

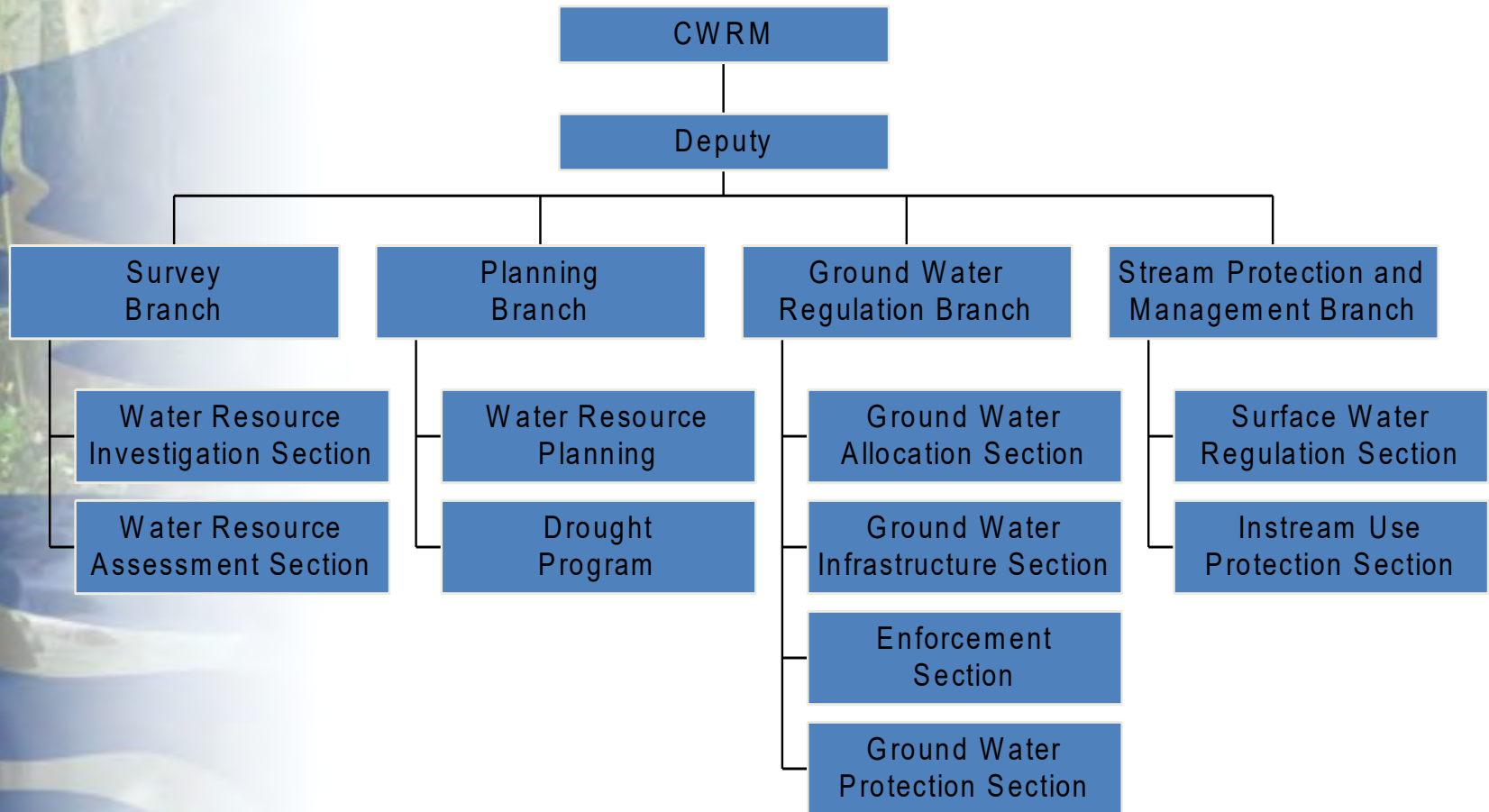
Public Fact Gathering Meeting

*October 28, 2019 6:00pm
Līhu'e Civic Center, Līhu'e*

Instream Flow Standard Assessment Reports for the surface water hydrologic unit of Lāwa'i (2050)



Commission on Water Resource Management (CWRM)



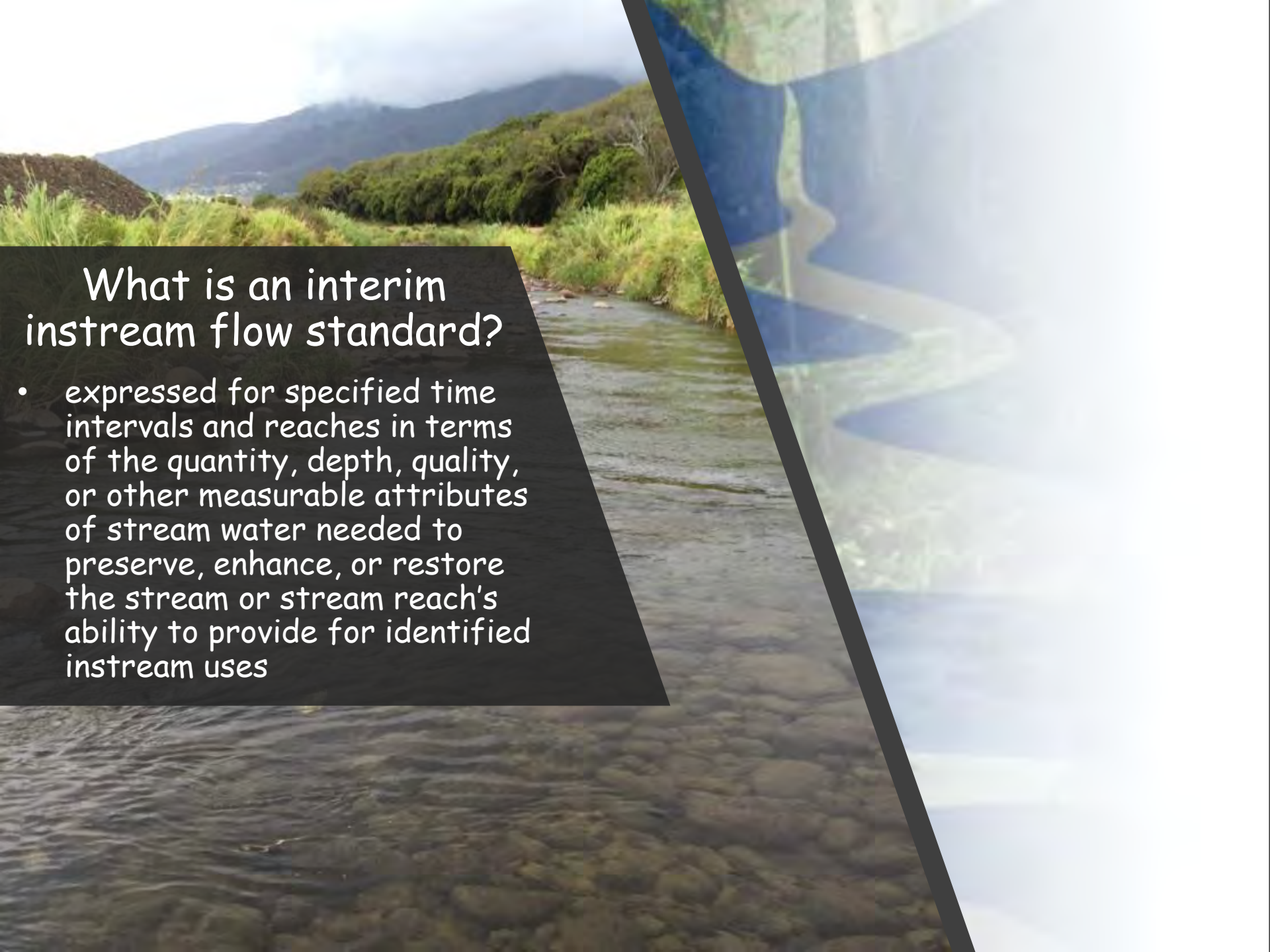
Stream Protection & Management Branch

- Regulate stream channel alterations and stream diversion works
- Set measurable interim instream flow standards
- Respond to requests for determination
- Respond to surface water-related complaints
- Administration of surface water use permits in surface water management areas



Brief History of Surface Water Management

- **1987** State Water Code Developed (HRS 174C)
 - HRS 13-169 Protection of Instream Uses of Water
- **1989** Commission required the registration of all surface water diversions
 - Database of stream diversions established...but many unverified
- **1990** Hawaii Stream Assessment
 - Inventoried ecological, cultural, recreational, riparian uses
- **2002** Stream Protection and Management Branch created
 - Focus has been responding to petitions/Contested Case Hearings Maui; West Kauai
- **2008** First measurable interim IFS set for East Maui
- **2010** Began monitoring Amended interim IFS
- **2017** West Kauai Watershed Agreement established interim IFS for Waimea River and tributaries
- **2018** Commission initiated interim IFS established for 6 streams in West Maui

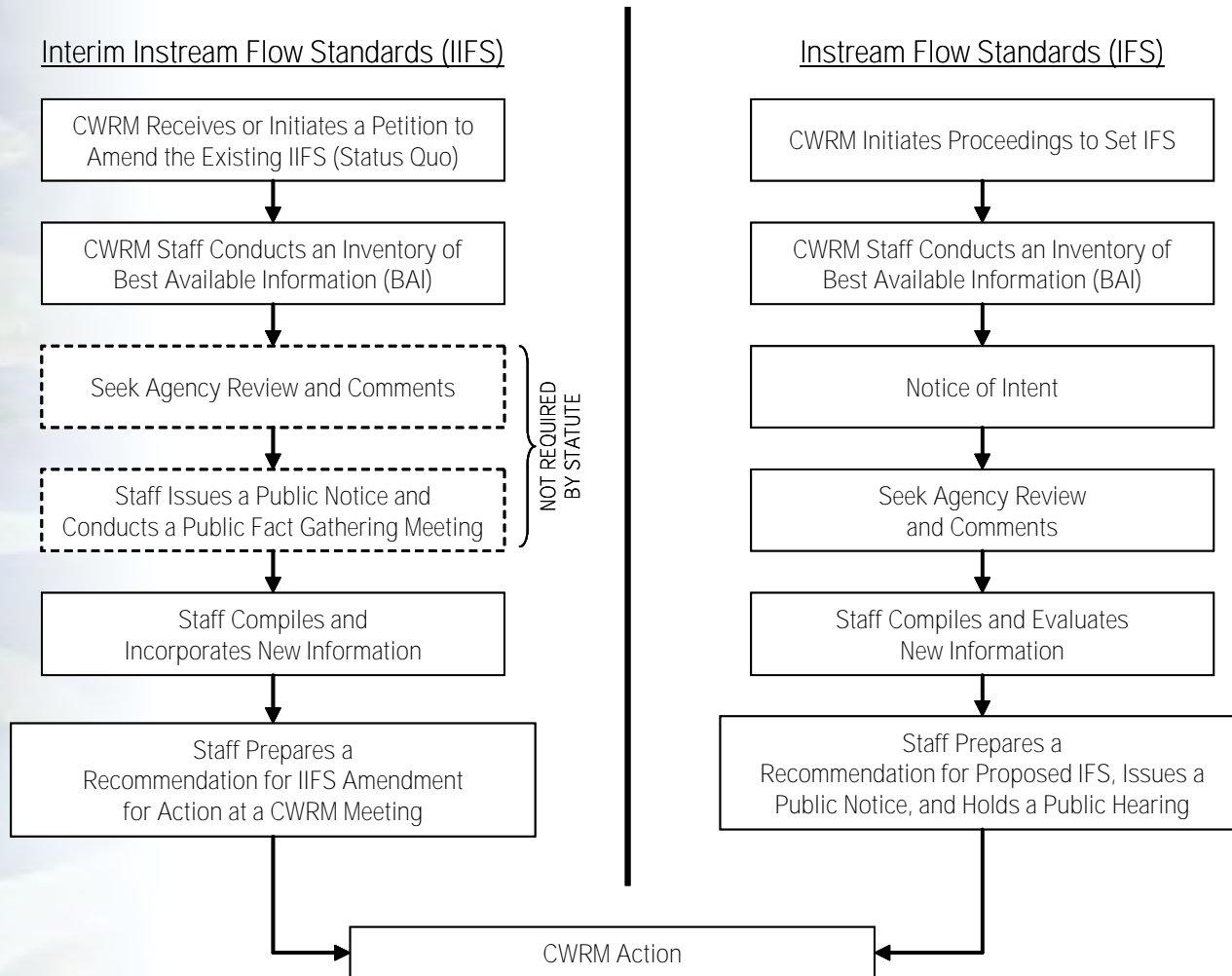


What is an interim instream flow standard?

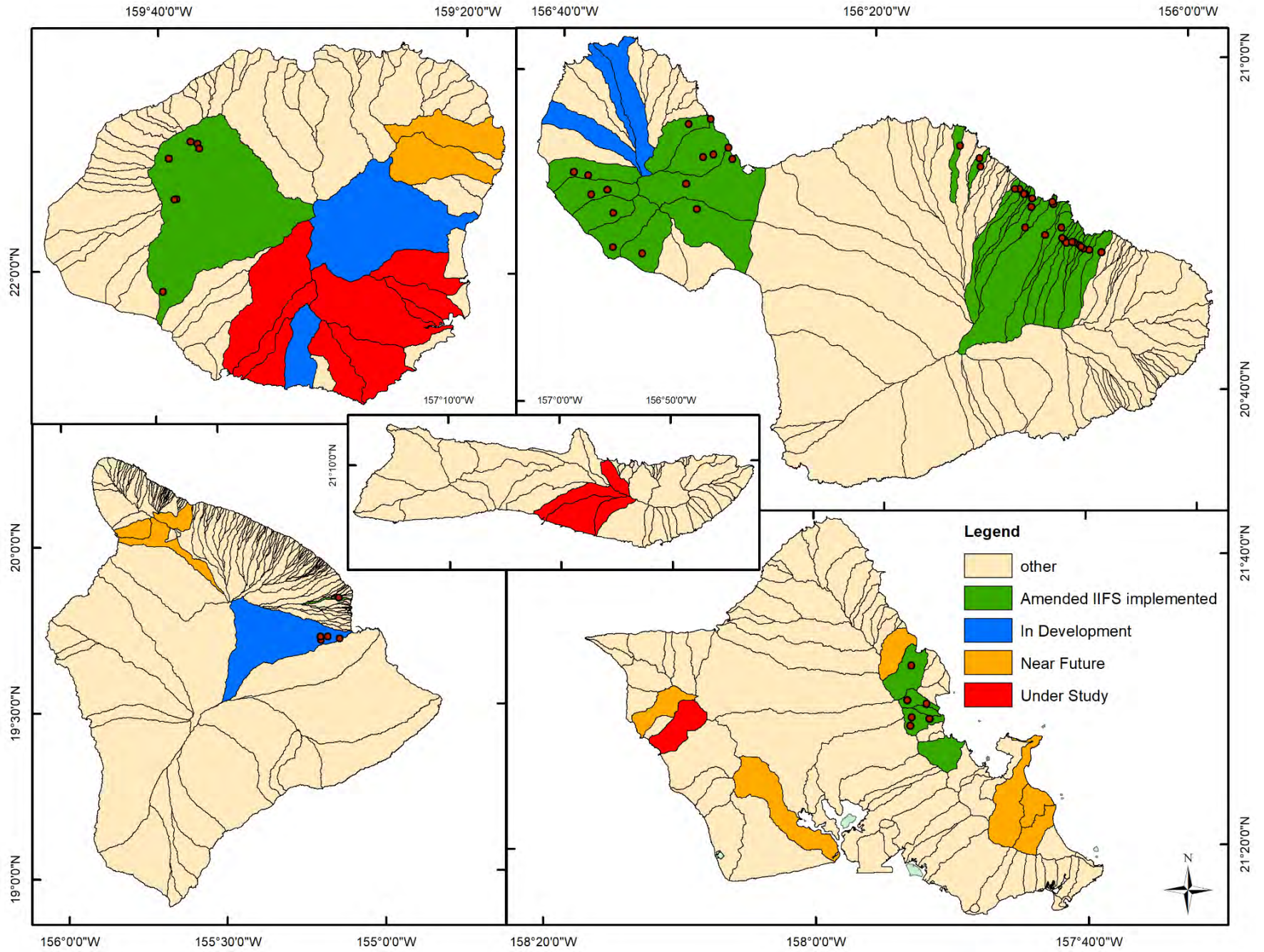
- expressed for specified time intervals and reaches in terms of the quantity, depth, quality, or other measurable attributes of stream water needed to preserve, enhance, or restore the stream or stream reach's ability to provide for identified instream uses

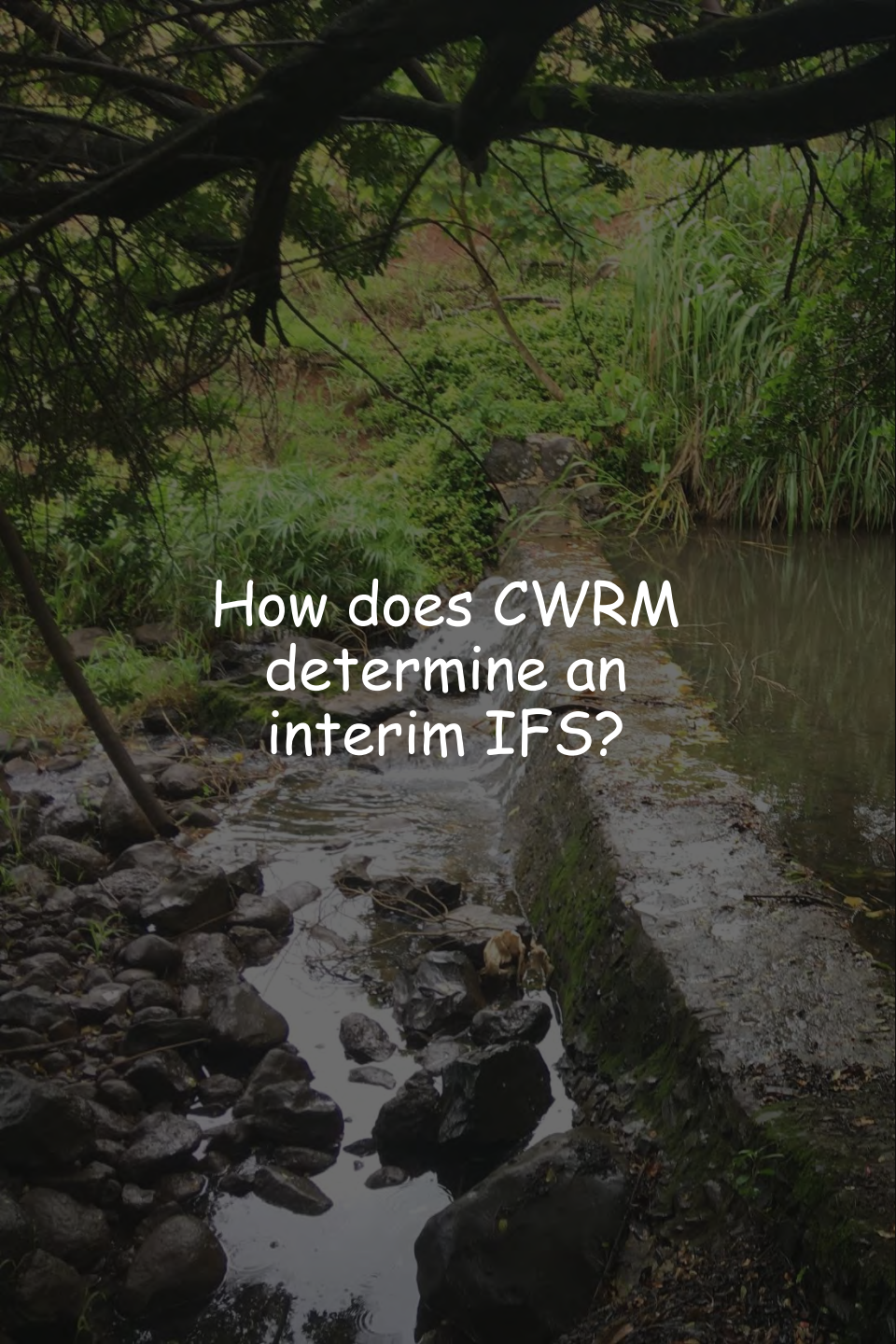
Instream Flow Standard Process

The commission may initiate proceedings for the establishment of an instream flow standard for any stream or stream reach in the state. Instream flow standards shall be established on a stream-by-stream basis whenever necessary to protect the public interest in waters of the state. HRS §13-169-30



Statewide interim IFS Priority Areas





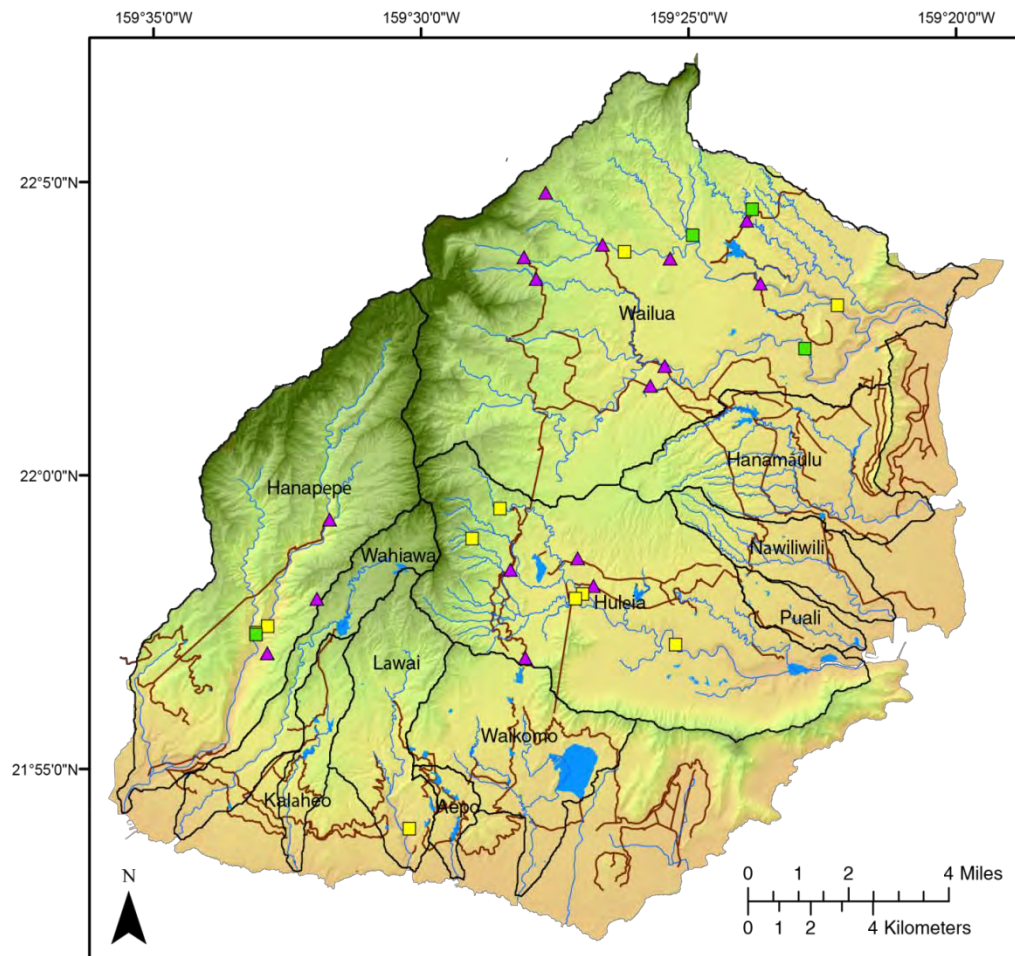
How does CWRM
determine an
interim IFS?



- Analyze/Evaluate the hydrologic data available
- Assessment of instream uses
- Weigh the importance of the present or potential instream values with the importance of the present or potential uses of water for non-instream purposes, including the economic impact of the restriction of such uses

Hydrologic Data: SE Kauai Low-Flow Study (USGS-CWRM)

Need: little information is currently available to understand natural flow conditions in SE Kauai

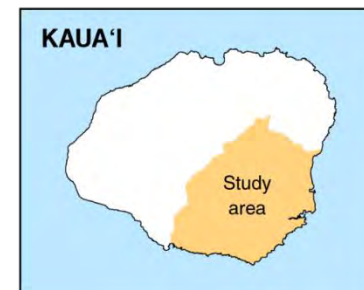


EXPLANATION

- Drainage basins within study area
- Diversion systems

Selected USGS gaging stations

- Surface-water gage, active
- Surface-water gage, inactive
- Diversion intake, inactive



Station no.	Station name	Period of record	Years of record ¹	Flow
16047000	Koula River at Koula near Eleele	1910-1939	6	Regulated
16049000*	Hanapepe River below Manuahi Stream near Eleele	1917-2014	90	Regulated
16052500	Lawai Stream near Koloa	1963-1972	9	Regulated
16053000	Kamooloa Stream near Koloa	1939-1941	-	Natural
16053800	Kamooloa Stream near Puhi	1963-1970	5	Regulated
16054000	Kuia Stream near Koloa	1939-1941	-	Natural
16054500	Kuia Stream near Puhi	1963-1966	1	Regulated
16055000	Huleia Stream near Lihue	1912-1970	6	Regulated
16060000*	South Fork Wailua River near Lihue	1912-2014	97	Regulated
16063000	North Fork Wailua River at altitude 650 ft near Lihue	1914-1985	69	Regulated
16068000*	East Bank of North Fork Wailua River near Lihue	1912-2014	99	Natural
16071000	North Fork Wailua River near Kapaa	1952-2003	51	Regulated
16071500*	Left Branch Opaekaa Stream near Kapaa	1960-2014	54	Natural



