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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
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Summary information from:

Hawaii Cooperative Park Service Unit. 1990. Hawaii Stream Assessment: A preliminary appraisal of Hawaii's stream resources. Report R84. Honolulu, Hawaii.

Parham et al. 2008. Atlas of Hawaiian Watersheds and Their Aquatic Resources, Island of Maui. Bishop Museum & Division of Aquatic Resources, Department of Land and Natural Resources. 866 p.

Declarations of Water Use. 1992. Volume 1: Declarations Summarized by File Reference. Commission on Water Resource Management Declaration of Water Use

- East Maui Irrigation registrations will be referred to as EMI instead of their registration file abbreviation (EAST MAUI IRR)
- TMK's owned by the State of Hawaii will be referred to as SOH

Cheng, C.L. (2016) Low-flow characteristics for streams on the islands of Kauai, Oahu, Molokai, Maui, and Hawaii, State of Hawaii. US Geological Survey Scientific Investigations Report 2016-5103.

Gingerich, S.B. (2004) Median and low-flow characteristics for streams under natural and diverted conditions, northeast Maui, Hawaii. US Geological Survey Scientific Investigations Report 2004-5262.

EXHIBIT "A"

Kōlea Stream

(Hydrologic Unit **6046**; DAR Watershed Code **64003**)

USGS Hydrologic Data: from Gingerich 2004 USGS SIR 2004-5262

name	Elevation (ft)	Drainage Area (mi ²)	TFQ ₅₀	TFQ ₉₅	BFQ ₅₀	BFQ ₉₅
Kolea lower	38	0.62	4.8	0.60	3.4	0.60
Kolea middle	525	0.51	3.6	0.20	2.5	0.20

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 0.6 mi²
 Maximum elevation: 1864 ft
 Land Use: 26.1% agriculture; 73.9% conservation
 Total Stream Length: 1.8 mi
 Terminal Order: 1

Watershed Rating:

Landcover: 9/10
 Shallow Waters Rating: 0/10
 Stewardship Rating: 4/10
 Size Rating: 1/10
 Wetness Rating: 6/10
 Reach Diversity Rating: 2/10
 Total Watershed Rating: 5/10

Historic Rankings:

Potential Heritage Stream: No
 Hawaii Stream Assessment Rank: none
 US Fish and Wildlife Service High Quality Stream: No
 The Nature Conservancy Priority Aquatic Sites: No
 National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None

Biological Rating:

Native Species Rating: not ranked
 Introduced Genera Rating: not ranked
 All Species Score: not ranked
 Total Biological Rating: not ranked
 Overall Rating: not ranked
 Rating Strength: 0/10

Overall Rating: not ranked
Rating Strength: not ranked

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
 HSA riparian resources: detrimental animals (pigs); 0% native forest
 HSA cultural resources: not surveyed
 HSA recreational resources: nothing; ranked a “4” by regional committee

Declarations of Water Use: Registered Diversions

DIV 147	EMI: W-5 Wailoa Ditch from Punaluu Stream	(TMK owned by SOH)
DIV 224	EMI: C-2 Center Ditch from Kolea Stream	(TMK owned by SOH)
DIV 203	EMI: C-3 Center Ditch from Kolea Stream	(TMK owned by SOH)
DIV 156	EMI: W-3 Wailoa Ditch from East Kolea	(TMK owned by SOH)
DIV 157	EMI: W-4 Wailoa Ditch from West Kolea Stream	(TMK owned by SOH)
DIV 209	EMI: NH-2 New Hamakua Ditch from East Kolea Stream	(TMK owned by SOH)
DIV 208	EMI: NH-3 New Hamakua Ditch from West Kolea Stream	(TMK owned by SOH)
DIV 231	EMI: Kolea Reservoir on Kolea Stream	(TMK owned by SOH)

Punaluu Stream

(Hydrologic Unit **6045**; DAR Watershed Code **64008**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 0.20 mi²

Maximum elevation: 1190 ft

Land Use:

Total Stream Length: 1.62 mi Terminal Order: 1

Watershed Rating:

Landcover: not ranked

Shallow Waters Rating: not ranked

Stewardship Rating: not ranked

Size Rating: not ranked

Wetness Rating: not ranked

Reach Diversity Rating: not ranked

Total Watershed Rating: not ranked

Historic Rankings:

Potential Heritage Stream: No

Hawaii Stream Assessment Rank: none

US Fish and Wildlife Service High Quality Stream: No

The Nature Conservancy Priority Aquatic Sites: No

National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None.

