

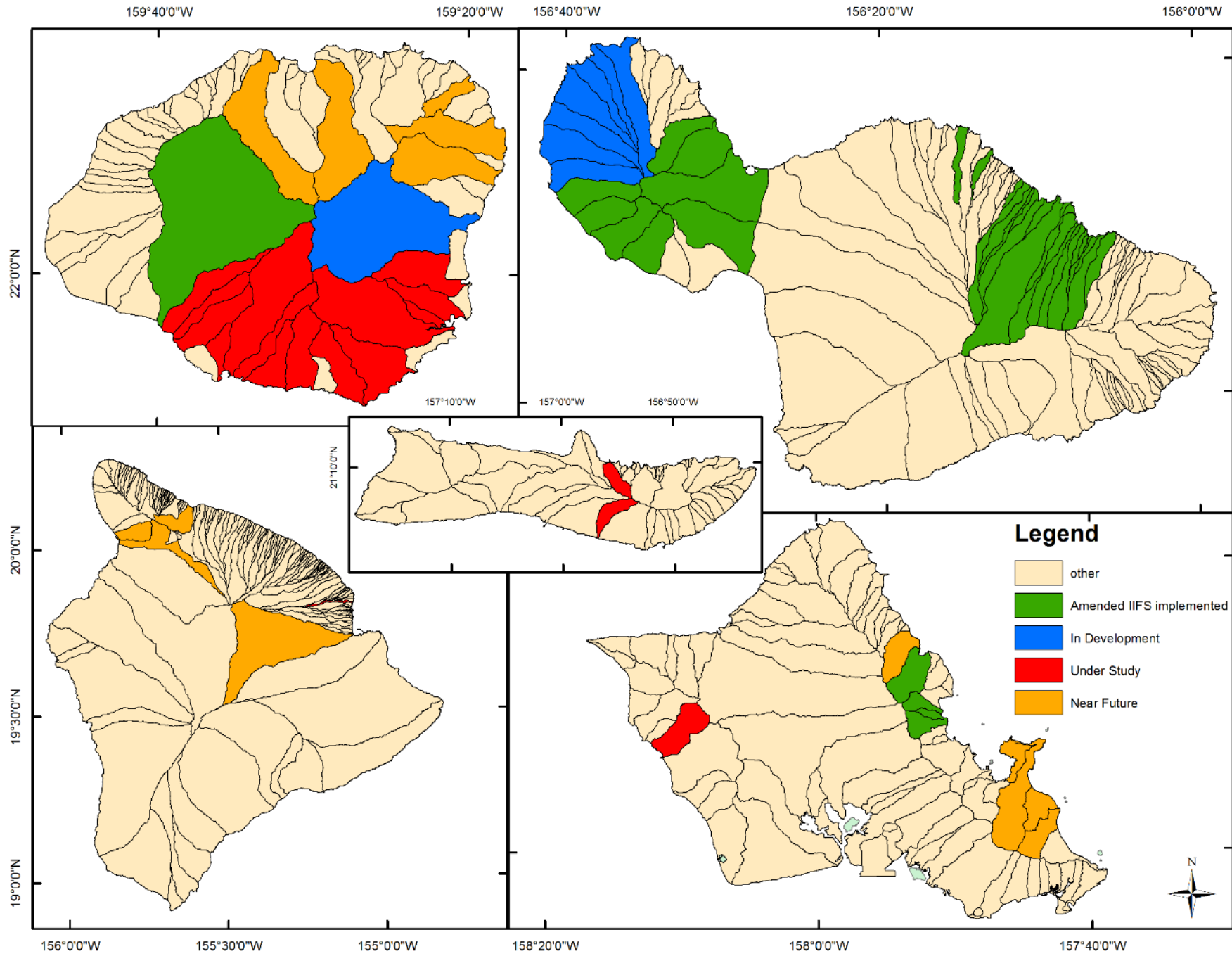
Update on Development and Implementation of Interim Instream Flow Standards in Southeast Kaua'i

C-5

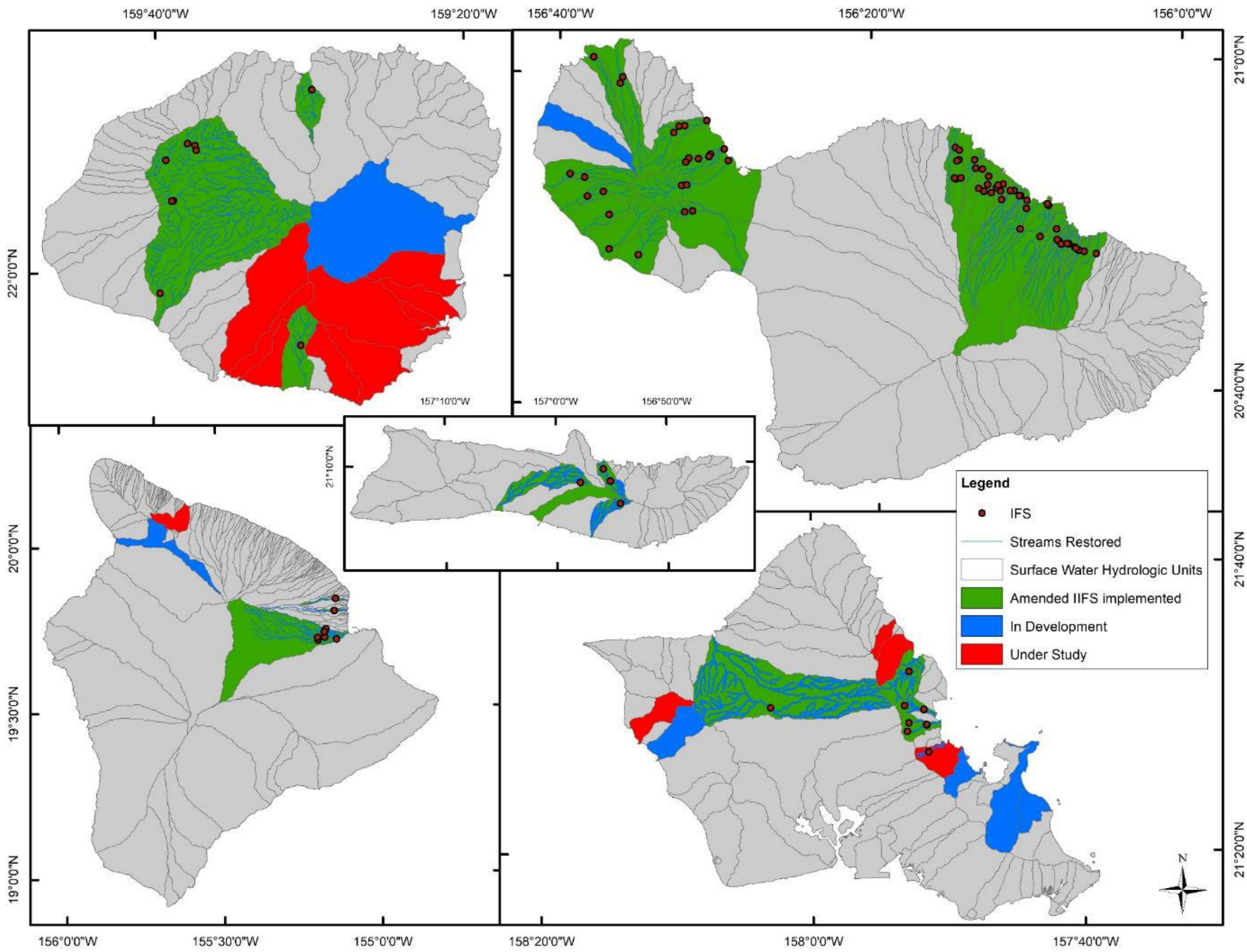
November 21, 2023



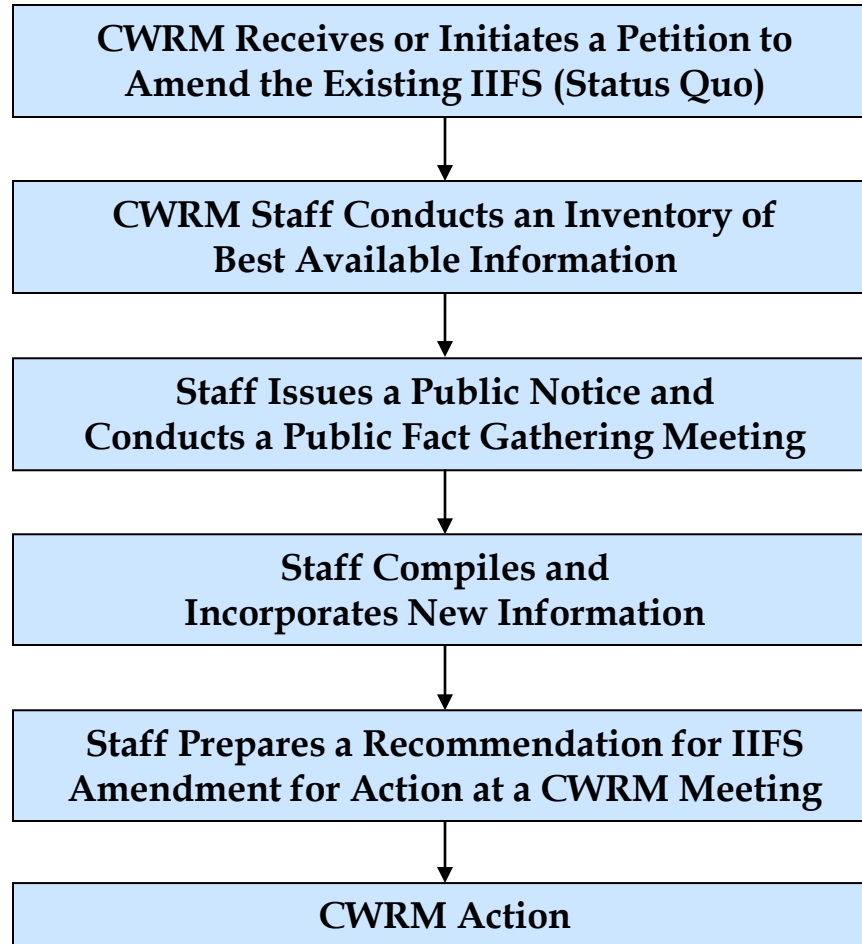
2018 Statewide interim IFS Priority Areas



