



STATE OF HAWAII | KA MOKU'ĀINA 'O HAWAII'
DEPARTMENT OF LAND AND NATURAL RESOURCES | KA 'OIHANA KUMUWAIWAI 'ĀINA
COMMISSION ON WATER RESOURCE MANAGEMENT | KE KAHUWAI PONO
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STAFF SUBMITTAL

COMMISSION ON WATER RESOURCE MANAGEMENT

December 19, 2024
Honolulu, Hawai'i

Adoption of the East Honolulu Watershed Management Plan to Update the Water Use and Development Plan for the City and County of Honolulu for Incorporation into the Hawai'i Water Plan

SUMMARY OF REQUEST:

Staff recommends the Commission on Water Resource Management (Commission) adopt the East Honolulu Watershed Management Plan (EHWMP)¹.

BACKGROUND:

The Honolulu Board of Water Supply (BWS) and City and County of Honolulu (County) Department of Planning and Permitting (DPP) have jointly prepared the EHWMP with support from consultant SSFM International. The EHWMP is one of eight (8) plans which together comprise the O'ahu Water Management Plan (OWMP). The OWMP framework calls for regional watershed management plans to be developed for each of O'ahu's land use planning districts. Table 1 summarizes the status of BWS's watershed management plans.

Table 1. Status of Watershed Management Plans

District	Status
Wai'anae	WMP Adopted March 11, 2011. Update in process
Ko'olaupoko	WMP Adopted March 11, 2011
Ko'olaupoko	WMP Adopted September 19, 2012
North Shore	WMP Adopted December 20, 2016
'Ewa	Scope of Work Approved May 16, 2012. Revisions in process to address climate change

¹ Link to East Honolulu Water Management Plan
<https://www.boardofwatersupply.com/water-resources/water-planning/watershed-management-plan/east-honolulu-plan>

Central O‘ahu	Scope of Work Approved October 16, 2013. Revisions in process to address climate change
Primary Urban Center	Scope of Work Approved May 16, 2017. Revisions in process to address climate change
East Honolulu	Scope of Work Approved May 21, 2019. Recommended for Adoption

AUTHORITY:

The State Water Code (Hawai‘i Revised Statutes 174C-2(b)) recognizes the need for comprehensive water resources planning and establishes the Hawai‘i Water Plan (HWP) as the guide for developing and implementing this policy. The HWP is intended to serve as a long-range guide for the Commission in executing its general powers, duties, and responsibilities to protect, manage, and regulate Hawai‘i’s freshwater resources (ground and surface water) and provide for the maximum beneficial use of water by current and future generations.

The HWP currently consists of five major components (plans)² 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.

The Water Code recognizes that the HWP must be continually updated to remain useful and relevant and further specifies that “[e]ach county shall update and modify its water use and development plans as necessary to maintain consistency with its zoning and land use policies” §174C-31(q) HRS.

WATER USE AND DEVELOPMENT PLANS (WUDPs)

A separate WUDP is prepared by each of the four counties and in some cases is adopted by county ordinance. In the case of O‘ahu, the County has decided to prepare eight (8) regional watershed management plans. These individual watershed management plans constitute the County’s WUDP. The county WUDPs are a means to integrate land and water planning and help ensure the County has a plan to meet existing and future water needs and recognizes, respects, and protects public trust resources and uses. The WUDPs encompass all water resources and water systems within the county, including the municipal and private water uses. The WUDPs are intended to provide information about current and projected water demands (over the next 20 years) based on various county land use plans and should be consistent with the other components of the HWP.

Hawai‘i Administrative Rule §13-170-31 states that each WUDP shall include, but not be limited to:

² Exhibit 3 summarizes the agencies responsible for preparing each of the five components and the primary objectives of each plan.

- (1) *Status of county water and related land development including an inventory of existing water uses for domestic, municipal, and industrial users, agriculture, aquaculture, hydropower development, drainage, reuse, reclamation, recharge, and resulting problems and constraints;*
- (2) *Future land uses and related water needs; and*
- (3) *Regional plans for water developments including recommended and alternative plans, costs, adequacy of plans, and relationship to the water resource protection plan and water quality plan.*

Additional guidelines for preparing the WUDPs are provided in Hawai‘i Administrative Rule §13-170-32:

- (1) *Each water use and development plan shall be consistent with the water resource protection plan and the water quality plan.*
- (2) *Each water use and development plan and the state water projects plan shall be consistent with the respective county land use plans and policies, including general plan and zoning as determined by each respective county.*
- (3) *Each water use and development plan shall consider a twenty year projection period for analysis purposes.*
- (4) *The water use and development plan for each county shall also be consistent with the state land use classification and policies.*
- (5) *The cost of maintaining the water use and development plan shall be borne by the counties; state water capital improvement funds appropriated to the counties shall be deemed to satisfy Article VIII, section 5 of the State Constitution.*

STATEWIDE FRAMEWORK FOR THE HAWAI‘I WATER PLAN

HRS Section 174C-31(n) provides that “[t]he commission may add to the Hawai‘i water plan any other information, directions, or objectives it feels necessary or desirable for the guidance of the counties in the administration and enforcement of this chapter”.

In February 2000, the Commission adopted the Statewide Framework for Updating the Hawai‘i Water Plan (Framework)³. The Framework is intended to provide additional instructions to help with the preparation and update of the five components of the HWP. The objectives of the Framework are:

- To achieve integration of land use and water planning efforts that are undertaken by federal, state, county, and private entities so that a consistent and coordinated plan for the protection, conservation and management of our water resources is achieved;
- To recommend guidelines for the HWP update so that the plan and its component parts are useful to the Commission, other state agencies, the counties, and the general public;

³ <https://dlnr.hawaii.gov/cwrmp/planning/hiwaterplan/framework>

- To develop a dynamic planning process that results in a "living document" for each component of the HWP which will provide county and state decision-makers with well formulated options and strategies for addressing future water resource management and development issues;
- To better define roles and responsibilities of all state and county agencies with respect to the development and updating of the HWP components;
- To describe and outline the techniques and methodologies of integrated resource planning as the basic approach that should be utilized in developing and updating the County WUDPs;
- To facilitate permitting and to identify potential critical resource areas where increased monitoring or baseline data gathering should proceed;
- To establish an overall schedule for phased updating of the HWP; and
- To outline an Implementation Plan for near-term and long-term actions.

The Framework (2000) includes the following recommended plan elements for the WUDP update process:

- County-Specific WUDP Project Description
- Coordination with Commission on Water Resource Management
- Stakeholder and Public Involvement
- Development of Policy Objectives and Evaluation Criteria
- Description of Water System Profiles
- Identification of Resource and Facility Options
- Development and Evaluation of Strategy Options
- Implementation Plan

The Framework (2000) further recommends integration of HWP components at the county level and advocates the use of an integrated resource planning (IRP) approach. In adopting the Framework (2000), the Commission recognized that each county faces a unique set of conditions that have an impact on the county's planning process, including:

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

Thus, the Framework (2000) recognizes the need for appropriate flexibility to encourage innovation as well as to accommodate unique and county-specific concerns that may be addressed within the WUDP. In light of the above conditions, the Framework (2000) requires that each county 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 WUDP. The EHWMP was developed using the Framework (2000).

UPDATING THE STATEWIDE FRAMEWORK (2000)

It has been 25 years since the Framework was last updated. During that time, various components of the HWP, including county WUDPs, have been drafted and amended. However, questions remain about the utility of these plans and if they provide sufficient guidance for the proper protection, conservation and management of the waters of the State. Commission staff have begun an update of the Framework (2000) document. This update began in 2019 and is nearing completion within the next 6-12 months. The goal of the Framework update is to make the HWP more integrated, enabling better holistic decision making across various sectors and agencies. It also attempts to build more explicitly on the unique cultural foundation and values of Native Hawaiians with a focus on the interconnectedness and sanctity of wai (water). Once completed, this update will undergo a formal adoption process, which includes statewide public hearings, and a vote by the Commission. Subsequent HWP components will need to be consistent with the new Framework once adopted. This includes the EHWMP. A methodology for ensuring timely and consistent plan updates across all components of the HWP is intended as part of the Framework update.

EHWMP COMMUNITY OUTREACH

Stakeholder outreach occurred throughout the development of the EHWMP. Initial consultations took place with elected officials and more than 20 community groups and agencies active in the district. The results of these interviews directly informed the identification of eight (8) critical water resources issues identified for East Honolulu (see Section 2.14 of the EHWMP). These water resource issues, along with water supply and demand scenarios and proposed projects and strategies, were further vetted through numerous Neighborhood Board presentations, four (4) community meetings, and six (6) public hearings through the Commission and City Council. See Exhibit 4 for the stakeholder outreach schedule and list.

The EHWMP draft also underwent several iterations of review and comment by agencies and the public. An Administrative Draft was developed and circulated to relevant County, State, and Federal agencies. Seven (7) agencies submitted comments, which were tabulated and individually addressed. Comments received were focused on ensuring accuracy of data and information presented and clarity of language. The project team integrated all comments that were determined to be accurate and relevant to the EHWMP scope.

Four iterations of the EHWMP were made available for public review and comment: a Public Review Draft, which was released for public review over a two-month period; a Final Draft, which incorporated comments on the Public Review Draft; a revised Final Draft, which was made available for public review through the City Council website and several hearings, and an Amended Council Draft, which was developed by Council based on testimony received and was ultimately adopted as ordinance.

- Outreach began March 19, 2019 after the Commission Scope of Work briefing:
 - Stakeholder meetings with individual agencies and community organizations
 - Presentations to the Kaiwi Maunalua Watershed Hui
 - Community Meetings #1-3
- Engagement for the public review draft began July 2023:
 - Neighborhood Board Announcements/Presentations
 - Posting of draft plan and public comment period on BWS website and social media
 - E-mail blasts to project mailing list
 - Transmittal of plan to County and State agencies
 - Community meeting #4
 - Two-month public comment period
- Public input collected and incorporated for Final Draft began January 2024:
 - See Exhibit 5 for incorporation to Final Draft
 - Endorsement by Hawai'i Kai Neighborhood Board in February 2024
 - Commission's Public Hearing held on September 18, 2024

Comments received on the Public Review Draft and Final Draft included requests to update project descriptions in Chapter 4, many of which are being led by community groups. The project team integrated the requested changes to ensure the accuracy of project descriptions. Requests were also made to update place names and Hawaiian diacriticals for accuracy, to update the ahupua'a boundaries of the district for consistency with the State GIS layer, and acknowledge additional community efforts and initiatives. Wherever the requested updates were found to be accurate and in keeping with the EHWMP scope, they were integrated. Examples of comments that were not incorporated into the document due to being outside the scope of the EHWMP included opposition to the County's proposed Stormwater Utility and fee, opposition to the boundaries of the East Honolulu Planning District, and concerns related to specific BWS facilities. In addition, the incorporation of a Ka Pa'akai Analysis (KPA) was deemed preliminary and may require further study beyond the scope of the EHWMP.

As the great majority of comments had been integrated into the Final Draft submitted to Council, the Plan received overall positive input and supporting testimony from key stakeholders throughout the City Council adoption process and the Commission's public hearing. Two pieces of testimony requesting amendments were provided to City Council, one from the Maunalua Fishpond Heritage Center requesting updates and clarifications to the Project #1 description, and another requesting text edits for consistency with the remainder of the document. All requested amendments were integrated into the Amended Council Draft, which was adopted unanimously by the City Council in October 2024 as Ordinance 24-29. All testimony received during the Council adoption process, as well as the draft bill and adopted ordinance, can be viewed here: <https://hnlldoc.ehawaii.gov/hnlldoc/measure/3012>.

Advanced notice of public meetings was given via press releases, a project e-mail list, regular e-mail list blasts, and posted to the BWS's website. Presentations to the existing 3 neighborhood

boards were done before each community meeting. The BWS’s website was used to disperse information on the EHWMP, including preliminary findings, meeting presentations and minutes, and draft reports.

In addition to the outreach conducted by HBWS and their consultant, the Commission staff held a public hearing on September 18, 2024, on O‘ahu to solicit comments on the plan. Advanced notice of public meeting was given via press release, newspaper (posted in The Honolulu Star-Advertiser) and posted to the BWS’s website. Commission staff received only a handful of oral testimony on the EHWMP. Testimony received was in support of the EHWMP.

ANALYSIS/ISSUES

Consistency with State Water Code Requirements and Recommended Framework Elements:

After reviewing the document submitted to the Commission for adoption, staff concludes that the EHWMP meets all of the statutory requirements set forth in the State Water Code §174C-31, Hawai‘i Administrative Rules §13-170, and addresses the recommended elements in the Framework (2000) pertaining to the update of the County WUDPs.

