



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

September 23, 2010
Honolulu, Hawaii

Update to the Hawaii Water Plan
Adoption of the Waianae and Koolau Loa Watershed Management Plans

SUMMARY OF REQUEST:

Staff is requesting that the Commission adopt the Koolau Loa and Waianae Watershed Management Plans, which are two of eight regional watershed management plans that together would comprise the Water Use and Development Plan for the City and County of Honolulu.

BACKGROUND:

The State Water Code, Chapter 174C, HRS, requires that the Commission on Water Resource Management (Commission) implement and utilize comprehensive water resources planning in its regulation and management of our State's water resources. The water code sets forth the requirement for initial development and updating of the Hawaii Water Plan (HWP) to guide the Commission in executing its general powers, duties, and responsibilities assuring economic development, good municipal services, agricultural stability, and environmental protection.

The HWP is intended to serve as a continuing long-range guide for water resource management. The HWP currently consists of five major components (plans) identified as the: 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 fulfill this mandate, the components of the HWP must be reviewed and updated on a regular basis. The initial HWP adopted by the Commission in 1990, provided the means in which to address many issues, including but not limited to, estimates of sustainable ground water yields by island, aquifer sectors/aquifer systems, as well as an initial evaluation of current and projected water needs for the State and the Counties.

An updated HWP is considered essential to effective coordination and integration of State and County actions related to sustainable water resource development. It also enables the Commission to effectively implement the statutory objectives of the State Water Code. Absence of updated information can lead to preparation and implementation of inadequate or unrealistic plans for development of existing and alternative water resources, and may result in conflicting objectives or uses that threaten our State's limited water resources. The lack of up-to-date demand projections and proposed strategies to meet such demands limit the State's and Counties' ability to address future water development and resource protection issues.

In updating the HWP components, there is consensus agreement among State and County agencies that a comprehensive water resource planning process is needed to address the problems of supply, demand, and conservation of water. Accordingly, the required updates/revisions to the HWP should follow and utilize an evaluation and assessment process that emphasizes the consideration of various planning scenarios incorporating uncertainties, environmental externalities, and public needs into a strategic decision-making process.

Under a comprehensive resource planning approach, all types of resources would be assessed and weighed in the context of new/existing supply-side resources, alternative source development such as wastewater reuse, conservation, alternative rate structures, as well as other demand-side management methods. In this process, the concept of least-cost planning can be pursued while balancing supply-side and demand-side management issues. A major outcome of this effort will be the development of coordinated strategies to meet future water demands, including greater use of alternative water sources, wherever possible.

A diagram illustrating the integration of the HWP components along with the current status of each is attached to this submittal (EXHIBIT 1).

STATEWIDE FRAMEWORK:

Updating the various components of the Hawaii Water Plan should take into consideration current statutory objectives which include, but are not limited to, obtaining 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.

In addition, the updating process should lead to refinement of current projections, planning principles, and strategies associated with water resource planning and development. Such efforts should result in: identification and assessment of potential new sources; more realistic demand projections/forecasts; improvements in the operation of existing systems; application of various screening criteria/analyses; more effective integration between demand- and supply-side resource options; and overall improved coordination between State and County water use and development plans.

Another element of the updating process should include a facilitated public participation process involving the community, public interest groups, and government agencies involved in the preparation of the County WUDPs. Under such a process, it is envisioned that 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.

The planning objectives described above are clearly set forth and established within “The Statewide Framework for Updating the Hawaii Water Plan” adopted by the Commission in February 2000. Recommended planning elements for each component of the HWP are prescribed in the adopted framework document, including issues that should be addressed as part a comprehensive updating process.

The guidelines presented in the framework define the overall parameters that each County’s WUDP must meet. However, the Commission recognizes that each county faces a unique set of conditions that have an impact on the county’s planning process, including:

1. The nature and occurrence of water resources and existing infrastructure in the county;
2. The planning issues and water use priorities the county must address;
3. The financial resources available to the county; and
4. The financial and organizational structure that has been established by its County Council and administration.

In light of such conditions, counties should develop a scope of work for updating its WUDP, which best meets its overall objectives. The process by which these objectives are to be achieved should be set forth in a detailed project description and schedule for updating the County WUDP.