Instream Uses of Surface Water

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

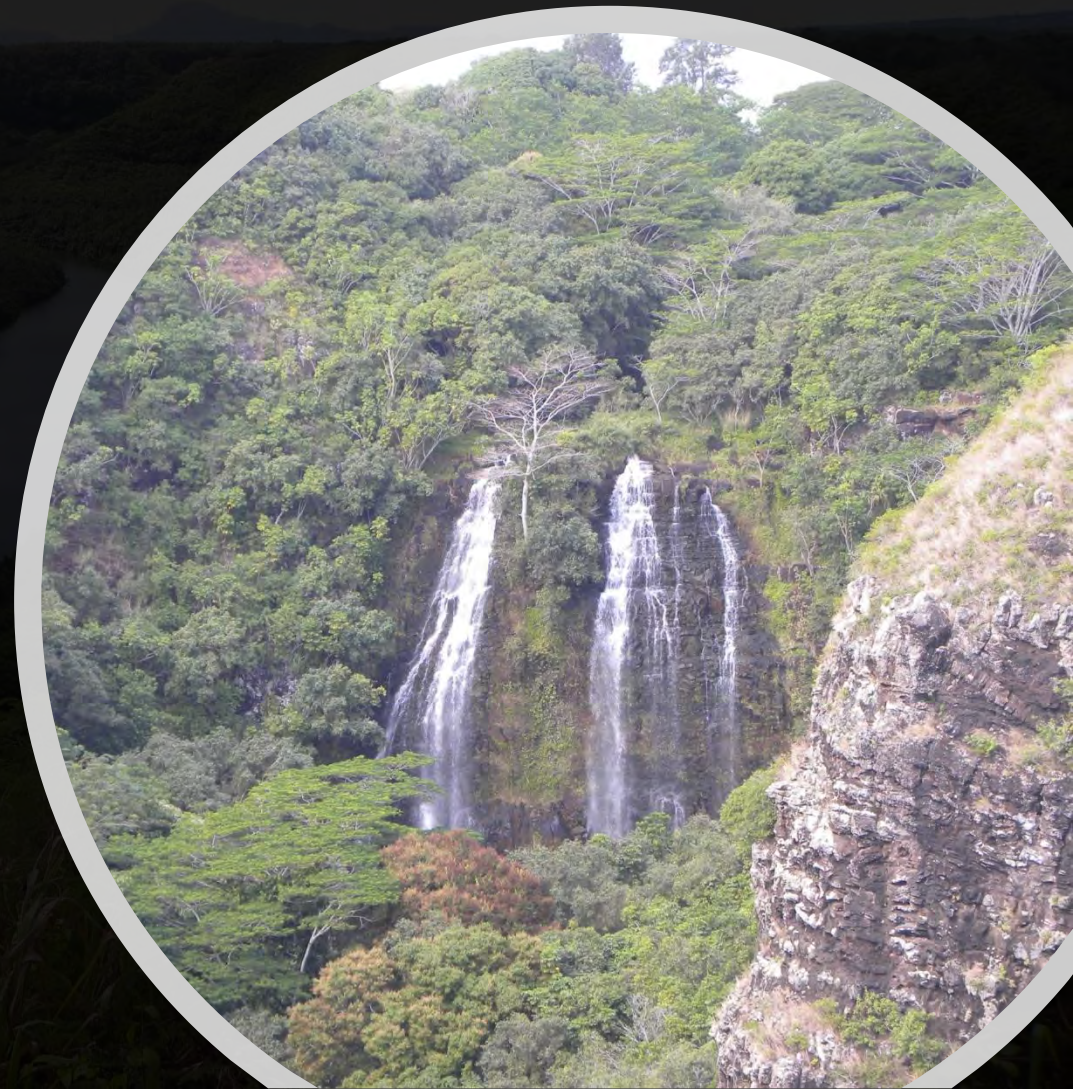
Noninstream Uses

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



Traditional and Customary Practices

Recreational and Aesthetic Values





Water Quality

- Temperature
- Turbidity



Habitat for Freshwater Biota





Domestic Water Supply



Lāwa'i Stream...above Lāwa'i Ditch

May 5, 2018



June 6, 2017



March 1, 2019



...and at NTBG

Lāwa'i Stream below Lāwa'i Ditch

August 16, 2018



Sept 11, 2018

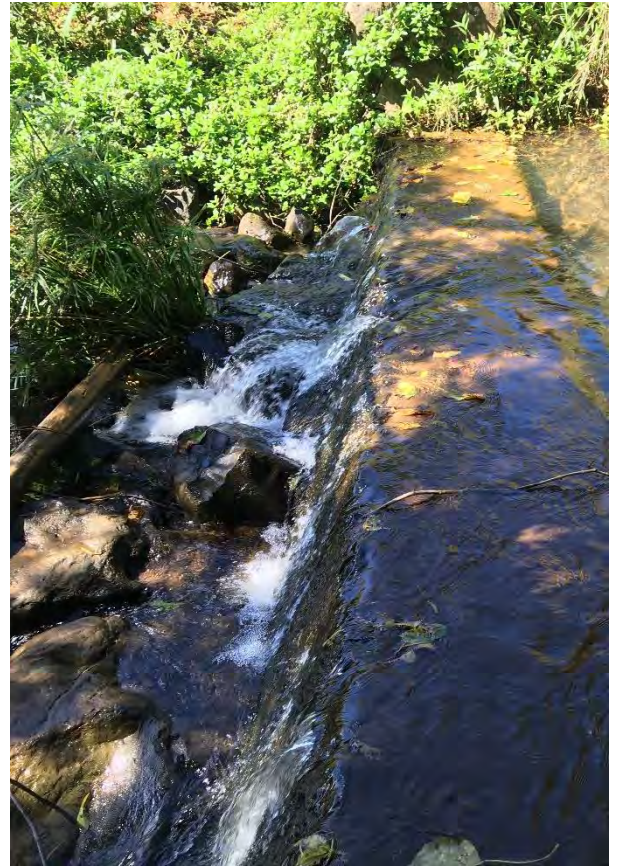


May 5, 2018

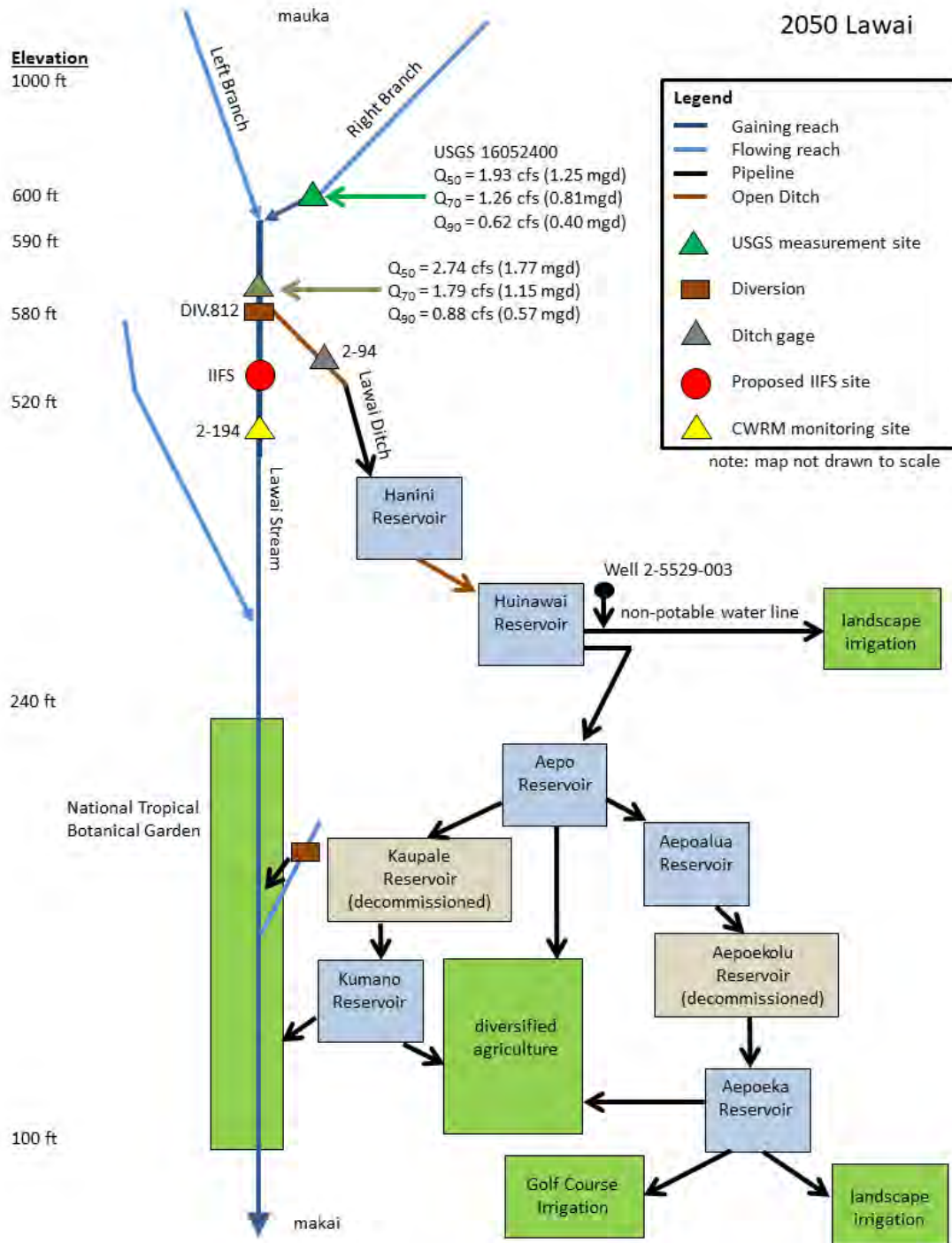


Oct 25, 2018





Diversion 812 on Lāwa'i Stream



Implementation: Monitoring of flows





Implementation:
Modifications to Intakes

Staff amendments to an instream flow standard...

DRAFT Instream Flow Standard Assessment Report



Public Comments and Fact Gathering



Update IFSAR
Compile public testimony
Submittal to Commission to Amend interim IFS
(additional public testimony accepted at Commission Meeting)



Home » [Surface Water](#) » [Instream Flow Standards](#) » IFS: Lāwa'i Stream, Kaua'i