Requirement/Recommendation	Compliance achieved?
<p><i>Status of county water and related land development including an inventory of existing water uses for domestic, municipal, and industrial users, agriculture, aquaculture, hydropower development, drainage, reuse, reclamation, recharge, and resulting problems and constraints</i></p> <p><i>HAR §13-170-31</i></p>	<p>Section 1.3 provides an overview of the O‘ahu Water Management Plan (OWMP) and includes County wide data on water and related land development, including existing water use.</p> <p>Section 3.2 presents water availability and supply for East Honolulu. District level demand for East Honolulu is included in Section 3.3, and water uses are presented in Section 3.4.</p>
<p><i>Future land uses and related water needs</i></p> <p><i>HAR §13-170-31</i></p>	<p>Section 3.5 discusses future water demand for East Honolulu, referencing the projections for population and land use policies in the East Honolulu Sustainable Communities Plan. Four future water demand scenarios are presented. Sections 3.6 and 3.7 evaluate future water supply against existing demand and discuss implications for water supply planning.</p>
<p><i>Incorporation of current and foreseeable WUD needs of DHHL</i></p>	<p>DHHL landholdings and water use and development needs county wide are discussed in Section 1.3.3. There are no</p>

<p><i>HRS §174C-31</i></p>	<p>DHHL landholdings within the East Honolulu District.</p>
<p><i>Regional plans for water developments including recommended and alternative plans, costs, adequacy of plans, and relationship to the water resource protection plan and water quality plan</i></p> <p><i>HAR §13-170-31</i></p>	<p>The EHWMP is a regional plan for the East Honolulu district under the O‘ahu Water Management Plan (OWMP). The OWMP’s relationship to other plans is discussed in Section 1.2.</p> <p>Recommended projects and strategies for addressing water resource issues in East Honolulu are presented in Section 4.3, with estimated costs provided as available. Chapter 5 discusses implementation and potential funding sources.</p>
<p><i>Each water use and development plan shall be consistent with the water resource protection plan and the water quality plan</i></p> <p><i>HRS §174C-31</i></p>	<p>The consistency of the O‘ahu Water Management Plan (OWMP) and its components (including the EHWMP) with the water resource protection plan and water quality plan is addressed in Section 1.3.</p>
<p><i>Each water use and development plan and the state water projects plan shall be consistent with the respective county land use plans and policies, including general plan and zoning as determined by each respective county</i></p> <p><i>HAR §13-170-32, HRS §174C-31</i></p>	<p>The EHWMP process was coordinated with the update of the East Honolulu Sustainable Communities Plan (EHSCP) and its review and adoption occurred in close coordination with DPP. Land use designations within East Honolulu are discussed in Section 2.11.2, and Appendix A includes a list of relevant policies from City and County Land Use Plans. The EHWMP recommendations are consistent with the EHSCP land use designations.</p>
<p><i>Each water use and development plan shall consider a twenty year projection period for analysis purposes</i></p> <p><i>HAR §13-170-32</i></p>	<p>The EHWMP utilized 20-year projections, in alignment with the OWMP (Section 1.2) and projections used for the EHSCP (Section 2.10).</p>
<p><i>The water use and development plan for each county shall also be consistent with the state land use classification and policies</i></p>	<p>State land use designations are discussed in Section 2.11.2. The EHWMP recommendations are consistent with the existing State land use designations.</p>

<p><i>HAR §13-170-32, HRS §174C-31</i></p>	
<p><i>County-Specific WUDP Project Description approved by CWRM</i></p> <p><i>HRS §174C-31</i></p>	<p>A presentation was given to the Commission on May 21, 2019 to present the project description. It was accompanied by a staff submittal recommending approval of the scope of work. A motion of approval was passed unanimously.</p>
<p><i>Coordination with the Commission</i></p> <p><i>HWP Framework; HRS §174-32</i></p>	<p>Formal presentations to the Commission occurred in May 2019, February 2023, July 2023, and November 2024. A public hearing for the project occurred on September 18, 2024. Coordination with Commission staff occurred regularly throughout the process via e-mail and meetings.</p>
<p><i>Stakeholder and Public Involvement</i></p> <p><i>HWP Framework</i></p>	<p>Stakeholder engagement is described in Section 2.1.2. Consultation occurred with more than 20 different stakeholder entities, some of whom remained involved throughout the process (Neighborhood Boards, Kaiwi Maunaloa Watershed Hui, etc.). Numerous neighborhood board meetings occurred, as well as 4 public meetings, a Commission public hearing, and 5 public hearings at City Council. Four iterations of the Draft Plan were made available for public comment: a Public Review Draft, a Final Draft, a Revised Final Draft that was submitted to City Council, and an Amended Council Draft, which was ultimately adopted as ordinance.</p>
<p><i>Development of Policy Objectives and Evaluation Criteria</i></p> <p><i>HWP Framework</i></p>	<p>Section 4.2 provides the policy framework for the EHWMP, including goals, objectives, and sub-objectives. The objectives and sub-objectives directly informed the selection of projects and strategies and the implementation framework.</p>

<p><i>Description of Water System Profiles</i></p> <p><i>HWP Framework</i></p>	<p>Chapter 2 includes a detailed profile of the East Honolulu District and all of its watersheds.</p>
<p><i>Identification of Resource and Facility Options</i></p> <p><i>HWP Framework</i></p>	<p>Chapter 3 includes a detailed description of water availability and supply systems in East Honolulu. Discussions of future water demand and supply are included in Sections 3.5-3.7. Recommendations for water resources and facilities to address future demand are included in Chapter 4 under Section 4.3.</p>
<p><i>Development and Evaluation of Strategy Options</i></p> <p><i>HWP Framework</i></p>	<p>Projects and strategies recommended to address water resource issues are presented in Chapter 4. They are further analyzed in Chapter 5, which identifies Catalyst Projects that would significantly advance water resource conservation and water quality in the district.</p>
<p><i>Implementation Plan</i></p> <p><i>HWP Framework</i></p>	<p>The implementation plan is included as Chapter 5 of the EHWMP.</p>

Chapter 343 – Environmental Assessment (EA) Compliance:

Chapter 343 is not applicable to the proposed action. HAR §11-200-5(d) provides:

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 water use and development plans are planning studies, which do not involve testing or other actions that will impact the environment. Therefore, HRS Chapter 343 is not applicable to this agency action.

RECOMMENDATION:

Staff recommends that the Commission adopt the East Honolulu Water Management Plan (EHWMP) for incorporation into the Hawai'i Water Plan.

Respectfully submitted,



CIARA W.K. KAHAHANE
Deputy Director

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|-------------|---|---|
| Exhibit(s): | 1 | East Honolulu Watershed Management Plan (EHWMP) Scope of Work |
| | 2 | East Honolulu Watershed Project Area |
| | 3 | Hawai'i Water Plan (HWP) Components |
| | 4 | EHWMP Outreach and Schedule |
| | 5 | EHWMP Final Draft Feedback Incorporation |

APPROVED FOR SUBMITTAL:



Dawn N. S. Chang
Chairperson



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

May 21, 2019
Honolulu, Hawai'i

Approval of the Scope of Work for the East Honolulu Watershed Management Plan to
Update the Water Use and Development Plan for the City and County of Honolulu

SUMMARY OF REQUEST

Staff requests that the Commission approve the scope of work for the East Honolulu Watershed Management Plan, which will update the Water Use and Development Plan for the City and County of Honolulu.

BACKGROUND

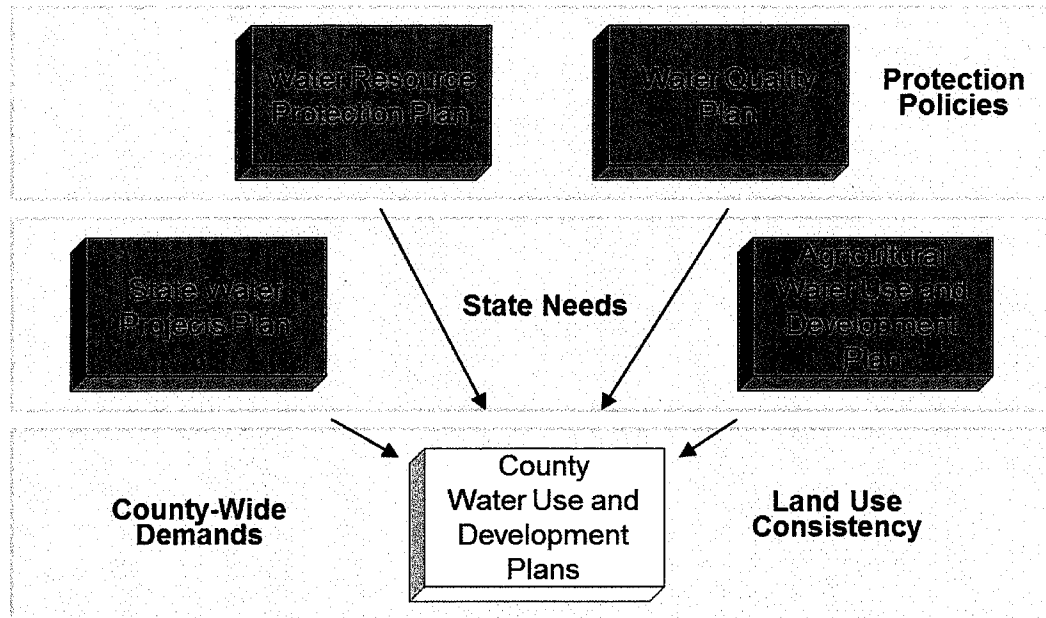
The State Water Code, Chapter 174C, HRS, requires that the Commission on Water Resource Management (Commission) implement and utilize comprehensive water resources planning in its regulation and management of our State's water resources. The Water Code sets forth the requirement for initial development and updating of the Hawai'i 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.

Exhibit 1

Item B-1

Figure 1. Hawai'i Water Plan Components



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 to address many issues including, but not limited to, establishment of ground water hydrologic units, estimates of sustainable ground water yields and surface water flows by island, existing water systems, and 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 and enables the Commission to more effectively implement the statutory objectives of the 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 among State and County agencies that a comprehensive water resource planning process is needed to guide the 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.

STATEWIDE FRAMEWORK

Updating the various components of the HWP should take into consideration current statutory objectives that include, but are not limited to, obtaining maximum reasonable-beneficial uses of water; protection of natural resources; existing water rights (including the Department of Hawaiian Homelands) 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 demand 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 counties.

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

In addition to the statutory requirements set forth in the Water Code, key elements of the Framework pertaining to the update of the County WUDPs include, but are not limited to:

- Submission of a County-Specific WUDP Project Description for review and approval by the Commission. The Project Description should include:
 - Identification of 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;
 - An outline of the County's plan for establishment of planning objectives and evaluation criteria;
 - A description of its public/stakeholder participation and public information program;
 - A description of its plans for identification of: water demand forecasts (and the consideration of future uncertainties) within the hydrologic units and water availability limits established 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;
 - A schedule for the County's updating of the WUDP, which shall:
 - Outline the different stages and activities of the County's planning effort;

- Indicate the approximate times and anticipated duration for public participation activities;
- Indicate the approximate timeframe for County approval of the WUDP and submission of the WUDP to the Commission for adoption;
- A description on 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.
- A facilitated public participation process involving the community, public interest groups, and government agencies involved in the preparation of the County WUDPs.
- Each County shall brief the Commission and its staff regarding any planned updates of the County WUDP; and
- Lastly, periodic milestone briefings to the Commission by the County shall also be required as part of the WUDP updating process.

Key statutory requirements that should be addressed as part of the WUDP update include:

- 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;
- Incorporation of the current and foreseeable development and use needs of the Department of Hawaiian Home Lands (DHHL); and
- Lastly, 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 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 §174C-5, HRS, and the requirements of the HWP described in §174C-31, HRS.

OAHU WATER MANAGEMENT PLAN

In accordance with these established provisions, the City and County of Honolulu proposed an Oahu Water Management Plan (OWMP) framework. 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 districts. These districts are:

Wai‘anae, Ko‘olaupoko, 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 districts. These watershed management plans will be consolidated into an overall WUDP for the City and County of Honolulu (County).

Table 1 summarizes the status of the district watershed management plans.

Table 1. Status of Watershed Management Plans

District	Status
Wai‘anae	WMP Approved March 11, 2011
Ko‘olaupoko	WMP Approved March 11, 2011
North Shore	WMP Approved September 19, 2012
‘Ewa	WMP Approved December 20, 2016
Central Oahu	Scope of Work Approved May 16, 2012
Primary Urban Center	Scope of Work Approved October 16, 2013
East Honolulu	Scope of Work Approved May 16, 2017
	<i>Scope of Work Being Submitted for Approval</i>

East Honolulu Watershed Management Plan Project Description

On March 6, 2019, the County submitted its scope of work (i.e., WUDP “Project Description”; Exhibit 1) for the East Honolulu Watershed Management Plan. The location of the East Honolulu district is shown in Exhibit 2. Staff has evaluated the planning elements described in the scope of work and addendum and has determined that the proposed WUDP updating process for the East Honolulu Watershed Planning Area meets the provisions and guidelines set forth in the State Water Code and the Commission’s Statewide Framework for Updating the Hawaii Water Plan. However, the County should also recognize and address Act 170, Session Laws of Hawai‘i (SLH), 2016, which sets forth as an additional goal of the Hawai‘i Water Plan the utilization of reclaimed water for uses other than drinking and for potable water needs in one hundred percent of state and county facilities by December 31, 2045.

Staff is expectant that the efforts of the County will result in development of a robust evaluation and assessment process, emphasizing the integration of various planning scenarios, and incorporating uncertainties, environmental externalities, and public needs into a strategic decision-making process. We also note and concur with the County’s incorporation of a robust, facilitated public participation/education process involving the community, public interest groups, and government agencies, as described in Exhibit 1.

Staff looks forward to the County’s implementation of a comprehensive planning approach, which facilitates the development and regular updating of a WUDP that conforms to the intentions of the county land use plans. The WUDP should provide guidance for decision-making on water allocation requests, as well as guidance for the formulation of recommended and alternative strategies for resource development to meet future demand scenarios.

In accordance with the Oahu Water Management Plan Framework, each watershed management plan will be submitted as separate documents, closely supporting each respective land use plan (e.g., Development Plan or Sustainable Community Plan), to the County Council for adoption by ordinance. Each regional plan will also be submitted to the Commission for adoption. At the completion of the first iteration of all the watershed management plans, a consolidation/integration process will be used to address inter-regional issues, culminating in an overall island-wide plan and perspective.

RECOMMENDATION

Staff recommends that the Commission approve the City and County of Honolulu's Scope of Work for the East Honolulu Watershed Management Plan.

Ola i ka wai,



M. KALEO MANUEL
Deputy Director

Exhibit 1 East Honolulu WMP Project Description
Exhibit 2 East Honolulu Watershed Planning Area

APPROVED FOR SUBMITTAL:



SUZANNE D. CASE
Chairperson

WORK PLAN



EAST HONOLULU WATERSHED MANAGEMENT PLAN

FINAL, January 2019

SSFM
International

EXHIBIT 1

CONTENTS

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A. Project Purpose, Goals & Tasks

1) Project Purpose & Goals

The goal of the East Honolulu Watershed Management Plan (EHWMP) is to develop a community-based, environmentally-holistic, economically viable, action-oriented plan for the watersheds of the East Honolulu District. The EHWMP will be in alignment with the O'ahu Water Management Plan & Regional Watershed Management Plans (Water Management-Chapter 30 ROH), BWS Water Master Plan, State of Hawai'i Water Code, Act 152 SLH 2000 Relating to Watershed Protection, the Hawai'i Water Plan components, and the Statewide Framework for Updating the Hawai'i Water Plan. The EHWMP will comply with the Hawai'i Supreme Court Decision on the Waiāhole Ditch Contested Case (applying the Public Trust Doctrine and the Precautionary Principle to water resource management), the East Honolulu Sustainable Communities Plan, the Department of Hawaiian Home Lands' needs, and other relevant Plans and Principles. The EHWMP will reflect the Hawaiian ahupua'a concept of management values and principles of the people of the East Honolulu land use district.