OAHU WATER MANAGEMENT PLAN:

To update its County WUDP, the City and County of Honolulu, Board of Water Supply proposed an Oahu Water Management Plan (OWMP) framework (EXHIBIT 2). The OWMP framework was presented to and approved by the Commission on March 17, 2004. According to the OWMP framework, the OWMP will be updated based on Oahu’s land use planning regions. These regions are: Waianae, Koolau Loa, Koolau Poko, North Shore, Ewa, Central Oahu, East Honolulu and the Primary Urban Center. The OWMP framework calls for regional watershed management plans to be developed for each of these land use planning regions. These watershed management plans will be consolidated into an overall WUDP for the County.

WAIANAЕ AND KOOLAU LOA WATERSHED MANAGEMENT PLANS:

The first two regional watershed management plans to be completed are the Waianae and Koolau Loa Watershed Management Plans. They are long range plans to the year 2030 for the protection, preservation, restoration, and balanced management of ground water, surface water and related watershed resources of the two land use planning regions. The overall goal of the plans was to formulate an environmentally holistic, community-based, and economically viable watershed management plan that will provide a balance between:

- (1) the protection, preservation, and management of Oahu’s watersheds; and
- (2) sustainable groundwater and surface water use and development to serve present users and future generations.

To accomplish this, the plans were assembled through an extensive stakeholder consultation process, therefore capturing within them the regional issues and district specific concerns.

On June 23, 2010, staff held a public hearing on the completed plans. At the public hearing, testimony was received in strong support of the Waianae Watershed Management Plan. No testimony in opposition to either of the plans was received. Following the public hearing, the Honolulu City Council adopted the plans by ordinance on August 18, 2010.

DISCUSSION/ANALYSIS:

The Koolau Loa and Waianae Watershed Management Plans have met the statutory requirements set forth in the State Water Code and the recommended elements in the statewide framework pertaining to the update of the County Water Use and Development Plans. These include:

- Submission of a County-Specific WUDP Project Description for review and approval by the Commission;
- Consistency with:
 - The Water Resource Protection Plan and Water Quality Plan;
 - County land use plans and policies; and
 - State land use classification and policies;
- The status of water and related land development including an inventory of existing water uses;
- Future land uses and related water needs;
- Regional plans for water developments including recommended and alternative plans, costs, and adequacy of plans;
- Consultation and careful evaluation of recommendations of concerned Federal, State and County agencies; and
- Incorporation of the current and foreseeable development and use needs of the Department of Hawaiian Home Lands.

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 are directly supportive of the Commission's duties and responsibilities set forth in Section 174C-5, HRS, and the requirements of the HWP described in Section 174C-31, HRS.

OTHER ISSUES:*I. Chapter 343 – Environmental Assessment (EA) Compliance***Applicability**

Chapter 343 is not applicable to the proposed action based on §HAR 11-200-5(d), which states "*For agency actions, chapter 343, HRS, exempts from applicability any feasibility or planning study for possible future programs which the agency has not approved, adopted, or funded. Nevertheless, if an agency is studying the feasibility of a proposal, it shall consider environmental factors and available alternatives and disclose these in any future assessment or subsequent statement. If, however, the planning and feasibility studies involve testing or other actions which may have significant impact on the environment, then an environmental assessment shall be prepared.*"

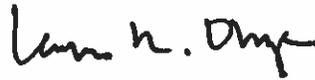
The watershed management plans are planning studies, which do not involve testing or other actions that will impact the environment; therefore chapter 343 is not applicable to this agency action.

RECOMMENDATION:

Staff recommends that the Commission:

1. Adopt the Waianae and Koolau Loa Watershed Management Plans as updates to the Hawaii Water Plan.

Respectfully submitted,



Lenore N. Ohye
Acting Deputy Director

Exhibit (s): 1 Hawaii Water Plan Components
 2 Oahu Water Management Plan Framework

APPROVED FOR SUBMITTAL:



LAURA H. THIELEN
Chairperson

Hawaii Water Plan Components

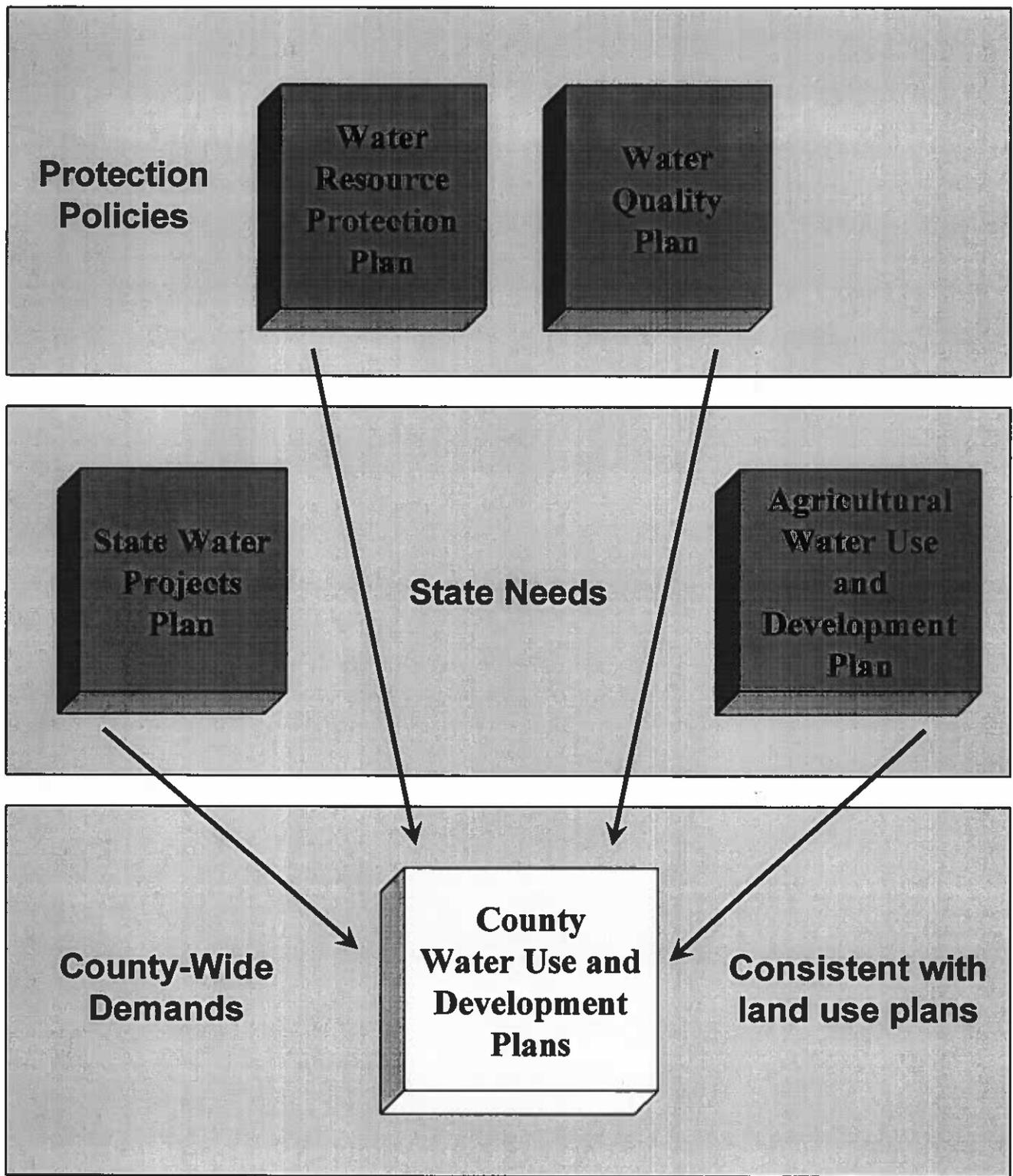


EXHIBIT 1

Hawaii Water Plan Components Status

- **Water Resource Protection Plan**
 - Prepared by the Commission on Water Resource Management
 - Protects and sustains statewide groundwater and surfacewater resources, watersheds, and natural stream environments.
 - Last updated in 2008

- **Water Quality Plan**
 - Prepared by the Department of Health
 - Protects the public health and sensitive ecological systems by preserving, protecting, restoring and enhancing the quality of ground- and surface-waters throughout the State
 - Last updated in 1990

- **State Water Projects Plan**
 - Prepared by the DLNR's Engineering Division
 - Provides a framework for planning and implementation of water development programs to meet projected water demands for State projects
 - Currently being updated