Biological Rating:

Native Species Rating: not ranked

Introduced Genera Rating: not ranked

All Species Score: not ranked

Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: not ranked

Hawaii Stream Assessment:

HSA aquatic resources: not ranked

HSA riparian resources: not surveyed

HSA cultural resources: not surveyed

HSA recreational resources: not surveyed

Declarations of Water Use: Registered Diversions

DIV 222 EMI: C-4 Center Ditch from Punaluu Stream

(TMK owned by EMI)

Kaaiea Stream

(Hydrologic Unit **6044**; DAR Watershed Code **N/A**)

USGS Hydrologic Data: from Cheng (2016)

Station ID	name	Period of Record	Q ₁₀	Q ₂₀	Q ₃₀	Q ₄₀	Q ₅₀	Q ₆₀	Q ₇₀	Q ₈₀	Q ₉₀
16565000	Kaaiea Gulch nr Huelo	1922-1961	17	8.8	5.6	3.8	2.9	2.2	1.7	0.94	0.93
16565000	Kaaiea Gulch nr Huelo	1984-2013					2.4	1.9	1.3	1.3	0.69

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 1.1 mi²
 Maximum elevation: 2717 ft
 Land Use: 19.9% agriculture; 80.1% conservation
 Total Stream Length: 5.3 mi
 Terminal Order: 1

Biotic Information:

None.

Watershed Rating:

Landcover: not ranked
 Shallow Waters Rating: not ranked
 Stewardship Rating: not ranked Size Rating: not ranked
 Wetness Rating: not ranked
 Reach Diversity Rating: not ranked
 Total Watershed Rating: not ranked

Biological Rating:

Native Species Rating: not ranked
 Introduced Genera Rating: not ranked
 All Species Score: not ranked
 Total Biological Rating: not ranked

Historic Rankings:

Potential Heritage Stream: No
 Hawaii Stream Assessment Rank: none
 US Fish and Wildlife Service High Quality Stream: No
 The Nature Conservancy Priority Aquatic Sites: No
 National Park Service Nationwide Rivers Inventory: No

Overall Rating: not ranked

Rating Strength: not ranked

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
 HSA riparian resources: detrimental plants (hau); detrimental animals (pigs); 10% native forest HSA
 cultural resources: not surveyed
 HSA recreational resources: hiking, swimming, scenic views; ranked a “2” by regional committee

Declarations of Water Use: Registered Diversions

DIV 194	EMI: C-5 Center Ditch from Kaaiea Stream	(TMK owned by SOH)
DIV 232	EMI: S-11 Spreckels Ditch from Kaaiea Stream	(TMK owned by SOH)
DIV 146	EMI: W-6 Wailoa Ditch from Kaaiea Stream	(TMK owned by SOH)

Oopuola Stream

(Hydrologic Unit **6043**; DAR Watershed Code **64001**)

USGS Hydrologic Data: from Cheng (2016)

Station ID	name	Period of Record	Q ₁₀	Q ₂₀	Q ₃₀	Q ₄₀	Q ₅₀	Q ₆₀	Q ₇₀	Q ₈₀	Q ₉₀
16566000	Oopuola Stream nr Huelo	1922-1961	6.2	3.4	2.2	1.5	1.1	0.85	0.62	0.46	0.32
16566000	Oopuola Stream nr Huelo	1984-2013					0.95	0.69	0.50	0.36	0.26

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 1.0 mi²
 Maximum elevation: 2057 ft
 Land Use: 27.7% agriculture; 72.3% conservation
 Total Stream Length: 4.4 mi
 Terminal Order: 2

Watershed Rating:

Landcover: 9/10
 Shallow Waters Rating: 1/10
 Stewardship Rating: 5/10 Size Rating: 2/10
 Wetness Rating: 7/10
 Reach Diversity Rating: 3/10
 Total Watershed Rating: 7/10

Historic Rankings:

Potential Heritage Stream: No
 Hawaii Stream Assessment Rank: none
 US Fish and Wildlife Service High Quality Stream: No
 The Nature Conservancy Priority Aquatic Sites: No
 National Park Service Nationwide Rivers Inventory: No

Biotic Information:

2008 DAR point quadrat survey

Biological Rating:

Native Species Rating: not ranked
 Introduced Genera Rating: not ranked
 All Species Score: not ranked
 Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: 1/10

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
 HSA riparian resources: Detrimental plants (hau); Detrimental animals (pigs); 0% native forest;
 HSA cultural resources: not surveyed
 HSA recreational resources: hiking, hunting, scenic views; 2 high quality experiences; ranked a “2” by regional committee

Declarations of Water Use: Registered Diversions

DIV 142	EMI: W-10 Wailoa Ditch from Oopuola Stream	(TMK owned by SOH)
DIV 150	EMI: W-9 Wailoa Ditch from Oopuola Stream	(TMK owned by SOH)
DIV 171	EMI: W-8 Wailoa Ditch from Oopuola Stream	(TMK owned by EMI)
DIV 173	EMI: W-7 Wailoa Ditch from Oopuola Stream	(TMK owned by SOH)
DIV 195	EMI: C-8 Center Ditch from West Oopuola Stream	(TMK owned by EMI)
DIV 196	EMI: C-7 Center Ditch from Oopuola Stream	(TMK owned by EMI)
DIV 199	EMI: C-6 Center Ditch from Makaanali Stream	(TMK owned by EMI)
DIV 261	EMI: NH-7 New Hamakua Ditch from Oopuola Stream	(TMK owned by SOH)
DIV 260	EMI: NH-8 New Hamakua Ditch from Oopuola Stream	(TMK owned by SOH)

Summary of "13 streams" at issue in *Sierra Club v. State*

Created: April 15, 2019

DIV	262	EMI: NH-6 New Hamakua Ditch from Oopuola Stream	(TMK owned by SOH)
DIV	263	EMI: NH-5 New Hamakua Ditch from Oopuola Stream	(TMK owned by EMI)
DIV	275	EMI: NH-4 New Hamakua Ditch from Makanali Stream	(TMK owned by EMI)
DIV	307	EMI: S-12 Spreckels Ditch from Makanali Stream	(TMK owned by EMI)
DIV	308	EMI: S-13 Spreckels Ditch from Oopuola Stream	(TMK owned by EMI)
DIV	316	EMI: S-14 Spreckels Ditch from West Oopuola Stream	(TMK owned by EMI)

Puehu Stream

(Hydrologic Unit **6042**; DAR Watershed Code **N/A**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 0.354 mi²

Maximum elevation: 1680 ft

Land Use:

Total Stream Length: 2.94 mi

Terminal Order: 1

Watershed Rating:

Landcover: not ranked

Shallow Waters Rating: not ranked

Stewardship Rating: not ranked

Size Rating: not ranked

Wetness Rating: not ranked

Reach Diversity Rating: not ranked

Total Watershed Rating: not ranked

Historic Rankings:

Potential Heritage Stream: No

Hawaii Stream Assessment Rank: none

US Fish and Wildlife Service High Quality Stream: No

The Nature Conservancy Priority Aquatic Sites: No

National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None.

Biological Rating:

Native Species Rating: not ranked

Introduced Genera Rating: not ranked

All Species Score: not ranked

Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: not ranked

Hawaii Stream Assessment:

HSA aquatic resources: not ranked

HSA riparian resources: not surveyed

HSA cultural resources: not surveyed

HSA recreational resources: not ranked

Declarations of Water Use: Registered Diversions

DIV **200** EMI: W-8 Wailoa Ditch from Oopuola Stream

(TMK owned by EMI)

Nailiilihaele Stream

(Hydrologic Unit **6041**; DAR Watershed Code **63015**)

USGS Hydrologic Data: from Cheng (2016)

Station ID	name	Period of Record	Q ₁₀	Q ₂₀	Q ₃₀	Q ₄₀	Q ₅₀	Q ₆₀	Q ₇₀	Q ₈₀	Q ₉₀
16570000	Nailiilihaele Str nr Huelo	1911-1975	88	46	30	22	17	13	11	8.2	5.8
16570000	Nailiilihaele Str nr Huelo	1984-2013					14	12	8.6	7.0	4.6

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 3.53 mi²
 Maximum elevation: 5210 ft
 Land Use: 8.2% agriculture; 91.8% conservation
 Total Stream Length: 11.9 mi
 Terminal Order: 3

Watershed Rating:

Landcover: 10/10
 Shallow Waters Rating: 0/10
 Stewardship Rating: 6/10 Size Rating: 3/10
 Wetness Rating: 8/10
 Reach Diversity Rating: 5/10
 Total Watershed Rating: 8/1

Historic Rankings:

Potential Heritage Stream: No
 Hawaii Stream Assessment Rank: none
 US Fish and Wildlife Service High Quality Stream: No
 The Nature Conservancy Priority Aquatic Sites: No
 National Park Service Nationwide Rivers Inventory: No

Biotic Information:

1961 DAR point quadrat survey
Atyoida bisulcata in middle and upper reaches

Biological Rating:

Native Species Rating: not ranked
 Introduced Genera Rating: not ranked
 All Species Score: 5/10
 Total Biological Rating: 4/10

Overall Rating: 6/10

Rating Strength: 4/10

Hawaii Stream Assessment:

HSA aquatic resources: ranked outstanding (1 low value native species observed); 2 surveys, last was in '63
 HSA riparian res.: detrimental plants (hau); detrimental animals (pigs); 20% native forest; palustrine wetland
 HSA cultural resources: not surveyed
 HSA recreational resources: swimming, scenic views; ranked a “3” by regional committee

Declarations of Water Use: Registered Diversions

DIV	167	EMI: Intake W-13 Wailoa Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	165	EMI: Papaaea Reservoir on Nailiilihaele Stream	(TMK owned by EMI)
DIV	168	EMI: Intake W-14 Wailoa Ditch from Nailiilihaele Stream	(TMK owned by SOH)
DIV	180	EMI: Intake W-11 Wailoa Ditch from Nailiilihaele Stream	(TMK owned by SOH)
DIV	187	EMI: Intake L-1 Lowrie Ditch from Nailiilihaele Stream	(TMK owned by EMI)
DIV	190	EMI: Intake W-12 Wailoa Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	255	EMI: Intake NH-13 New Hamakua Feeder Ditch to Papaaea Reservoir	(TMK owned by EMI)
DIV	267	EMI: Intake NH-12 New Hamakua Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	267	EMI: Intake NH-12 New Hamakua Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	268	EMI: Intake NH-11 New Hamakua Ditch Nailiilihaele Stream	(TMK owned by SOH)

Summary of “13 streams” at issue in *Sierra Club v. State*

Created: April 15, 2019

DIV	269	EMI: Intake NH-10 New Hamakua Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	272	EMI: Intake NH-9 New Hamakua from Ditch Nailiilihaele Stream	(TMK owned by SOH)
DIV	306	EMI: Intake S-15 Spreckels Ditch from Nailiilihaele Stream	(TMK owned by EMI)

Kailua Stream

(Hydrologic Unit **6040**; DAR Watershed Code **63014**)

USGS Hydrologic Data: from Cheng (2016)

Station ID	name	Period of Record	Q ₁₀	Q ₂₀	Q ₃₀	Q ₄₀	Q ₅₀	Q ₆₀	Q ₇₀	Q ₈₀	Q ₉₀
16577000	Kailua Str nr Huelo	1913-1958	68	45	19	13	9.4	7.3	5.4	3.9	2.6
16577000	Kailua Str nr Huelo	1984-2013					7.8	5.9	4.2	3.2	2.0

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 4.9 mi²
 Maximum elevation: 6549 ft
 Land Use: 17.9% agriculture; 82.1% conservation
 Total Stream Length: 10.7 mi Terminal Order: 2

Watershed Rating:

Landcover: 10/10
 Shallow Waters Rating: 1/10
 Stewardship Rating: 7/10
 Size Rating: 2/10
 Wetness Rating: 7/10
 Reach Diversity Rating: 5/10
 Total Watershed Rating: 8/10

Historic Rankings:

Potential Heritage Stream: No
 Hawaii Stream Assessment Rank: none
 US Fish and Wildlife Service High Quality Stream: No
 The Nature Conservancy Priority Aquatic Sites: No
 National Park Service Nationwide Rivers Inventory: No

Biotic Information:

1961, 1962, 1988, 2003
Atyoida bisulcata in middle and upper reaches
Sicyopterus stimpsoni in upper reaches

Biological Rating:

Native Species Rating: 2/10
 Introduced Genera Rating: 10/10
 All Species Score: 5/10
 Total Biological Rating: 5/10

Overall Rating: 7/10

Rating Strength: 6/10

Hawaii Stream Assessment:

HSA aquatic resources: Moderate (1 high value species (nopili); 1 low value native species observed); 2 surveys, last was in 1963
 HSA riparian resources: not ranked
 HSA cultural resources: very limited survey coverage; 2 archeological sites; very few sites; pre-contact/early contact, important information; moderately sensitive; no taro historically associated with stream HSA
 recreational resources: swimming; ranked a “2” by regional committee

Declarations of Water Use: Registered Diversions

DIV	158	EMI: Reservoir in Kailua Stream	(TMK owned by EMI)
DIV	181	EMI: Intake W-16 Wailoa Ditch from Ohanui Stream	(TMK owned by EMI)
DIV	185	EMI: Intake W-15 Wailoa Ditch from Kailua Stream	(TMK owned by SOH)
DIV	188	EMI: Intake L-2 Lowrie Ditch from Kailua Stream	(TMK owned by EMI)
DIV	250	EMI: Intake H-1 Haiku Ditch from Kailua Stream	(TMK owned by EMI)
DIV	273	EMI: Intake NH-14 New Hamakua Ditch from Ohanui Stream	(TMK owned by EMI)

Hanawana Stream

(Hydrologic Unit **6039**; DAR Watershed Code **63013**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 0.7 mi²
Maximum elevation: 1535 ft
Land Use: 52.7% agriculture; 47.3% conservation
Total Stream Length: 0.8 mi
Terminal Order: 1

Watershed Rating:

Landcover: 9/10
Shallow Waters Rating: 0/10
Stewardship Rating: 3/10
Size Rating: 1/10
Wetness Rating: 5/10
Reach Diversity Rating: 1/10
Total Watershed Rating: 4/10

Historic Rankings:

Potential Heritage Stream: No
Hawaii Stream Assessment Rank: none
US Fish and Wildlife Service High Quality Stream: No
The Nature Conservancy Priority Aquatic Sites: No
National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None.

Biological Rating:

Native Species Rating: not ranked
Introduced Genera Rating: not ranked
All Species Score: not ranked
Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: 0/10

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
HSA riparian resources: not ranked
HSA cultural resources: not ranked
HSA recreational resources: hiking, swimming; ranked a "3" by regional committee

Declarations of Water Use: Registered Diversions

DIV 177	EMI: Intake L-3 Lowrie Ditch from Hanawana Stream	(TMK owned by SOH)
DIV 274	EMI: Intake NH-15 New Hamakua Ditch from Hanawana Stream	(TMK owned by SOH)
DIV 515	HOOPAI J: ditch from Hanawana Stream	
DIV 1211	WHITE J: 2 pipes from Hanawana Stream for 120 gpm to irrigate 1.5 acres of banana and other fruit	property was resold twice, new landowners are Callahans (in 2006); in 2011 an easement was granted by BLNR for current landowners to utilize pipeline from stream across state lands to their property.

Hoalua Stream

(Hydrologic Unit **6038**; DAR Watershed Code **63012**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 1.3 mi²
Maximum elevation: 2887 ft
Land Use: 14.6% agriculture; 85.4% conservation
Total Stream Length: 2.4 mi
Terminal Order: 1

Watershed Rating:

Landcover: 10/10
Shallow Waters Rating: 0/10
Stewardship Rating: 6/10
Size Rating: 1/10
Wetness Rating: 7/10
Reach Diversity Rating: 3/10
Total Watershed Rating: 7/10

Historic Rankings:

Potential Heritage Stream: No
Hawaii Stream Assessment Rank: none
US Fish and Wildlife Service High Quality Stream: No
The Nature Conservancy Priority Aquatic Sites: No
National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None.

Biological Rating:

Native Species Rating: not ranked
Introduced Genera Rating: not ranked
All Species Score: not ranked
Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: 0/10

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
HSA riparian resources: detrimental animals (pigs); 0% native forest
HSA cultural resources: ranked outstanding; substantial information to assist prediction; 2 sites; low density; precontact or early contact sites with important information, and culturally noteworthy sites
HSA recreational resources: none; ranked a “4” by regional committee

Declarations of Water Use: Registered Diversions

DIV	141	EMI: Intake L-4 Lowrie Ditch from Hoalua Stream	(TMK owned by SOH)
DIV	186	EMI: Intake W-17 Wiloa Ditch from Hoalua Stream	(TMK owned by SOH)
DIV	230	EMI: Intake H-2 Haiku Ditch from Hoalua Stream	(TMK owned by SOH)
DIV	245	EMI: Intake NH-16 New Hamakua Ditch from Hoalua Stream	(TMK owned by SOH)

Waipio Stream

(Hydrologic Unit **6036**; DAR Watershed Code **63010**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 0.6 mi²
Maximum elevation: 1529 ft
Land Use: 39.7% agriculture; 60.3% conservation
Total Stream Length: 2.8 mi
Terminal Order: 1

Watershed Rating:

Landcover: 9/10
Shallow Waters Rating: 0/10
Stewardship Rating: 4/10
Size Rating: 1/10
Wetness Rating: 5/10
Reach Diversity Rating: 3/10
Total Watershed Rating: 5/10

Historic Rankings:

Potential Heritage Stream: No
Hawaii Stream Assessment Rank: none
US Fish and Wildlife Service High Quality Stream: No
The Nature Conservancy Priority Aquatic Sites: No
National Park Service Nationwide Rivers Inventory: No

Biotic Information:

None.

Biological Rating:

Native Species Rating: not ranked
Introduced Genera Rating: not ranked
All Species Score: not ranked
Total Biological Rating: not ranked

Overall Rating: not ranked

Rating Strength: 0/10

Hawaii Stream Assessment:

HSA aquatic resources: not ranked
HSA riparian resources: Detrimental plants (hau); Detrimental animals (pigs); 0% native forest; small palustrine wetland
HSA cultural resources: not surveyed
HSA recreational resources: none; ranked a “4” by regional committee

Declarations of Water Use: Registered Diversions

DIV	66	BUNCH WJ: diversion from Waipio Stream	
DIV	201	EMI: New Hamakua Ditch from Waipio Stream	(TMK owned by A&B)
DIV	216	EMI: Haiku Ditch from Waipio Stream	
DIV	238	EMI: Lowrie Ditch from Waipio Stream	(TMK owned by A&B)
DIV	448	HAROLD FL: pump from Waipio Stream	
DIV	1104	TROPICAL ORCH: pump from Waipio Stream	
DIV	1124	VALLEY FARM: auwai from Waipio Stream	
DIV	1125	VALLEY FARM: pump from Waipio Stream	
DIV	1207	WENTWORTH R: pipe from Waipio Stream	

Mokupapa Stream

(Hydrologic Unit **6035**; DAR Watershed Code **N/A**)

USGS Hydrologic Data: None

Atlas of Hawaiian Watersheds

Watershed Characteristics:

[Small stream within the Hoolawa hydrologic unit]
Catchment Area: 0.5 mi²
Maximum elevation: 876 ft
Total Stream Length: 2.4 mi
Terminal Order: 1

Biotic Information:

None.

Watershed Rating:

None.

Biological Rating:

None.

Historic Rankings:

Potential Heritage Stream: No
Hawaii Stream Assessment Rank: none
US Fish and Wildlife Service High Quality Stream: No
The Nature Conservancy Priority Aquatic Sites: No
National Park Service Nationwide Rivers Inventory: No

Overall Rating: not ranked

Rating Strength: not ranked

Hawaii Stream Assessment: No stream-specific Information available

Declarations of Water Use: Registered Diversions

None on State land

DIV 121 DANG PK: pipe from unmapped tributary to Mokupapa Gulch

DIV 135 DUNNILL G: Pump from Mokupapa Stream 3xmonth via 30 gpm pump to storage tank used for domestic supply and irrigation

DIV 214 EMI: Intake H-6 Haiku Ditch from Mokupapa Stream; also 1” pipe at bottom of intake basin provides water to the Mandoe’s (TMK 2-9-05-5,46,47,48,49)

DIV 447 HAROLD FL: Pump from Mokupapa Stream

Hoolawa Stream

(Hydrologic Unit **6035**; DAR Watershed Code **663009**)

USGS Hydrologic Data:

Station ID	name	Period of Record	Q ₁₀	Q ₂₀	Q ₃₀	Q ₄₀	Q ₅₀	Q ₆₀	Q ₇₀	Q ₈₀	Q ₉₀
16585000	Hoolawanui Str nr Huelo	1911-1971	26	19	9.8	7.4	5.6	4.3	3.3	2.5	1.7
16585000	Hoolawanui Str nr Huelo	1984-2013					4.4	3.5	2.6	1.9	1.4
16586000	Hoolawaliliii Str nr Huelo	1912-1957	14	10	6.5	5.3	4.4	3.7	3.2	2.8	2.2
16586000	Hoolawaliliii Str nr Huelo	1984-2013					3.6	3.1	2.7	2.2	1.7

Atlas of Hawaiian Watersheds

Watershed Characteristics:

Area: 3.6 mi²
 Maximum elevation: 3481 ft
 Land Use: 14.6% agriculture; 85.4% conservation
 Total Stream Length: 11.0 mi
 Terminal Order: 2

Watershed Rating:

Landcover: 10/10
 Shallow Waters Rating: 0/10
 Stewardship Rating: 5/10 Size Rating: 2/10
 Wetness Rating: 6/10
 Reach Diversity Rating: 4/10
 Total Score: 7/10

Potential Heritage Stream (1998): No
 Hawaii Stream Assessment Rank (1990): limited resources
 US Fish and Wildlife High Quality Stream (1988): No
 The Nature Conservancy Priority Aquatic Site (1985): No
 National Park Serv. Nationwide Rivers Inventory (1982): No

Biotic Information:

None.

Biological Rating:

Native Species Rating: 2/10
 Introduced Genera Rating: 10/10
 All Species Score: 5/10
 Total Biological Rating: 5/10

Overall Rating: 6/10

Rating Strength: 5/10

Hawaii Stream Assessment:

Potential Heritage Stream (1998): No
 Hawaii Stream Assessment Rank (1990): limited resources
 US Fish and Wildlife High Quality Stream (1988): No
 The Nature Conservancy Priority Aquatic Site (1985): No
 National Park Service Nationwide Rivers Inventory (1982): No

Declarations of Water Use: Registered Diversions

DIV **32** BAILEY R: 2 inch pipe from spring
 DIV **33** BAILEY R: 2 inch pipe from spring
 DIV **34** BAILEY R: pump from Hoolawa Stream
 DIV **52** BICKFORD J: pipe from Hoolawa Stream
 DIV **83** CARR TL: pump from Hoolawa Stream

Summary of “13 streams” at issue in *Sierra Club v. State*

Created: April 15, 2019

DIV	143	EMI: Intake W-22 Wailoa Ditch from West Hoolawanui Stream	(TMK owned by SOH)
DIV	144	EMI: Intake W-20 Wailua Ditch from Hoolawanui Stream	(TMK owned by SOH)
DIV	145	EMI: Intake W-19 Wailoa Ditch from Hoolawaliilii	(TMK owned by SOH)
DIV	215	EMI: Intake H-7 Haiku Ditch from Hoolawa Stream	(TMK owned by SOH)
DIV	234	EMI: Intake NH-19 New Hamakua Ditch from Hoolawanui Stream	(TMK owned by SOH)
DIV	236	EMI: Intake L-13 Lowrie Ditch from Hoolawanui Stream	(TMK owned by SOH)
DIV	237	EMI: Intake L-14 Lowrie Ditch from West Hoolawanui Stream	(TMK owned by EMI)
DIV	243	EMI: Intake L-12 Lowrie Ditch from Hoolawaliilii Stream	(TMK owned by SOH)
DIV	244	EMI: Intake NH-20 New Hamakua Ditch from West Hoolawanui Stream	(TMK owned by SOH)
DIV	254	EMI: Intake NH-21 New Hamakua Ditch from West Hoolawa Nui Stream	(TMK owned by SOH)
DIV	361	GARDIEN K: pipe from Hoolawa Stream	
DIV	625	KIGER D: pipe from Hoolawa Stream	
DIV	637	KLOPPING S: pump from Hoolawa Stream	
DIV	920	PALMER S: pump from Hoolawa Stream	
DIV	1214	WILLIAMS R: pump #1 Hoolawa Stream	
DIV	1215	WILLIAMS R: pipe from Hoolawa Stream tributary	
DIV	1216	WILLIAMS R: pump from Hoolawa Stream	

Puakea Stream

(Hydrologic Unit N/A; DAR Watershed Code N/A)

USGS Hydrologic Data: none

Atlas of Hawaiian Watersheds

Watershed Characteristics:

N/A

Biotic Information:

N/A

Watershed Rating:

N/A

Biological Rating:

N/A

Historic Rankings:

Potential Heritage Stream: No

Hawaii Stream Assessment Rank: none

US Fish and Wildlife Service High Quality Stream: No

The Nature Conservancy Priority Aquatic Sites: No

National Park Service Nationwide Rivers Inventory: No

Overall Rating: not ranked

Rating Strength: not ranked

Hawaii Stream Assessment:

N/A

Declarations of Water Use: Registered Diversions

None