The Plan is meant to be **community-based**. This will be accomplished through discussions and consultation with community leaders, neighborhood boards, community organizations, landowners, developers, public agencies and officials, and other stakeholders. Wherever possible, the plan will seek to identify and support community-based partnerships that further the objectives of the EHWMP.

The Plan will be **environmentally holistic** (an approach that considers the environment's interconnected systems) through an inventory and analysis of data on the many natural processes and resources that interact within the East Honolulu District. Examples are climate, geology, topography, soils, surface water, ground water, nearshore ocean waters, plants, animals, and ecological communities, as well as human uses and impacts.

The Plan will be **economically viable**. This will be accomplished through the evaluation of water supply options which are cost effective, optimized, and which leverage new technologies, efficiencies and renewable water and energy resources that meet demands within reasonable costs.

The Plan will be **action oriented** by defining and describing projects and programs that can be implemented by the BWS and by other federal, state, and city agencies, as well as by community groups and organizations.

The Plan will be in **alignment with State and County water and land use policies**. This will be accomplished through review of relevant plans for the East Honolulu District.

2) Project Tasks

The scope of work for the project is appended at the end of this document in Section F. Its central component is the EHWMP. The EHWMP will be based on technical analysis and stakeholder input conducted by the project team, and will be developed through a series of four working papers during the first four phases of the projects. These working papers will address the following: watershed profile and critical watershed issues; alternative East Honolulu growth scenarios and related water demand projections; EHWMP issues, objectives, policies/sub-objectives, projects, programs, and strategies, and; implementation. During Phase 5, the working papers will be compiled to form Chapters 1-5 of the EHWMP. The project team will guide the plan approval process, integrating comments from relevant agencies, Neighborhood Board (NHB) members, elected officials, community organizations, and other relevant stakeholders, into the Final EHWMP.

Based on the project Scope of Work, SSFM identified six Phases, with associated tasks to indicate the approach to the Project. The six phases are as follows:

Phase 1: Plan Overview, Watershed Profile & Stakeholder Consultations

Phase 2: Water Demand Analysis

Phase 3: Policies, Projects & Strategies

Phase 4: Implementation Plan

Phase 5: Agency Review Draft & Public Review Drafts

Phase 6: Prefinal Plan, Plan Approval & Final Plan

Each phase and its respective tasks are summarized below, along with associated staff leads from SSFM.

PHASE 1: PLAN OVERVIEW, WATERSHED PROFILE, AND STAKEHOLDER CONSULTATIONS

Lead: Melissa White and Abbey Seitz, SSFM

- **Task 1.1** – Prepare Work Plan and Project Schedule. Acquire approval from CWRM for the EHWMP project description.
- **Task 1.2** – Gather, analyze, and summarize relevant data.
- **Task 1.3** – Gather, review, and summarize relevant plans.
- **Task 1.4** – Analyze special areas of concern.
- **Task 1.5** – Conduct initial stakeholder consultations. This process will inform key stakeholders of the goals, objectives, process and general timeline for the EH WMP. This initial process will include up to twenty-three (23) meetings.
- **Task 1.6** – Develop a preliminary list of critical water resources issues for East Honolulu from initial public outreach, with a focus on issues relating to water sources, water supply systems, Hawai'i Kai WWTP recycled water for Hawai'i Kai golf course, and future water demands.
- **Task 1.7** – Develop Working Paper No. 1: EH Profile, Critical Resources Issues, and the updated O'ahu Water Management Plan Overview. Submit Draft Working Paper No. 1 to BWS for review and comment.
- **Task 1.8** – Revise Working Paper No.1 and submit Final Working Paper No. 1 to BWS.
- **Task 1.9** – Schedule, prepare for, facilitate, and document Community Meeting No. 1.

PHASE 2: WATER DEMAND ANALYSIS

Lead: Melissa White and Rethwik Gona, SSFM

- **Task 2.1** – Develop four alternative “future growth scenarios” for East Honolulu: “High Growth,” “Moderate Growth,” “Low Growth”, and “Ultimate Growth” for the forecast year 2040.
- **Task 2.2** – Develop a draft Water Demand Model and preliminary forecast numbers for Water Demand, including both potable and non-potable uses, for the four future growth scenarios for East Honolulu.
- **Task 2.3** – Document the four alternative future growth scenarios and the draft water demand projections in the Draft Working Paper No. 2. Submit the working paper to BWS for review and comment.
- **Task 2.4** – Revise Working Paper No. 2 and submit Working Paper No. 2 to BWS.
- **Task 2.5** - Schedule, prepare for, facilitate, and document Community Meeting No. 2.

PHASE 3: POLICIES, PROJECTS & STRATEGIES

Lead: Melissa White and Abbey Seitz, SSFM.

- **Task 3.1** – Develop a set of East Honolulu-specific policies/sub-objectives that respond to the critical water resources issues and concerns obtained through research and public outreach.
- **Task 3.2** – Document approximately 15-20 water supply, watershed management, cultural restoration and coastal/ocean resource management/preservation/recreational projects that address identified critical water-related issues.
- **Task 3.3** – Identify and document up to twenty (20) important water supply and watershed management strategies for East Honolulu.
- **Task 3.4** – Document the key issues, objectives, sub-objectives, projects, programs, and strategies in the Draft Working Paper No. 3 and submit the Working Paper to BWS and DPP for review and comment.
- **Task 3.5** – Revise Working Paper No. 3 and submit the Final Working Paper No. 3 to BWS. Coordinate an interim project briefing to CWRM.
- **Task 3.6** – Schedule, prepare for, facilitate, and document Community Meeting No. 3.

PHASE 4: IMPLEMENTATION PLAN

Lead: Melissa White and Abbey Seitz, SSFM with contributions from Jared Chang and Carlos Kelton.

- **Task 4.1** –Develop a draft plan and strategy for providing for East Honolulu potable and non-potable water needs for the 4 alternative growth scenarios by the Year 2040.
- **Task 4.2** – Develop the Draft Working Paper No. 4, which will document the draft Implementation Plan for the EHWMP. Submit the Working Paper to BWS for review and comment.
- **Task 4.3** – Meet with BWS, DPP, and CWRM to discuss comments on the implementation Plan for the EHWMP.
- **Task 4.4** – Revise Working Paper No. 4 and submit Final Working Paper No.4 to BWS.

PHASE 5: AGENCY REVIEW DRAFT AND PUBLIC REVIEW DRAFT

Lead: Melissa White and Abbey Seitz, SSFM.

- **Task 5.1** – Compile all of the Working Papers, edit as needed, and submit as the “INTERNAL DRAFT EHWMP” (Chapters 1-5) to BWS for review and comment.
- **Task 5.2** – Incorporate BWS comments and prepare and submit the EHWMP AGENCY REVIEW DRAFT to BWS, DPP, DFM, ENV and CWRM for review and comment.
- **Task 5.3** – Receive comments on the AGENCY REVIEW DRAFT through memos, emails and review meetings and revise the EHWMP AGENCY REVIEW DRAFT as needed.
- **Task 5.4** – Prepare and submit the EHWMP PUBLIC REVIEW DRAFT to BWS. Coordinate with BWS for posting of the EHWMP PUBLIC REVIEW DRAFT on the BWS web site. Schedule presentations of the EHWMP PUBLIC REVIEW DRAFT with each of the 3 NHB’s in the EH district.
- **Task 5.5** – Brief each of the NHB’s on the EHWMP and seek their endorsement of the Plan at these meetings or at a subsequent meeting if a NHB requires more time to review the Plan (See Task 6.1 below). Also brief East Honolulu State Senators, State Representatives, and City Council members.
- **Task 5.6** – Plan, schedule, prepare for, publicize, facilitate, and document EHWMP Community Meeting No. 4 to present the EHWMP PUBLIC REVIEW DRAFT to public agencies, private organizations, and the interested community members.

PHASE 6: PREFINAL DRAFT, PLAN ADOPTION AND FINAL EHWMP

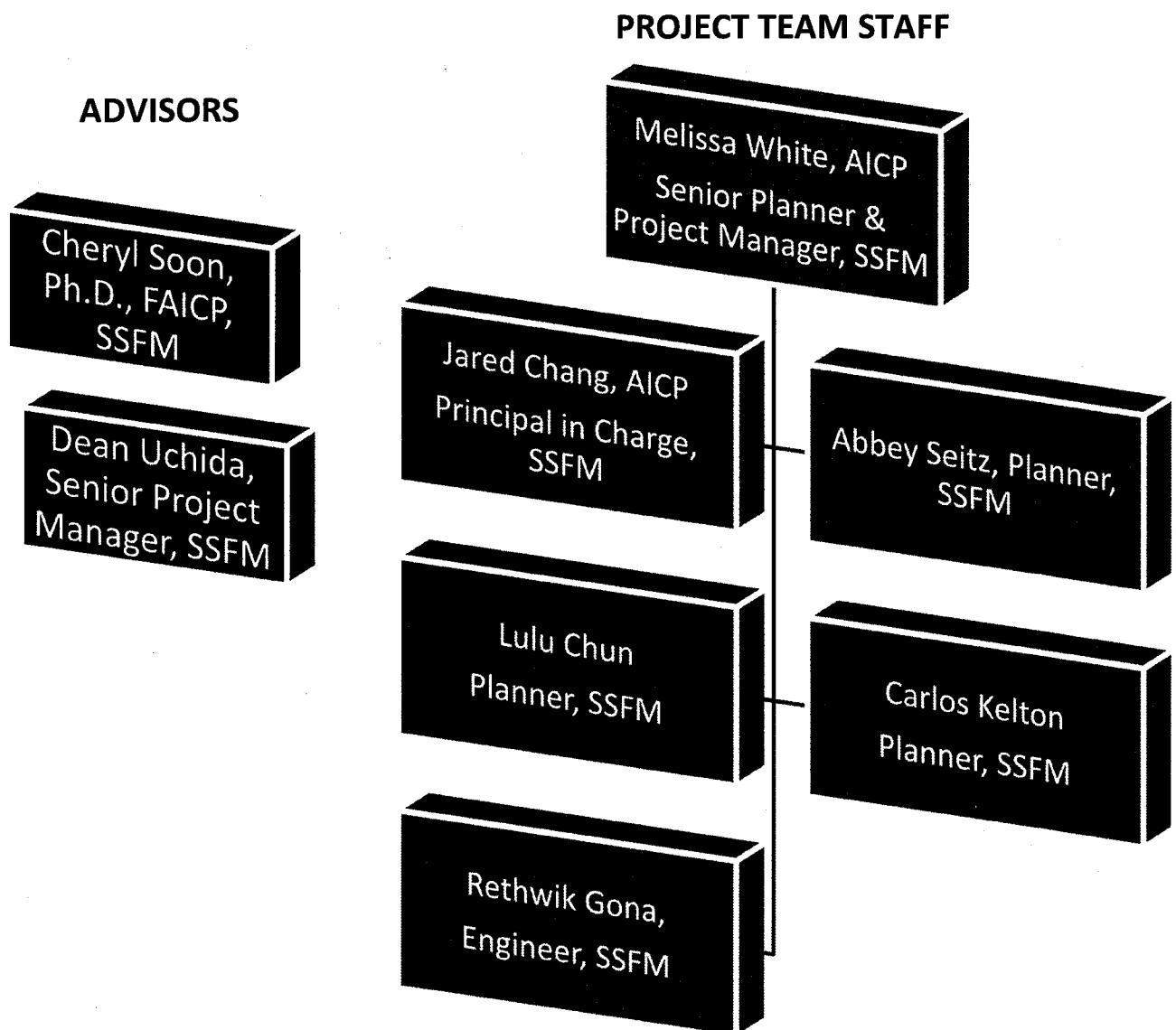
Lead: Melissa White, Abbey Seitz, and Administrative Staff, SSFM

- **Task 6.1** – Meet with East Honolulu NHB’s that did not endorse the EHWMP in Task 5.5 above to receive their endorsement of the Plan or document the discussion in the event a NHB does not elect to endorse the Plan. Document any substantive comments that the 3 NHB’s may have on the PUBLIC REVIEW DRAFT.
- **Task 6.2** – Review and compile any and all comments received on the EHWMP PUBLIC REVIEW DRAFT, and note responses to these comments and how the comments are to be addressed in the PREFINAL document. Revise the PUBLIC REVIEW DRAFT as needed. Compile and submit the PREFINAL EHWMP to BWS for their final review and comment.
- **Task 6.3** – Schedule and conduct a presentation of the PREFINAL EHWMP to the BWS Chief Engineer, the BWS Board, DPP Director, and CWRM.
- **Task 6.4** – Prepare for, participate in, and complete the City Council approval process for the EHWMP, including a presentation to the Honolulu City Council and attendance at the required City Council Hearings and Committee Meetings. The Plan adoption will be an amendment to Chapter 30 ROH.
- **Task 6.5** – Coordinate with CWRM staff to draft and post a PUBLIC HEARING NOTICE for the EHWMP before the City Council’s 2nd Committee Meeting. Coordinate with CWRM staff to prepare for, conduct and document the Public Hearing. Assist the CWRM staff to obtain CWRM adoption of the EHWMP.
- **Task 6.6** – Complete any final detailed edits of the EHWMP and submit electronic file copies of the FINAL EHWMP to BWS, DPP, and CWRM. Also print not more than twenty (20) copies of the FINAL EHWMP and submit these hard copies to individuals and entities as directed by BWS.

