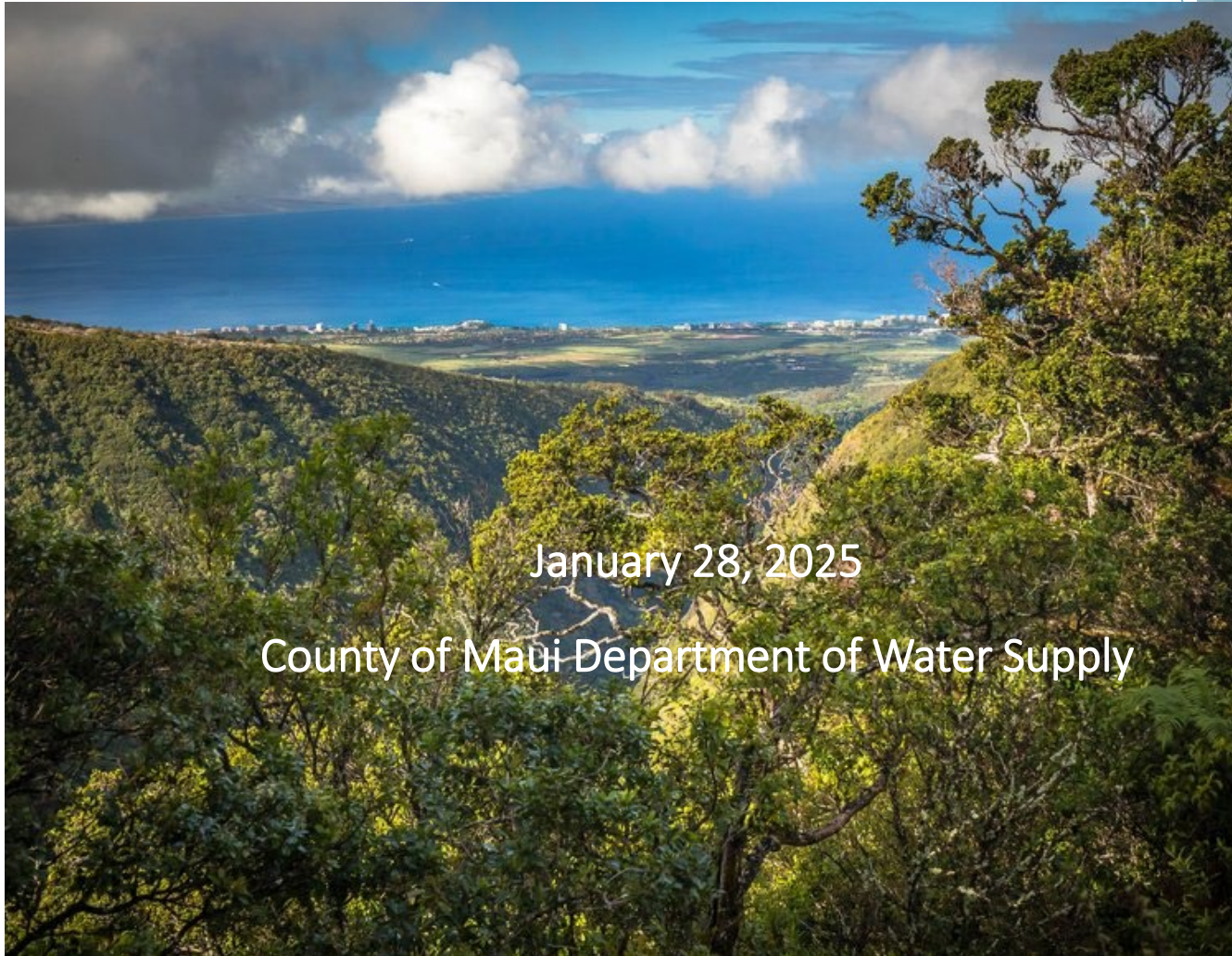


Maui Water Use and Development Plan Briefing to the Commission on Water Resource Management



January 28, 2025

County of Maui Department of Water Supply

OLA NĀ MEA A PAU I KA WAI
By Water All Things Find Life

PC: Aloha Pu`u Kukui

June 20, 2023 CWRM adoption of the Maui WUDP for incorporation into the Hawai'i Water Plan, with conditions