- **Agricultural Water Use and Development Plan**
 - Prepared by the Department of Agriculture
 - Develops a long-range management plan that assess state and private agricultural water use, supply, and irrigation water systems
 - Currently being updated

- **County Water Use and Development Plans**
 - Prepared by each of the four counties
 - Sets forth the allocation of water to land use through the development of policies and strategies to guide the County in its planning, management, and development of water resources to meet projected demands
 - Kauai County WUDP last updated in 1990
 - Maui County WUDP
 - 2009 Central District Review Draft submitted to County Council for adoption
 - 2010 Lanai Review Draft submitted to Lanai Water Advisory Group for review
 - Upcountry Maui District update underway
 - Hawaii County WUDP finalized and awaiting County Council adoption
 - City and County of Honolulu WUDP
 - Koolau Loa and Waianae Watershed Management Plans completed and ready for adoption by Commission
 - Koolau Poko Watershed Management Plan update underway



Oahu Water Management Plan Framework
And Scope of Work for Wai`anae and Ko`olauloa
Watershed Management Plans

Submitted to the State Commission on Water Resource Management
in Compliance with the Statewide Framework for Updating the Hawaii
Water Plan, Oahu County Water Use and Development Plan.

Attachment to BWS Transmittal Letter to CWRM, Dated February 20, 2004.

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OWMP Framework Summary

The OWMP consists of policies and strategies, which guide the activities of the City and County of Honolulu and advises the State Commission on Water Resource Management (CWRM) in the areas of planning, management, water development and use and allocation of Oahu's natural water resources. The OWMP framework proposes regional plans entitled "watershed management plans" and shall be consistent with the following:

1. State Water Resource Protection Plan, State Water Quality Plan, State Water Projects Plan, State Agricultural Water Use and Development Plan and Department of Hawaiian Home Lands water plans as listed in Chapter 174C-31, Hawaii Water Plan, State Water Code.
2. The Statewide Framework for Updating the Hawaii Water Plan (Statewide Framework)
3. The General Plan for the City and County of Honolulu. The General Plan is a comprehensive statement of objectives and policies, which sets forth the long range aspirations of Oahu's residents and the strategies of actions to achieve them. It is the focal point of a comprehensive planning process that addresses physical, social, economic and environmental concerns affecting Oahu. This planning process serves as the coordinative means by which the City provides for the future growth of the metropolitan area of Honolulu. <http://www.honoluluodpp.org/Planning/OahuGenPlan.asp>
4. 8 Development Plan (DP) and Sustainable Community Plan (SCP) land use planning regions of Oahu. Each community oriented land use plan is intended to help guide public policy, investment, and decision making over the next 20 years. Each plan responds to specific conditions and community values of each region. Ewa and Primary Urban Center are "development plan" areas where growth and supporting facilities will be directed and be the policy guide for development decisions and actions needed to support that growth. The remaining 6 land use areas are "sustainable communities" plans, which are envisioned as relatively stable regions in which public programs will focus on supporting existing populations. The following table lists the 8 land use planning reports with links.

Oahu's Land Use Planning Regions	Web Page Links to the Plans
Waianae	http://www.honoluluodpp.org/Planning/DevSust_Waianae.asp
Ko'olauloa	http://www.honoluluodpp.org/Planning/DevSust_Koolauloa.asp
Ko'olaupoko	http://www.honoluluodpp.org/Planning/DevSust_Koolaupoko.asp
North Shore	http://www.honoluluodpp.org/Planning/DevSust_NorthShore.asp
Ewa	http://www.honoluluodpp.org/Planning/DevSust_Ewa.asp
Central Oahu	http://www.honoluluodpp.org/Planning/DevSust_CentralOahu.asp
East Honolulu	http://www.honoluluodpp.org/Planning/DevSust_EastHonolulu.asp

Primary Urban Center	http://www.honoluludpp.org/Planning/DevSust_PrimaryUrbanCenter.asp
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5. City and County of Honolulu Ordinance 90-62, Water Management establishing the Oahu Water Management Plan establishing water management policies and strategies “for water use and development within each development plan area.”
6. Annual Report to the Twenty-First Legislature 2001 Regular Session on Act 152, SLH 2000, Relating to Watershed Protection. The annual report set forth the development of a watershed master plan, including identifying protected watersheds areas, enhancement projects and an implementation plan.
7. Supreme Court Decision on Waiahole Ditch Contested Case applying the Public Trust Doctrine and the Precautionary Principle to water resource management.
8. BWS Sustainability Vision and Mission of “Water for Life” to enhance the quality of life of our community by providing world-class water services. Protecting the environment and supporting Oahu’s economy while involving the community achieve BWS goals of sustainable water supplies for future generations. BWS accomplishes these goals with our watershed protection and water conservation partnership programs and diversifying our water supplies, both natural and alternative technologies, such as recycled water, seawater desalination and ocean resource development.