B. Team Composition

1) Organization Chart

The Project Team is composed of experienced members from the SSFM Strategic Services Group, led by Project Manager Melissa White, AICP with oversight by Principal-in-Charge Jared Chang. Project advisors will include Cheryl Soon, FAICP, and Senior Project Manager Dean Uchida.



2) Personnel Assignments

The table below shows staff and roles that will be assigned to the project.

Team Member	Assignments
SSFm Staff	
Melissa White, AICP	Project Manager, Senior Planner
Jared Chang, AICP	Principal-in-Charge
Cheryl Soon, Ph.D., FAICP	Advisor
Dean Uchida	Advisor
Abbey Seitz	Research, writing, stakeholder consultation
Carlos Kelton	Research, mapping, stakeholder consultation
Lulu Chun	Graphic design, mapping, community meeting support
Rethwik Gona	Phase 2 data analysis
SSFm Administrative Staff and Interns	Community meetings' logistics and manpower

C. Approach to Completing Project Tasks & Deliverables

1) Approach to Completing Tasks & Deliverables

The approach and deliverables for each of the six phases of the project are described below. This portion of the Work Plan is intended as a “living document” and any changes to it will be documented as agreed by SSFM and the client. SSFM will provide drafts of all meeting materials, outreach materials, and deliverables for client approval prior to finalization. We will produce professionally designed documents, collateral, presentations, and other visuals that clearly communicate the project’s goals. We will implement thorough Quality Assurance/Quality Control (QA/QC) of deliverables with oversight from Principal in Charge Jared Chang. SSFM will also utilize our network and contacts in the community to gather input from key stakeholders and incorporate their expertise into deliverables.

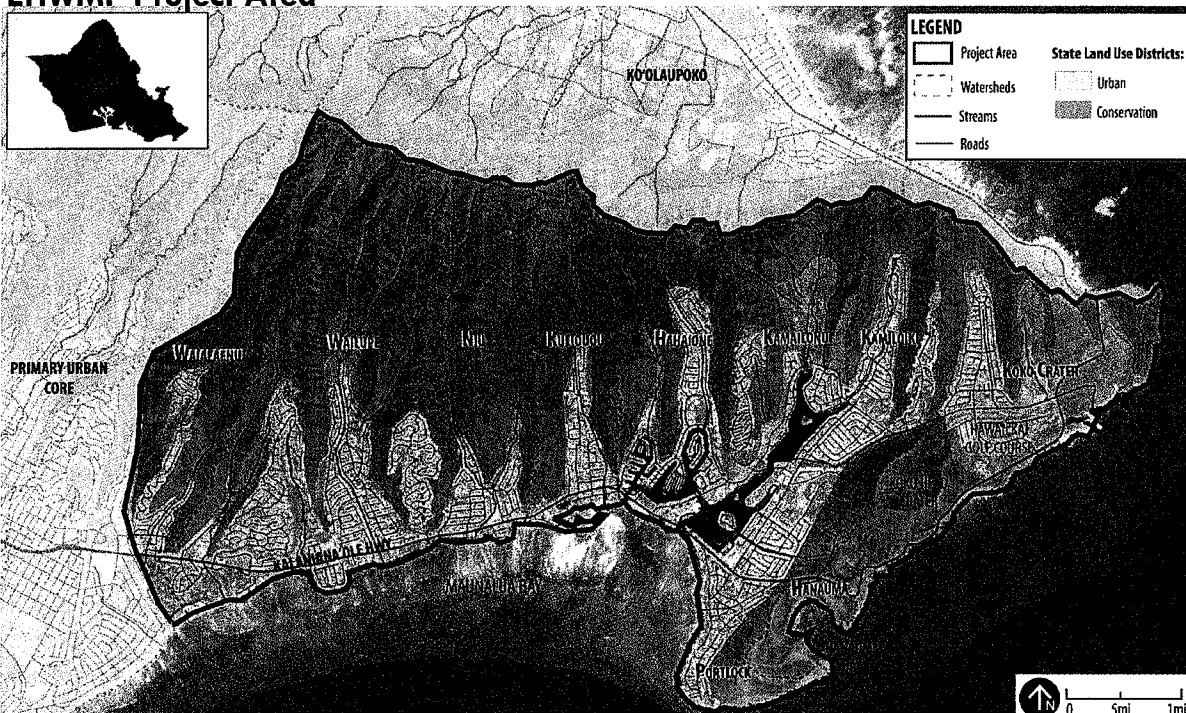
PHASE 1: PLAN OVERVIEW, PRELIMINARY WATERSHED PROFILE & INITIAL STAKEHOLDER CONSULTATIONS

Timeline: September 2019 – April 2019

This phase establishes the overall approach to the project, documents existing available information about the East Honolulu area, and engages stakeholders in identifying key issues related to water resources in East Honolulu.

The area covered by the EHWMP extends from Kāhala to Makapu‘u, corresponding with the planning area for the *East Honolulu Sustainable Communities Plan* (see figure below). The EHWMP encompasses the entirety of the Hawai‘i Kai (#1) and Kuli‘ou‘ou-Kalani Iki (#2) Neighborhood Board (NB) districts, as well as portions of the Wai‘alae-Kāhala NB district. The EHWMP project area also encompasses ten distinct watersheds.

EHWMP Project Area



The nine tasks in Phase 1 are described further below.

Task 1.1: Work Plan and Schedule

This Work Plan and Schedule has been finalized through consultation with BWS, DPP, and CWRM. It can be modified as needed and mutually agreed by SSFM and the client. The Work Plan includes the following components:

- Project purpose, goals, objectives, and tasks;
- Team composition;
- Approach to completing project tasks;
- Schedule;
- Budget breakdown; and,
- Contract scope of work.

SSFM will also work with BWS to acquire approval from CWRM for the EHWMP project description.

Task 1.2: Gather and Analyze Existing Relevant Data

SSFM will gather and analyze existing relevant data, including but not limited to: pre-contact land use/customs/wahi pana/ahupua'a, contemporary land and water resources, water uses and users, water demand trends, potable water infrastructure, quality of ground water and surface water, flooding and drainage, land ownership, land use, land development trends, urban infrastructure, demographics, and population trends and projections. SSFM will submit a list of proposed data sources to BWS for input and will incorporate any additional sources per the client's input. BWS will assist with procuring and providing SSFM with relevant data. The findings from this task will be incorporated into Working Paper No.1.

Task 1.3: Review Relevant Plans

The project team will review existing and ongoing plans, policies, programs, and studies relevant to the East Honolulu District. The purpose of this review will be to align the EHWMP with policies, plans, and projects identified in prior planning efforts. Those that are most relevant to East Honolulu will be incorporated into policies, strategies, and projects for the EHWMP. These plans include but are not limited to: the *O'ahu Water Management Plan*, *Regional Watershed Management Plans*, *City and County of Honolulu's East Honolulu Sustainable Communities Plan*, *State Water Resource Protection Plan*, *State Agricultural Water Use and Development Plan*, *Freshwater Blueprint*, *State Water Projects Plan*, *State Water Quality Plan*, *State and City land use plans*, *area water master plans*, *environmental reports for major proposed new projects*, the *State Ocean Resources Management Plan*, and the *Hawai'i Sea Level Rise Vulnerability and Adaptation Report*. SSFM will submit a reference list to BWS for input and will incorporate any additional references requested by the client. The findings from this task will be incorporated into Working Paper No.1.

Task 1.4: Analyze Special Areas of Concern

The project team will gather, analyze, and summarize information on special areas of concern including the potential effects of climate change on the water resources and water infrastructure and new water conservation, water recycling and storm water capture technologies that may be relevant to urban environments in EH. The findings from this review will be further refined during stakeholder outreach and will inform the identification of critical water resource issues in Task 1.6. The findings will eventually be incorporated into Working Paper No.1.

Task 1.5: Conduct Initial Stakeholder Outreach

The project team will conduct stakeholder outreach in order to identify important watershed issues and potential projects in the East Honolulu area. A stakeholder database will be compiled to identify key stakeholders with an interest in the East Honolulu area, including members of the Hawai'i Kai, Kuliouou-Kalani Iki, and Waiialae-Kahala NHBs, elected officials, major land owners, public agencies, community leaders and organizations, respected kupuna, schools, ahupua'a councils, and business owners involved with land and water resource planning and management. A draft of the stakeholder database will be submitted for BWS review and approval. The database will be added to throughout the project.

At the commencement of this task, BWS staff will conduct presentations to each of the three NHBs in the project area to announce the project and address any questions. SSFM staff will attend the presentations and take note of questions and issues raised by NHB members. BWS will also initiate contact with area elected officials to notify them that the project is being initiated and seek their input on area issues and stakeholders. Elected officials for East Honolulu are listed in the Table below.

East Honolulu Elected Officials

Official	District
City Council	
Tommy Waters	Council District #4
State Senate	
Stanley Chang	Hawai'i 9th Senate District
State House of Representatives	
Gene Ward	Hawai'i 17th Rep. District
Mark J Hashem	Hawai'i 18th Rep. District
U.S. Senate	
Brian Schatz	-
Mazie Hirono	-
U.S. Congress	
Ed Case	1 st Congressional District

SSFM will initiate outreach by conducting consultation meetings with a handful of key stakeholders that are “connectors” in the community and that own critical lands or facilities. A series of questions will be developed by SSFM in collaboration with BWS to guide these meetings and gather needed input on: 1) Critical issues related to water resources in East Honolulu; 2) Key stakeholders to consult with during the process; 3) Current projects and initiatives that may qualify as “projects” or “strategies” for the EHWMP; and 4) Future priorities, goals, and plans that may offer opportunities for partnership or support.

The initial round of outreach is proposed to include representatives of the following agencies and organizations:

- Malama Maunalua Bay
- Livable Hawai'i Kai Hui (Elizabeth Reilly)
- Hui O Ko'olaupoko
- Ka Iwi Coalition
- Trust for Public Land
- American Water

- UH Sea Grant (Center for Coastal and Climate Science Resilience; Center for Water Resource Sustainability)
- City and County of Honolulu Department of Facility Maintenance (DFM)
- City and County of Honolulu Department of Planning and Permitting (DPP)
- State Commission on Water Resources Management (CWRM)

Following this initial round of consultation SSFM will update the stakeholder database and conduct additional meetings with stakeholders approved by BWS. In total, this task may include up to twenty-three (23) individual meetings with stakeholders. As part of this task, SSFM will look for opportunities to engage schools and community-based organizations as partners in developing educational material, articulating community needs and issues, and identifying projects and strategies for the EHWMP.

SSFM will be responsible for coordinating, attending, and documenting all stakeholder consultation meetings. BWS will inform SSFM of any consultation meetings they wish to participate in. Stakeholder input collected during this task will inform the list of critical water resource issues to be developed in Task 1.6, and will ultimately be incorporated into Working Paper No.1.

Task 1.6: Develop List of Critical Water Resources Issues

The project team will develop a list of critical water resources issues for East Honolulu. This list will be informed by the initial public outreach effort in Task 1.5. It will identify issues relating to water sources, water supply systems, the use of Hawai'i Kai WWTP recycled water for Hawai'i Kai golf course, future water demands, and others identified by stakeholders. The discussion of issues will also incorporate analysis of climate change impacts on both water demand and supply using existing UH rainfall forecasts (statistical & dynamical model results) and sea level rise impacts to coastal properties using UH Sea Grant's sea level rise and coastal erosion models. Findings from Task 1.6 will be incorporated into Working Paper No.1.

Task 1.7: Draft Working Paper No.1

The project team will synthesize the findings of research (from Tasks 1.2-1.4, and 1.6) and stakeholder outreach (Task 1.5) to develop Working Paper No. 1, which will include an East Honolulu Watershed Profile, Critical Resources Issues, and the updated O'ahu Water Management Plan Overview. The Draft Working Paper No. 1 will be submitted to BWS for review and comment.

Task 1.8: Final Working Paper No.1

BWS will provide comments on Draft Working Paper No. 1, and the project team will revise as needed and submit as the Final Working Paper No.1. This Working Paper will constitute the bulk of Chapters 1 & 2 of the Draft EHWMP (Phase 5 of this project).

Task 1.9: Community Meeting No.1

SSFM will take the lead to schedule, prepare for, and facilitate Community Meeting No. 1. This will be an informational meeting about the EHWMP approach. SSFM staff will prepare and deliver a presentation on important EH facts, trends, and water resources issues. BWS staff will attend the meeting and participate in Q&A and input-gathering activities. This community meeting may be held in collaboration with DPP to present the East Honolulu Sustainable Communities Plan Public Review Draft.

The community meeting will include a variety of ways to gather input on issues and concerns relating to water resources in East Honolulu. These will include a Q&A following the presentation, interactive displays, and comment sheets.

SSFM will submit drafts of meeting plans, agendas, presentations, and other materials for BWS review in advance of the meeting, and will revise according to client comments. Input from Community Meeting No.1 will be documented in a meeting summary and submitted to BWS. Input from Community Meeting No.1 will also be incorporated into the Final Working Paper No.1.

Deliverables

- Work Plan and Schedule;
- Lists of data sources and relevant plans;
- Analysis of special areas of concern;
- Stakeholder database;
- Agenda and questions for stakeholder consultation meetings;
- Notes from stakeholder consultation meetings;
- List of critical water resources issues for East Honolulu;
- Draft & Final Working Paper No. 1 on EH Profile and Critical Water Resources Issues and the updated O'ahu Water Management Plan Overview;
- Agenda, Materials, Presentations, and Summary of Community Meeting No. 1.

PHASE 2: WATER DEMAND ANALYSIS

Timeline: April – August 2019

This task explores future scenarios of water use and demand in the East Honolulu planning district, relying on currently available data, trends, and projections from BWS and DPP. Scenarios of future population growth and per capita demand will assist BWS in determining the adequacy of available water sources and supply systems to serve East Honolulu to 2040, and to identify needed solutions including conservation and demand management. The five tasks in this phase are described below.