IFS: LĀWA'I STREAM, KAUA'I

Instream Flow Standard: Hydrologic Unit of Lāwa'i (2050)

The Commission on Water Resource Management is preparing to amend the interim instream flow standards for the Lāwa'i Stream surface water hydrologic unit, Southeast Kaua'i.



The Lāwa'i Ditch diversion across Lāwa'i Stream from the left bank.



Lāwa'i Stream below the Lāwa'i Ditch intake is consistently subject to high turbidity, high temperatures, and low dissolved oxygen due to reduced flows.

SURFACE WATER INDEX

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- [Instream Flow Standards](#)
 - [Petition to Amend IIFS West Kauai and Complaint Against Waste](#)
 - [IFS: Lāwa'i Stream, Kaua'i](#)
 - [IFS: Wailua, Kaua'i](#)
 - [IFS: Honokōwai, Honolulu, and Honokōhau Streams, Maui](#)
 - [IFS: Ukumehame, Olowalu, Launiupoko, Kaua'ula Streams, Maui](#)
 - [IFS: Kahoma and Kanahā Streams, Maui](#)
 - [Na Wai Eha, Maui](#)
 - [East Maui Instream Flow Standards](#)
 - [Waiahole Ditch Combined Contested Case Hearing](#)
- [Permit Application Review](#)
- [Regulations & Permits](#)

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