Ka Wai e Hiki Mai Ana: The Water to Come

CWRM's Goals and Major Projects

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Commission on Water Resource Management
State of Hawai'i


Aia i hea ka wai a Kāne?
Maui

Overview

- About CWRM
- 2025 Legislative Session in Review
- Our Current Priorities
- Our Future

About CWRM

CWRM's Mission

- Established by Article XI, Section 7 of the Hawai'i State Constitution
- The primary guardian of Hawai'i's water resources under the public trust
- Mission: To protect and manage the waters of Hawai'i for present and future generations

CWRM's Mission

Protection

Instream

Public

Use

Offstream

Private

CWRM's Staff

- **3** branches
- Planning Branch
- Stream Protection and Management Branch
- Ground Water Branch

  Survey +
  Ground Water Regulation

CWRM's Capacity

- 376 perennial streams
- 1,300 stream diversions
- 110 aquifer system areas
- 5,500 groundwater wells

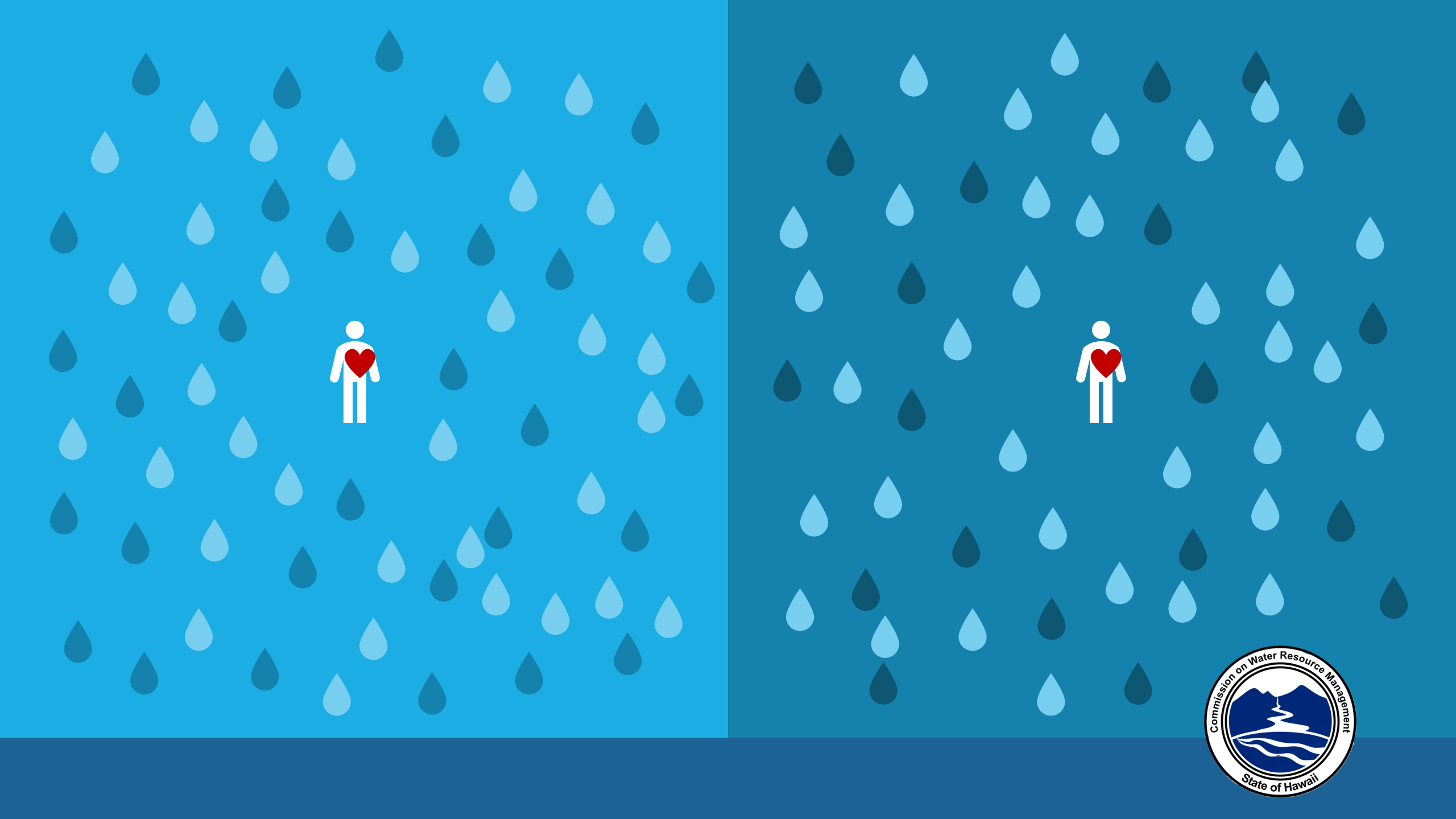
CWRM's Capacity

For each SPAM staff, there are:

- 54 perennial streams
- 186 stream diversions

For each GW staff, there are:

- 916 wells
- 18 aquifer systems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2025 Legislative Session in Review

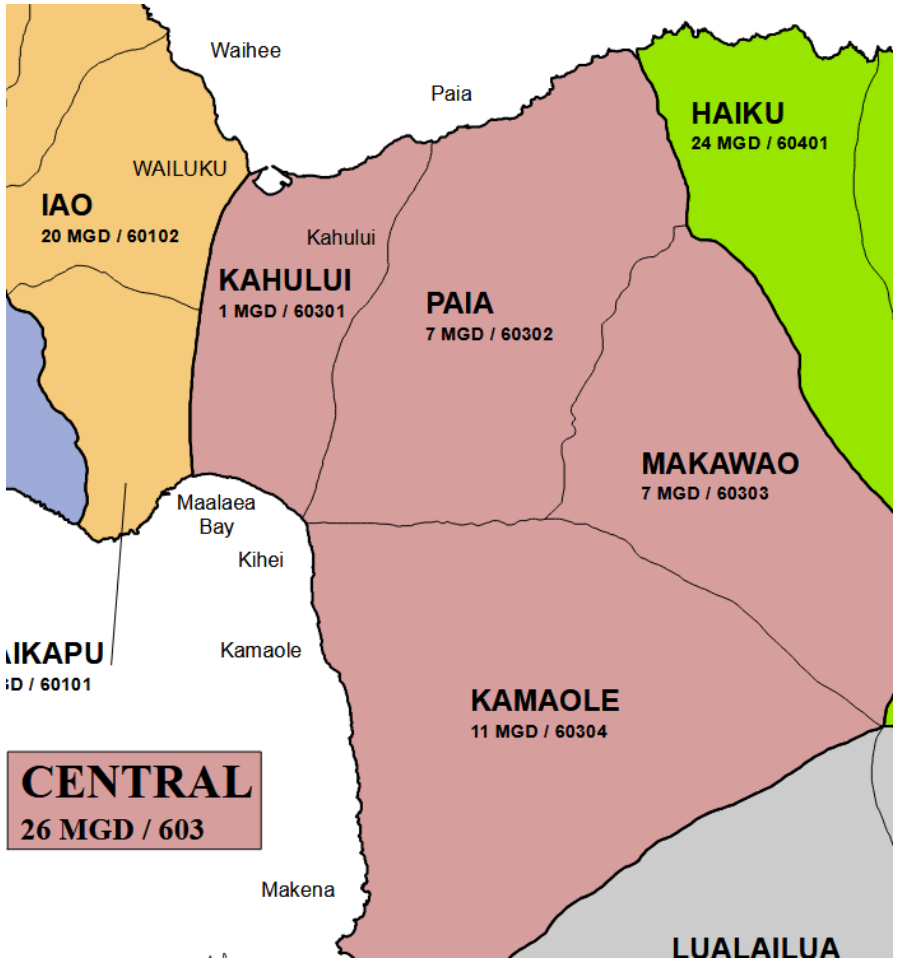
New Funding (FY26-27 Budget)

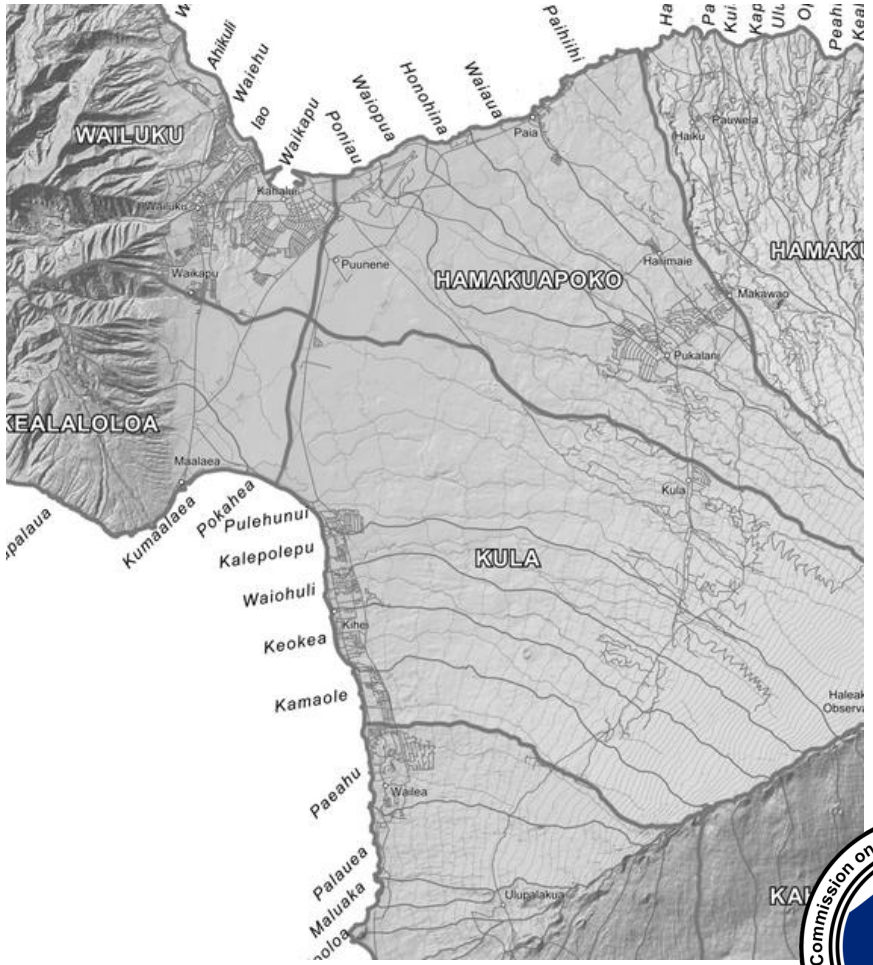
- Expanded monitoring network (USGS)
- Central Maui hydrologic boundary study
- Sustainable yield studies
- Continued support for Hawai‘i Mesonet
- Three new deep monitor wells:
  - 1 statewide
  - 2 in the Keauhou aquifer

Monitoring Network Expansion

- Two additional rainfall stations at existing monitoring locations:
  - Honopou, Huelo, Maui
  - Kualapuʻu Deep Monitor Well, Molokaʻi
- New, upgraded, or reactivated streamflow monitoring stations
  - ʻĀwini Puali Gulch, Hāwī, Hawaiʻi
  - Waikoloa Stream near Waimea, Hawaiʻi
  - Wailoa Stream near Waipiʻo, Hawaiʻi
  - Waiheʻe River below Spreckels Ditch, Maui
  - Kaʻaiea Gulch near Huelo, Maui
  - Waikolu Stream at 900ft near Kalaupapa, Molokaʻi
  - Koaiʻe near Waimea, Kauaʻi

Central Maui Boundary Study





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Hawai‘i Mesonet

- Around 100 stations
- Information made available through the Hawai‘i Climate Data Portal
- Climate data includes rainfall, wind speed, and humidity
- Data can be used for many applications, including hydrology, agriculture, and hazard mitigation

Hawai‘i Mesonet

Keauhou Aquifer System (Act 189)

- Establishes a Keauhou aquifer system monitoring pilot project
- Directs CWRM to, among other things,

  (7) Integrate new and existing studies and research into a plan for the responsible management of groundwater resources in the Keauhou aquifer system; ...

- Reports to the legislature required every 6 months detailing, at minimum, groundwater levels and salinity
- $200,000 annual operating funds for FY26-27

Desalination Planning Task Force (S.C.R. 54)

- Goal: Determine whether the use of desalination for large-scale water consumption in the State is feasible
- Report to the legislature 20 days before the 2027 session
- Meetings anticipated to begin in 2026
- CWRM Chair or designee to chair the Task Force
- Members: DOH, BOA, OHA, WAL & WTL Chairs, each county DWS/BWS

Desalination Planning Task Force (S.C.R. 54)

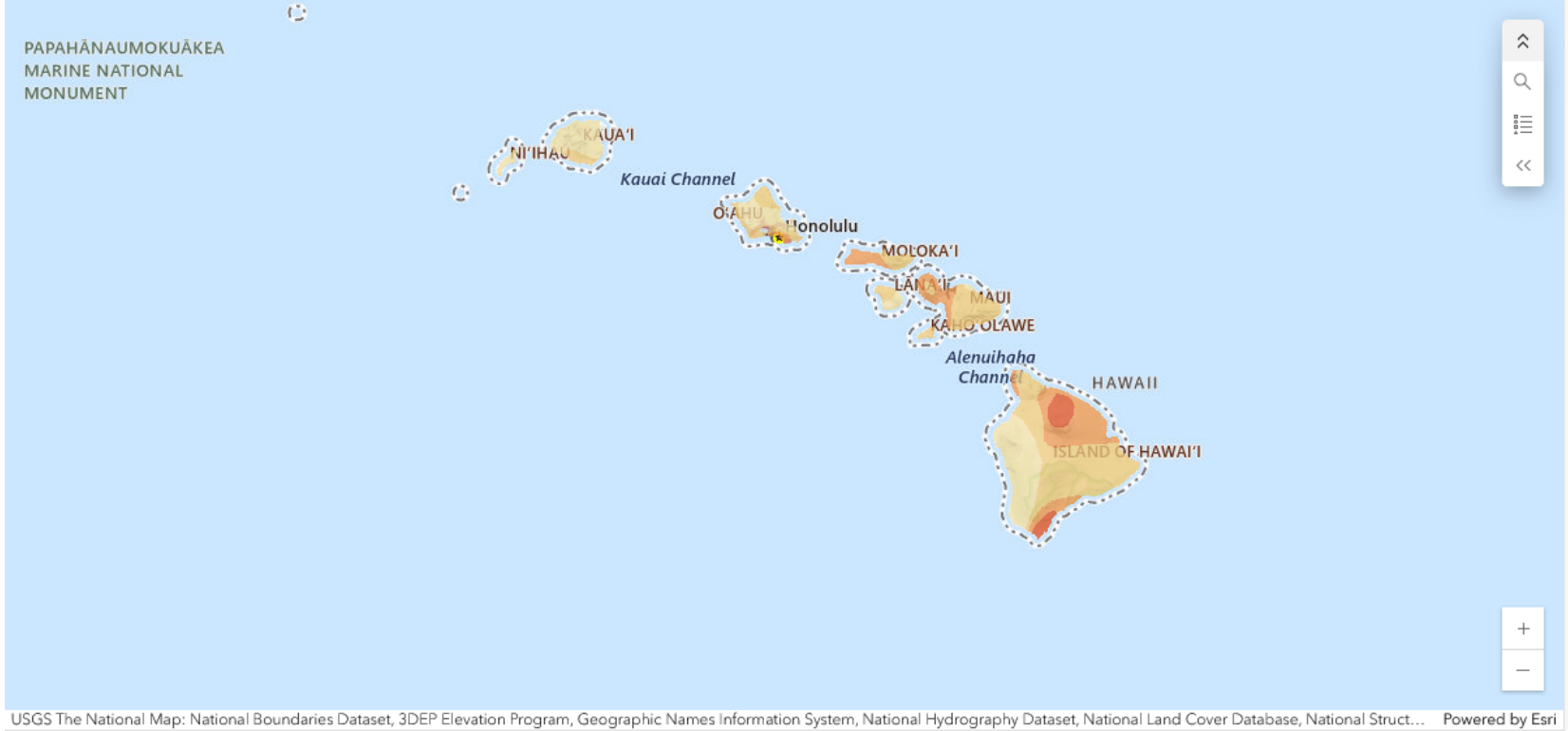
Questions:

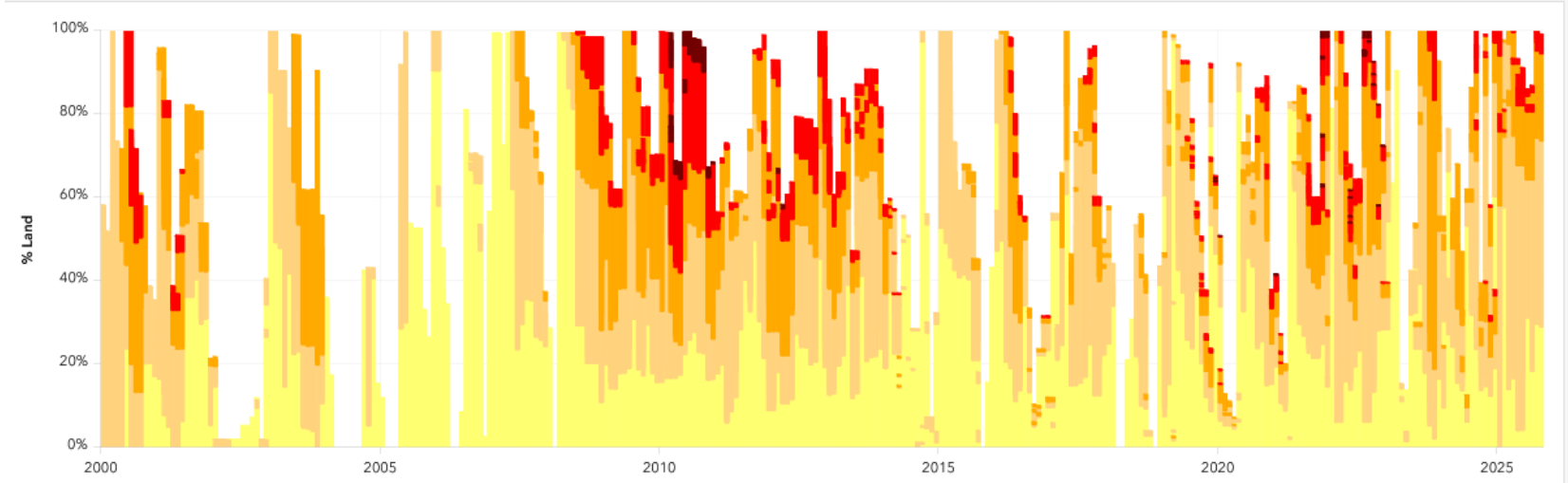
- What is the overall water demand for housing, agriculture, and industrial uses statewide?
- How feasible is desal for housing, agriculture, and industrial uses? Drinking water?
- To what extent will desal: Hawai‘i in meeting its projected future water needs and improve the resiliency of our water systems?
- Is it feasible for CWRM to integrate desal into its overall water management plans?
- To what extent will the construction of desal plants affect or interfere with historical sites and Native Hawaiian cultural sites and practices, including burials?
- How can we address environmental concerns like high energy consumption and disposal of brine concentrate?

Our Current Priorities

Our Current Priorities

- Conservation and Resilience
- Resource Assessment and Monitoring
- Water Management Areas
- Adaptive Management





99.3%

Land at or above abnormal drought conditions

11.5%

Land at or above severe drought conditions

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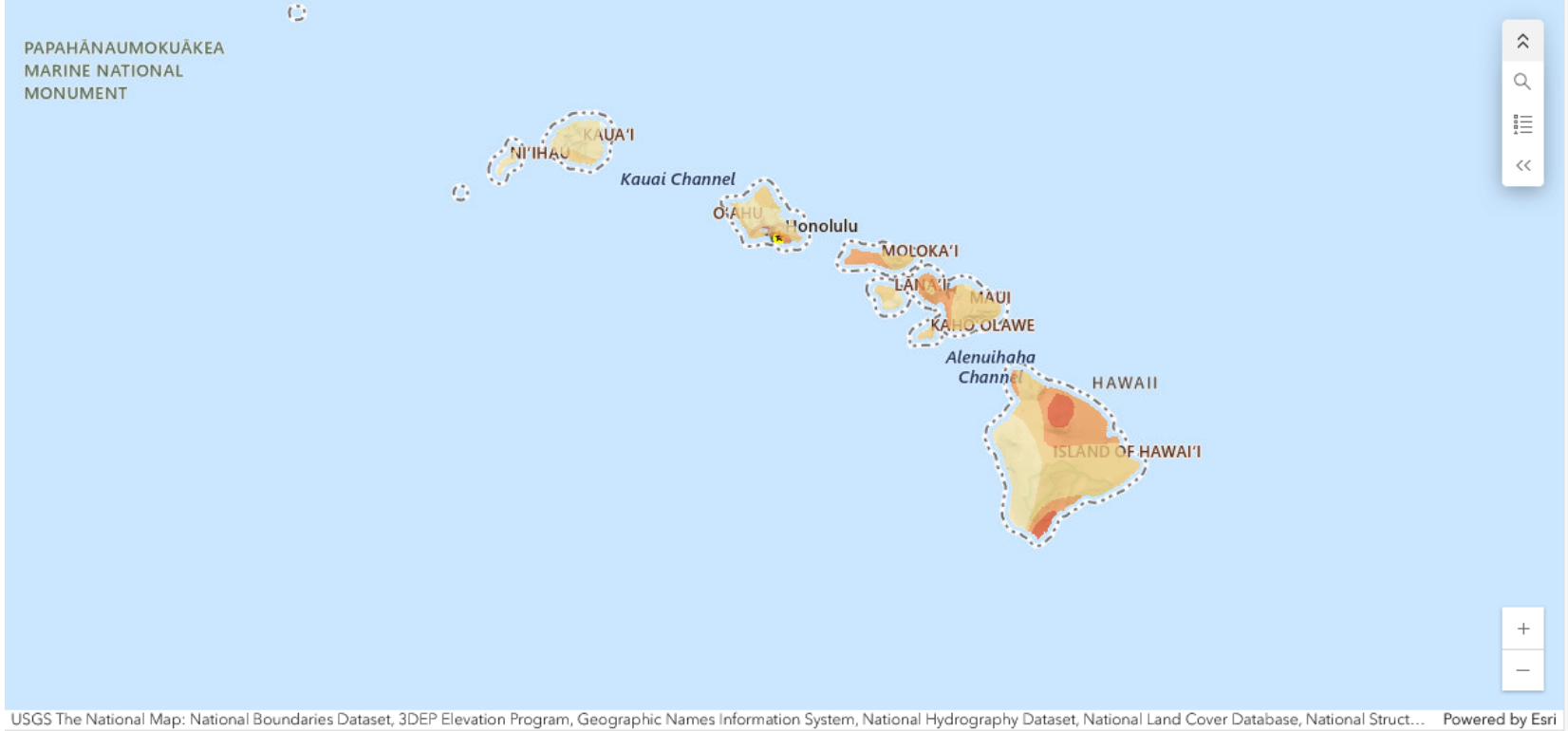

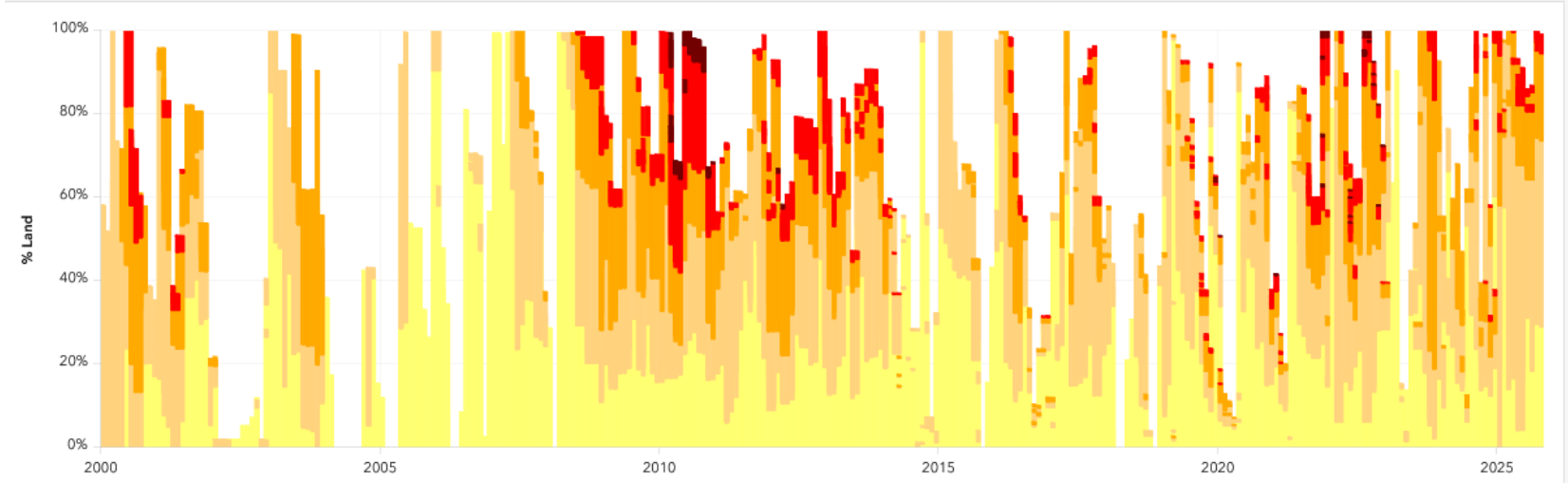

99.3%

Land at or above abnormal drought conditions

11.5%

Land at or above severe drought conditions

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Conservation and Resilience

- Implementing water audit program
- Studying reuse and desalination
  - Statewide Water Reuse Study (Act 170, 2016)
  - Desalination Task Force (S.C.R. 54, 2025)
- Planning for water shortages
  - Lahaina water shortage plan in development
- Envisioning water's role in fire prevention

Water's Role in Fire Prevention

- Lahaina Fire Forward-Looking Report published in January 2025
- Systems focus: National Cohesive Wildland Fire Management Strategy

https://ag.hawaii.gov/maui-wildfire-investigation-resources-page/

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HEALTHY, RESILIENT LANDS & WATERS

- Lands managed to resist risk of ignition & rapid spread
- Lands managed to resist & survive drought, floods, invasive species, erosion, climate change impacts
- Ecological function and integrity is maintained or restored, including water flow, ground water recharge, evapotranspiration, food production, native species, cultural practices

VEGETATIVE FUELS MANAGEMENT

- Vegetation is managed using site-appropriate methods to create fire breaks, fuel breaks, weed reduction areas, or fuels conversion to a lesser fire risk landcover is implemented
- Vegetation management is maintained to consistently on both public & private properties to reduce risk

POLICIES, LAWS, CODES

- WUI codes in place to address wildfire risks on landscape
- Laws encourage active use of lands for community safety and concurrent benefits (park space, food production, ecological health, climate change adaptation)
- Brush abatement laws enforced on public and private lands

INVESTMENT & SUSTAINED FUNDING

- Proactive code enforcement programs amd personnel
- Vegetation management on large lands via cost-share, grants, tax penalties & incentives
- Workforce development in wildfire mitigation, including supporting risk-reducing activities, i.e agriculture, ecosystem protection, vegetation

FIREFIGHTING ACCESS AND WATER

- Land-use planning & management includes the development of firefighting access roads and water resources in wildland areas

EDUCATION & PREPAREDNESS

- Mitigation education for those who manage, own, or steward large parcels
- Land managers are prepared to limit access during high fire danger conditions
- Land managers are prepared to communicate with responders& , provide access & assets during response

PLANNING & INFORMATION DEVELOPMENT

- Wildfire risk posed by vegetation & unmanaged lands is addressed in hazard, forest, watershed, & community plans
- Threats to natural resources are addressed in all plans as wildfire safety issues
- Wildfire mitigation efforts & impacts are tracked and monitored

SYSTEM FACTORS NEEDED TO ACHIEVE THESE PRIORITIES:

Protect Life
Stabilize Incident/ Control Fire
Protect Property
Protect Natural & Cultural Resources

→ **FIRE ADAPTED COMMUNITIES**

→ **SAFE & EFFECTIVE WILDFIRE RESPONSE**

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Water's Role in Fire Prevention

Finding 13 (page 305):

- There is a need for additional public and private investment in long-term ecosystem restoration and sustainable land management practices that promote healthy ecosystems, maintain active agriculture, reduce fire risk, and control erosion.
- Recommendation 2 - Invest in watershed partnerships, conservation groups, and other existing ecosystem conservation and agricultural initiatives.

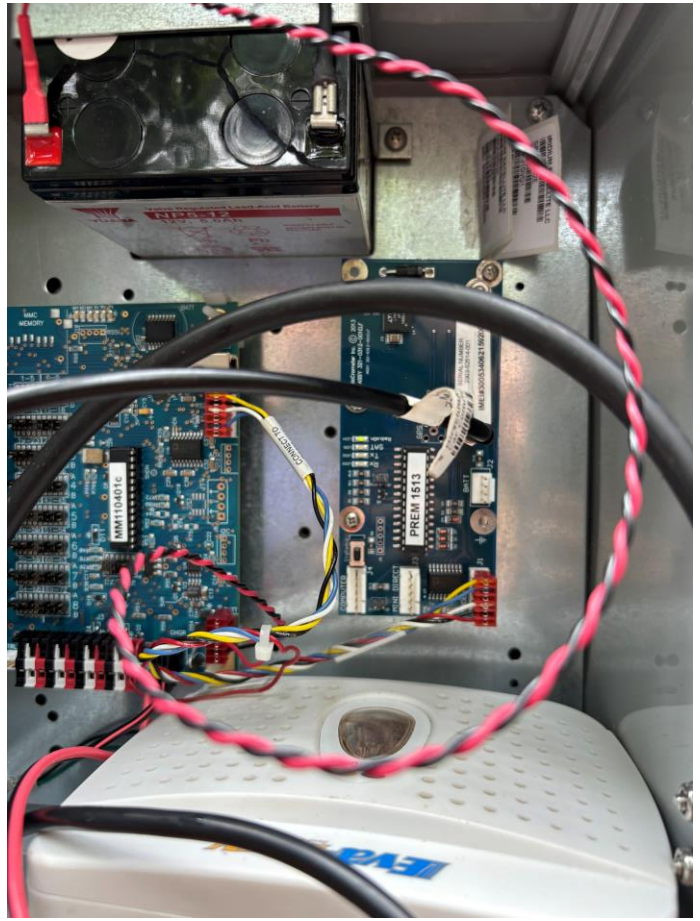
https://ag.hawaii.gov/maui-wildfire-investigation-resources-page/

Water's Role in Fire Prevention

- Ongoing project with Hawai'i Wildfire Management Organization to create a Wildfire Action Plan
- How can the availability of water impact fire risk and fire response?
- How can the work of CWRM to maintain stream flow and ground water levels lead to the creation of wildfire-resilient landscapes?

Monitoring Streams

- Data collection and analysis
- Partnership with USGS for 44 stream gages
- This federal fiscal year, taking over gages with discontinued federal funding



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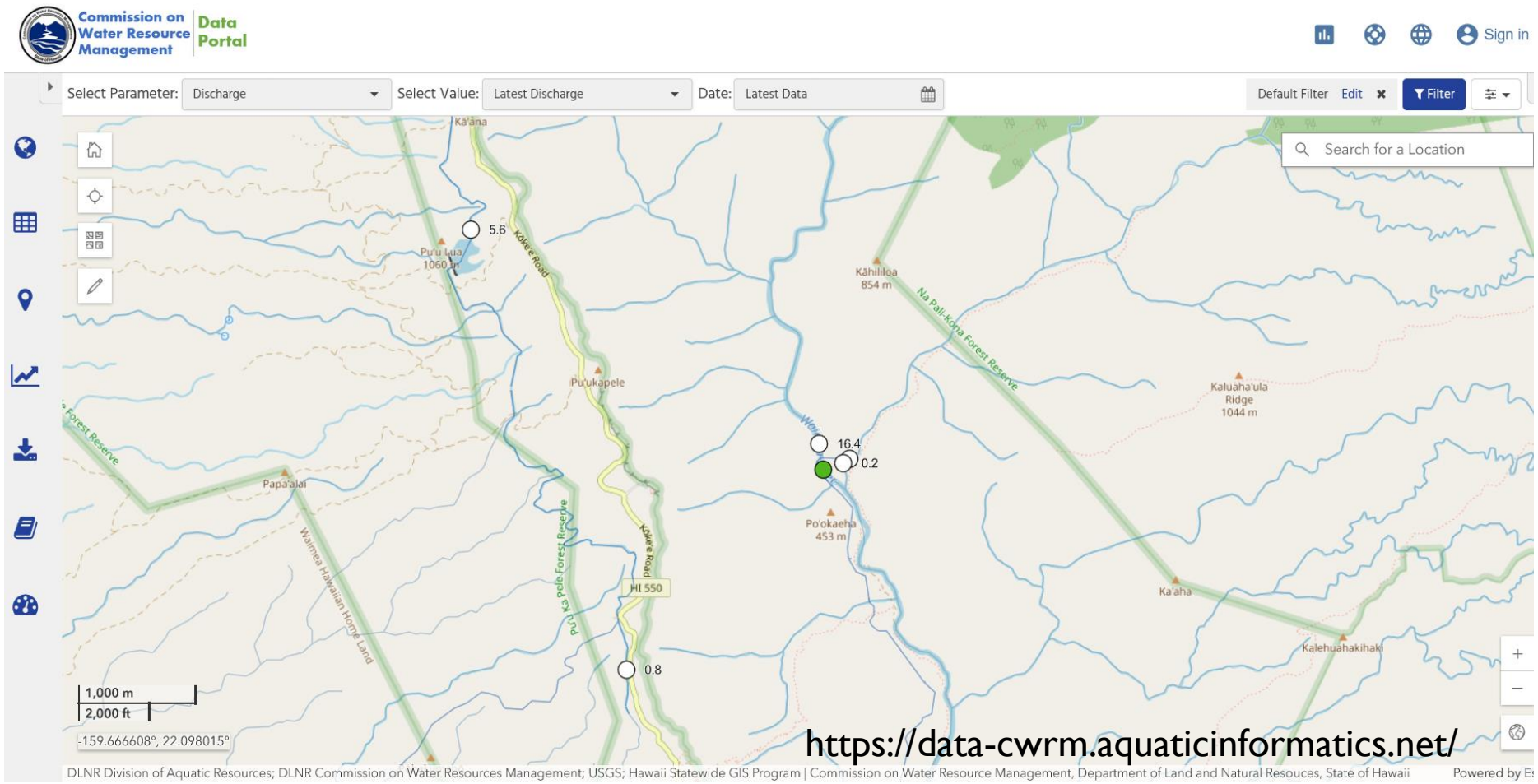
CWRM Data Portal



https://data-cwrm.aquaticinformatics.net/

Monitoring Streams

- Understanding the ecosystem effects of restoring stream flow
- Recently published: Hydrological and Biological Assessment of Nā Wai ʻEhā Streams Following Streamflow Restoration, Maui

https://files.hawaii.gov/dlnr/cwrm/publishedreports/PR202501.pdf

Monitoring Ground Water

- Deep monitor wells
  - Approved the Waimea DMW on Hawai‘i Island
  - Commenced repairs to the Kāloko DMW
  - Advanced DMWs in Pā‘ia, Honolua, Launiupoko, and Wai‘anae
- Assessing the impacts of pumping on groundwater-dependent ecosystems
- Exploring new technologies for collecting groundwater data
- Increasing our in-house modeling capability

Water Management Areas

- Nā Wai ʻEhā
  - Remand from Hawaiʻi Supreme Court June 2024
  - Scope of reopening on remand to be determined
- Lahaina
  - Establishing a framework for processing of permits, 2025
- Waiʻanae
  - Petition accepted by the Commission May 2025
  - Next step: public meeting; findings of fact

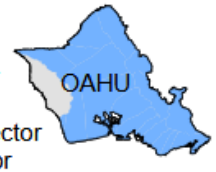
Surface Water Management Area

Ground Water Management Area

ISLAND OF OAHU

Ground Water

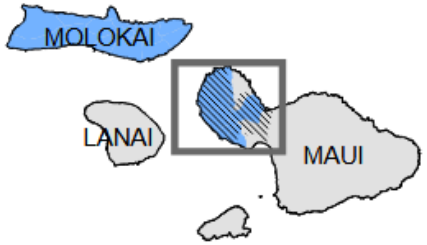
Central Sector
Honolulu Sector
North Sector
Pearl Harbor Sector
Windward Sector



ISLAND OF MOLOKAI

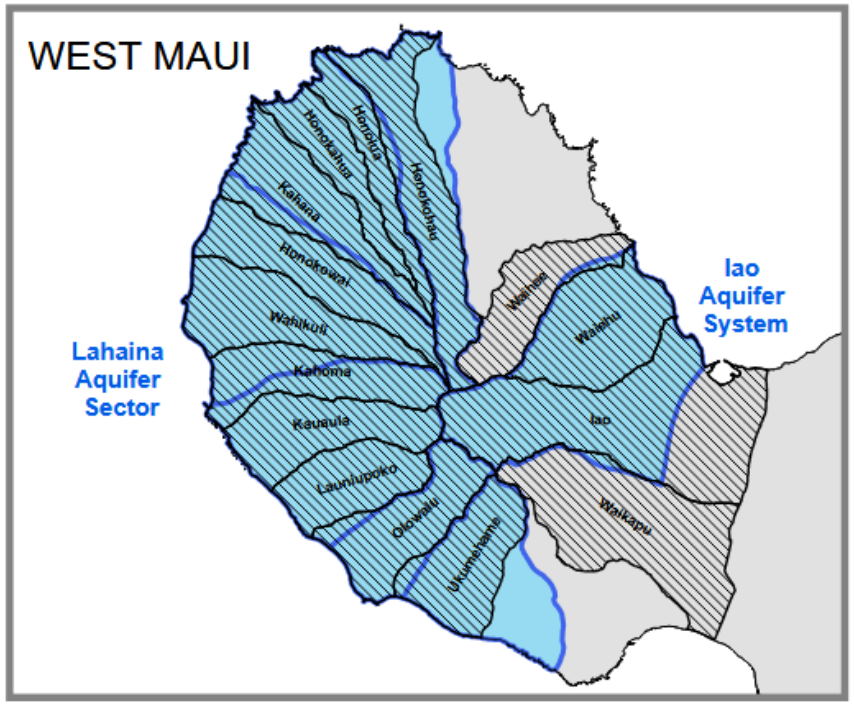
Ground Water

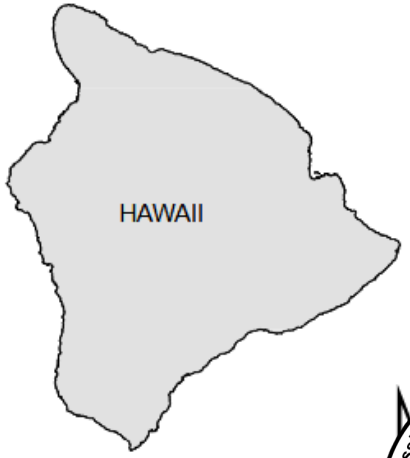
Central Sector
Northeast Sector
Southeast Sector
West Sector



ISLAND OF MAUI

Ground Water	Surface Water
Lahaina Sector	Honokohau
Iao System	Honolua
	Honokahua
	Kahana
	Honokowai
	Wahikuli
	Kahoma
	Kauaula
	Launiupoko
	Olowalu
	Ukumehame
	Waihee
	Waiehu
	Iao
	Waikapu





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Adaptive Management

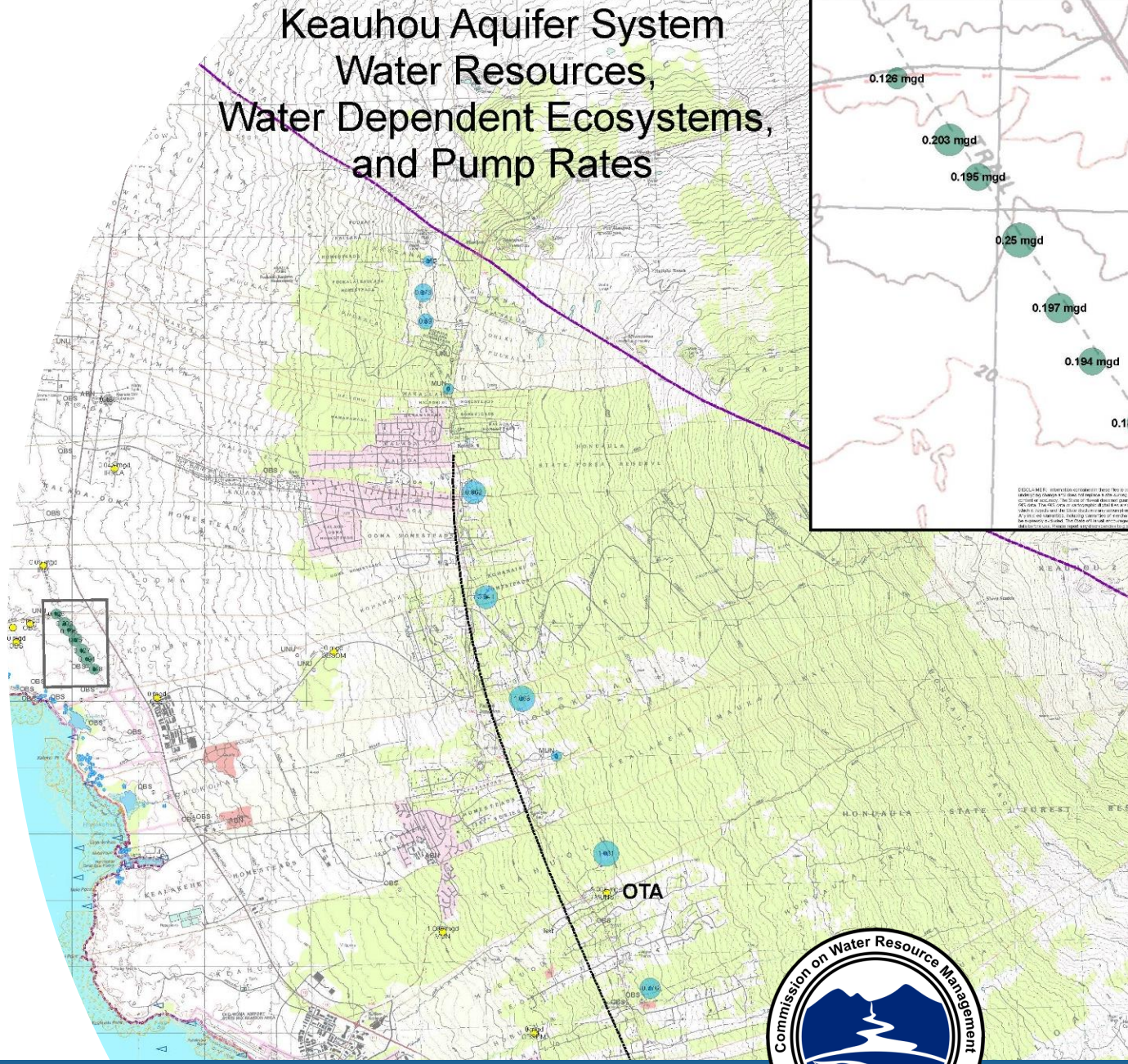
- Resource management is not a static process
- Continuing duty to gather data, review outcomes, and adjust
- Collaboration is key
- Current project: Keauhou Aquifer System Groundwater Adaptive Management Plan

Keauhou AMP

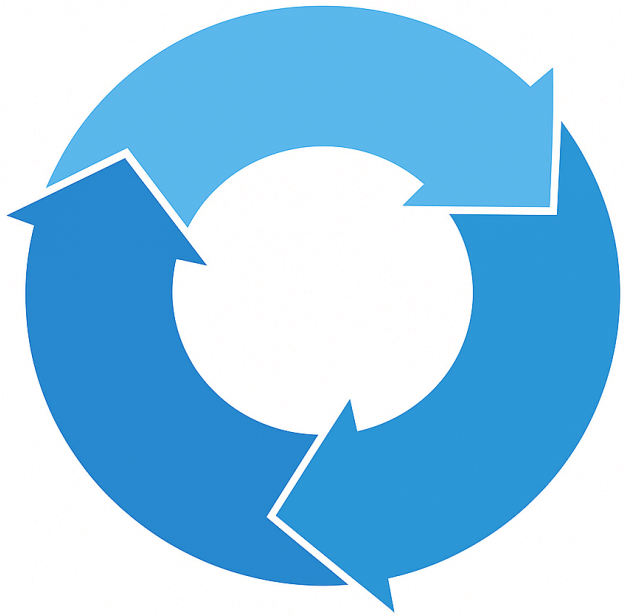
- Why?
  - Increasing development pressure in the Keauhou region of West Hawai‘i
  - Sustainable ground water management is critical to responsible development
- Initial goal: identify key indicators, locations, and monitoring needs to create an initial monitoring plan and begin collecting baseline data
- Mid-term goals:
  - Allocate costs of monitoring and management,
  - Identify triggers for action tied to ecological & cultural thresholds,
  - Identify management actions to be taken if triggers are met

Keauhou AMP

- Experts in hydrology, ecology, and groundwater pollution and contamination have met and prepared initial reports
- Reports will be reviewed and discussed with community stakeholders, then used to prepare an initial monitoring plan



Keauhou AMP



Long-term goals:

- Continue to monitor, respond, and revise
- Adjust management based on real data and changing conditions
- Incorporate the findings of the AMP into components of the Hawai‘i Water Plan
- Implement adaptive management in other groundwater-stressed areas like West Maui

Our Future

YOU!!!

People and Capacity

- 33 full-time positions
- 14 vacancies
- Ground Water
  - Hydrologists
  - Engineer
  - Engineering Tech
  - Planner
  - Secretary
  - General Professional
- Stream Protection and Management
  - Hydrologists (Maui)
  - General Professional
- Planning
  - Hydrologist / Legislative Analyst
  - Drought & Water Conservation Coordinator

Deputy Director's Vision

Huliāmahi

- To join together in great numbers to cooperate
- Strong, as the sea
- To overflow, as a river; to be full of water


Mahalo
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State of Hawaii