Task 2.1: Develop Four Alternative Future Growth Scenarios

In consultation with BWS and DPP, SSFM will develop four alternative “future growth scenarios” for East Honolulu: “High Growth,” “Moderate Growth,” “Low Growth,” and “Ultimate Growth” for the forecast year 2040. Variables that will be considered in developing these alternative growth scenarios and narratives will apply current DPP policy population projections while varying the BWS per capita demand for existing and new populations. Scenarios will also factor in the potential impacts of climate change and coastal retreat, as identified in Task 1. Results from this analysis will be incorporated into Working Paper No.2.

Task 2.2: Develop Water Demand Model

The project team will develop a preliminary water demand model and preliminary forecast numbers for water demand – including both potable and non-potable – for the four future growth scenarios for East Honolulu. Factors in the water demand model include: Base Year 2015 actual water use in the East Honolulu, per capita water demand trends in East Honolulu, ongoing and new water conservation programs, the impacts of climate change on water use and coastal erosion of urban lands, and the potential benefits of water recycling and storm water capture technologies on water demand. The analysis will utilize applicable CWRM categories in demand projections, including domestic (residential and non-residential),

industrial, agricultural, and commercial uses. Projections will be provided in units of gallons per capita per day. Results from this analysis will be incorporated into Working Paper No.2.

Task 2.3: Draft Working Paper No.2

The project team will develop Draft Working Paper No. 2, which will document the four alternative future growth scenarios and the draft water demand projections from Tasks 2.1 and 2.2. Draft Working Paper No. 2 will be submitted to BWS for review and comment.

Task 2.4: Final Working Paper No. 2

The project team will meet with BWS, DPP, and CWRM to discuss water demand projections in detail. Based on the input received from BWS, DPP, and CWRM, the project team will revise as needed and submit as the Final Working Paper No. 2. This Working Paper will constitute the bulk of Chapter 3 of the EHWMP.

Task 2.5: Community Meeting No.2

The project team will schedule, prepare for, and facilitate Community Meeting No. 2. This will be an informational meeting that will present the draft findings, forecasts, and alternative growth scenarios on water use and development for the East Honolulu District. A variety of ways of presenting information and gathering input will be utilized. BWS representatives will announce the date and place for the community meeting at regular meetings of each of the 3 NHBs. Input from Community Meeting No. 2 will be documented and submitted to BWS.

Deliverables

- Four alternative future growth scenarios.
- Draft water demand model.
- Draft & Final Working Paper No. 2: Four alternative growth scenarios and related demand projections for East Honolulu;
- Agenda, Materials, Presentations, and Summary of Community Meeting No. 2.

PHASE 3: WATERSHED MANAGEMENT POLICIES, PROJECTS AND STRATEGIES

Timeline: September – December 2019

The intent of this Phase is to develop a framework of policies, objectives, projects, and strategies that guide implementation of the EHWMP in a manner that sustainably meets East Honolulu’s water resources needs through 2040. Policies and objectives will be grounded in the objectives of the O’ahu Watershed Management Plan to ensure that the EHWMP promotes sustainability, enhances water quality and quantity, protects native Hawaiian rights and access, is inclusive and participatory, and meets future water demands. In addition, policies and objectives will incorporate principles identified during the planning process and in prior WMP’s prepared for O’ahu. This includes ensuring that the plan balances environmental, economic, and social benefits and concerns (the “three legged stool” of sustainability).

During this phase, overarching themes and educational messaging for the plan will be developed based around the understanding of community issues, priorities, and current and future needs. The “identity” of the plan and how it is articulated and engaged with by stakeholders will begin to take shape. SSFM will continue to engage interested schools and community organizations as partners and “champions” to help develop messaging and disseminate educational materials.

Champions and partners will be instrumental generating ideas and momentum for projects and strategies to include in the plan. In addition to incorporating known projects and initiatives from previous planning efforts and partner agencies, SSFM will actively seek out community organizations that are action-driven and have a track record of implementation as potential partners and projects to highlight in the plan. Selected projects will be documented and described in sufficient detail to provide a basis for future grants and other forms of support. Strategies will be earmarked as potential future projects or initiatives that can be implemented by BWS and public or private entities. Need, objectives, and implementing entities will be identified in order to support future requests for funding or partnership.

Collectively, the policies, objectives, projects, and strategies will comprise Draft Working Paper No. 3, which will eventually make up the bulk of Chapter 4 of the EHWMP.

Task 3.1: EHWMP Policies & Objectives

In consultation with BWS and DPP, SSFM will develop a set of East Honolulu-specific policies and objectives that respond to the critical water resources issues and concerns obtained through research and public outreach. The policies and objectives drafted for the EHWMP will conform with the O'ahu Watershed Management Plan, which includes the following objectives:

- Promote Sustainable Watersheds;
- Protect and enhance water quality and quantity;
- Protect native Hawaiian rights and traditional and customary practices;
- Facilitate public participation and education, and project implementation; and,
- Meet future water demands at reasonable costs.

The policies and objectives drafted in Task 3.1 will be further refined by input received during Community Meeting No.3, and will be incorporated into Working Paper No.3.

Task 3.2: EHWMP Projects

Through research and public outreach, the project team will source and document approximately 15-20 water supply, watershed management, cultural restoration and coastal, ocean resource management, preservation, and recreational projects that address identified critical water-related issues in East Honolulu. To maintain an action-oriented focus, projects must have a "champion" that is actively planning or working to implement the project in the East Honolulu area. Implementing entities may include BWS or other public or private entities. The project team will also identify catalyst projects that could drive the implementation of other related projects and strategies. The projects drafted in Task 3.2 will be refined by input received during Community Meeting No.3, and will be incorporated into Working Paper No.3.

Task 3.3: EHWMP Strategies

The project team will identify and document up to twenty (20) water supply and watershed management strategies for East Honolulu. Strategies are defined as watershed projects or programs that should be organized and implemented for East Honolulu, but which do not yet have a "champion" that will organize and implement the project or program. The strategies drafted in Task 3.3 will be further refined by input received during Community Meeting No.3, and will eventually be incorporated into Working Paper No.3.

Task 3.4: Draft Working Paper No.3

The project team will develop the Draft Working Paper No.3, which will document the key issues, objectives, sub-objectives, projects, programs and strategies for the East Honolulu Watershed. Draft Working Paper No. 3 will be submitted to BWS and DPP for review and comment.

Task 3.5: Final Working Paper No.3

The project team will meet with BWS, DPP and CWRM to receive comments on the Draft Working Paper No. 3. The project team will revise the Working Paper as needed to respond to comments, and will submit the Final Working Paper No. 3 to BWS. This Working Paper will comprise the bulk of Chapter 4 of the EHWMP to be developed in Phase 5 of this project. SSFM will also provide an interim project briefing to CWRM.

Task 3.6: Community Meeting No.3

The project team will schedule, prepare for, and facilitate Community Meeting No. 3. This will be an informational meeting that will present the district specific sub-objectives, water supply and watershed management projects and strategies that address the issues and concerns obtained from the stakeholder outreach process for the East Honolulu District. The meeting will include a variety of ways of presenting information and gathering input from participants. Projects and strategies may be showcased in partnership with community organizations or implementing agencies. BWS NHB representatives will announce the date and place for the community meeting at regular meetings of each of the 3 NHBs. Input from Community Meeting No.3 will be documented and submitted to BWS. Input from Community Meeting No.3 will be incorporated into the Final Working Paper No.3.

Deliverables

- Draft & Final Working Paper No. 3: EHWMP issues, objectives, polices/sub-objectives, projects, programs and strategies; and,
- Agenda, Materials, Presentations, and Summary of Community Meeting No. 3.

PHASE 4: IMPLEMENTATION PLAN

Timeline: January – April 2020

This phase of the project is where the “rubber meets the road.” It synthesizes the analysis and findings from previous tasks to lay out a strategy for meeting East Honolulu’s potable and non-potable water needs through the year 2040. An implementation approach will be presented for each of the four Alternative Growth Scenarios that identifies sources, supply allocations, and target usage in gallons per capita per day. The implementation plan for each scenario will identify a mix of projects and strategies as well as recommended phasing. The plan will constitute Working Paper No. 4, and will eventually comprise the bulk of Chapter 5 of the EHWMP.

Task 4.1: Draft Implementation Plan

The project team will analyze and integrate all of the EHWMP material developed in previous tasks, and use this material to develop a draft plan and strategy for providing for East Honolulu potable and non-potable water needs identified for the 4 alternative growth scenarios by the Year 2040. This draft Implementation Plan will relate and analyze water supply projections to future water demands, trends, and implications, and will account for the impacts of future development within East Honolulu. The analysis will

factor in the impacts of climate change, sea level rise, coastal erosion and retreat, and the potential benefits and impacts of water conservation programs, water recycling, storm water capture, and recharge technologies. Elements common to all scenarios will be highlighted, as well as those that are specific to particular futures. The implementation strategy will identify recommended phasing for EHWMP projects, as well as catalytic projects that will help to further the overall goal of the EHWMP. It will include a section on funding sources and on potential barriers to implementation. This draft Implementation Plan will be incorporated into Working Paper No.4.

Task 4.2: Draft Working Paper No.4

The project team will develop the draft Implementation Plan into Draft Working Paper No. 4. Working Paper No. 4 will be submitted to BWS for review and comment.

Task 4.3: Receive Comments on the Implementation Plan

The project team will meet with BWS, DPP, and CWRM to discuss comments on the draft Implementation Plan.

Task 4.4: Final Working Paper No.4

The project team will organize the review comments from BWS, DPP, and CWRM on the draft Implementation Plan. The Working Paper will be revised as needed based on this input, and will be submitted as the Final Working Paper No. 4 to BWS. This Working Paper will comprise “Chapter 5” of the EHWMP to be developed during Phase 5 of this project.

Deliverables

- Draft & Final Working Paper No. 4: Implementation Plan.

PHASE 5: AGENCY REVIEW DRAFT AND PUBLIC REVIEW DRAFT

Timeline: May – December 2020

Phase 5 assembles the findings of all the previous tasks and working papers into a master EHWMP document. A phased review process will provide BWS, partner agencies, and the public opportunities to provide input into the content and recommendations of the plan. Through a fourth community meeting and consultations with Neighborhood Boards and Elected Officials, the project team will seek to gather input and garner support from key community stakeholders in preparation for the City Council review process.

Task 5.1: EHWMP INTERNAL DRAFT

The project team will compile all of the Working Papers developed in Phases 1-4 and edit as needed. The compiled Working Papers will then be submitted as the “EHWMP INTERNAL DRAFT” to BWS for review and comment.

Task 5.2: EHWMP AGENCY DRAFT

The project team will incorporate BWS comments and revise the EHWMP as needed. The revised plan will be submitted as the “EHWMP AGENCY REVIEW DRAFT” to BWS, DPP, DFM, ENV and CWRM for review and comment.

Task 5.3: Receive Comments on the EHWMP AGENCY DRAFT

The project team will receive and organize comments from BWS, DPP, DFM, ENV, and CWRM on the AGENCY REVIEW DRAFT through memos, emails, and review meetings. The project team will revise the EHWMP AGENCY REVIEW DRAFT as needed.

Task 5.4: EHWMP PUBLIC REVIEW DRAFT

The project team will prepare and submit the revised plan as the “EHWMP PUBLIC REVIEW DRAFT” to BWS. The project team will also coordinate with BWS for posting of the EHWMP PUBLIC REVIEW DRAFT on the BWS web site and schedule presentations of the EHWMP PUBLIC REVIEW DRAFT with each of the 3 NHB’s in the East Honolulu district. During this time, the project team will collect and organize public comments on the EHWMP PUBLIC REVIEW DRAFT via emails.

Task 5.5: NHB and Elected Officials Briefings

The project team and BWS will brief each of the NHB’s on the EHWMP and seek their endorsement of the Plan at these meetings or at a subsequent meetings if a NHB requires more time to review (see Task 6.1 below.) The project team and BWS will also brief State Senators, State Representatives, and City Council members within the East Honolulu District. Input from the NHBs and elected officials will be compiled and reviewed in Task 6.2, and may influence revisions made to the EHWMP PUBLIC REVIEW DRAFT.

Task 5.6: Community Meeting No.4

The project team will plan, schedule, prepare for, publicize, and facilitate Community Meeting No. 4 to present the EHWMP PUBLIC REVIEW DRAFT to public agencies, private organizations, and interested community members. Input from Community Meeting No.4 will be documented and submitted to BWS. Input from Community Meeting No.4 will be compiled and reviewed in Task 6.2, and may influence revisions made to the EHWMP PUBLIC REVIEW DRAFT.

Deliverables

- EHWMP INTERNAL DRAFT;
- EHWMP AGENCY REVIEW DRAFT;
- EHWMP PUBLIC REVIEW DRAFT; and
- Agenda, Materials, Presentations, and Summary for Community Meeting No. 4.

PHASE 6: PREFINAL PLAN, PLAN ADOPTION, AND FINAL PLAN

Timeline: January – September 2021

Task 6 takes the EHWMP from Public Review Draft to Final. It starts with making final adjustments and revisions to the Public Review Draft to address stakeholder comments and concerns. This “PREFINAL” EHWMP will be reviewed by BWS and presented to partner agencies. It will also be shared with Neighborhood Boards and other key stakeholders as needed to verify that their comments were addressed and confirm their support (or note any outstanding comments/concerns). SSFM will participate in the City Council review process and associated public hearing, as well as in the adoption process by CWRM. With any final comments incorporated, the EHWMP will be finalized and distributed.

Task 6.1: NHB and Elected Officials Briefings

The project team and BWS will meet with any NHBs and/or elected officials that did not endorse the EHWMP in Task 5.5 above to receive their endorsement of the Plan or document the discussion in the event

a NHB or elected official does not elect to endorse the Plan. The project team will document any substantive comments that the 3 NHB's or elected officials may have on the EHWMP PUBLIC REVIEW DRAFT and submit to BWS.

