will provide guidance for decision-making on water allocation requests, the formulation of recommended and alternative strategies for resource development to meet future demand scenarios, and for future land use decisions.

RECOMMENDATION:

Staff recommends that the Commission:

1. Approve the County of Maui's Project Description for updating the Maui County WUDP, and
2. Authorize staff to participate in meetings and/or workshops, as necessary, with pertinent State and County agencies to facilitate implementation of statutory and framework provisions for updating Maui County's Water Use and Development Plan.

Respectfully submitted,



WILLIAM M. TAM
Deputy Director

Exhibit (s): 1 Project Description

APPROVED FOR SUBMITTAL:



WILLIAM J. AILA, JR.
Chairperson

Maui Island Water use & Development Plan Update Project Description – Revised August 2012

I. Project Description

The Project Description of the Maui Island WUDP includes:

- Technical Approach;
- Methodology for Water Resources and Planning;
- An outline of the County's plan for establishing planning objectives and evaluation criteria;
- Incorporation of the Maui Island Plan land use policies, zone changes;
- Demand forecasts & Uncertainties
- Source Development Options, Impacts and Selection Process
- Incorporation of the current and foreseeable development and use needs of the Department of Hawaiian Homelands;
- A description of the public/stakeholder process for participation and public information program;
- A description of how information from the State Water Projects Plan and the Agricultural Water Use and Development Plan will be integrated and used in updating the Maui Island WUDP;
- An description of how the following will be identified:
 - Water demand forecasts
 - Conservation and demand side management programs
 - Results and outcomes of Maui County Watershed Partnerships programs
 - Source development options and potential impacts to the resource
 - Development and integration of resource development strategies
 - Impacts of climate change on the resource and consumption demands
- A schedule of the County's update of the WUDP to include:
 - Dated benchmarks of a phased approach reflecting the County's planning effort
 - Schedule to include the approximate dates and anticipated duration for public participation;
 - Approximate timeframe for the County WUDP approval process and submission of the Maui Island WUDP to the CWRM for adoption;
 - Approximate schedule for CWRM (and staff) briefings by the County.

II. Technical Approach

The primary objective of the Maui County Water Use & Development Plan is to provide guidelines for the management of the island's water resources to ensure that future water needs of the County are met while preserving the integrity of the island's water resources. Key to the success of the Maui County WUDP is to coordinate water use with land use policies set by the Maui Island Plan and the State of Hawaii. The 2003 Maui County

Code (Chapter 11, Section 8-11.2) states “The department of water supply shall implement the county's general plan and community plans in the administration of its affairs (Amended 2002, 1988).”

As required by the Hawaii Water Plan framework data and analyses will be based on groundwater hydrologic units and surface water hydrographic units designated by the CWRM. There are seven aquifer sectors on Maui Island. Table 1 lists the aquifer sectors, geographical area of coverage, and sustainable yield.

Table 1 – Aquifer Sectors

Sector	Area (Acres)	Sustainable Yield (MGD)
Central	147,102	26
Koolau	86,044	175
Kahikinui	72,349	34
Lahaina	61,459	34
Wailuku		
Hana	57,324	122
Maui Island	466,102	427

III. Methodology for Water Resources and Planning

The WUDP update is prepared in accordance with the CWRM "Statewide Framework for Updating the Hawaii Water Plan". An "integrated resource planning" approach is used which includes identifying planning objectives, determining future water needs, identifying all feasible means to meet future water needs and determining, by careful analysis, the best strategy to meet the planning objectives and future needs.

Water resource planning for the County WUDP will integrate land use based water demand projections and population rate of growth for future water needs per the information within the 2012 Maui Island Plan. The intent is to determine the sustainability of the water needs associated with the capacity of the public and private water systems to meet the demand of the potential full-build out development as identified in the Maui Island Plan. Water consumption, including both public and private water systems, will be compared to the incremental water needs for the next 20 years as proposed based on the Maui Island Plan population and rate of growth projections.

