

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date: 11/4/2024 Site Name: Upstream Site Time: 0947

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input checked="" type="checkbox"/> showers (intermittent)	
<u>80</u> % cloud cover	<u>50</u> % cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: Clear, algae at bottom of stream.

Water Color: clear

Estimated Depth: 1.5"

Visibility: 100%, to the bottom

Tide (if applicable): N/A

Notes: Rooted vegetation at edge disturbed by past high water. Second lower culvert not flowing. Minimal leaf litter at water edge.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes: no waterbirds/shorebirds

Species Observed	# of individuals	Behavior	Notes/Observations
spotted dove	1	Foraging	Foraging at the water's edge
red-vented bulbul	4	Loafing	Calling from the trees over the stream
scaly-breasted munia	3	Loafing	Calling from the trees over the stream
mongoose	1	Foraging	Fence ledge

Halawa Stream Monitoring Data Sheet

PHOTOGRAPHS



Photograph #
1:
Upstream Site
looking
upstream.



Photograph #
2:
Upstream Site
looking
downstream.

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date: 11/4/2024 Site Name: Discharge Site Time: 0924

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input type="checkbox"/> showers (intermittent)	
<u>50</u> % cloud cover	<u>50</u> % cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: clear, green algae at bottom of the stream

Water Color: clear to bottom

Estimated Depth: 2", flowing on both sides of culvert slope.

Visibility: 100%, to the bottom

Tide (if applicable): N/A

Notes: Discharge flowing with 4 pipes open and lots of water. Stream flowing fast. No visible vegetation downstream.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes: N/A

Species Observed	# of individuals	Behavior	Notes/Observations
Northern red cardinal	1	Loafing	Calling from the trees at the edge of the stream
warbling white-eye	1	Foraging	Foraging in lower ponds
Pacific golden plover	1	Loafing	Downstream at the stream edge
red-vented bulbul	1	Loafing	Calling from the trees above the stream

Halawa Stream Monitoring Data Sheet

PHOTOGRAPHS



Photograph #
1:
Discharge Site
looking
upstream.

Halawa Stream Monitoring Data Sheet



Photograph #
2:

Discharge Site
looking
downstream.

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date: 11/4/2024 Site Name: Downstream Site # 1 Time: 1028

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input type="checkbox"/> showers (intermittent)	
<u>80</u> % cloud cover	<u>50</u> % cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: Heavy sediment mixed in water

Water Color: brown

Estimated Depth: >3"

Visibility: 100% to the bottom

Tide (if applicable): N/A

Notes: High water flow across most of channel. Only 10% of side still vegetated, all other living clumps gone. Hand-sized clumps of vegetation flowing down stream with floating trash and debris.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes:

Species Observed	# of individuals	Behavior	Notes/Observations
Hawaiian Stilt	2	Foraging	Foraging in stream
warbling white-eye	1	Loafing	Calling from the bushes next to the stream
common myna	2	Flying	Flew over the stream
mosquito fish	<100	Foraging	Near vegetation/soil clumps in the stream

Halawa Stream Monitoring Data Sheet

PHOTOGRAPHS



Photograph #
1:
Downstream
Site # 1.

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date: 11/4/2024 Site Name: Downstream Site # 2 Time: 1018

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input type="checkbox"/> showers (intermittent)	
<u>100</u> % cloud cover	<u>50</u> % cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: clear, sediment at bottom of stream, some surface foam

Water Color: clear to brown

Estimated Depth: >4'

Visibility: ~2'

Tide (if applicable): ~1.0 ft

Notes: No vegetation island in the middle of the stream- all grass pushed over by recent high flow. Dead vegetation on sides of stream. Water becoming murky as survey in progress due to stream flow sediment.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes: N/A

Species Observed	# of individuals	Behavior	Notes/Observations
black-crowned night heron	1	Foraging	Foraging for and eating fish
black-crowned night heron	1	Loafing	Roosting in mangrove on stream edge
mallard hybrids	5	Foraging	Foraging in the stream
Pacific golden plover	1	Loafing	Standing on the edge of the stream
Pacific golden plover	1	Foraging	Chasing after fish in the stream
warbling white-eye	2	Loafing	Calling from vegetation on the edge of the stream

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scaly-breasted munia	20	Foraging	Foraging in the grass as a flock
spotted dove	2	Loafing	Walking in the stream bed
mullet	1	Foraging	Foraging in the deep end of the stream
tilapia	~200	Foraging	Dense school in deep end of the stream

PHOTOGRAPHS



Photograph #
1:

Downstream
Site # 2.