Task 6.2: Revise EHWMP Public Review Draft

The project team will review and compile any and all comments received on the EHWMP PUBLIC REVIEW DRAFT, and note responses to these comments and how the comments are to be addressed in the EHWMP PREFINAL document. In collaboration with BWS, DPP, and CWRM, the project team will revise the PUBLIC REVIEW DRAFT as needed, and submit the revised Plan to BWS as the "PREFINAL EHWMP" for their final review and comment.

Task 6.3: Agency Presentations

The project team will schedule and conduct a presentation of the PREFINAL EHWMP to the BWS Chief Engineer, the BWS Board, DPP Director, and CWRM.

Task 6.4: City Council Approval Process

The project team will prepare for, participate in, and complete the City Council approval process for the EHWMP, including a presentation to the Honolulu City Council and attendance at the required City Council Hearings and Committee Meetings. The Plan adoption will be an amendment to Chapter 30 ROH.

Task 6.5: City Council Public Hearing and CWRM Adoption

The project team will assist with the City Council public hearing and CWRM adoption process. CWRM plan adoption must occur after City Council approval. To accomplish such, the project team will:

- Coordinate with the CWRM to post a public hearing notice for the EHWMP before the City Council's 2nd Committee Meeting
- Coordinate with CWRM to prepare for, conduct, and document the Public Hearing; and,
- Assist the CWRM staff to obtain CWRM adoption of the EHWMP.

Task 6.6: Submit Final EHWMP

The project team will make any needed detailed edits to the PREFINAL EHWMP and submit the updated plan as the "FINAL EHWMP" to BWS. Electronic file copies of the FINAL EHWMP will be submitted to BWS, DPP, and CWRM. The project team will also print not more than twenty (20) copies of the FINAL EHWMP and submit these hard copies to individuals and entities as directed by BWS.

Deliverables

- PREFINAL EHWMP; and,
- FINAL EHWMP.

D. Schedule

1) Schedule & Milestones

The contract duration is thirty six (36) months, beginning with the official Notice to Proceed on September 10, 2018 and ending on September 10th, 2021. The table on the following two pages lists milestones for project deliverables, activities, and outreach activities. It is followed by a workflow diagram showing the sequence and timing of tasks and deliverables.

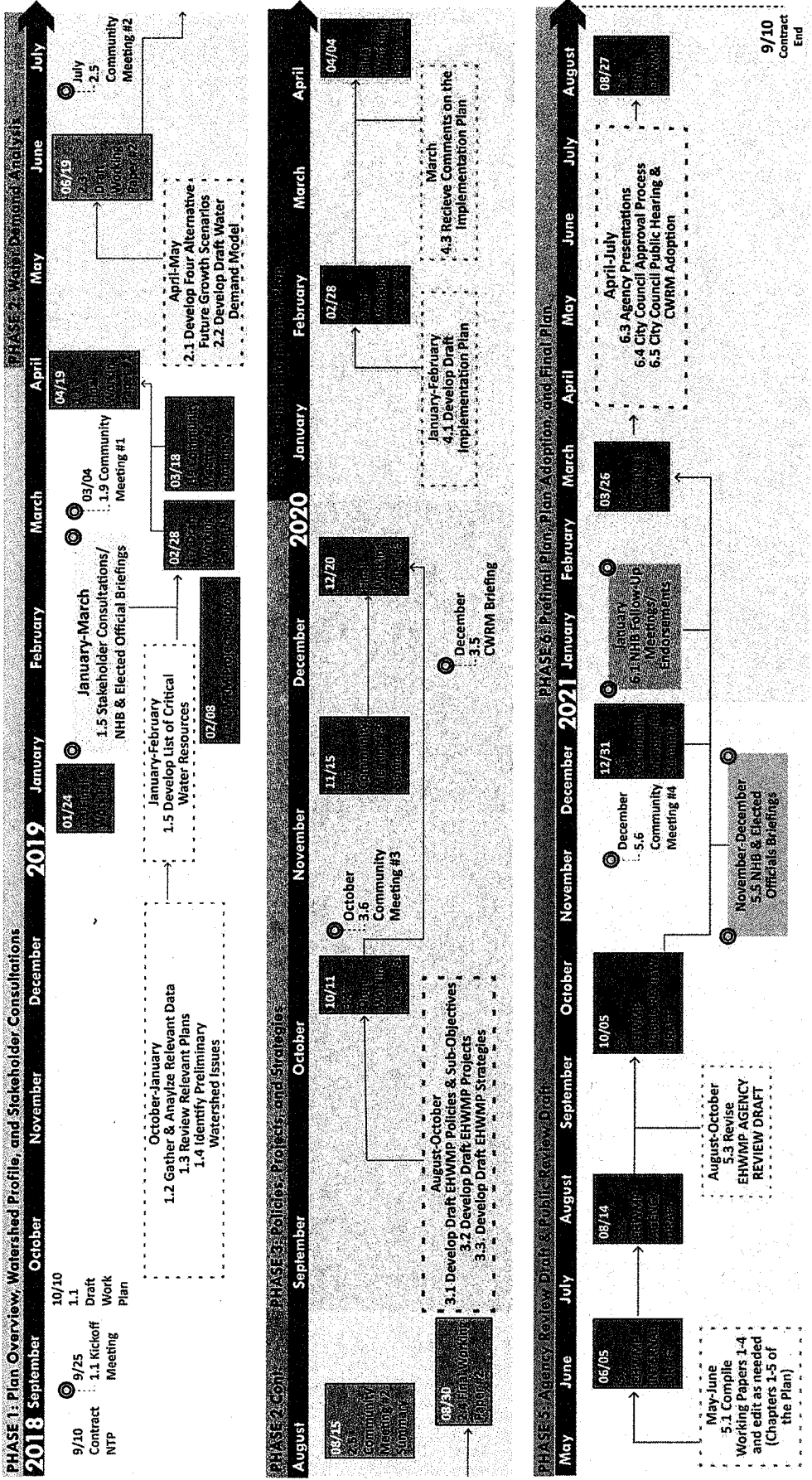
Task #	Milestone	Timeline /Due Date
PHASE 1 : PLAN OVERVIEW, PRELIMINARY WATERSHED PROFILE & INITIAL STAKEHOLDER CONSULTATIONS (September 2018-April 2019)		
1.1	Project Kick-off	September 25, 2018
1.1	Submit Draft Work Plan	October 10, 2018
1.1	Submit Final Work Plan	January 24, 2019
1.1	Team meeting with BWS, DPP, CWRM	November 21, 2018
1.1	Project description approval from CWRM	February 2018
1.2	Submit list of data sources	November 21, 2018
1.2	Finalize list of data sources and obtain data	December 13, 2018
1.3	Submit reference list of relevant plans	October 31, 2018
1.3	Finalize reference list for review of relevant plans	November 21, 2018
1.4	Develop analysis of special areas of concern	February 18, 2019
1.5	Submit stakeholder database	October 12, 2018
1.5	Agenda and questions for stakeholder meetings	October 17, 2018
1.5	NHB & Elected Officials Briefings	January & February 2019
1.5	Conduct preliminary Stakeholder Consultations	January-March 2019
1.5	Complete and document all stakeholder meetings	March 31, 2019
1.6	Submit list of critical water resource issues	March 29, 2019
1.7	Submit Draft Working Paper No.1	February 28, 2019
1.8	Submit Final Working Paper No.1	April 19, 2019
1.9	Hold Community Meeting No.1	March 4, 2019
1.9	Submit Summary of Community Meeting No.1	March 18, 2019
PHASE 2: WATER DEMAND ANALYSIS (April-August 2019)		
2.1	Develop four Alternative Future Growth Scenarios	May 17, 2019
2.2	Develop draft Water Demand Model	May 30, 2019
2.3	Submit Draft Working Paper No.2	June 19, 2019
2.4	Submit Final Working Paper No.2	August 30, 2019
2.5	Hold Community Meeting No.2	Week of July 29, 2019

2.5	Submit Summary of Community Meeting No.2	August 15, 2019
PHASE 3: WATERSHED MANAGEMENT POLICIES, PROJECTS & STRATEGIES (August-December 2019)		
3.1	Develop Policies & Sub-objectives for EH	September 2, 2019
3.2	Draft Projects	September 20, 2019
3.3	Draft Strategies	September 27, 2019
3.4	Submit Draft Working Paper No.3	October 11, 2019
3.5	Submit Final Working Paper No.3	December 20, 2019
3.5	Interim Project Briefing to CWRM	December, 2019
3.6	Hold Community Meeting No.3	Week of October 28, 2019
3.6	Submit Summary of Community Meeting No.3	November 15, 2019
PHASE 4: IMPLEMENTATION PLAN (January-April 2020)		
4.2	Submit Draft Working Paper No.4	February 28, 2020
4.4	Submit Final Working Paper No.4	April 4, 2020
PHASE 5: AGENCY REVIEW DRAFT & PUBLIC REVIEW DRAFT (May-December 2020)		
5.1	Submit EHWMP DRAFT CHAPTERS 1-5	June 5, 2020
5.2	Submit EHWMP AGENCY REVIEW DRAFT	August 14, 2020
5.4	Submit EHWMP PUBLIC REVIEW DRAFT	October 5, 2020
5.5	NHB Presentations & Elected Officials Briefings	November 2020
5.6	Hold Community Meeting No.4	December 2020
PHASE 6: PREFINAL PLAN, PLAN ADOPTION, AND FINAL PLAN (January-September 2021)		
6.1	NHB Follow-up Meetings / Endorsements	January 2021
6.2	PREFINAL EHWMP	March 26 th , 2021
6.3	Presentation to BWS, DPP, CWRM	April 2021
6.4	City Council approval process	May-July 2021
6.5	Public Hearing	July 2021
6.6	FINAL EHWMP	August 27 th , 2021



EAST HONOLULU WATERSHED MANAGEMENT PLAN

Schedule of Project Deliverables by Task



E. Budget Breakdown

Tasks with Budgets, Durations, and Personnel

The table below provides a budget that includes work plan tasks, durations, personnel, and fees inclusive of labor, material, supplies, and taxes.

Phase	Duration	Personnel	Total Fees (Inclusive of Labor, Materials, Supplies, & Taxes)
1: Plan Overview, Watershed Profile, and Stakeholder Consultations	September 2018 – April 2019	SSFM Planning	\$101,147.70
2: Water Demand Analysis	April – August 2019	SSFM Planning	\$ 51,294.82
3: Policies, Projects, and Strategies	September – December 2019	SSFM Planning	\$ 98,221.25
4: Implementation Plan	January – April 2020	SSFM Planning	\$ 49,155.69
5: Agency Review Draft & Public Review Draft	May – December 2020	SSFM Planning	\$ 103,966.57
6: Prefinal Plan, Plan Approval, and Final Plan	May-June 2021	SSFM Planning	\$ 84,104.27
TOTAL			\$ 487,890.30

F. Contract Scope of Work

The project scope of work is attached at the end of this document.

CONTRACT NO. C18545003

ATTACHMENT NO. 1 - - SCOPE OF WORK

I. **Services.** CONTRACTOR shall, in a proper and satisfactory manner as determined by the BWS, use its best efforts to perform the following services in accordance with the specifications and requirements set forth below:

EAST HONOLULU WATERSHED MANAGEMENT PLAN

II. **Modification of Services.** The aforementioned services are subject to reasonable modification by the BWS as provided for in the General Conditions, with or without adjustment to CONTRACTOR's compensation.

EAST HONOLULU WATERSHED MANAGEMENT PLAN

SCOPE OF WORK

OVERALL GOAL

The overall goal of the 'East Honolulu Watershed Management Plan (EHWMP) is to develop a community-based, environmentally-holistic, economically viable, action-oriented plan for the watersheds of the East Honolulu District for the Board of Water Supply, City and County of Honolulu (BWS). The EHWMP will be in alignment with the *Oahu Water Management Plan & Regional Watershed Management Plans* (Water Management-Chapter 30 ROH), *BWS Water Master Plan*, State of Hawaii Water Code, Act 152 SLH 2000 Relating to Watershed Protection, the *Hawaii Water Plan* components, and the Statewide Framework for Updating the *Hawaii Water Plan*. The EHWMP will comply with the Hawaii Supreme Court Decision on the Waiahole Ditch Contested Case (applying the Public Trust Doctrine and the Precautionary Principle to water resource management), the *'East Honolulu Sustainable Communities Plan*, the Department of Hawaiian Home Lands' needs, and other relevant Plans and Principles. The EHWMP will reflect the Hawaiian ahupua'a concept of management values and principles of the people of the 'East Honolulu land use district.

The EHWMP is meant to be community-based. This will be accomplished through extensive discussions and consultation with community leaders, neighborhood boards, community organizations, landowners, developers, public agencies and officials, and other stakeholders.

The Plan will be environmentally holistic (an approach that considers the environment's interconnected systems) through an inventory and analysis of data on the many natural processes and resources that interact within the East Honolulu District. Examples are climate, geology, topography, soils, surface water, ground water, nearshore ocean waters, plants, animals, and ecological communities, as well as human uses and impacts.

The Plan should be economically viable. This will be accomplished through the evaluation of water supply options which are cost effective, optimized, and which leverage new technologies, efficiencies and renewable water and energy resources that meet demands within reasonable costs.

The Plan will be action oriented by defining and describing projects and programs that can be implemented by the BWS and by other federal, state, and city agencies, as well as by community groups and organizations.

The Plan will be in alignment with State and County water and land use policies. This will be accomplished through review of relevant plans for the East Honolulu District.

The Consultant shall meet approximately once a month or as needed with BWS, Department of Planning and Permitting (DPP) and Commission on Water Resource Management (CWRM) Project managers to review progress and to discuss important project issues and findings.

PHASE 1- THE OAHU WATER MANAGEMENT PLAN OVERVIEW AND PRELIMINARY WATERSHED PROFILE, CRITICAL ISSUES, AND INITIAL STAKEHOLDER CONSULTATIONS (CHAPTERS 1 AND 2 OF THE PLAN)

Task 1.1 - Develop the Work Plan and Project Schedule. The draft Work Plan and Schedule will be developed in consultation with BWS, DPP and CWRM and modified as needed. The EHWMP scope of work will be presented to CWRM for approval.