The development of the Maui Island Water Use and Development Plan will be accomplished through the completion of five stages. Of note, while much of the development of the WUDP will be accomplished in a chronological fashion as work progresses from stage to stage, many tasks and objectives from different stages can be accomplished simultaneously. The proposed process is described below:

Stage I – Identify Planning Objectives and Evaluation Criteria

Initial identification of the planning objectives will occur through the results of comprehensive research of relevant planning documents such as the Maui Island Plan, in addition to input on water resource planning issues as received from Public and Stakeholder meetings and agency feedback. Upon the completion of comprehensive research and outreach to the public, stakeholders and relevant government agencies and organizations, selection and prioritization of the planning objectives and evaluation criteria will be accomplished utilizing Integrated Resource Planning (IRP). Through the IRP process, the planning objectives selected will form the basis in which to apply the resource scenarios for evaluation. The planning objectives to be identified for the Maui Island WUDP will be precise, qualitative and quantifiable. Through the application of IRP, tradeoffs will be made among conflicting objectives in order to reach community consensus and result in a balanced approach.

Planning Objectives and Evaluation Criteria will be identified by:

1. Research and review of relevant Island wide, state and federal planning documents (including State Water Plan, State Water Quality Plan, State Water Resources Plan)
2. Input received from public and stakeholder meetings, including DHHL

Stage II – Identify Existing and Future Water Demand for all Water Use Categories

Data relative to accomplishing the identification of Island wide (public and private water systems) existing and future water demand will be collected and analyzed for potential impacts, existing and future demands for all CWRM water use categories (e.g. agriculture, residential and nonresidential domestic, industrial, irrigation and municipal). We will be reliant upon best available data from Commission on Water Resources Management, the US Geological Survey (past and ongoing hydrological studies), Department of Health and other state and federal agencies as appropriate. Additionally, source development and water management strategies will be assessed against the established planning objectives and evaluation criteria as established in the previous stage.

Completion of the tasks in this stage will be accomplished by the following:

1. Compilation and analysis of existing Island wide water demand estimates for both public and private water systems
2. Analysis and evaluation of water resource adequacy
3. Collection of available surface and ground water resources for potable/nonpotable sources
4. Identification of potential impacts to water resources
5. Evaluation of the water infrastructure capabilities
6. Collection/analysis of data and studies related to future demand forecasts, including additional studies to define the impacts on streams due to water withdrawal
7. Development of forecasts for public/private water usage (per CWRM water use categories) on Maui Island
8. Identification and prioritization of surface and groundwater development options, and alternative water sources

9. Identification and integration of resource development strategies
10. Identification of the impacts of climate change on water resource supply and consumption demands
11. Implementation of conservation and demand side management programs
12. Identify conceptual water system upgrades

Stage III. Identify and Prioritize Options and Strategies

Key to the successful completion of this stage is to integrate the data, analyses and other information collected in the previous stages related to existing and future water use demand. Integrated resource planning is a critical component of this stage. Tradeoffs will need to be made among conflicting and competing planning objectives and strategies in order to feasibly address a range of planning scenarios to address existing and future water demands.

Planning Options and Strategies will be identified and prioritized by:

1. Identify planning objective conflicts
2. Analyze potential tradeoffs between competing planning objectives
3. Develop suitable strategies to address the diversity of the planning objectives

Stage IV. Integrate the State Water Projects Plan and the Agricultural Water Use and Development Plan. Develop and implement consistency between the Maui Water Use Development Plan and appropriate State and Federal regulations, policies and plans.

The Maui WUDP will incorporate the State Water Projects Plan and the Agricultural WUDP. Consistency will be achieved with the State Water Code, Administrative Rules and the two other components of the Hawaii Water Plan including the Hawaii Water Resources Plan and the State Water Quality Plan. Ensuring consistency with the Hawaiian Homelands Water Plan will be accomplished through the inclusion of preliminary findings from the update of the State Water Projects Plan. Additionally, through the public outreach process, the Maui Islands WUDP will address and integrate as appropriate planning issues, water use, existing and future demands as raised by the Department of Hawaiian Homelands.

V. Public/Stakeholder Process and Public Information Program

Consistent, diverse and credible stakeholder involvement is critical to the success of the County WUDP. Using a diverse approach, the DWS plans to utilize a variety of outreach media to inform and engage the public including informational meetings, AKAKU local television programming, the County web site, fact sheets and other printed materials. The public meetings will provide a forum to solicit input on water resource issues, and also to gather comments on the development of the WUDP. Key stakeholders representing various landowners, the Department of Hawaiian Homelands, community and civic organizations, will be invited as active reviewers as the plan develops. After the revised project description approval by CWRM, a project “kick off” presentation will be given to the Maui County Council and the Board of Water Supply. The kick off meetings will also

take place for the public in five separate locations (Central, South, West Maui, Up Country, and East Maui). Public informational meetings will be held to also inform the public of the WUDP update commencement process. In addition to the regularly scheduled public meetings to be held throughout the development of the WUDP, the public will also have opportunity to offer their input at all of the scheduled Maui County Council Water Resources Committee meetings,

V. Updating and Adoption Process

CWRM approval of the revised Project Description initiates the process to update the 1990 WUDP and notifies the CWRM of the County's intent and proposed technical approach. Periodic milestone briefings to the CWRM will be conducted throughout the preparation of the WUDP. The completed Maui WUDP will be submitted to the Maui County Council Water Resources Committee and the Maui County Board of Water Supply for their review regularly throughout the development of the WUDP. The Maui County Council will review the WUDP and offer public comment during the proceedings. Upon Maui County Council approval, the Maui Island WUDP will be submitted to CWRM for review and adoption.

Maui Island WUDP Work Plan

<i>WUDP Element</i>	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14								
Stage I Planning objectives & evaluation criteria											DRAFT 1							DRAFT 2							DRAFT 3							FINAL DRAFT						
Research and review relevant planning documents																																						
Solicit input from public/stakeholder (DHHL) and County meetings																																						
Identify issues/planning objectives																																						
Stage II Identify Existing & Future Demand/Supply											DRAFT 1							DRAFT 2							DRAFT 3							FINAL DRAFT						
Compilation/analysis of existing Island wide water demand estimates (public & private water systems)																																						
Analysis/evaluation of water resource adequacy																																						
Data collection of surface/ground water resources for potable/nonpotable sources																																						
Identification of potential impacts to water resources																																						
Evaluation of the water infrastructure capabilities																																						
Collection/analysis of data and studies related to future demand forecasts																																						

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Development of forecasts for public/private system water usage for water use categories																														
Identification & prioritization of surface and groundwater resource development options & alternative water sources																														
Identify/integrate water resource development strategies																														
Identify potential impacts of climate change on water resource supply and consumption demands																														
Develop and implement conservation and demand side management programs																														
Identify conceptual water system upgrades																														
Stage III Identify and Prioritize Options & Strategies																														
Identify planning objective conflicts																														
Analyze tradeoffs between competing planning objectives																														
Develop suitable strategies for a range of specified planning scenarios																														
Stage IV Integrate State Documents from HI Water Plan																														
Incorporate updates from State Water Projects Plan (DHHL water plan findings)																														

<i>WUDP Element</i>	Jul-12	Aug-12	Sep-12	Oct-12	Nov-12	Dec-12	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14
Integrate Ag. WUDP																														
Review and incorporate consistency between Maui Island WUDP and appropriate state regulations, policies and plans (e.g. State Water Quality and Water Resource Plans)																														
Provide drafts to be reviewed by state counterparts to ensure consistency																														
Stage IV Prepare Maui Island Water Use Development Plan document																														
DRAFT 1 COMPLETE											*																			
Drafts out for review to:																														
DWS leadership																														
Maui Water Resources Committee																														
Maui County Board of Water Supply																														
Public Comment																														
CWRM Briefing																														
Edits/revisions																														
DRAFT 2 COMPLETE																														
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DRAFT 3 COMPLETE																					*								
Drafts out for review to:																													
DWS leadership																													
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