2023 Statewide Interim IFS Priority Areas

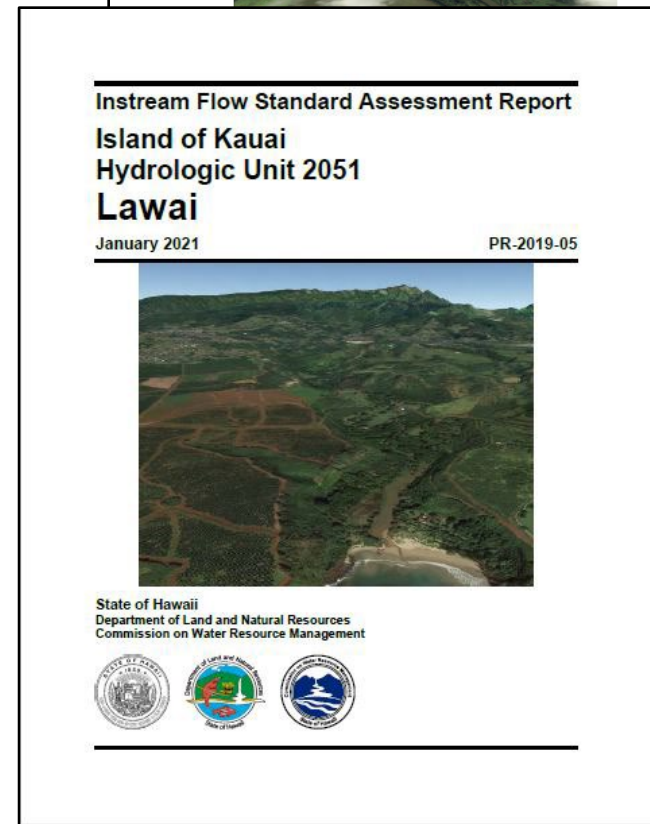
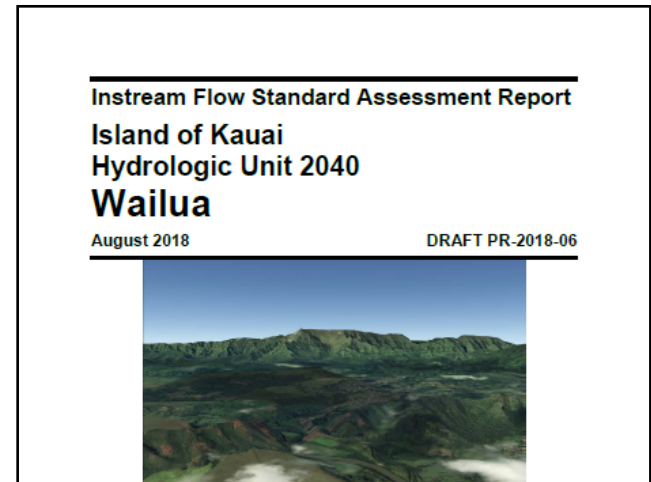


Interim IFS Process



Instream Flow Standard Assessment Report

- Summarizes best available information
- Working document
- Used as a reference → not a recommendation
- Wailua Hydrologic Unit
 - Initial draft published May 2018
 - Updated August 2018
 - Continuing to be updated with hydrologic data
 - USGS SE Kauai publication data added



Instream Flow Standard Assessment Report

Hydrology

- Median Flow
- Base Flow
- Pre-Diversion Flow Estimate
- Groundwater Interaction
- Surface-Water Use
- Ground-Water Use
- Other

Fish/Wildlife Habitat

- Stream Channelizations
- Native Vertebrates
- Invertebrates
- Invasive Species
- Recruitment
- Abundance
- Diversity
- Distribution
- Other

Recreation

- Swimming
- Nature Study
- Fishing
- Boating
- Parks
- Other

Ecosystem Maintenance

- Estuaries
- Wetlands
- Nearshore Waters
- Natural Area Reserves
- National Parks
- Other Protected Areas
- Other

Aesthetics

- Scenic Views
- Waterfalls
- Tourism
- Other

Navigation

- Boating
- Other

Hydropower

- Present Use
- Potential Use
- Other

Water Quality

- Water Quality Standards
- 303(d) Impaired Waters
- Total Maximum Daily Loads
- Land Use
- Other

Conveyance of Water

- Multiple Diversions on a Single Stream
- Other

Hawaiian Rights

- Traditional and Customary Rights
- Taro Cultivation
- Appurtenant Rights
- Cultural Values
- Other

Noninstream Uses

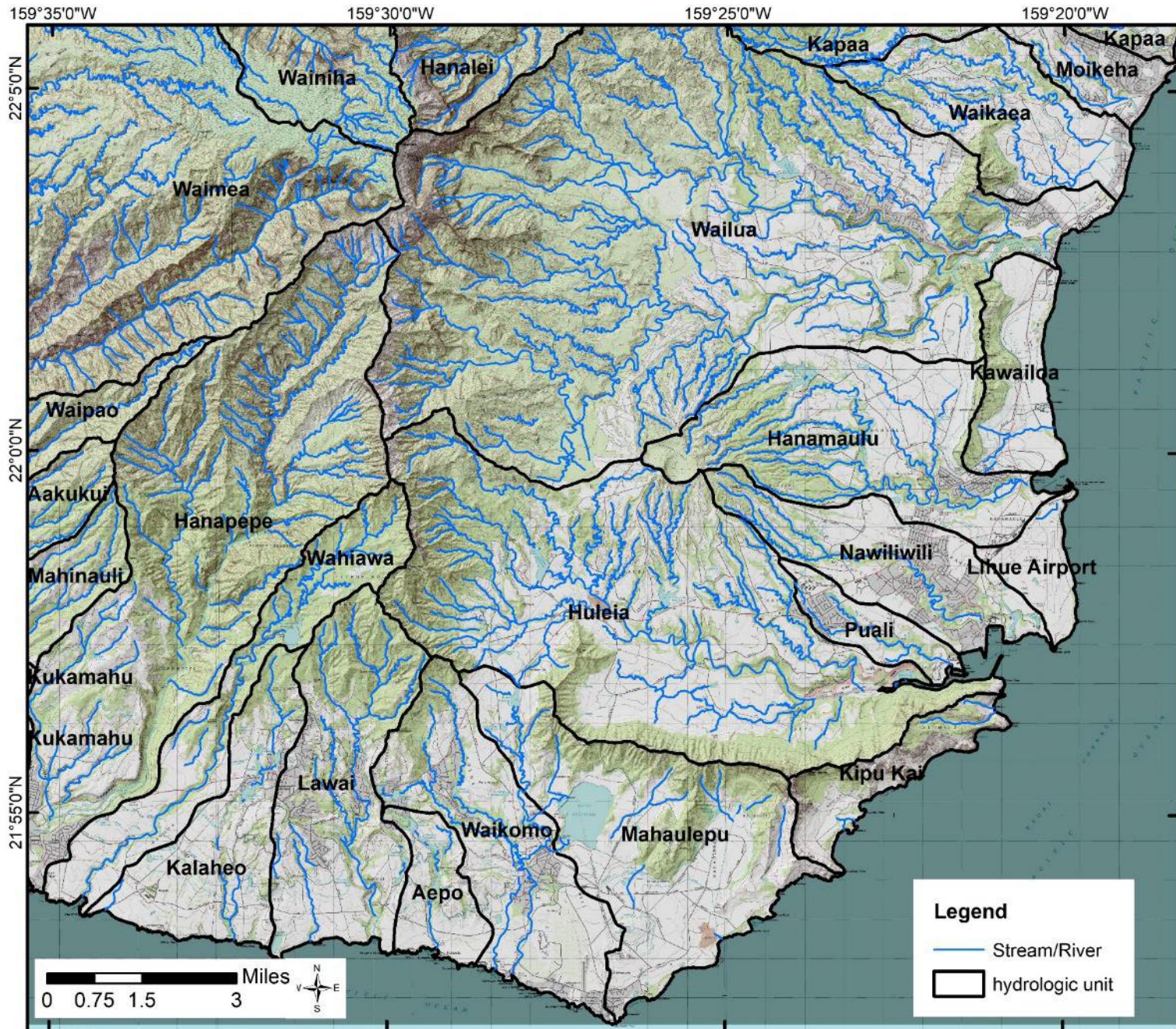
- Diversions
- Domestic/Municipal Use
- Agriculture
- Industrial
- Present vs. Potential Use
- Economic Impacts

Southeast Kaua'i Timeline

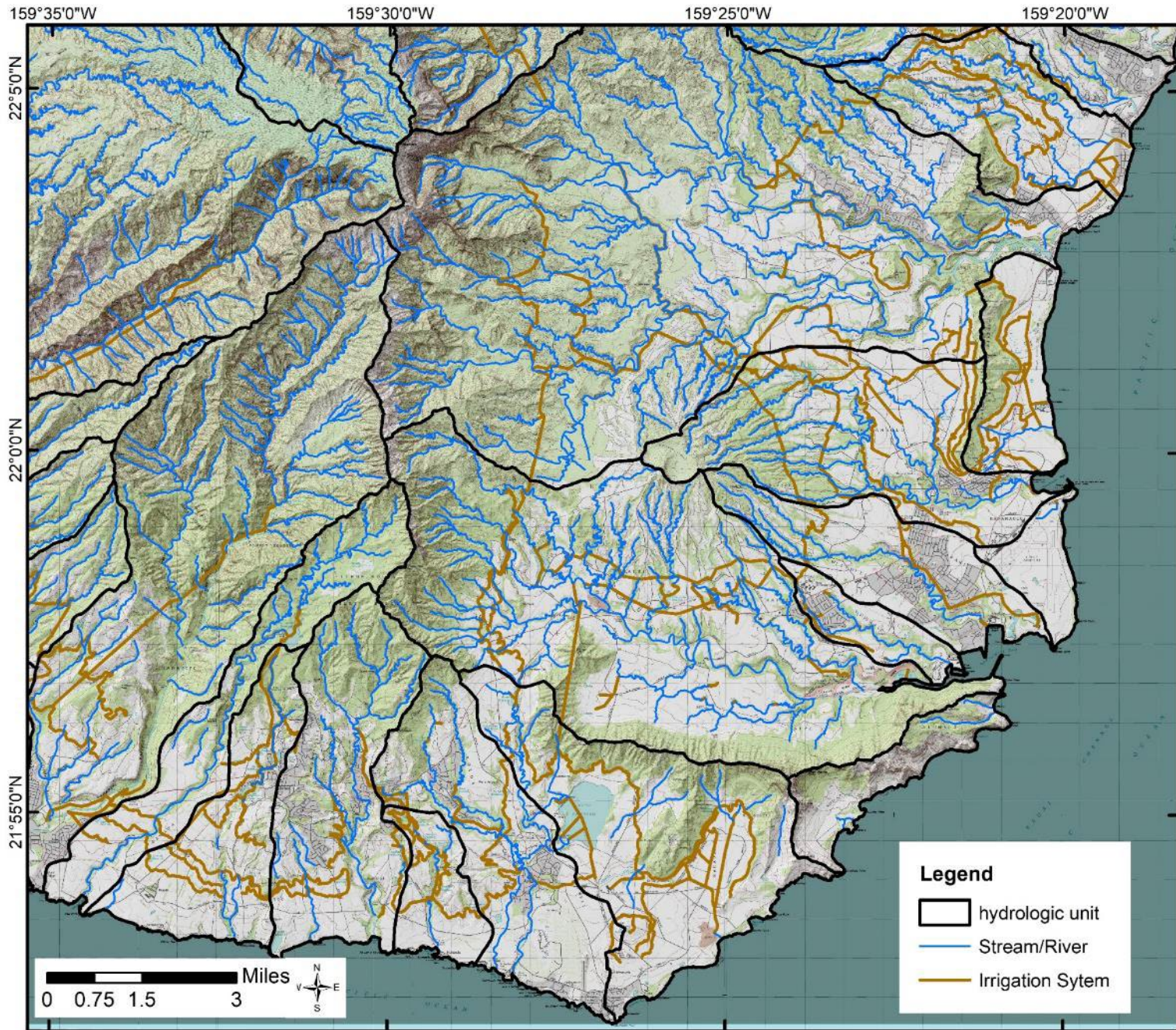
2015-2020	USGS fieldwork
2015	CWRM began fieldwork
Spring 2018	Wailua IFSAR draft published
2018	Proposed amending interim IFS for Wai'ale'ale and Waikoko → proceedings halted by CCH request
Fall 2019	Lāwa'i IFSAR draft published
Fall 2019	USGS Low-Flow Study Projected Publication
June 2020	USGS 16057900 Waiahi Str US Upper Powerhouse station installed
Dec 2020	USGS Low-Flow Study Actual Publication
Mar 2021	Lāwa'i Interim IFS approved
Feb 2022	USGS 1606950 NF Wailua abv N Wailua Ditch Int station installed
2022	CCH request for Wai'ale'ale and Waikoko interim IFS dropped
2023	Waikomo IFSAR in development



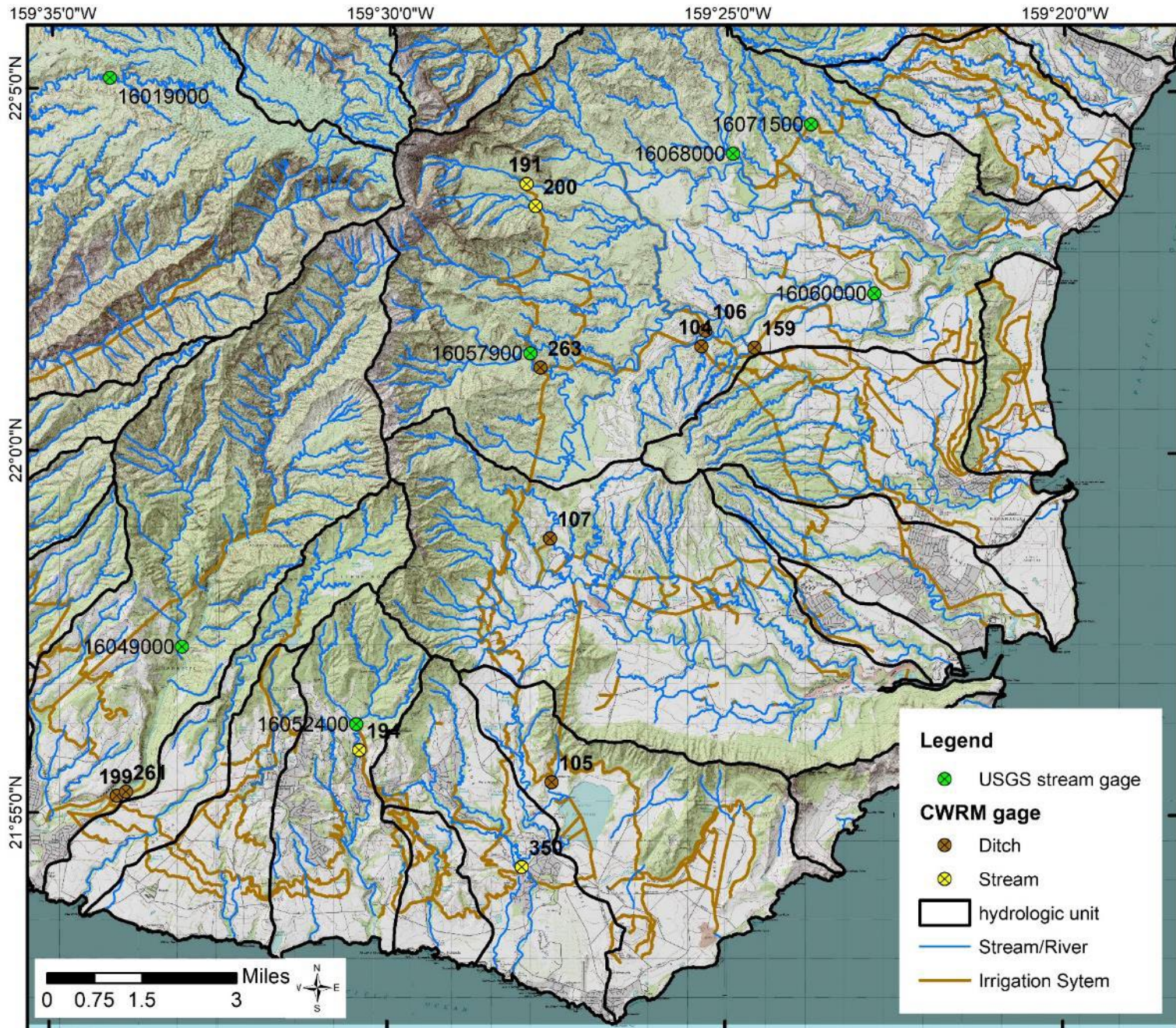
Surface Water Hydrologic Units in SE Kaua'i



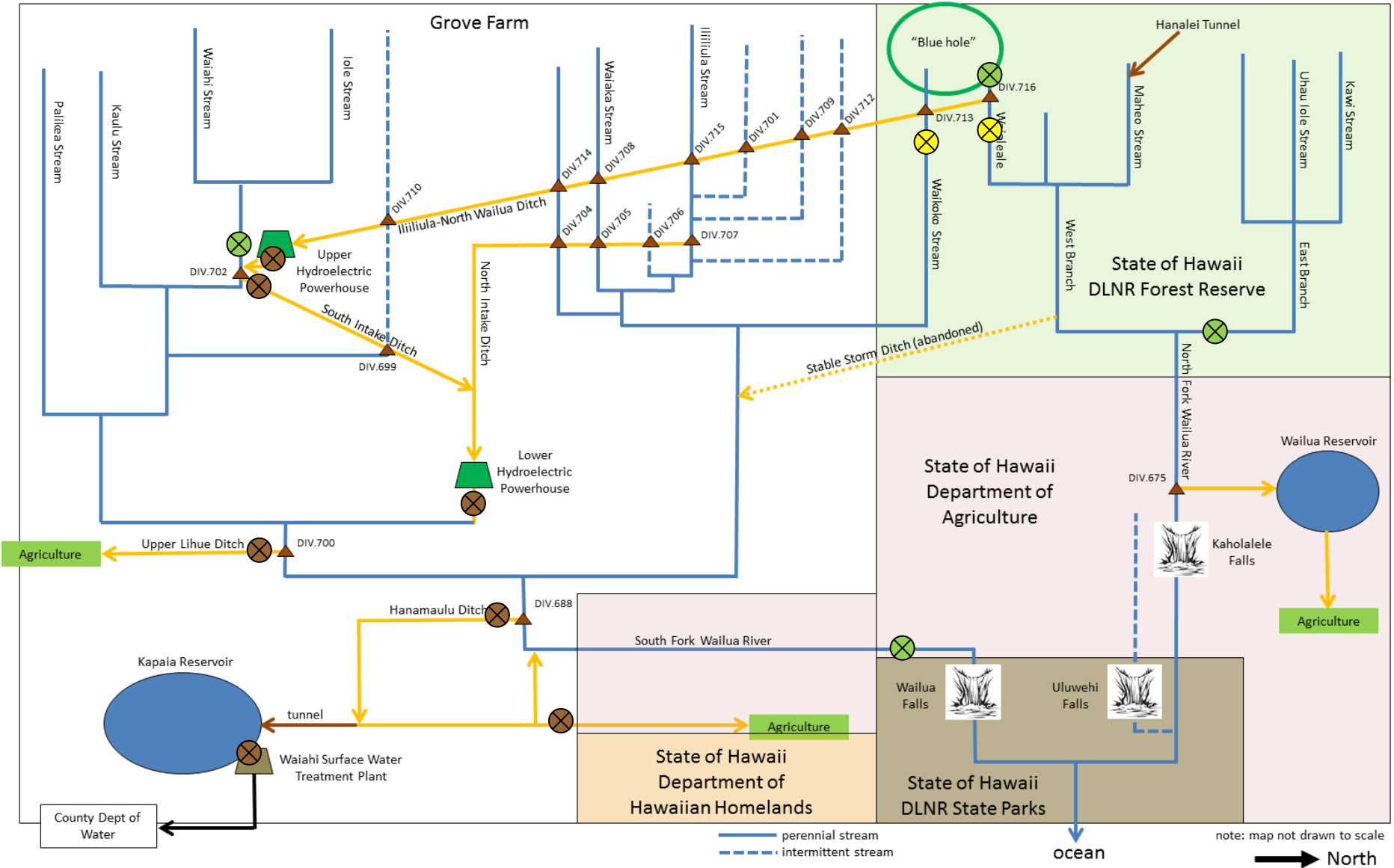
Irrigation Systems in SE Kaua'i



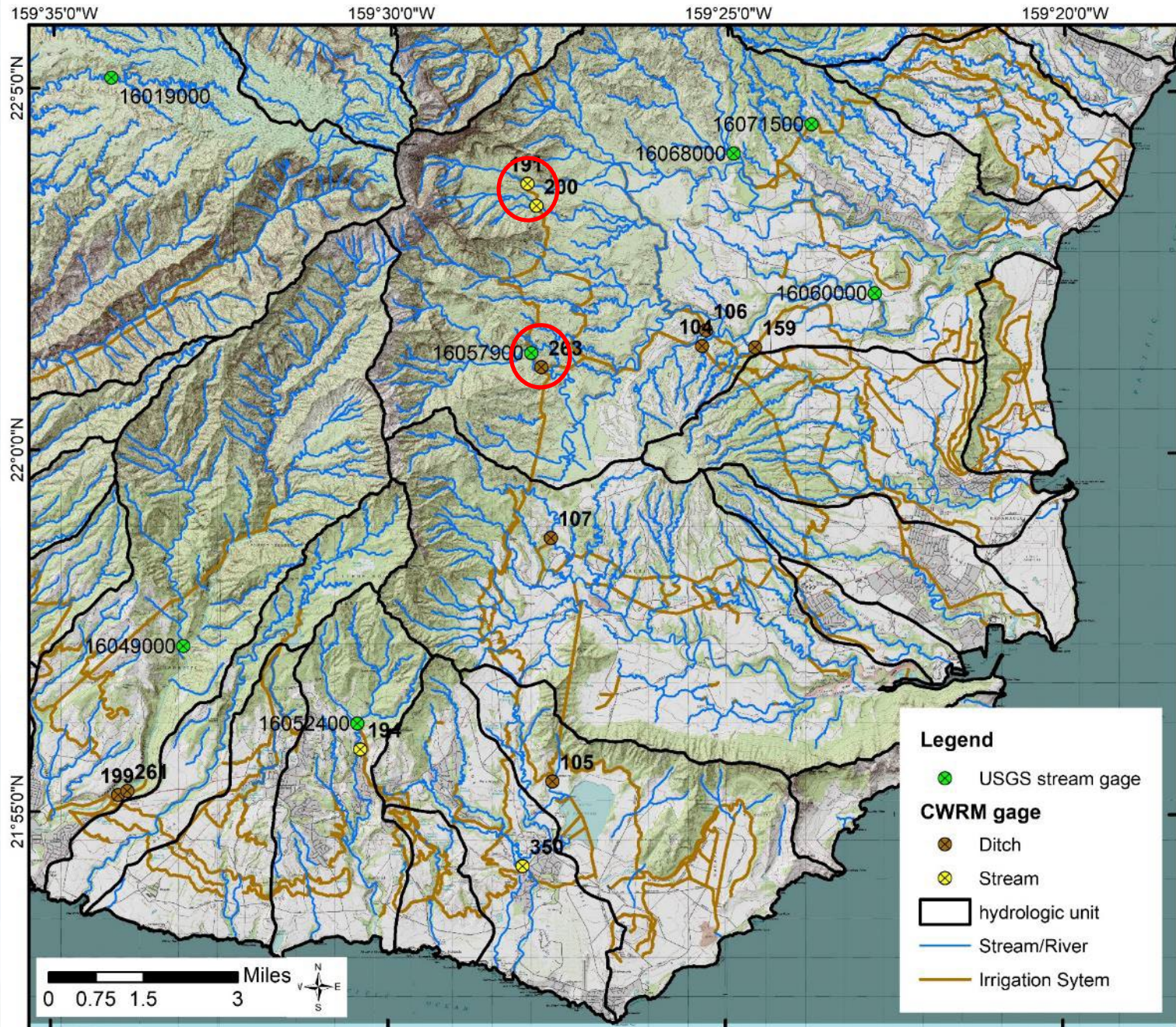
Surface Water Monitoring in SE Kaua'i



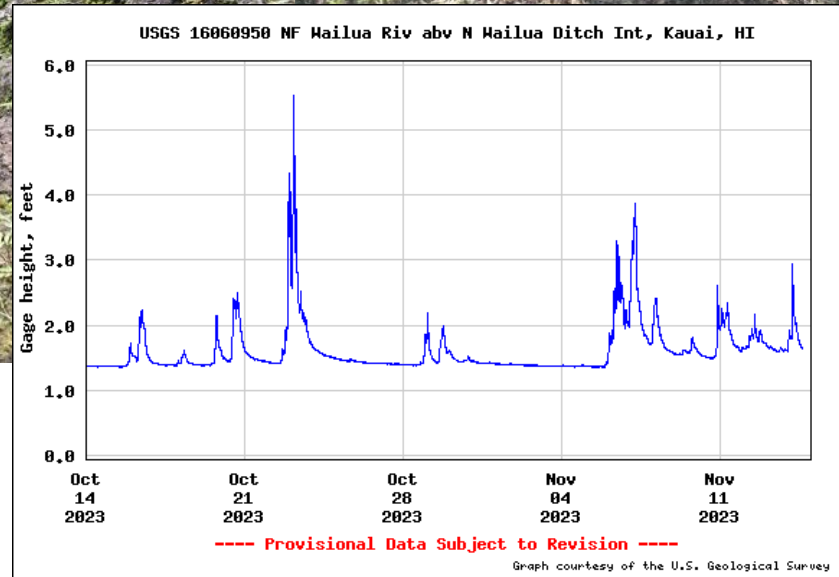
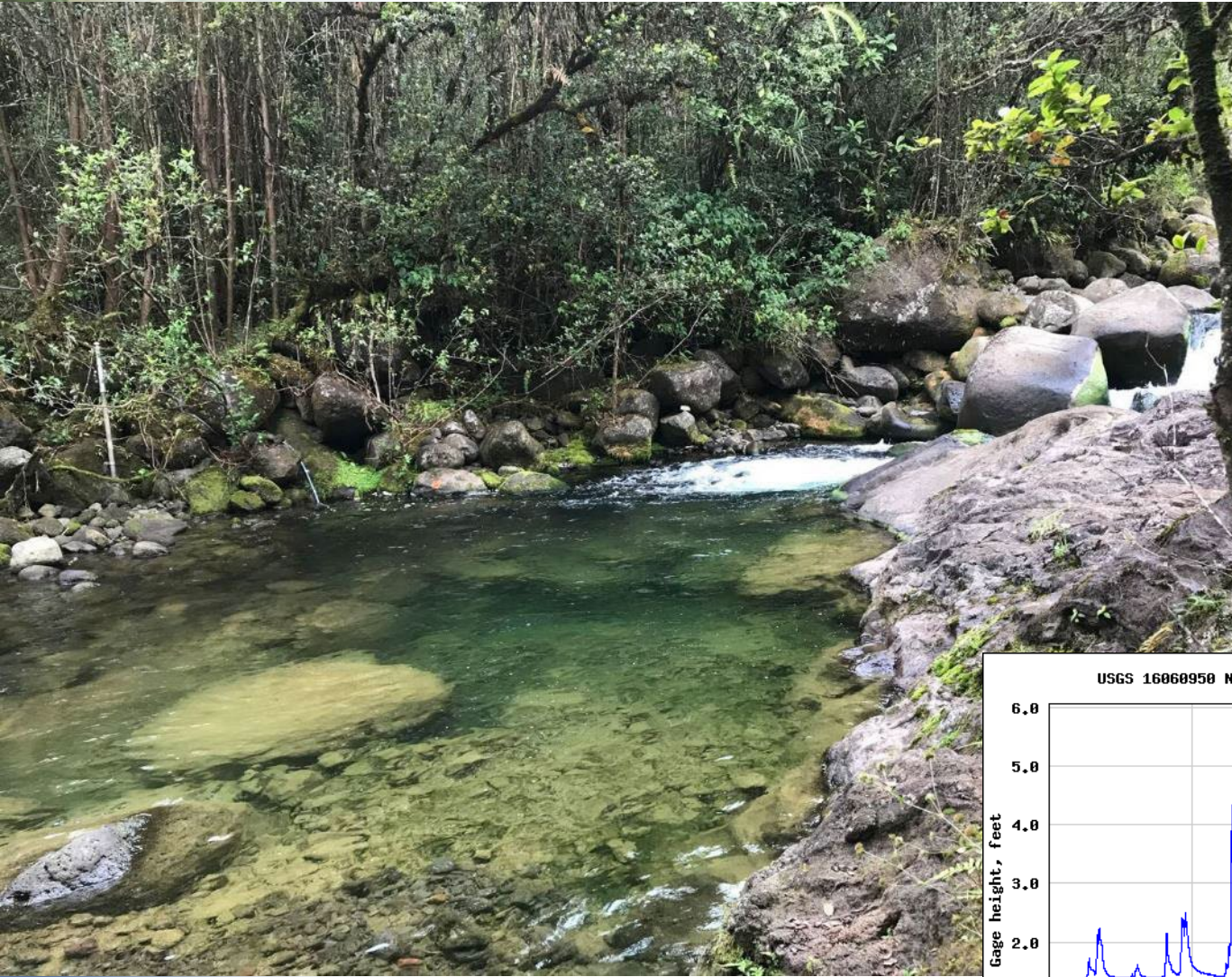
Surface Water Monitoring in Wailua



Surface Water Monitoring in Wailua

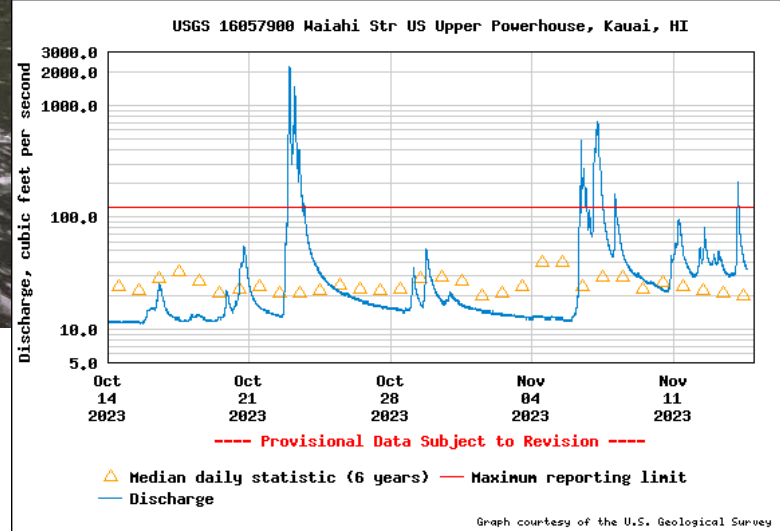


USGS 16060950 NF Wailua Riv abv N Wailua Ditch



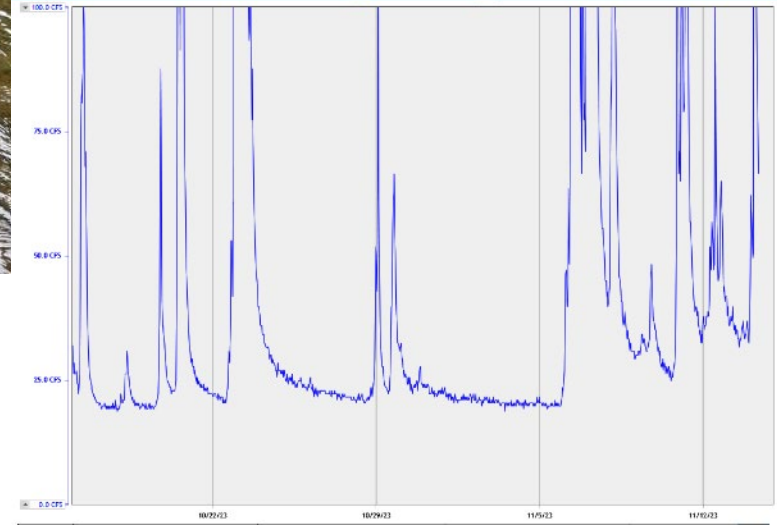
station costs \$26,000 per year

USGS 16059700 Waiahi Str US Upper Powerhouse



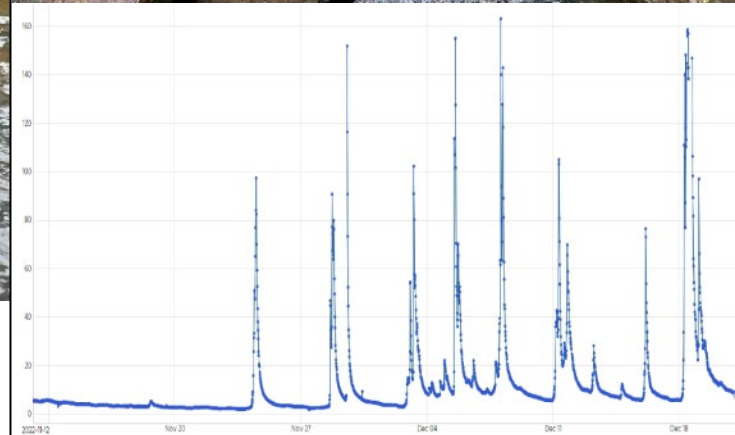
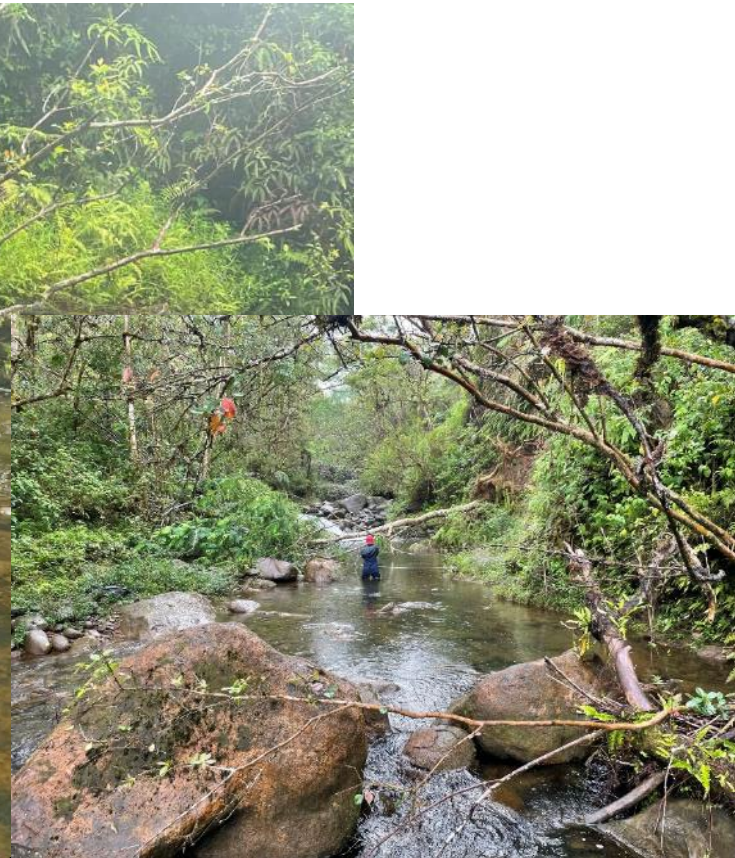
station costs \$24,000 per year

CWRM 2-191 NF Wailua at 1,080 ft elevation



station costs \$10,000 per year

CWRM 2-200 Waikoko Stream at 1,100 ft elevation

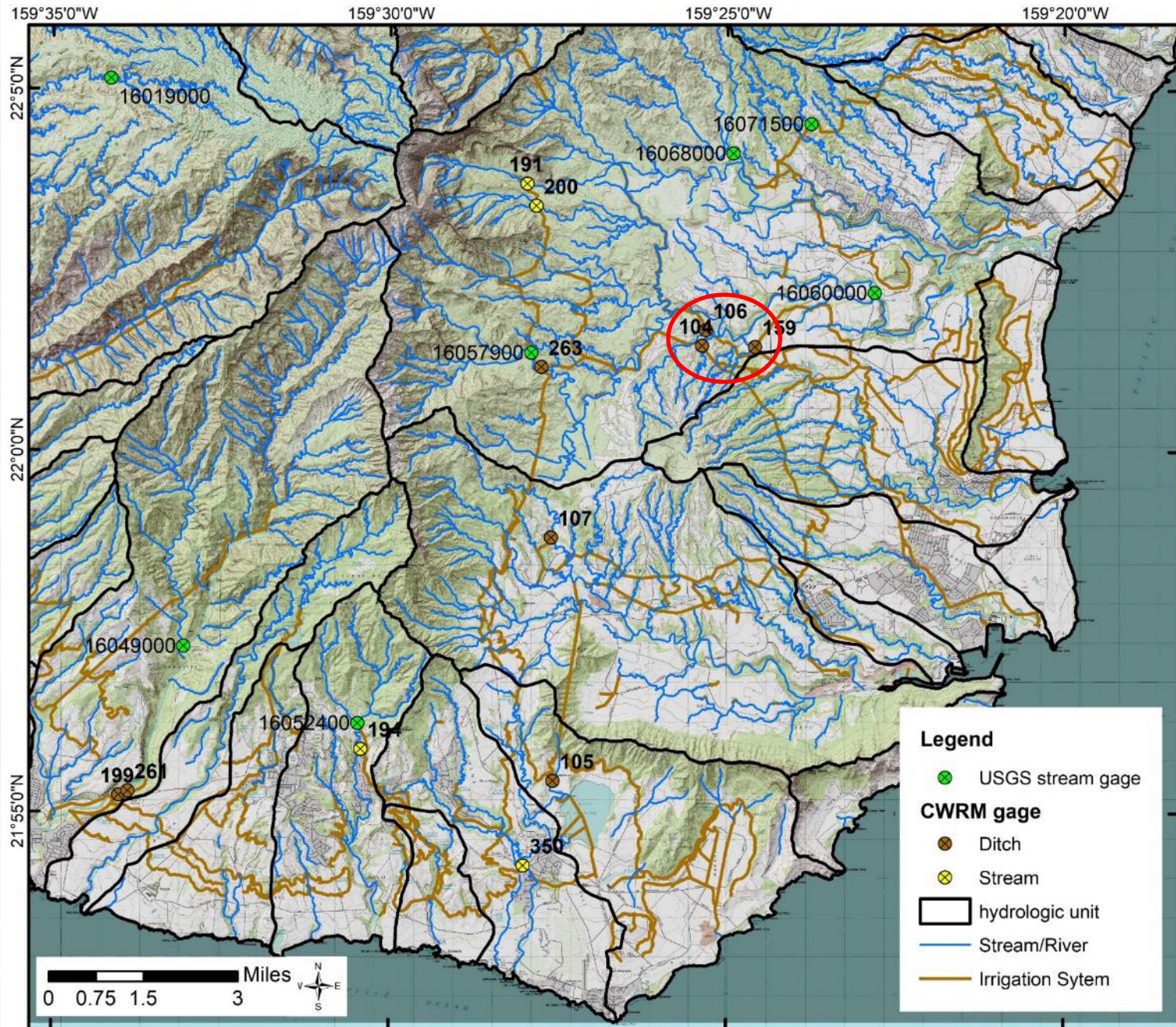


station costs \$6,000 per year

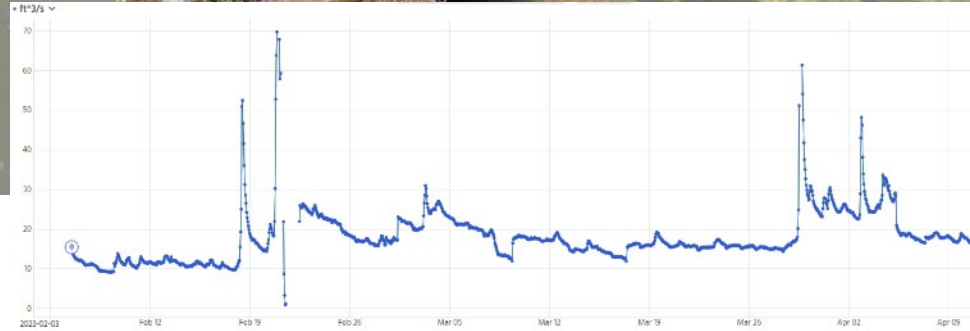
CWRM 2-263 South Intake Ditch



Surface Water Monitoring in Wailua

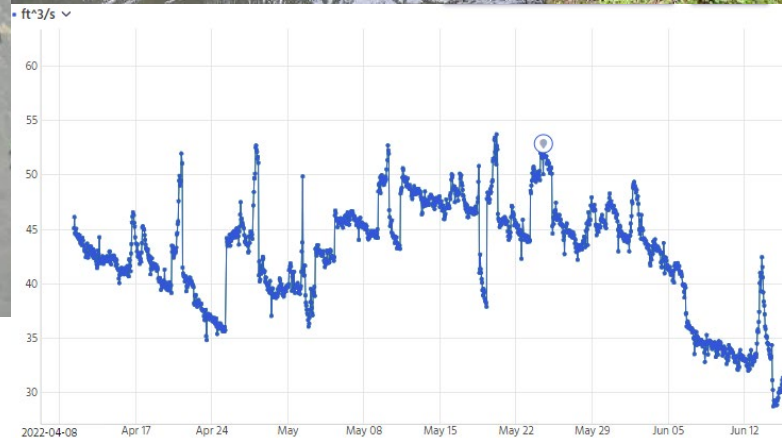


CWRM 2-104 Upper Līhu'e Ditch



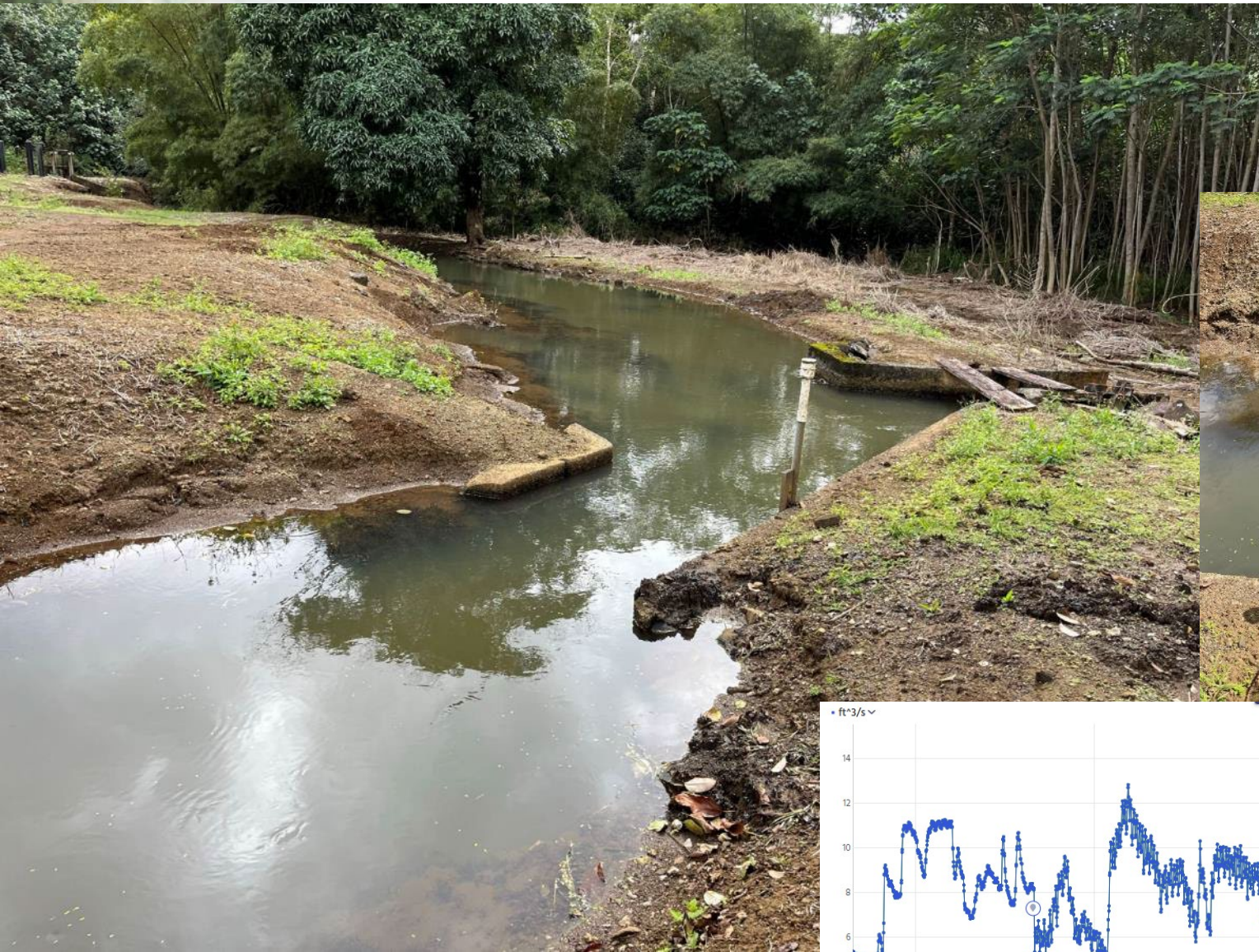
station costs \$6,000 per year

CWRM 2-106 Hanamā'ulu Ditch



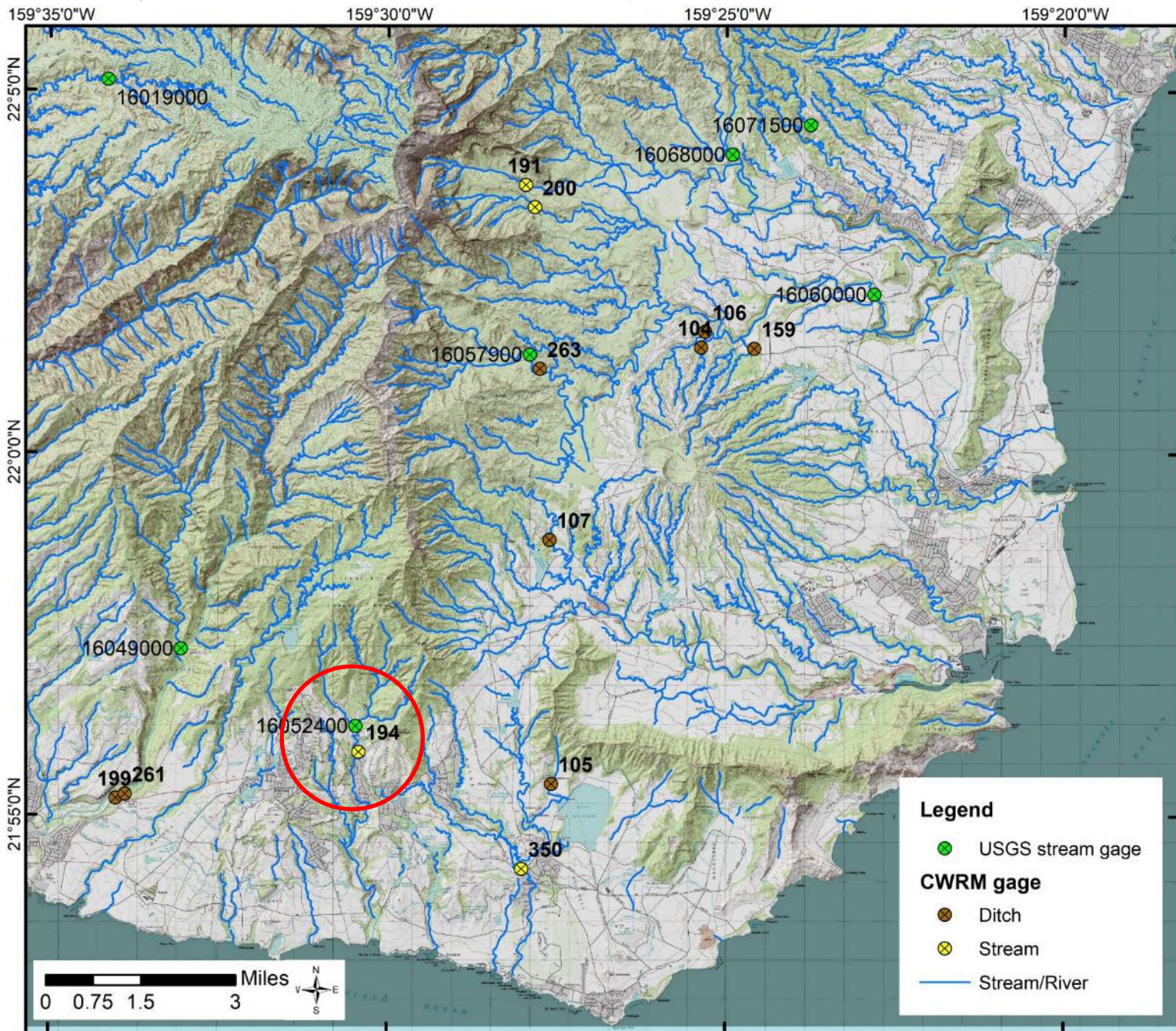
station costs \$6,000 per year

CWRM 2-159 ADC-Hanamā'ulu Ditch



station costs \$5,000 per year

Surface Water Monitoring in SE Kaua'i



Modifications to Lāwa'i Ditch Intake

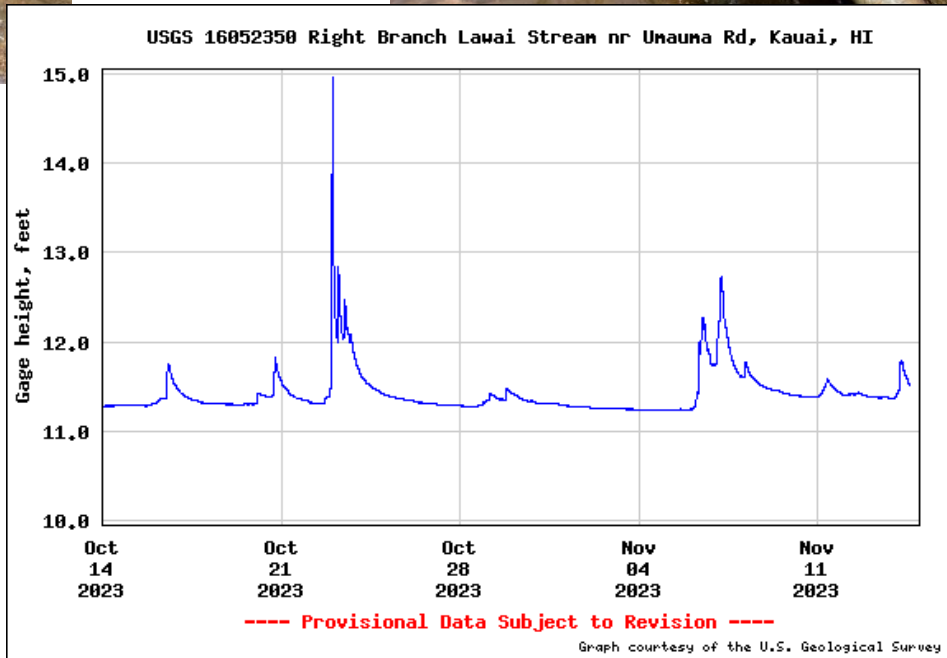


CWRM 2-194 Lāwa'i Stream below Lāwa'i Ditch



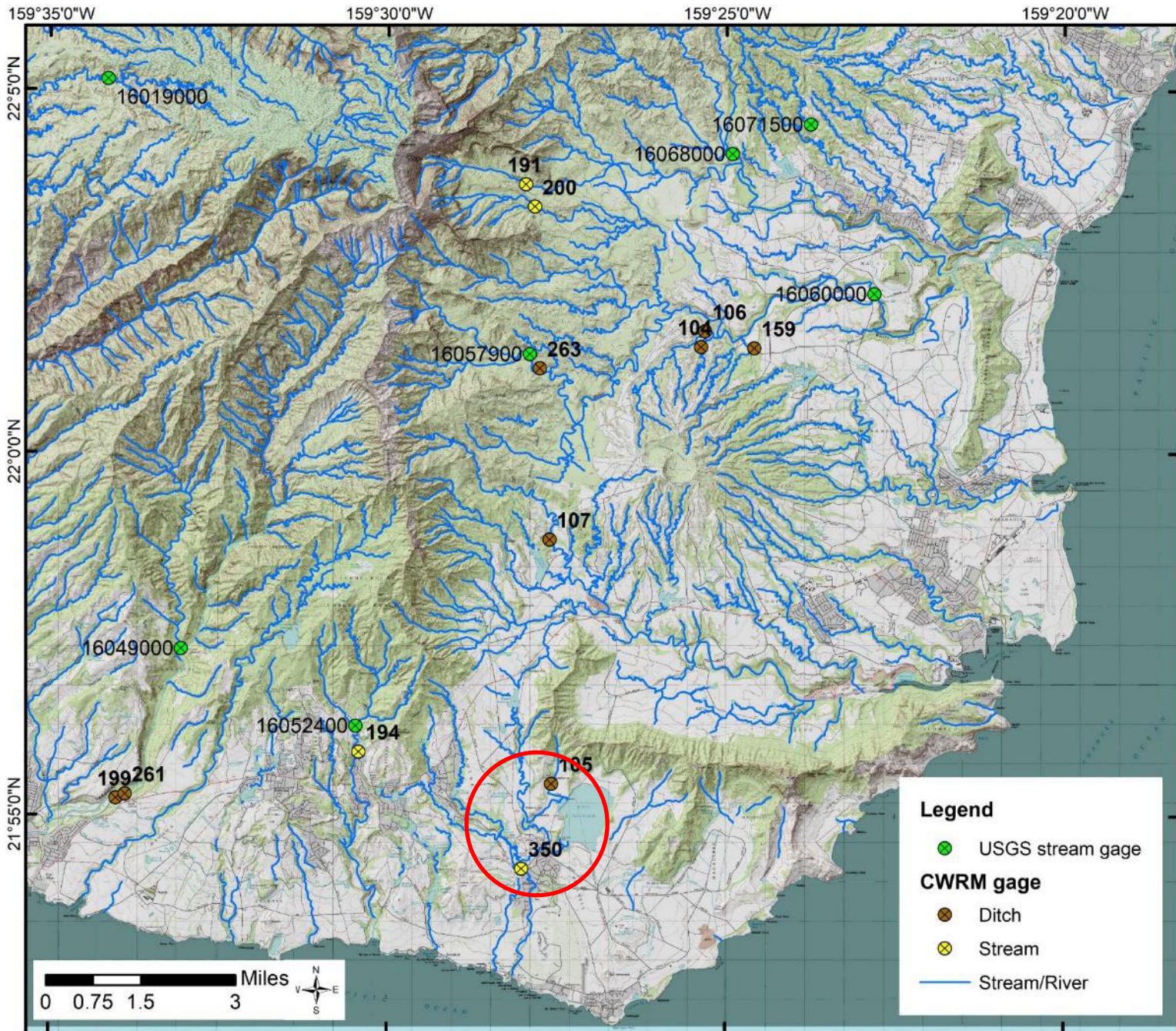
station costs \$10,000 per year

USGS 16052350 Right Branch Lāwa'i Stream



station costs \$24,000 per year

Surface Water Monitoring in SE Kaua'i



CWRM 2-105 Waita Ditch abv Waita Reservoir

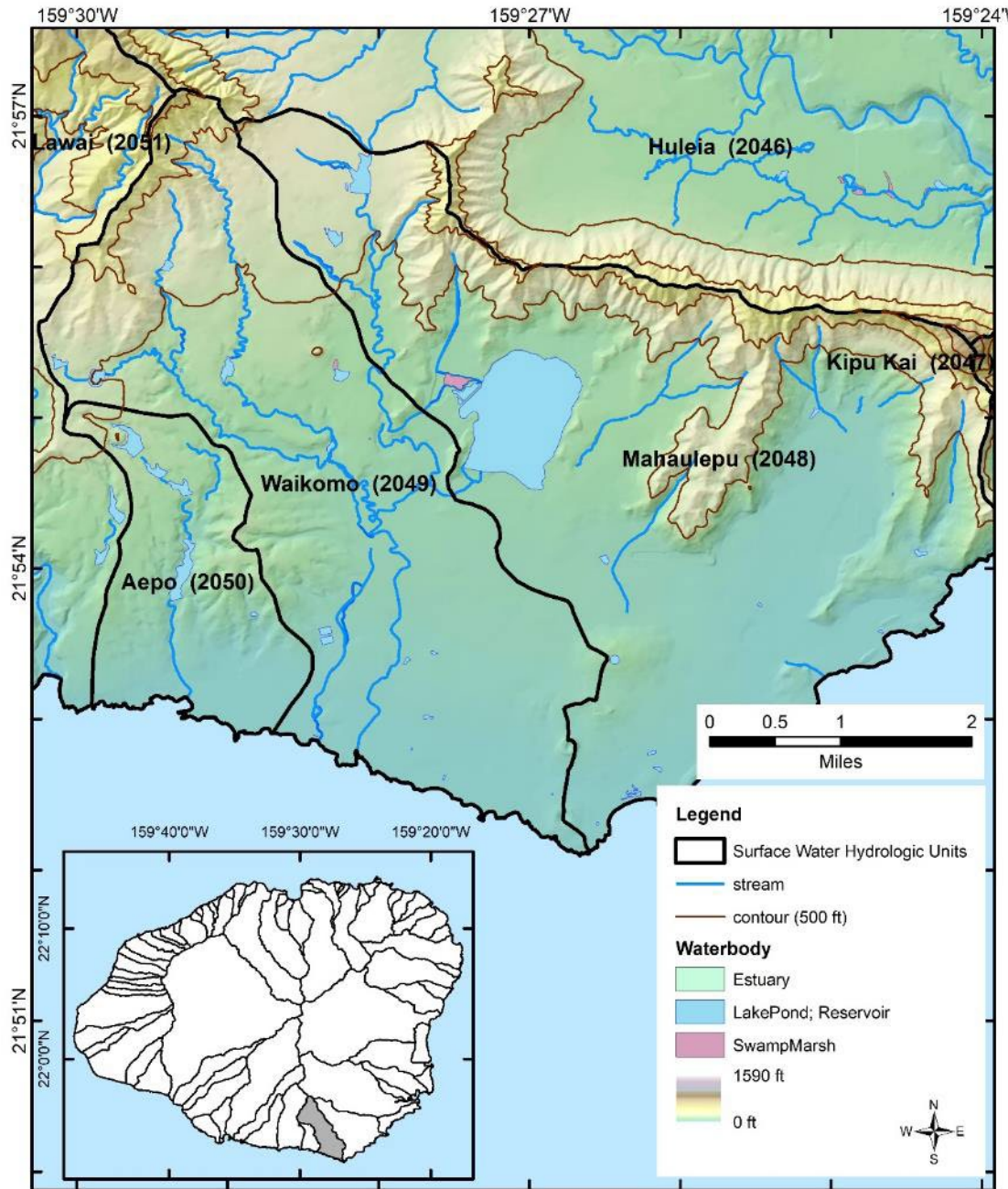


station costs \$6,000 per year

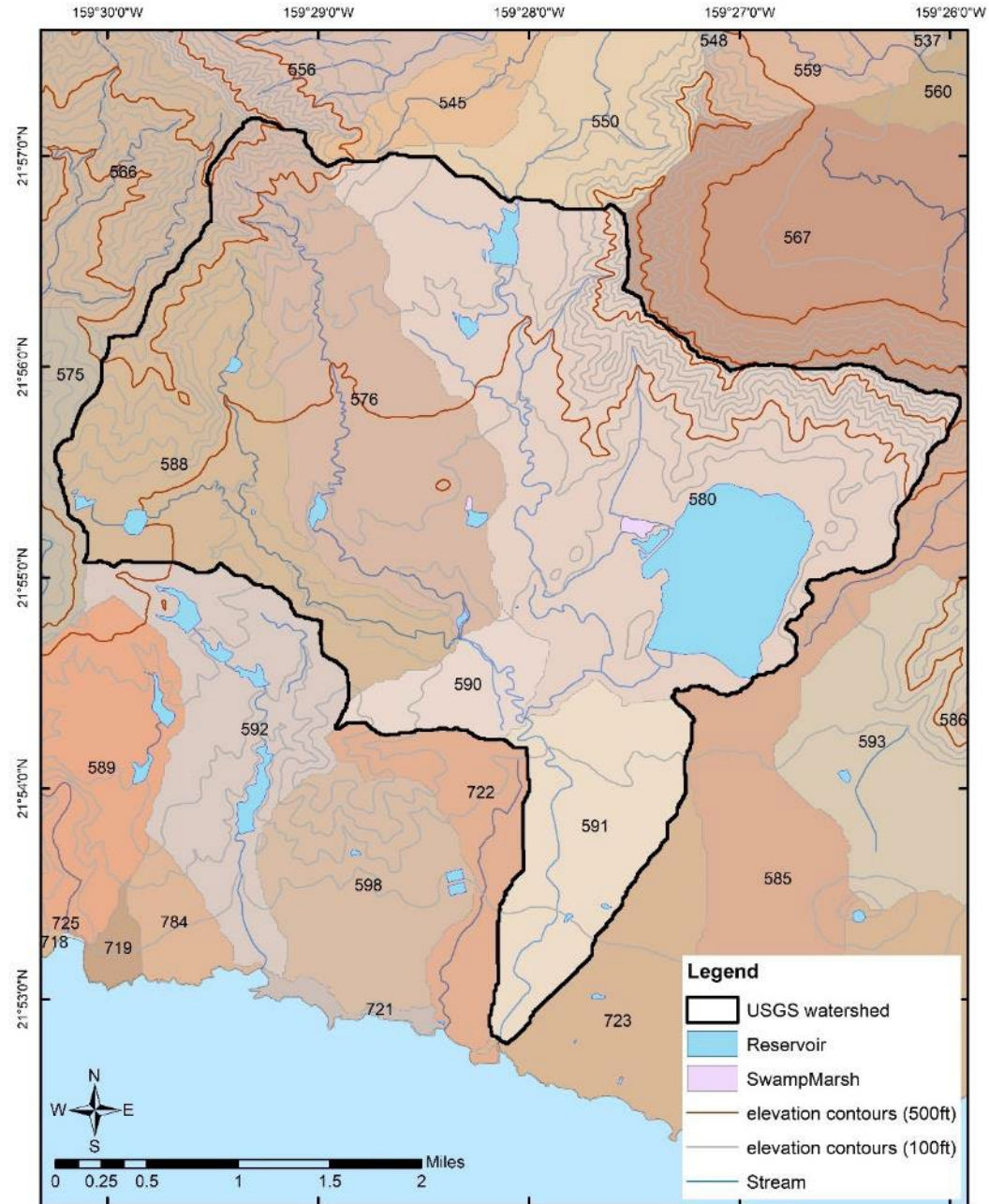
Waikomo above Mouth



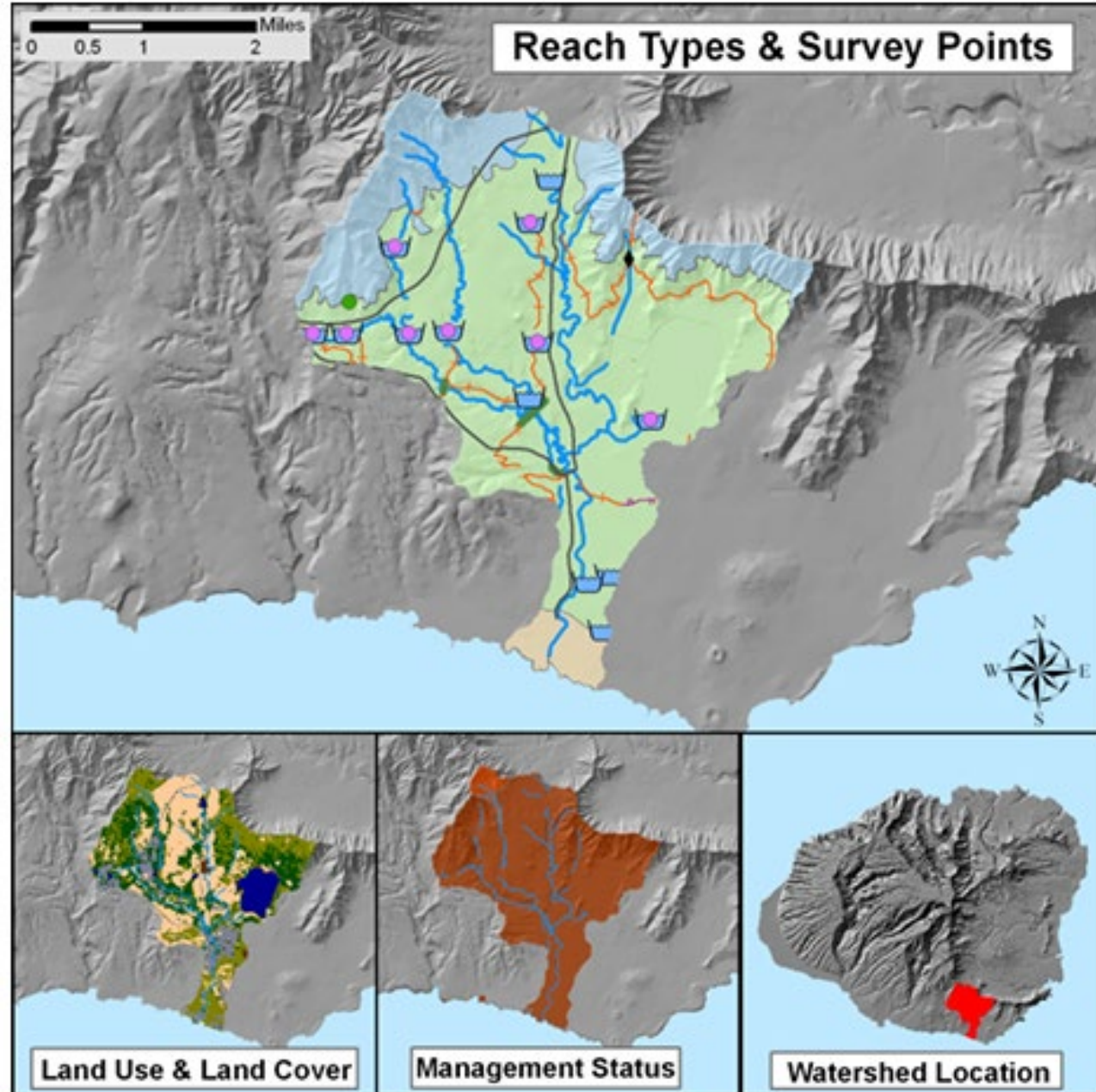
Waikomo Surface Water Hydrologic Unit



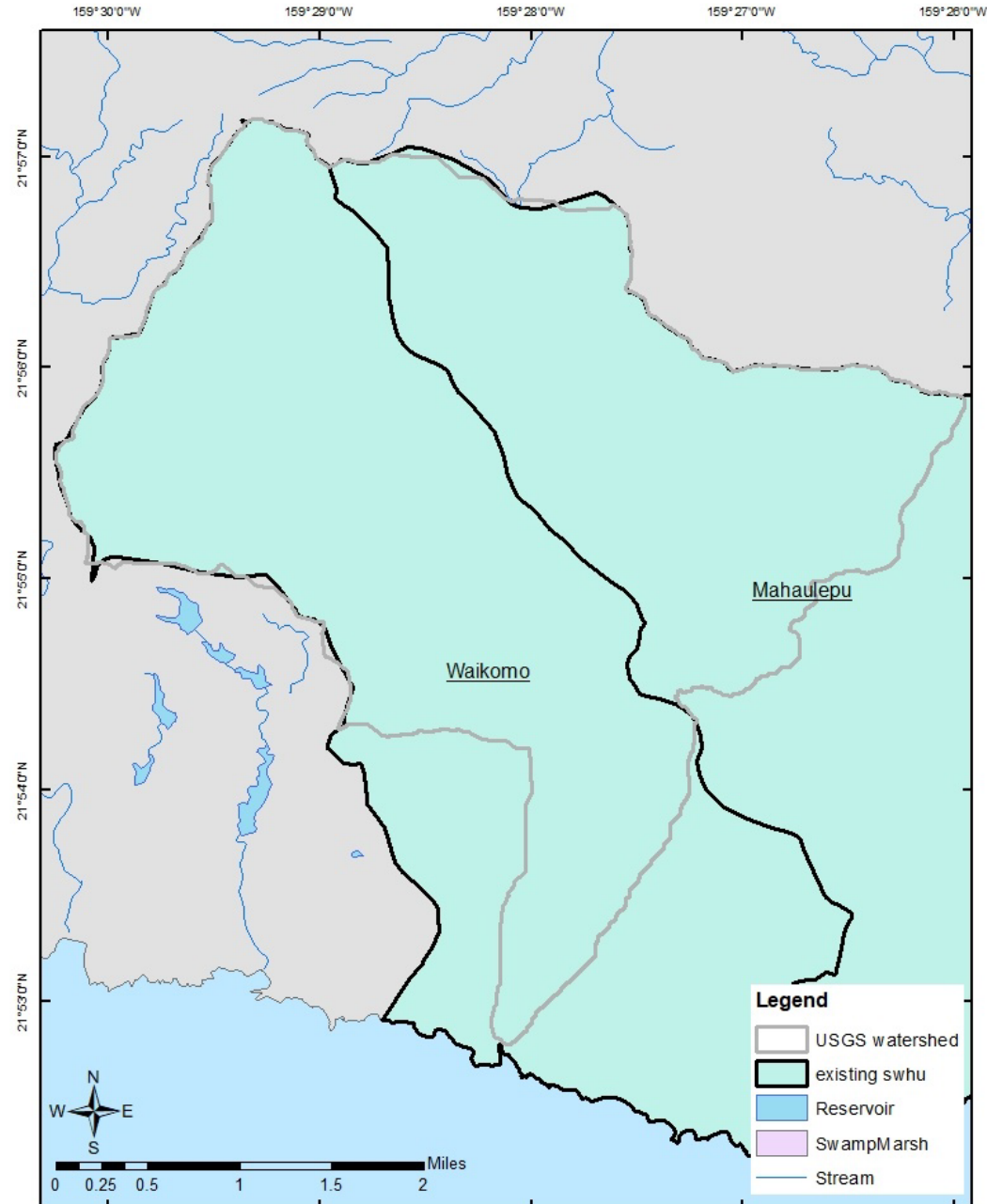
Waikomo USGS Watershed Boundary



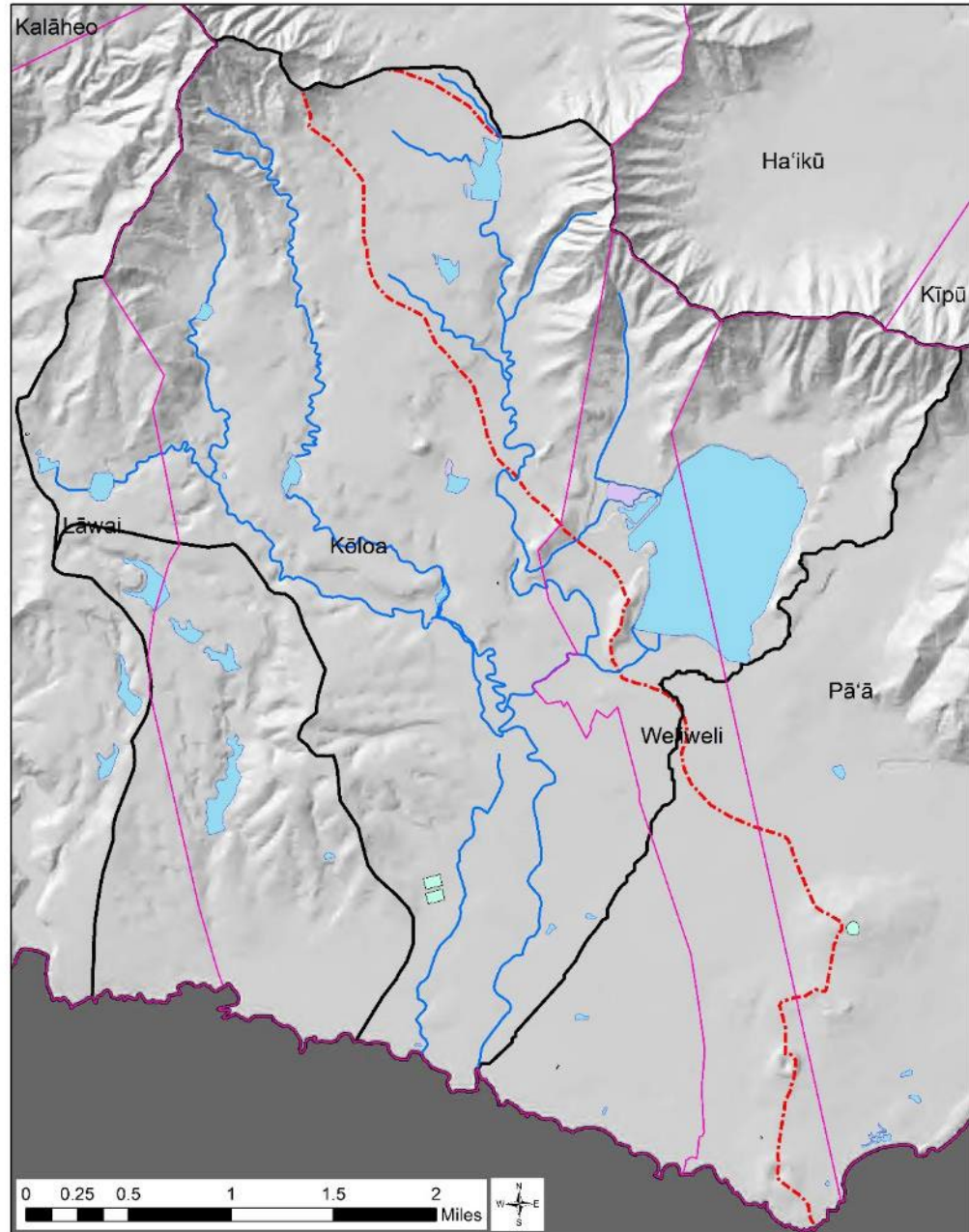
Waikomo DAR Watershed Boundary



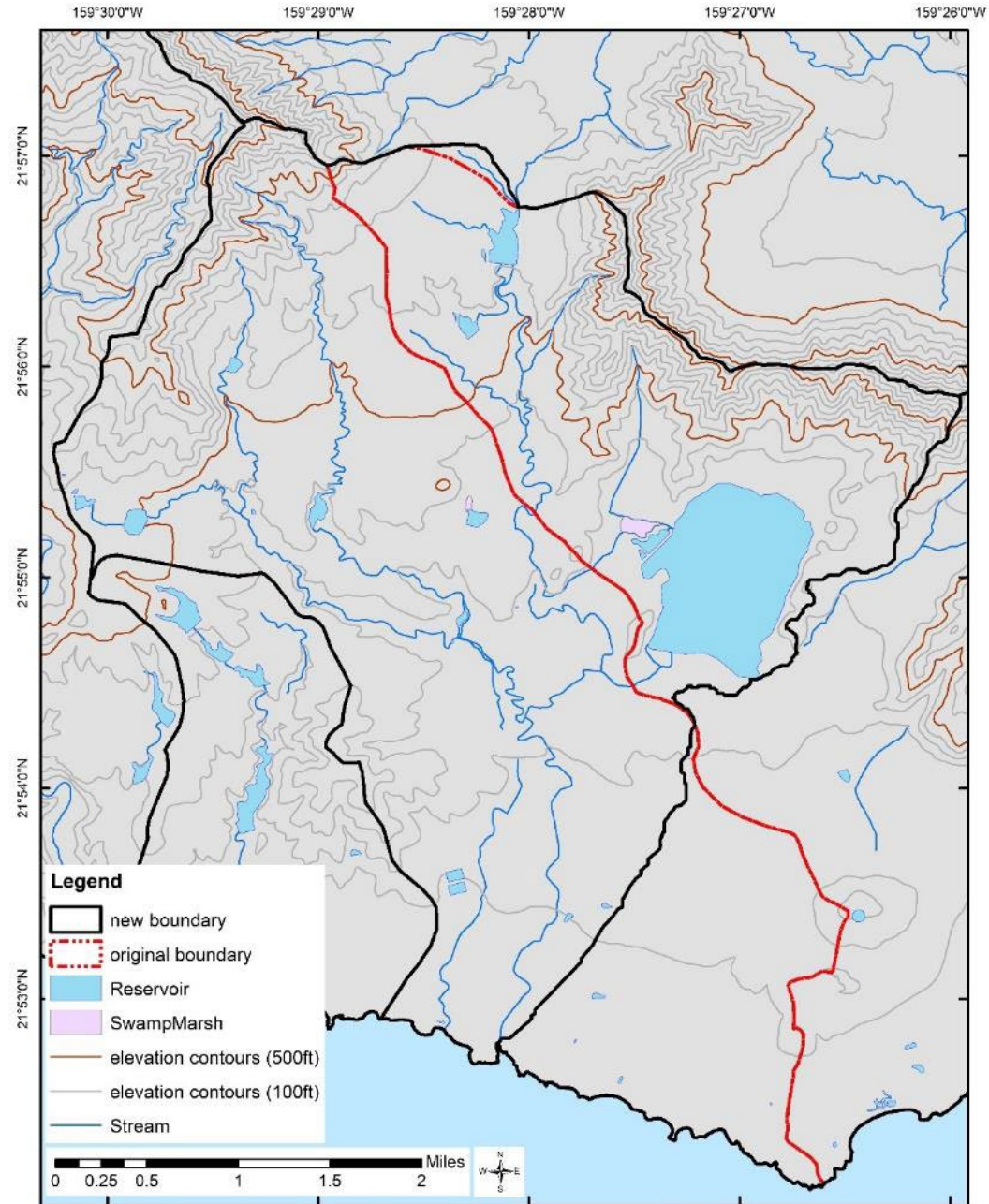
Waikomo Surface Water Hydrologic Unit



Waikomo Surface Water Hydrologic Unit



Waikomo Surface Water Hydrologic Unit



Southeast Kaua'i Next Steps

2024

- Reevaluation of Wailua Hydrologic Data
- Waikomo Hydrologic Unit Boundary
- Waikomo IFSAR Development

Wailua interim IFS recommendations

Waikomo interim IFS recommendations