Commission staff commit to work with the County of Maui on:

1. Maui DWS will hire a consultant to write a “Maui Island WUDP Summary” document of the plan for public consumption.
2. Commission and Maui DWS will incorporate the findings of the USGS study on climate change impacts to groundwater recharge into water planning documents, including the Maui Island WUDP and updated sustainable yields.
3. Maui DWS will organize meetings annually with stakeholder groups to better quantify water needs of residents, including traditional kuleana users, rural residents, and small farmers. Feedback will be incorporated into a future update of the Maui Island WUDP.
4. Maui DWS will report back to the Commission within one year with an update on the status of the USGS hydrologic study of the Ha'ikū aquifer.
5. Commission staff will continue to work with Maui DWS to support development of their water conservation programs, including water loss control components that implement the findings of completed annual water audits.

“Maui Island WUDP Summary” document

- ✓ Contract with Hawaii Planning Consultants, January 31, 2024
- ✓ Draft Summary Document completed



Artist: Alyssa Ching

MAUI ISLAND
WATER USE
AND
DEVELOPMENT
PLAN

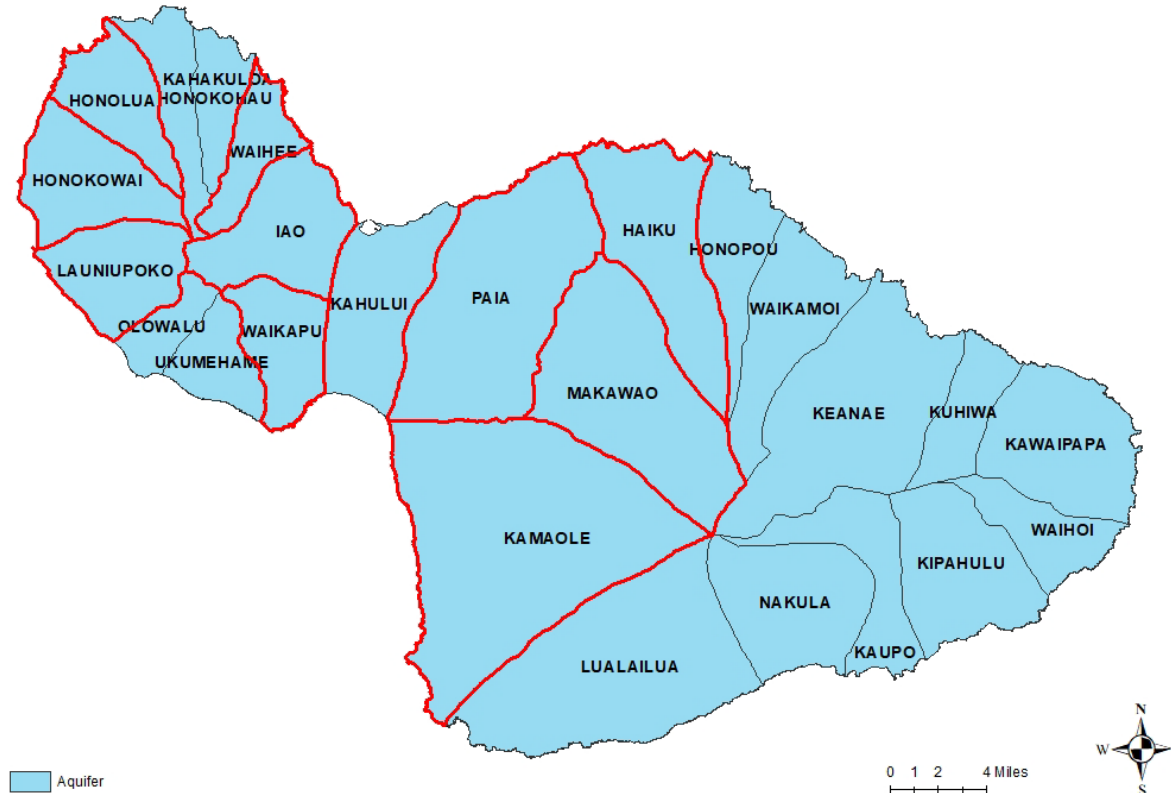
EXECUTIVE SUMMARY

MAUI ISLAND WATER USE AND DEVELOPMENT PLAN SUMMARY DOCUMENT



USGS study on climate change impacts to groundwater recharge

- ✓ Contract October 1, 2021. Two no-cost time extensions
- ✓ Quantify changes to groundwater availability on Maui for selected mid-century future land-cover and recharge scenarios by characterizing optimal withdrawal distributions subject to appropriate withdrawal-site and saltwater-intrusion constraints
- ✓ Guide DWS in sustainable pumpage and well development
- ✓ Numerical model runs to optimize withdrawal scenarios ongoing
- ✓ Peer reviewed report to be published September 2025



Stakeholder meetings addressing kuleana users, rural residents, and small farmers.

Feedback:

- ✓ More nimble WUDP process needed
- ✓ Better accounting of public trust needs
- ✓ Extend municipal water system to remote rural areas
- ✓ More stakeholder involvement
- ✓ Control over private systems
- ✓ Invasive species impact on watershed status and resource

WATER USE & DEVELOPMENT PLAN IMPLEMENTATION MEETINGS



The Department of Water Supply will host meetings in six Aquifer Sectors to guide implementation and future updates of the Maui Island Water Use and Development Plan. Come share your mana`o for your area! Light refreshments will be served.

FOCUS:

- Rural & farming water needs
-
- Drought & wildfire risk
-
- Residents not served by a public water system
-
- Reliable water supply

October 16, 5:30 – 7:30 PM
HANA – Helene Hall

October 22, 2:30 – 4:30 PM
KAHIKINUI – Kaupo Community Resource Center

October 30, 5:30 – 7:30 PM
WAILUKU – Kahului Community Center

November 4, 5:30 – 7:30 PM
KO`OLAU – Haiku Community Center

November 7, 5:30 – 7:30 PM
CENTRAL – Kula Community Center

December 2, 5:30 – 7:30 PM
LAHAINA – Lahaina Civic Center

Status of the USGS hydrologic study of the Ha'ikū aquifer

- ✓ East Maui Source Development Feasibility Study completed December 2024
- ✓ Updated USGS proposal, concurrence by East Maui Consent Decree plaintiffs on additional monitoring well test protocol

Commission staff will continue to support development of DWS water conservation programs, loss control and implement the findings of water audits.

- ✓ Water shortage and conservation plan completed April 2024
- ✓ Implementing demand side priority measures in the plan
- ✓ Perform field measurements to confirm accuracy of production and customer meters
- ✓ Ramp up leak detection to reduce water losses

<https://waterresources.mauicounty.gov/101/Water-Use-Development-Plan>

SUMMARY
WATER USE AND DEVELOPMENT PLAN
PLANNING CONSULTANTS HAWAII, LLC 
COMMISSION ON WATER RESOURCE MANAGEMENT
JANUARY 28, 2025




Source: Maui Department of Water Supply

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SUMMARY WATER USE AND DEVELOPMENT PLAN
BACKGROUND

- CWRM adopted the Maui Island Water Use and Development Plan (WUDP) in June 2023 with four conditions
- This afternoon we would like to provide you with a quick overview of the Summary WUDP's scope and organization



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SUMMARY WATER USE AND DEVELOPMENT PLAN

Scope: Provide a summary of the WUDP including its planning context, rationale, values, and policy

Intent: Complement the full WUDP

Target

Audience: General public

The Summary WUDP does not include new policy or data beyond what was included in the CWRM approved Water Use and Development Plan