Background:

The Commission in 1990 formally adopted the initial Hawaii Water Plan, prepared by various state and county agencies. Further updates in 1992 were deferred pending additional refinement of plan components. In 1994, the City and County of Honolulu began their initial revision to the Oahu Water Management Plan. The draft OWMP update was completed in January 1998 and is the most current reference document. However, it was not submitted for adoption because Oahu’s water situation was in a state of flux, with major changes in the agriculture industry, including the closing of the Oahu Sugar Company and the Waialua Sugar Company.

In 1999, the Honolulu Board of Water Supply (BWS) initiated the integrated resource planning process to update the Oahu Water Management Plan, Oahu’s County Water Use and Development Plan. The integrated islandwide water planning effort was met with significant opposition, which surfaced in our public participation process. After almost two years of effort, we did not move beyond the public participation process and so before we started the water planning stage, we decided to stop and re-evaluate our approach. We summarize the main lessons learned as follows:

1. It is important to have equal focus on resource protection, conservation and restoration as on water use and development. There needs to be a reassurance that our natural resources are protected and our water supplies are sustainable before planning on water use and development can successfully occur.

2. It is important to elevate the community's knowledge about water related issues so the interested community can actively participate in a community-based planning process. It is equally important that the planning document is written so that it is easily understood.
3. The islandwide integrated approach elevated community concerns on growth limits and regional water transport. The integrated approach is more complex on Oahu because approximately ¼'s of Oahu's water systems are interconnected. The communities needed assurance that there were sufficient water resources within their watersheds before islandwide regional water needs were discussed.

In February 2000, CWRM adopted a framework for updating the Hawaii Water Plan to provide focus and additional guidance to each agency responsible for updating specific plan components. CWRM recognized the complexities in addressing water resource planning and views the plans as "living documents which over several plan iterations will result in a truly comprehensive water plan" (Statewide Framework page 1-2)

In August 2000, the Hawaii Supreme Court's decision on the Waiahole Ditch Contested Case, and the remand hearings, provided additional guidance for water resources planning, like the precautionary principle. In addition, three public trust uses of water were identified; domestic use, instream use and water for traditional and cultural practices. Commercial and agricultural water uses are in a lower category.

In 2001, BWS broadened its mission to "Water for Life", which strives for sustainability of all water supplies and to enhance the quality of life of our community by providing world-class water services.

The 2000 Act 152 Watershed Protection required the development of a watershed protection master plan that identified priority watersheds and protection projects for implementation. Act 152 renewed BWS investment in watershed protection recognizing the importance of watersheds for the sustainability of our groundwater supplies and streams. To date, about \$1 million has been invested by BWS into Oahu's watersheds and aquifers. Noteworthy watershed protection projects are as follows:

- Ka `ala Bog Fencing to prevent feral animals from destroying the Mt. Ka `ala native habitat.
- Grant to the Oahu Invasive Species Committee to control invasive plant species within the Ko `olau watersheds
- Ala Wai Mauka Restoration Project for the Ko `olau Mountain Watershed Partnership
- BWS and Kamehameha Schools funded a USGS study to assess the hydrological and biological features and also funded the Punahu `u Agricultural Lands and Irrigation System Assessment to help set the in-stream flow standard for Punahu `u Stream.
- Waibe `e Valley Make a Difference Day invasive species removal
- Malama O Manoa "Kuleana Project" to change the residential practices of the Manoa Ahupua `a to increase awareness of water conservation and polluted runoff control.
- Watershed protection studies in Ala Wai, West Honolulu and Central Oahu.
- Ka `ala Farms and Mohala I Ka Wai educational awareness program
- Makaha Valley Restoration project
- Wai `anae and Ko `olauloa Watershed Management Plans

From 2001 to the present, several mountain and urban watershed partnerships have been established among BWS, agencies, organizations and community groups. Together, these partnerships have identified watershed protection projects and plans have been developed and funded. The following partnerships have been developed:

- Ko'olau Mountain Watershed Partnership
- Mohala I Ka Wai in Wai'anae
- Punalu'u Watershed Partnership
- Waihe'e Ahupua'a Initiative
- Ahupua'a Restoration Council of He'eia
- Malama O Manoa
- Wai'anae Kai Watershed Partnership
- University of Hawaii Manoa / BWS Water Conservation Partnership
- Hawaiian Electric Co. / BWS Energy and Water Conservation Partnership

Watershed Planning Approach:

The OWMP Framework proposes individual planning documents referred to as regional watershed management plans, which collectively will be the Oahu Water Management Plan. The regional watershed management plans will address the water needs, both present and future, for the 8 land use districts on Oahu. Rather than an islandwide approach brought down to each watershed, the watershed planning approach will start from the basic planning unit, each watershed or "ahupua'a" and expand it to the region or "moku". It is important that this watershed management plan allow equal focus on resource protection, conservation and restoration as well as on water use and development. The watershed approach is supported by the following references:

- The planning regions will be consistent with and support each of the 8 DP/SCP land use planning regions established in the General Plan. The State Water Code, Chapter 174C-31(b)(2), requires that "Each water use and development plan shall be consistent with the respective county land use plans and policies, including general plan and zoning".
- The Statewide Framework for Updating the Hawaii Water Plan, Page 3-26, Need for Flexibility, recognizes the need for appropriate flexibility in the county plans due to institutional and /or funding constraints, to encourage innovation as well as to accommodate unique and county-specific concerns.
- The Statewide Framework Page 3-19 also requires the preparation of "regional plans for water development including recommended and alternative plans, costs, adequacy of plans and relationship to water resource protection and quality plan." (Emphasis added).

The watershed management plans will have the following key themes:

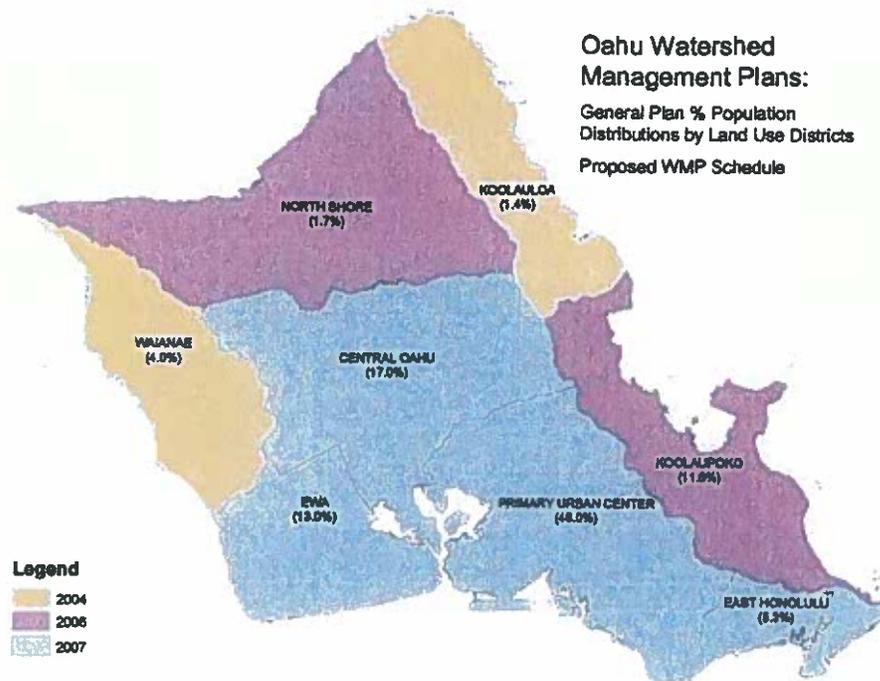
- Community-Based: In addition to public meetings, there will be many small group meetings with the community to educate, understand and apply the community's thinking and values about water resources. A wide-range of community meetings will be conducted including regional organizations such as Mohala I Ka Wai, Malama Ohana and the Neighborhood

Boards, to local councils and associations, down to key individual meetings. The BWS watershed partnerships will be asked to provide representation for the community and key stakeholder groups.

- **Environmentally Holistic:** The watershed approach from mountains to the coral reefs recognizes the inter-dependence of water and land. The watershed management planning approach will not only address water use and development in the urban and agricultural zoned lands, but also describe protection strategies and enhancement projects for the forest reserves, conservation districts, streams and near-shore waters.
- **Action-Oriented:** The plan will describe specific watershed protection projects as well as natural and alternative water supply facilities that can be implemented by federal, state and city agencies and programs. The projects will be presented in a budgetary level format with information specific enough to support grant funding requests or an agency's capital improvement program.
- **Alignment with State and County Water and Land Use Policies** as stated above.
- **Reflects Ahupua`a Management Principles:** The watershed management plans will incorporate Ahupua`a principles in the plans. The community's help will be needed to identify their thinking and values about water. Living with Ahupua`a values and protocols is very important to culturally intact communities, like Wai`anae and Ko`olauloa. Ahupua`a principles are not major factors in all districts, such as the urban metropolitan districts, however, these principles can still be used to guide water resource planning.

Proposed Schedule of Funding and Plan Approval:

The Oahu graphic below, shows the 8 land use areas on Oahu and the proposed funding schedule for the watershed management plans.



The following table lists the proposed funding schedules and anticipated target dates for submittal to CWRM for plan approval. The approval dates are based on an 18-month planning time frame and are only estimates and therefore subject to change.

Watershed Planning Areas	BWS Funding Schedule Fiscal Year	Target Dates for Submittal to CWRM for Plan Approval
Wai`anae, Ko`olauloa	FY 2004	1 st Qtr FY 2006
North Shore, Ko`olaupoko	FY 2006	2 nd Qtr FY 2007
South Oahu: (Ewa, Central Oahu, Primary Urban Center, East Honolulu)	FY 2007	2 nd Qtr FY 2008

* BWS Fiscal Year is July 1 to June 30.

The four-year funding schedule is proposed due to the following reasons:

1. The Statewide Framework recognizes that implementation of the requirements and recommendations will need to be phased over the next several years and possibly over successive iterations of the updating process for the Hawaii Water Plan. (Statewide Framework Implementation Plan, Page 4-1)
2. BWS budgetary and staffing constraints.
3. As this watershed approach is new and unique, we are proposing an 18-month planning process to develop a baseline format and obtain the necessary approvals.

4. Wai`anae, Ko`olauloa, North Shore and Ko`olaupoko are designated as low growth, sustainable communities in the General Plan. The water demand projections for these areas show only marginal water demand increases through the planning horizon, currently 2025.
5. BWS is participating in active watershed partnerships in the Wai`anae and Ko`olauloa areas among others and these partnerships could assist in the public participation process.
6. South Oahu will be funded after the 4 rural districts for the following reasons:
 - To allow time for progress on the Section IV Framework Implementation Plan; Phase I Framework Adoption and Initial Updates to Hawaii Water Plan components, Phase II Development and Funding of New Framework Initiatives and Phase III Component Integration Phase of the Statewide Framework.
 - To allow time to complete the on-going products of the CWRM led Pearl Harbor Monitoring Group as part of the Milestone Framework for the Revised Pearl Harbor Sustainable Yields. Since 1998, BWS has funded over \$4 million for the construction of deep monitor wells throughout Oahu and have committed staffing resources for the monitoring of these wells on a quarterly basis. These wells will be essential in the groundwater monitoring and modeling efforts currently underway to increase our understanding of the groundwater supply in the Pearl Harbor and Honolulu aquifers.
 - To allow time to complete the Board of Water Supply's 3-dimensional groundwater model of the Honolulu aquifers.
 - To allow time to incorporate state projects water demands and agricultural water needs. We understand that the State Water Projects Plan was recently completed and the State Agricultural Water Use and Development plan is now underway.
 - The watershed management plans for South Oahu will be funded in the same fiscal year and may be combined into a single plan to more easily address the integration of water resources.

In calendar year 2000, South Oahu consumed about 78% of the islandwide municipal source pumpage of 154.6 mgd. We anticipate that the South Oahu watershed management plan(s) will fully utilize the IRP decision tools as described in the Statewide Framework for Updating the Hawaii Water Plan. The scope of work contemplated for the South Oahu regional watershed plan(s) will provide for compiling and developing water demand projections for domestic, commercial, industrial, agricultural, and nonpotable uses of municipal, state, federal and private water systems. It will also include assessment of environmental factors as part of the project objectives and evaluation criteria to be developed for the purpose of evaluating resource options and water management strategies.

Commitment for Agency Coordination:

As each watershed management plan moves forward and in addition to the public participation process, we anticipate several staff meetings with CWRM, City Department of Planning & Permitting and BWS to update our planning progress and obtain feedback and guidance. At key milestones, as coordinated with CWRM staff, we will present updates to the CWRM, tentatively mid-way through the planning process, after the public review draft is available, during plan approval and as otherwise requested by the CWRM. A schedule will be developed.

Each watershed management plan will be submitted for approval as separate documents, closely supporting each respective DP/SCP land use plan. At the completion of the first iteration of all planning regions, there will be a consolidating process to provide an islandwide perspective and to resolve any remaining inter-regional issues.

Proposed Scope of Work, Major Project Elements:

As each planning region is funded, their scopes of work will be submitted to the CWRM for review and approval. The proposed scopes of work for the Wai`anae and Ko`olauloa sustainable community plan areas are being submitted for CWRM review and approval (see attached). The draft scopes and planning approach were discussed with some of the community leaders and organizations in Wai`anae and Ko`olaupoko, and their feedback incorporated. The major project elements for the FY 2004 watershed management plans for Wai`anae and Ko`olauloa are:

1. Project Organization
2. Preliminary Watershed Analysis
3. Preliminary Stakeholders Consultations
4. Preliminary Watershed Management Strategies
5. 5-year Watershed Action Plan
6. Water Use and Development Plan
7. Draft Report
8. Final Report
9. Watershed Management Plan Approval

Summary of Current Water Distribution:

As part of the process of initiating the update of the OWMP and consistent with the guidelines set forth in the Statewide Framework for Updating the Hawaii Water Plan, we have compiled information on existing and projected water demands and sources of supply for the municipal system. BWS has evaluated the adequacy of the supply to meet the potable and nonpotable needs through ground water and recycled water sources. Water demand will be met with existing and funded source projects beyond the estimated 5-year planning period during the completion of all of the regional watershed management plans for Oahu.

The sustainable communities of Wai`anae, North Shore, Ko`olauloa and Ko`olaupoko have essentially the same water demand throughout the planning period. The existing sources and infrastructure in these areas are adequate to provide potable water service through the planning horizon and therefore, additional integration of water supplies between these regions will be limited.

In South Oahu, the water supplies, both natural and alternative, will be fully integrated and described in a future scope of work that once funded in FY 2007, will be submitted to CWRM for their review and approval. The following summarizes the main land use and water planning highlights in South Oahu.

- The City's General Plan directs the majority of the growth to South Oahu.

- Based on the City's growth forecast evaluating population, visitors, housing and employment factors, we forecast an increase in potable water demand for Oahu averaging about 1.1 million gallons per day per year, most of which will occur in South Oahu. In 5 years the BWS system demand is expected to increase by about 5.5 mgd, from 156 mgd in 2003 to 161.5 in 2008. New sources in the Waipahu-Waiawa Water Management Area, as identified in the City DP and SCP land use plans, will be able to provide adequate water supply.
- In addition, in that time period, recycled water facilities in Ewa and Central Oahu will be expanded to continue to off-set additional groundwater development.
 - In 2000, BWS acquired and now operates the 12 mgd Honouliuli Water Recycling Facility supplying irrigation and industrial process water for Ewa.
 - BWS has also funded the design of a delivery system to utilize approximately 3.0 mgd of Wahiawa recycled water in Central Oahu.
- The Kalaeloa seawater desalination plant is currently under design and will bring an additional 5.0 mgd of potable water supply to the second city of Kapolei.

For your information, a summary of Oahu's estimated population distribution based on the 2000 census, BWS potable water demand in calendar year 2000 and water distribution is provided among the 8 land use regions. This is essentially the base case of existing water demand and distribution in the BWS system that will be referenced in establishing future watershed management plans scenarios. As we have stated above, the future water demand and distribution in the Waianae, North Shore and Windward regions will not change significantly.