Task 1.2 - Gather and analyze existing relevant data, including data on pre-contact land use/customs/wahi pana/ahupua'a, contemporary land and water resources, water uses and users, water demand trends, potable water infrastructure, quality of ground water and surface water, flooding and drainage, land ownership, land use, land development trends, urban infrastructure, demographics, and population trends and projections.

Task 1.3 - Review relevant plans for the East Honolulu District including but not limited to the Oahu Water Management Plan and Regional Watershed Management Plans, City and County of Honolulu's "East Honolulu Sustainable Communities Plan", the Hawaii Water Plan (State Water Resource Protection Plan, State Agricultural Water Use and Development Plan, State Water Projects Plan, State Water Quality Plan), and State and City land use plans, area water master plans and environmental reports for major proposed new projects, and State Ocean Resources Management Plan and the Hawaii Sea Level Rise Vulnerability and Adaptation Report.

Task 1.4 - Gather, analyze and summarize information on special areas of concern including the potential effects of climate change on the water resources and water infrastructure and new water conservation, water recycling and storm water capture technologies that may be relevant to urban environments in East Honolulu (EH).

Task 1.5 - Conduct an initial stakeholder outreach process in order to identify important watershed issues as viewed by the Hawaii Kai, Kuliouou-Kalani Iki, and Waialae-Kahala Neighborhood Boards, elected officials, major land owners, public agencies, community leaders and organizations, respected kupuna, ahupua'a councils, and business owners involved with land and water resource planning and management. This process will inform key stakeholders of the goals, objectives, process and general timeline for the EH Watershed Management Plan (WMP). This initial process will be limited to not more than thirty-five (35) meetings.

Task 1.6 - Develop a preliminary list of critical water resources issues for EH from initial public outreach, with a focus on issues relating to water sources, water supply systems, Hawaii Kai Wastewater Treatment Plant (WWTP) recycled water

for Hawaii Kai golf course, and future water demands. This will include analysis of climate change on both water demand and supply using existing University of Hawaii (UH) rainfall forecasts (statistical & dynamical model results) and sea level rise impacts to coastal properties using UH Sea Grant sea level rise and coastal erosion models.

Task 1.7 - Prepare the findings of research and stakeholder meetings to develop Working Paper No. 1: EH Profile, Critical Resources Issues, and the updated Oahu Water Management Plan Overview. Submit Working Paper No. 2 to BWS for review and comment.

Task 1.8 - Meet with BWS, DPP, and CWRM to receive comments on Working Paper No. 1, and revise Working Paper No.1 as needed.

Task 1.9 - Schedule, prepare for, facilitate, and document Community Meeting No. 1. This will be an informational meeting about the EHWMP approach. It will include a presentation on important EH facts, trends, and water resources issues, invite input on issues and concerns relating to water resources for the East Honolulu District. Community meetings will include a variety of ways to present material and gather input, including display boards, presentations, and breakout groups. The breakout groups are meant to encourage community member discussion and interaction with one another, as well as with BWS and the consultant team. Where helpful, exercises will be used to identify preferences and set priorities.

Phase 1 Timeline: Months 1 through 6 of the contract

Deliverables: Work Plan and Schedule; Working Paper No. 1 on EH Profile and Critical Water Resources Issues and the updated Oahu Water Management Plan Overview; Documentation of Community Meeting No. 1.

PHASE 2 - EH WATER DEMAND ANALYSIS ("CHAPTER 3" OF THE PLAN)

Task 2.1- In consultation with BWS and OPP, develop four alternative "future growth scenarios" for the EH: "High Growth," "Moderate Growth," and "Low Growth" for the forecast year 2040, and an "Ultimate Growth." Variables that will be considered in developing these alternative growth scenarios and narratives will apply the OPP policy population projections while varying the BWS per capita demand for existing and new populations. They will also factor in the potential impacts of climate change and coastal retreat.

Task 2.2 – Develop a draft Water Demand "Model" and preliminary forecast numbers for Water Demand, both potable and non-potable, for the four future growth scenarios for the EH. Factors to include in the Water Demand "Model" include: Base Year 2015 actual water use in the EH, per capita water demand trends in the EH, ongoing and new water conservation programs, the impacts of climate change on water use and coastal erosion of urban lands, and the potential benefits of water recycling and storm water capture technologies on water demand.

East Honolulu WMP Scope of Work

Task 2.3 - Document the four (4) alternative future growth scenarios and the draft water demand projections in a Working Paper No. 2. Submit the working paper to BWS for review and comment.

Task 2.4 - Meet with BWS, DPP and CWRM to discuss water demand projections in detail, and revise Working Paper No. 2 as needed.

Task 2.5 - Schedule, prepare for, facilitate and document Community Meeting No. 2. This will be an informational meeting that will focus on the draft findings, forecasts and alternative growth scenarios on water use and development for the East Honolulu District. Comments on these and related issues from Neighborhood Board (NHB) members, public agencies, private organizations and the interested public will be recorded. BWS representatives will announce the date and place for the community meeting at regular meetings of each of the three (3) Neighborhood Boards.

Phase 2 Timeline: Months 7 through 10 of the contract

Deliverables: Working Paper No. 2: Four alternative growth scenarios and related demand projections for the EH; Documentation of Community Meeting No. 2.

PHASE 3 - WATERSHED MANAGEMENT POLICIES, PROJECTS AND STRATEGIES ("CHAPTER 4" OF THE PLAN)

Task 3.1 – In consultation with BWS and DPP, develop a set of East Honolulu-specific policies/sub-objectives that respond to the critical water resources issues and concerns obtained through research and public outreach.

The 'East Honolulu objectives should conform to the overall O'ahu Watershed Management Plan which includes the following objectives:

- Promote Sustainable Watersheds;
- Protect and enhance water quality and quantity;
- Protect native Hawaiian rights and traditional and customary practices;
- Facilitate public participation and education, and project implementation;
- and,

Meet future water demands at reasonable costs.

The policies/sub-objectives will be organized under the five major Objectives that are common to all of the BWS Watershed Management Plans.

Task 3.2 - Through research and public outreach, document approximately 15-20 water supply, watershed management, cultural restoration and coastal/ocean resource management/preservation/recreational projects that address identified critical water-related issues. Emphasis should be made on projects being actively planned, implemented or championed by BWS and other public or private entities in the East Honolulu District. Identify catalyst projects that could drive the implementation of other related projects and strategies.

Task 3.3 - Identify and document up to twenty (20) important water supply and

East Honolulu WMP Scope of Work

watershed management STRATEGIES for the EH. "Strategies" are defined as watershed projects or programs that should be organized and implemented for the EH, but which do not yet have a "champion" that will organize and implement the project or program.

Task 3.4 - Document the key issues, objectives, sub-objectives, projects, programs and strategies in a Working Paper No. 3 and submit the Working Paper to BWS and OPP for review and comment.

Task 3.5 - Meet with BWS, OPP and CWRM to receive comments on Working Paper No. 3. Revise the objectives, policies/sub-objectives, projects, programs and strategies to respond to comments.

Task 3.6 - Schedule, prepare for, facilitate and document Community Meeting No. 3. This will be an informational meeting that will present the district specific sub-objectives, water supply and watershed management projects and strategies that address the issues and concerns obtained from the stakeholder outreach process for the East Honolulu District. BWS NHB representatives will announce the date and place for the community meeting at regular meetings of each of the three (3) NHBs.

Phase 3 Timeline: Months 11 through 16

Deliverables: Working Paper No. 3: EHWMP issues, objectives, policies/sub-objectives, projects, programs and strategies; Documentation of Community Meeting No. 3.

PHASE 4 - EH WATERSHED MANAGEMENT - IMPLEMENTATION PLAN ("CHAPTER 5" OF THE PLAN)

Task 4.1- Analyze and integrate all of the EHWMP material developed in previous tasks. Develop a draft plan and strategy for providing for the EH potable and non-potable water needs for the 4 alternative growth scenarios by the Year 2040. This draft EHWMP Implementation Plan will relate and analyze water supply to future water demands, trends and implications and account for the impacts of future development within EH, the impacts of climate change, sea level rise, coastal erosion and retreat, and the potential benefits and impacts of water conservation programs, water recycling, storm water capture and recharge technologies.

Task 4.2 - Develop a Working Paper No. 4 documenting the draft Implementation Plan for the EHWMP and submit to BWS for review and comment.

Task 4.3 - Meet with BWS, OPP and CWRM to discuss comments on the implementation Plan for the EHWMP.

Task 4.4 - Organize the review comments from BWS and revise Working Paper No. 4 as needed.

Phase 4 Timeline: Months 17 through 20
Deliverables: Working Paper No. 4; Draft Implementation Plan

PHASE 5 - AGENCY REVIEW DRAFT AND PUBLIC REVIEW DRAFT

Task 5.1 - Compile all of the Working Papers, edit as needed, and submit the compiled Draft "Chapters 1 through 5" of the EHWMP to BWS for review and comment.

Task 5.2 - Incorporate BWS comments; prepare the EHWMP AGENCY REVIEW DRAFT document and submit the Draft to BWS, OPP, Department of Facility Maintenance (DFM), Environmental Services (ENV) and CWRM for review and comment.

Task 5.3 - Receive comments on the AGENCY REVIEW DRAFT through memos, emails and review meetings and revise the Draft EHWMP as needed.

Task 5.4 - Prepare and submit to BWS the EHWMP PUBLIC REVIEW DRAFT and coordinate with BWS for posting of the PUBLIC REVIEW DRAFT on the BWS web site. Schedule presentations of the PUBLIC REVIEW DRAFT with each of the three (3) NHB's in the EH district.

Task 5.5 - The consultant and BWS will brief each of the NHB's on the EHWMP and seek their endorsement of the Plan at these meetings or at a subsequent meeting if a NHB requires more time to review the Plan (See Task 6.1 below.) Also brief EH State Senators, State Representatives, and City Council members on the Public Review Draft Plan.

Task 5.6 - Plan, schedule, prepare for, publicize, facilitate and document EHWMP Community Meeting No. 4 to present the EHWMP PUBLIC REVIEW DRAFT to public agencies, private organizations and the interested public.

Phase 5 Timeline: Months 21-28
Deliverables: EHWMP AGENCY REVIEW DRAFT; EHWMP PUBLIC REVIEW DRAFT.

PHASE 6 - PREFINAL DRAFT, PLAN ADOPTION AND FINAL EHWMP

Task 6.1 - Meet with the EH Neighborhood Boards that did not endorse the EHWMP in Task 5.5 above to receive their endorsement of the Plan or document the discussion in the event a NHB does not elect to endorse the Plan. Document any substantive comments that the three (3) NHB's may have on the PUBLIC REVIEW DRAFT.

Task 6.2 - Review and compile any and all comments received on the PUBLIC REVIEW DRAFT, and note responses to these comments and how the comments are to be addressed in the PREFINAL document. In collaboration with BWS, DPP

and CWRM revise the PUBLIC REVIEW DRAFT as needed. Compile the PREFINAL EHWMP. Submit the PREFINAL EHWMP to BWS for their final review and comment.

Task 6.3 - Schedule and conduct a presentation of the PREFINAL EHWMP to the BWS Chief Engineer, the BWS Board, DPP Director, and to the CWRM.

Task 6.4 - Prepare for, participate in, and complete the City Council approval process for the EHWMP, including a presentation to the Honolulu City Council and attendance at the required City Council Hearings and Committee Meetings. The Plan adoption will be an amendment to Chapter 30 ROH.

Task 6.5 - Coordinate with CWRM staff to draft and post a PUBLIC HEARING NOTICE for the EHWMP before the City Council's 2nd Committee Meeting. Coordinate with CWRM staff to prepare for, conduct and document the Public Hearing. Assist the CWRM staff to obtain CWRM adoption of the EHWMP. CWRM plan adoption must occur after City Council approval.

Task 6.6 - Do any final detailed edits of the EHWMP and submit electronic file copies of the EHWMP to BWS, DPP, and CWRM. Also print not more than twenty copies of the final EHWMP and submit these hard copies to individuals and entities as directed by BWS.