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date: 11/4/2024 Site Name: Estuary Site # 1 Time: 1109

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input checked="" type="checkbox"/> showers (intermittent)	
<u>50%</u> cloud cover	<u>50%</u> cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: Heavy sediment mixed in water

Water Color: dark brown/ green

Estimated Depth: 7'

Visibility: ~3', clear at first 2' of depth.

Tide (if applicable): ~0.85 ft

Notes: Debris (dead vegetation, leaves) scattered up stream on surface. Shoreline inhabitants have lots of clutter (bags of cans and mattress). High traffic time.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes: no waterbirds or shorebirds

Species Observed	# of individuals	Behavior	Notes/Observations
red-vented bulbil	1	Flying	Flew into trees at stream edge
tilapia	~30	Loafing	Swimming in vegetation clump at bridge pillar and shoreline

Halawa Stream Monitoring Data Sheet

PHOTOGRAPHS



Photograph #
1:

Estuary Site #
1.

Halawa Stream Monitoring Data Sheet

Observer/s: _____

Date 11/4/2024 Site Name: Estuary Site # 2 Time: 1055

WEATHER CONDITIONS

NOW	Past 24 Hours	Has there been a heavy rain in the past 7 days?
<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> storm (heavy rain)	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no
<input type="checkbox"/> rain (steady rain)	<input type="checkbox"/> rain (steady rain)	
<input type="checkbox"/> showers (intermittent)	<input type="checkbox"/> showers (intermittent)	
<u>60</u> % cloud cover	<u>50</u> % cloud cover or less	
<input checked="" type="checkbox"/> clear/sunny	<input checked="" type="checkbox"/> clear/sunny	

WATER QUALITY

Water level dry wet standing water flowing water sheen visible

Observed Turbidity/Sedimentation: Heavy sediment mixed in water

Water Color: brown

Estimated Depth: 4"

Visibility: < 1"

Tide (if applicable): ~0.90 ft

Notes: Water level low and can see rocky shoreline. Lots of glare on water. Scattered floating debris and vegetation in big clumps. Large clump past stream mouth and past boom.

SPECIES OBSERVATIONS

Fish Kill? Yes No # Dead Fish 0

Fish Breathing Stress/Gulping None Yes

Fish Abnormal Behavior None Yes

Notes: no water birds or shore birds

Species Observed	# of individuals	Behavior	Notes/Observations
Pacific golden plover	1	Foraging	Foraging in the grass field
common myna	6	Foraging	Foraging in the grass field
zebra dove	6	Foraging	Foraging in the grass field
warbling white-eye	2	Loafing	Calling from trees at the edge of the stream
Java sparrow	1	Foraging	Foraging in the grass field
tilapia	10	Foraging	Swimming at shoreline
surgeon fish	1	Foraging	Swimming at shoreline, size ~1"

Halawa Stream Monitoring Data Sheet

PHOTOGRAPHS



Photograph #
1:
Estuary Site # 2
looking
upstream.



Photograph #
2:
Estuary Site # 2
looking
downstream.

WATERBIRD SURVEY DATASHEET

WETLAND CONDITION CODES				WEATHER CODES			
Water Level (WL) 0 = dry 1 = lower than normal 2 = normal 3 = higher than normal	Human Impact (HI) 0 = indirect (little garbage, few people) 1 = moderate 2 = heavy (many people present; e.g., wading, boating, fishing, etc)	Rainfall (RF) 0 = no rain 1 = mist or fog 2 = drizzle 3 = light rain 4 = heavy rain 5 = snow or hail	Wind 0 = no wind, < 1 mph 1 = smoke drifts, 1-3 mph 2 = wind felt on face, 4-7 mph 3 = leaves and twigs rustle, 8-12 mph 4 = dust raises, branches stir, 13-18 mph 5 = small trees sway, >19 mph				
Vegetation Cover (VC) 0 = open water (<25% veg) 1 = 26-50% veg cover 2 = 51-75% veg cover 3 = >75% cover	Shoreline Condition of Tidal Wetlands (SC) 0 = water at high tide mark 1 = water 25 ft from high tide mark 2 = water 50 ft from high tide mark 3 = water >50 ft from high tide mark	Cloud Cover (CC) = Estimate to the nearest 10% N/A=not applicable					

Date 11-4-24

REMINDERS: If site is not accessible, include wetland name and write 'no access'

Observers XXXXXXXXXX

If no birds observed, fill out top portion and write 'no birds'

KEEP A COPY FOR YOUR RECORDS

Island O'ahu

Subadult includes juveniles and chicks

Wetland Name	US				DC				DS 1				DS 2			
	WL	VC	HI	SC	WL	VC	HI	SC	WL	VC	HI	SC	WL	VC	HI	SC
Condition	2	0	1	NA	2	0	1	NA	3	0	0	NA	2	0	0	1
Weather	CC	RF	Wind		CC	RF	Wind		CC	RF	Wind		CC	RF	Wind	
	80	0	1		50	0	2		50	0	3		100	0	3	
Time	Start		Stop		Start		Stop		Start		Stop		Start		Stop	
	0947		0953		0924		0930		1028		1033		1018		1023	
COOT adult																
subadult																
GALLINULE/MOORHEN adult																
subadult																
STILT adult	2 (adult/foraging)															
subadult																
KOLOA adult																
subadult																
Koloa/Mallard Hybrid	5 (adult/foraging)															
Mallard (domestic/feral)																
Other Domestic Duck																
Black-cr. Night Heron	2 (adult/foraging/roost)															
Cattle Egret																
Pacific Golden Plover	1 (adult/foraging)															
Ruddy Turnstone																
Sanderling																
Wandering Tattler																
Northern Pintail																
Mallard (migratory)																
Lesser scaup																
Comments	no waterbirds/shorebirds				In streambed				In stream				In stream, roost in tree			

WATERBIRD SURVEY DATASHEET

WETLAND CONDITION CODES				WEATHER CODES			
Water Level (WL) 0 = dry 1 = lower than normal 2 = normal 3 = higher than normal	Human Impact (HI) 0 = indirect (little garbage, few people) 1 = moderate 2 = heavy (many people present; e.g., wading, boating, fishing, etc)			Rainfall (RF) 0 = no rain 1 = mist or fog 2 = drizzle 3 = light rain 4 = heavy rain 5 = snow or hail	Wind 0 = no wind, < 1 mph 1 = smoke drifts, 1-3 mph 2 = wind felt on face, 4-7 mph 3 = leaves and twigs rustle, 8-12 mph 4 = dust raises, branches stir, 13-18 mph 5 = small trees sway, >19 mph		
Vegetation Cover (VC) 0 = open water (<25% veg) 1 = 26-50% veg cover 2 = 51-75% veg cover 3 = >75% cover	Shoreline Condition of Tidal Wetlands (SC) 0 = water at high tide mark N/A=not applicable 1 = water 25 ft from high tide mark 2 = water 50 ft from high tide mark 3 = water >50 ft from high tide mark			Cloud Cover (CC) = Estimate to the nearest 10%			

Date 11-04-24

REMINDERS: If site is not accessible, include wetland name and write 'no access'

Observers ██████████

If no birds observed, fill out top portion and write 'no birds'

KEEP A COPY FOR YOUR RECORDS

Island O'ahu

Subadult includes juveniles and chicks

Wetland Name	ES 1				ES 2											
	WL	VC	HI	SC	WL	VC	HI	SC	WL	VC	HI	SC	WL	VC	HI	SC
Condition	2	1	2	1	2	0	2	1								
Weather	CC	RF	Wind		CC	RF	Wind		CC	RF	Wind		CC	RF	Wind	
	50	0	1		50	0	1									
Time	Start		Stop		Start		Stop		Start		Stop		Start		Stop	
	1112		1117		1055		1101									
COOT adult																
subadult																
GALLINULE/MOORHEN adult																
subadult																
STILT adult																
subadult																
KOLOA adult																
subadult																
Koloa/Mallard Hybrid																
Mallard (domestic/feral)																
Other Domestic Duck																
Black-cr. Night Heron																
Cattle Egret																
Pacific Golden Plover	1 (adult/foraging)															
Ruddy Turnstone																
Sanderling																
Wandering Tattler																
Northern Pintail																
Mallard (migratory)																
Lesser scaup																
White Tern																
Comments	no waterbirds/shorebirds				Grass field											