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<p style="text-align: center;">CONTENTS</p> <p style="text-align: center;">i</p> <hr/> <p style="text-align: center;">1.0 BACKGROUND AND PURPOSE</p> <p style="text-align: center;">01</p> <hr/> <p style="text-align: center;">2.0 HISTORICAL AND CULTURAL CONTEXT</p> <p style="text-align: center;">03</p> <hr/> <p style="text-align: center;">3.0 WATER RESOURCES</p> <p style="text-align: center;">06</p> <hr/> <p style="text-align: center;">4.0 MDWS WATER SYSTEMS</p> <p style="text-align: center;">12</p>	<p style="text-align: center;">5.0 WILL THERE BE ENOUGH POTABLE WATER?</p> <p style="text-align: center;">15</p> <hr/> <p style="text-align: center;">6.0 ISLANDWIDE PLANNING ISSUES</p> <p style="text-align: center;">23</p> <hr/> <p style="text-align: center;">7.0 RECOMMENDATIONS</p> <p style="text-align: center;">25</p> <hr/> <p style="text-align: center;">REFERENCES</p> <p style="text-align: center;">42</p>
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* This is a summary of the Maui Island Water Use and Development Plan (WUDP) prepared by the Maui County Department of Water Supply in March 2019. To see the full WUDP, you are encouraged to visit the Maui Department of Water Supply website.

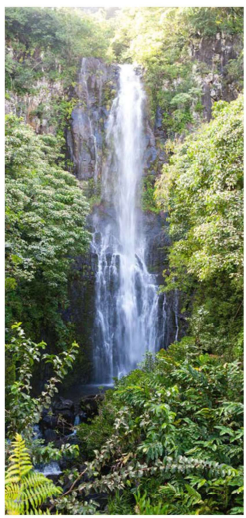


Photo: Maui Waterfall (Source: 2023 MDWS Annual Report).
County of Maui Department of Water Supply

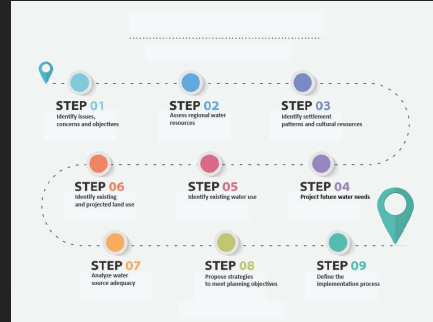
pg.i Water Use and Development Plan – Summary Document | December 2024

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SUMMARY WATER USE AND DEVELOPMENT PLAN

1.0 Background and Purpose

- MDWS mission and role
- Purpose of the full WUDP and Summary WUDP
- Overview of the WUDP planning process and methodology
- Constitution and Public Trust Doctrine



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Summary WUDP

2.0 Historical and Cultural Context

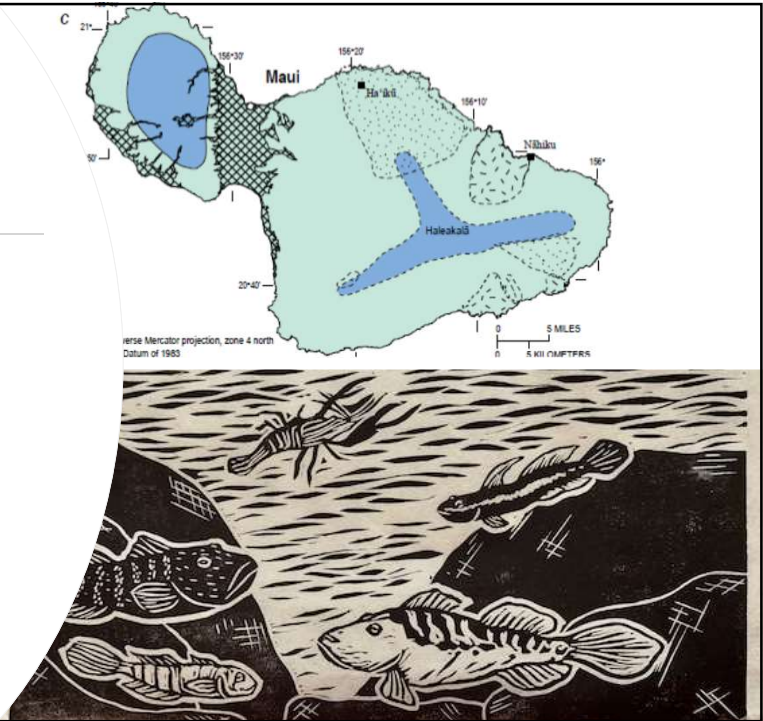
- Ahupua'a System
- The importance of continuous stream flow from mauka to makai
- The use of stream water for drinking, daily life, and sustainable agriculture
- The Kanaka Maoli water sharing system
- Native Hawaiian water rights



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Summary WUDP 3.0 Water Resources

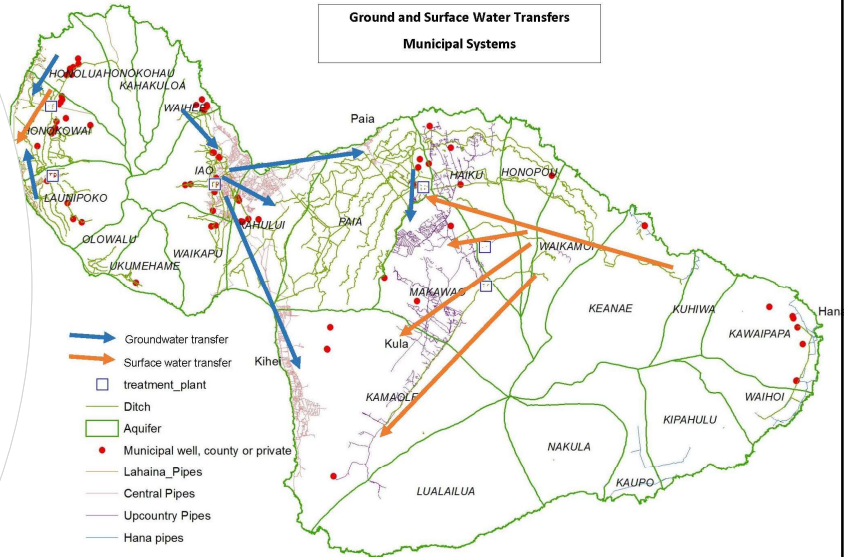
- Maui's hydrogeology
- Groundwater settings and resources
- The hydrologic cycle
- Maui's watersheds and native forests
- Stream habitat and native species
- Aquifer sector areas




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Summary WUDP 4.0 MDWS Water Systems

- MDWS role and responsibilities
- Overview of MDWS public water systems
- The role of ground and surface water
- Ground and surface water transfers



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Summary WUDP
5.0 Will there be Enough Potable Water?

- Focus on potable water
- Emphasis on MDWS systems
- Discussion of private systems and agricultural water use

ISLANDWIDE:

- How many Maui residents will there be?
- How much potable water will MDWS require?
- How much water does Maui Island have now?
- Does Maui Island have enough potable water for the future?

REGIONAL:

- Will the MDWS water systems have enough potable water for the future (Central Maui, Upcountry, Lahaina, Hana)?

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Summary WUDP
6.0 Islandwide Planning Issues

ISLANDWIDE PLANNING ISSUES

- Cost and Complexity of Developing New Water Sources
- Climate Change
- Groundwater Protection
- Watershed Management
- Conservation and Efficiency

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Values: The extensive public outreach identified values, issues and objectives to guide policies and strategies for the protection, planning, management, and development of water resources. The following overriding values were derived from community input:

Summary WUDP

7.0 Recommendations

RECOMMENDATIONS:

- Values
- Objectives
- Strategies

'Wai' as a vital cultural and sustaining resource
Native Hawaiians and the Hawaiian culture value "wai" as a fundamental and necessary sacred element, and they continue to advocate for the rights to continuous flowing streams supported by healthy watersheds and nearshore environments.

Quality water
Availability of high-quality water supports social and economic well-being as well as the health of people and cultures.

Maui's natural beauty, native ecology and cultural heritage
Mauians are proud to reside in one of the most beautiful and distinctive places in the world. They value the protection of Maui's native ecology as essential to preserving the island's beauty and cultural history, including its agrarian roots which support open spaces, native Hawaiian culture, and local self-reliance and independence.

Sustainable water resources
Maui is blessed with abundant groundwater, streams and ocean resources to serve its diverse needs. The native Hawaiians' mauka-to-makai ahupua'a management system safeguarded adequate stream flow necessary to sustain human settlements, cultural traditions and natural ecosystems from one generation to the next.

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