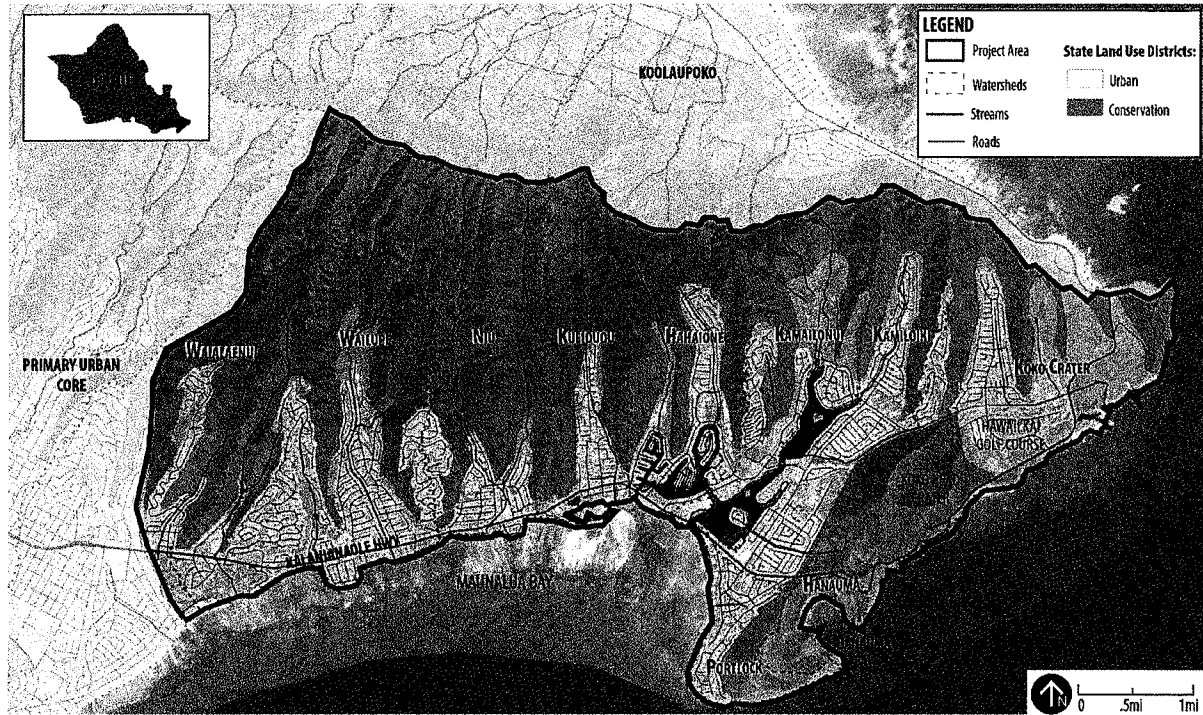
Phase 6 Timeline: Months 29-36

Phase 6 Deliverables: PREFINAL and FINAL EHWMP

MAJOR DELIVERABLES (Electronic submittals only unless otherwise noted)

- Work Plan and Schedule
- Working Paper No. 1: Watershed Profile and Critical Watershed Issues
- Working Paper No. 2: Four Alternative EH Growth Scenarios and Related Water Demand Projections
- Working Paper No. 3: EHWMP issues, objectives, policies/sub-objectives, projects, programs and strategies
- Working Paper No. 4: Draft Implementation Plan
- AGENCY REVIEW DRAFT of the EHWMP (5 hard copies w/o Appendices)
- PUBLIC REVIEW DRAFT of the EHWMP (20 hard & 5 CD copies w/Appendices)
- PREFINAL EHWMP (5 CD copies w/Appendices)
- FINAL EHWMP (20 Hard Copies w/Appendices)

East Honolulu Watershed Project Area



East Honolulu Watershed Project Area

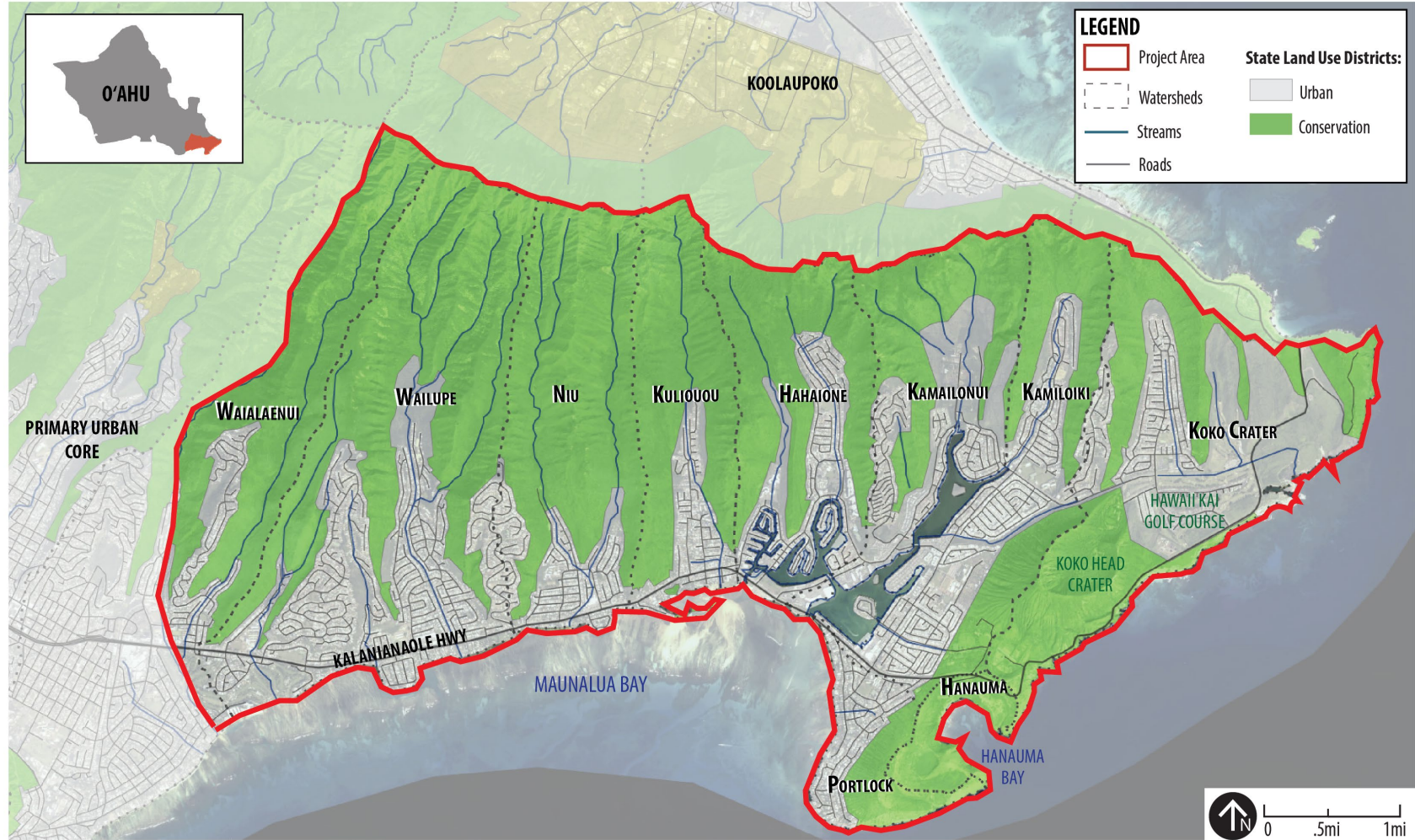


Exhibit 2

Hawai'i Water Plan (HWP) Components

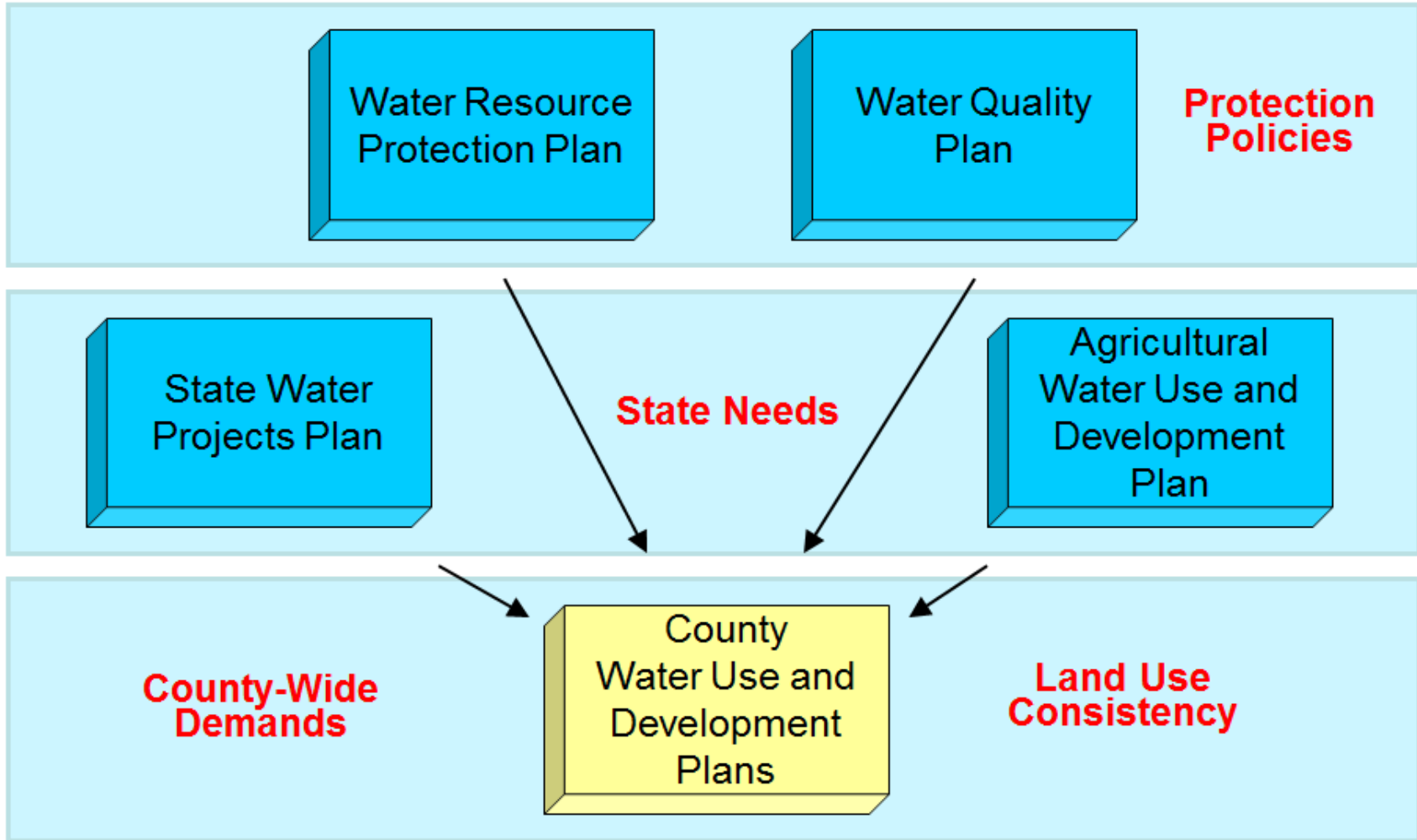


Exhibit 3

EHWMP Outreach and Schedule

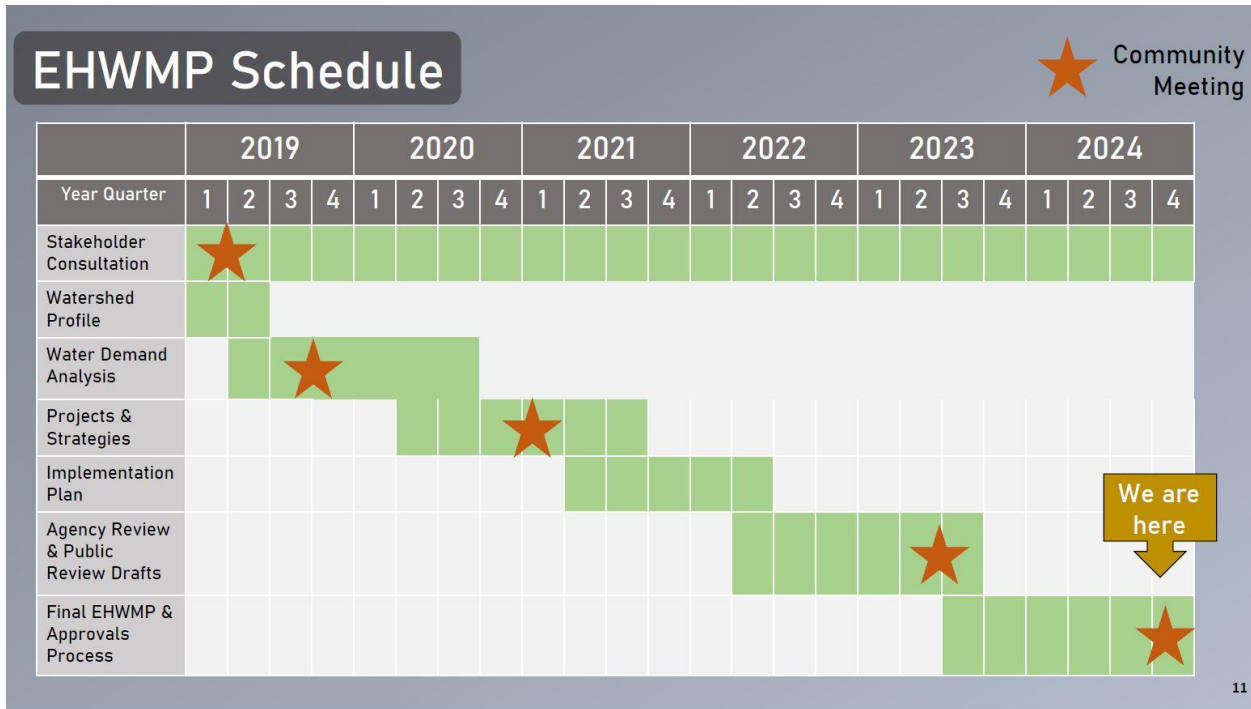


Exhibit 4

EHWMP Final Draft Feedback Incorporation

How Public Input was Incorporated into the EHWMP Final Draft

PUBLIC REVIEW DRAFT – JANUARY 2024
(43 comments tabulated):

- Updated data, project information, and references where appropriate
 - Preliminary census data incorporated into water demand analysis
- Referenced additional community watershed projects provided by the Maunalua Ka Iwi Watershed Hui
- Updated place name references where appropriate
- Emphasized that Ka Pa‘akai Analysis for projects was preliminary and may require further study



FINAL DRAFT TO COUNCIL – MAY 2024
(28 comments tabulated):

- Revisions to ahupua‘a maps and boundaries to match updated State GIS ahupua‘a layer
- Incorporated updates to Mālama Maunalua priority project
- Added references to Kamilo Nui Firewise
- Added project champions to project list
- Updated place name and organization names throughout
- Corrected tables/figures as applicable
- Added Paiko Ridge Preservation as Project #31

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Neighborhood Board Presentations & Endorsement of Final Draft (Feb–May 2024)

- **Hawai‘i Kai Neighborhood Board No. 1:**
 - February 2024: Unanimous endorsement
- **Kuli‘ou‘ou–Kalani Iki Neighborhood Board No. 2:**
 - May 2024: 7 votes in favor, 2 against
- **Wai‘alae–Kāhala Neighborhood Board No. 3:**
 - May 2024: 4 votes in favor, 4 abstained

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Exhibit 5

Council Hearings and Adoption (Aug-Oct 2024)

- Three Council readings, two Committee meetings (Housing, Sustainability, Health); ordinance passed unanimously on 10/9
- Testimony received:
 - Generally supportive
 - Amendments submitted based on two pieces of testimony requesting revisions:
 - Small text edits
 - Changes for one of the “projects with champions” descriptions (#1) and two associated figures
 - Correction to ahupua'a description (based on changes to previous draft)

See Council records and adopted Ordinance here:

