

STREAM SURVEY FORM

Hillwa #1

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: _____
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: *Hillwa #1* ELEVATION: *20 ft above gage* (ft.)
 DATE: *NOV / 8 / 2004* TIME: *11:11* AM TO *11:30* AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL *80%*
 COBBLE _____ BOULDERS _____ BEDROCK *20%*
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____

☒ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☐ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ? _____

Note:
 sunny
 6 inc

COMMENTS:

Random No.: *3, 8*

Site No.: *1*

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: _____
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: _____ ELEVATION: *60 ft above site* (ft.)
 DATE: *NOV / 8 / 2004* TIME: *11:35* AM TO *11:55* AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL *40%*
 COBBLE _____ BOULDERS *20%* BEDROCK *30%*
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____

☒ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☐ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ? _____

15 inc

COMMENTS:

Random No.: *2, 3*

Site No.: *2*

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiliwai A
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Ialakea ELEVATION: _____ (ft.)
 DATE: Nov 8, 2004 TIME: 12:40 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 COBBLE 25% BOULDERS _____ BEDROCK 75%
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
☒ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☐ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: SIZE ♂ ♀ ?

16ins deep
 75ft up stream of staff gauge
 COMMENTS:

Random No.: 25

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiliwai A
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Ialakea ELEVATION: _____ (ft.)
 DATE: Nov 8, 2004 TIME: _____ AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 25%
 COBBLE 10% BOULDERS _____ BEDROCK 65%
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
☐ POOL ☐ SIDE POOL ☒ PLUNGE POOL ☐ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth 6in

COMMENTS:

Random No.: 36

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Mikewai "A"
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: - - - - - ELEVATION: (ft.)
DATE: Nov 18 12004 TIME: 1250 AM TO 2:10 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 35% SAND 5% GRAVEL 35
COBBLE 15% BOULDERS 5% BEDROCK 5%
DETritus

HABITAT TYPE:

SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth 13 inches

COMMENTS:

Random No.: 64

Site No.: 5

DIVISION OF AQUATIC RESOURCES
GRH 2/02



STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER:
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: NOP:11 ELEVATION: (ft.)
DATE: Nov 9 12004 TIME: 1:55 AM TO 2:40 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
COBBLE BOULDERS BEDROCK 100%
DETritus

HABITAT TYPE:

SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Sinc

COMMENTS:

Random No.: 55

Site No.: 6

DIVISION OF AQUATIC RESOURCES
GRH 2/02



STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Napili
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: _____ ELEVATION: _____ (ft.)
DATE: NV 18 2004 TIME: 2:15 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM
SUBSTRATE TYPE (%):
SEDIMENT 0% SAND 25 GRAVEL 25
COBBLE 25 BOULDERS 0% BEDROCK 0%
DETRITUS _____
HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

COMMENTS:

Random No.: 28

Site No.: 7

DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA
WATERPROOF *Auto*

STREAM SURVEY FORM

Raoni n' Iwa

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Kahea/Chloe

HSA CODE: - - - TEMPERATURE: (°C)

NAME: ELEVATION: (ft.)

DATE: 12 / 1 / 04 TIME: 1:50 AM TO AM
Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 100% COBBLE SAND GRAVEL

COBBLE pebbles BOULDERS BEDROCK

100% DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

8 in. deer

Notes:

70 ft. below diversion

N 20.08826°

W 155.60049°

wp=354

COMMENTS:

Random No.: 6, 4

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Ahi, Iri, Jacob

HSA CODE: - - - TEMPERATURE: (°C)

NAME: ELEVATION: 490 m (ft.)

DATE: Dec 11 12604 TIME: 2:57 PM TO AM
Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL

COBBLE 90% BOULDERS BEDROCK

DETRITUS 10%

HABITAT TYPE: SURVEY AREA (l" x w" x h"):

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

- 4 in.

N 20.08841°
W 155.60043°

355

End time = 3:00

COMMENTS:

Random No.: 7, 8

Site No.: 2

Hihiwai
STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Leinagla
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: Hihiwai ELEVATION: 2027 (ft.)
DATE: 2/14/2005 TIME: 11:37 AM TO 11:50 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL 20%
COBBLE 30% BOULDERS BEDROCK 50%
DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

GPA: N 20.08786°
W 155.60138°

COMMENTS:

Random No.: 3, 4

Site No.: 1

DIVISION OF AQUATIC RESOURCES
GRH 2/02



G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: (RANDOM) NONRANDOM OBSERVER: Leinagla
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: Hihiwai ELEVATION: 2044 (ft.)
DATE: 2/14/2005 TIME: 11:55 AM TO 12:10 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
COBBLE BOULDERS 10% BEDROCK 90%
DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
(POOL) SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.08805°
W 155.60063°

Depth: 2.6 ft.

COMMENTS:

Random No.: 2, 9

Site No.: 2

DIVISION OF AQUATIC RESOURCES
GRH 2/02



G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiiwai A
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Levenson ELEVATION: 2048 (ft.)
 DATE: Feb 14 2005 TIME: 1:30 AM TO 1:55 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND 20% GRAVEL 30%
 COBBLE 50% BOULDERS - BEDROCK -
 DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): -

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 2008756
 W 155.60086

depth
 1.4ft

COMMENTS:

Random No.: 69

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiiwai A
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Levenson ELEVATION: 2083 (ft.)
 DATE: Feb 14 2005 TIME: 2:00 AM TO 2:12 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL 75%
 COBBLE 10% BOULDERS 15% BEDROCK -
 DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): -

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.08743
 W 155.60139

depth
 1.8ft

COMMENTS:

Random No.: 92

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Nopili
HSA CODE: - - - TEMPERATURE: - (°C)
NAME: - ELEVATION: 2078 (ft.)
DATE: 2 / 14 / 05 TIME: 2:29 AM TO - AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
COBBLE - BOULDERS - BEDROCK 100%
DETritus -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): -
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth - 1.2 inches

GPS N 20.08754°
W 155.60091°

lg. Crayfish

COMMENTS:

Random No.: 5, 4

Site No.: 5

DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA *Write*
WATERPROOF

G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Nopili
HSA CODE: - - - TEMPERATURE: - (°C)
NAME: J.D. ex Kana ELEVATION: N 20.08716° (ft.)
DATE: Feb 14 / 05 TIME: 2:45 AM TO - AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
COBBLE - BOULDERS 50% BEDROCK 50%
DETritus -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): -
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth: 1.7 ft.

COMMENTS:

Random No.: 9, 7

Site No.: 6

DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA *Write*
WATERPROOF

G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: no pili
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: ELEVATION: (ft.)
DATE: 2/15/05 TIME: 10:15 AM AM TO 10:30 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL 25%
COBBLE 25% BOULDERS 50% BEDROCK
DETritus

HABITAT TYPE: SURVEY AREA (l" x w" x h"): serger
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth: 1ft

N 20.10666°

W 155.59663°

COMMENTS:

Random No.: 5, 1

Site No.: 1

DIVISION OF AQUATIC RESOURCES
GRH 2/02

DURA *Rite*

G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: No pili
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: no pili ELEVATION: 183.4 (ft.)
DATE: 1 Feb 2005 TIME: 10:32 AM TO (STOP) AM
Mo. Day Yr. (START) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL 25%
COBBLE 25% BOULDERS 50% BEDROCK
DETritus

HABITAT TYPE: SURVEY AREA (l" x w" x h"): serger
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10606°

W 155.59595°

COMMENTS:

Random No.: 0, 2

Site No.: 2

DIVISION OF AQUATIC RESOURCES
GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Nopili
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Nopili ELEVATION: 83.4 (ft.)
 DATE: 2/15/2005 TIME: 11:00 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 25%
 COBBLE 25% BOULDERS 50% BEDROCK _____
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 3' x 6' x 1'
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE 6' x 1'
 NO WATER DIRTY WATER beep

SPP: SIZE ♂ ♀ ?

depth: 1

N 20.10551°
 W 155.59558

COMMENTS:

Random No.: 8, 2

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiiwai A
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Levenson ELEVATION: 264 (ft.)
 DATE: Feb 15 2005 TIME: 11:30 AM TO 12:00 PM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 COBBLE _____ BOULDERS 100% BEDROCK _____
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 3' x 6' x 1'
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.105413
 W 155.59558

depth
 1.2 ft

COMMENTS:

Random No.: 7, 8

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hawai A
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: Levenson ELEVATION: 158 (ft.)
DATE: Feb 15 2005 TIME: 12:01 AM TO PM (START) (STOP) (AM) (PM)

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
COBBLE BOULDERS 100% BEDROCK
DETritus

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10472°
W 155.59576°

depth
0.8ft

grasshopper

COMMENTS:

Random No.: 1, 8

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 5

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Wmala
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: Hawai ELEVATION: 175 (ft.)
DATE: 2 15 2005 TIME: 1:30 AM TO 1:50 (START) (STOP) (AM) (PM)

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
COBBLE BOULDERS 100% BEDROCK
DETritus

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

* Depth: 15 1/2 in.

* GPS: N 20.106059°
W 155.59624°

* Wpt: 2355

COMMENTS:

Random No.: 4, 3

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 6

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Leināāla

HSA CODE: - - - TEMPERATURE: (°C)

NAME: Hihwai ELEVATION: ~128? (ft.)

DATE: 2 / 15 / 2005 TIME: 1:52 AM TO AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND 10% GRAVEL 10%

COBBLE 10% BOULDERS 10% BEDROCK

DETRITUS

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 3x6x6

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

* Depth: 8"m

* GPS: N 20.10648°

W 155.59621°

* wpt: 356

COMMENTS:

Random No.: 14, 7

Site No.: 7

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Himiwai
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: _____ ELEVATION: _____ (ft.)
DATE: 2 / 17 / 05 TIME: 9:00 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
COBBLE ✓ BOULDERS _____ BEDROCK ✓
DETritus _____

HABITAT TYPE: 35 SURVEY AREA (l" x w" x h"): Serber
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth = 11 in.

N 20.10644°
W 155.59633°

COMMENTS:

Random No.: 6, 8

Site No.: 1

DIVISION OF AQUATIC RESOURCES
GRH 2/02

J. L. DARLING CORP.
www.RiteInTheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Himiwai
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: _____ ELEVATION: _____ (ft.)
DATE: 2 / 17 / 05 TIME: 9:20 AM TO 9:45 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
COBBLE ✓ 50% BOULDERS ✓ 50% BEDROCK _____
DETritus _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): Serber
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth - 10 1/2"

N: NO GPS
W: NO GPS

COMMENTS:

Random No.: 9, 5

Site No.: 2

DIVISION OF AQUATIC RESOURCES
GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: JP
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: 06pu ELEVATION: _____ (ft.)
 DATE: 2/17/05 TIME: 9:48 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 20%
 COBBLE 5% BOULDERS 75% BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): Gerber

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10575°
 W 155.59622

COMMENTS:

Random No.: 1, 8

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: 0'opu
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: _____ ELEVATION: _____ (ft.)
 DATE: Feb 17 05 TIME: 10:15 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 COBBLE 80% BOULDERS 20% BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10595°
 W 155.59586

1.2 ft deep / 14 inches deep

COMMENTS:

Random No.: 2, 3

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: (Potāgi) 'opae
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Kaori, Iwa, Ahi, Nalu ELEVATION: _____ (ft.)
 DATE: 2 / 17 / 05 TIME: 10:37 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 5% SAND 0% GRAVEL 10%
 COBBLE 70% BOULDERS 10% BEDROCK 5%
 DETRITUS 0%

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

* Kaori, Ahi, Iwa, Nalu *

(7/18/05 written under water)

COMMENTS:

Random No.: 7, 5

Site No.: 5

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Ahi
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Potāgi 'opae ELEVATION: _____ (ft.)
 DATE: 2 / 17 / 05 TIME: 10:55 AM TO 11:00 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 20%
 COBBLE _____ BOULDERS 80% BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): serber

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N=18.30872°
 W=159.27142°

COMMENTS:

Random No.: 1, 5

Site No.: 5

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Tard
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: - - - - - ELEVATION: (ft.)
DATE: 3 / 11 / 04 TIME: 1:12 AM TO AM
Mo. Day Yr. (START) (PM) (STOP) PM
SUBSTRATE TYPE (%):
SEDIMENT 0% SAND 44% GRAVEL 35%
COBBLE 20% BOULDERS 0-1% BEDROCK 0%
DETRITUS
HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m / 10"
POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

N 20.10654°
W 155.59625°
NAME: T. Hottendorf

WP 172

COMMENTS:

Random No.: 7, 9

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: C. Kana
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: - - - - - ELEVATION: (ft.)
DATE: 3 / 11 / 04 TIME: 1:45 PM AM TO AM
Mo. Day Yr. (START) PM (STOP) F
SUBSTRATE TYPE (%):
SEDIMENT SAND 5% GRAVEL 5%
COBBLE 20% BOULDERS 10% BEDROCK
DETRITUS
HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m / 10"
POOL SIDE POOL PLUNGE POOL RUN (RIFFLE) CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

N 20° 20.10626
W 155° 59630
WP 173

COMMENTS:

~~XXXXXXXXXX~~ Caddis Fly (Pupae)

Random No.: 3, 1

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: ~~CHART~~ C. KAO
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: ELEVATION: (ft.)
DATE: 3 / 11 / 04 TIME: 2:08 AM TO 2:38 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL 5%
COBBLE BOULDERS ~~45%~~ 25% BEDROCK 70%
DETRITUS

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m / 6"

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.10640°
W 155.59627°
WP174

COMMENTS:

Random No.: 5, 6

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Pua Hall
HSA CODE: - - - - - TEMPERATURE: (°C)
NAME: ELEVATION: (ft.)
DATE: 03 / 11 / 2004 TIME: 2:42 AM TO 3:12 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND 5% GRAVEL 5%
COBBLE 30% BOULDERS 60% BEDROCK
DETRITUS

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m 8"

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N-20.10628°
W-155.59607°

+ Caddis Flies

COMMENTS:

WP#175

Random No.: 7, 6

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Pua H.
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: _____ ELEVATION: 111 (ft.)
DATE: 03 / 11 / 2004 TIME: 3:18 PM TO _____ PM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 65% GRAVEL 15%
COBBLE 20% BOULDERS _____ BEDROCK _____
DETritus _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m / 6"

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N-20.10604°
W-155.5959°

COMMENTS:

WP=176

Random No.: 2, 5

Site No.: 5

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Keala Alamo
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: _____ ELEVATION: _____ (ft.)
DATE: 3 / 12 / 04 TIME: 9:00 AM TO _____ PM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 60% GRAVEL _____
COBBLE _____ BOULDERS 40% BEDROCK _____
DETritus _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 39 x 32 x 24"

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N20.10604° W155.5959°

COMMENTS: WP#177

Random No.: _____, _____

Site No.: 6

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: ^{Kcala} atamo'o

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: _____ ELEVATION: _____ (ft.)

DATE: 3 / 12 / 04 TIME: _____ AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 40% GRAVEL _____

COBBLE 30% BOULDERS 30% BEDROCK _____

DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 39" x 39" x 18"

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

N 20.10647 W 155.5963425

COMMENTS: WP#179 179

Random No.: 6, 1

Site No.: 7

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Potägi
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Inalani Kaili ELEVATION: _____ (ft.)
DATE: 4 / 14 / 05 TIME: 9:00 AM TO 9:00 PM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 10% SAND _____ GRAVEL 90%
COBBLE _____ BOULDERS _____ BEDROCK _____
DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth - 7 inches

275 ft. upstream
of Ron's Station

COMMENTS:

Random No.: _____

Site No.: _____

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Potägi
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Inalani Kaili ELEVATION: _____ (ft.)
DATE: 4 / 14 / 05 TIME: 9:22 AM TO - PM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 80%
COBBLE _____ BOULDERS 20% BEDROCK _____
DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): See Surber

POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
NO WATER DIRTY WATER (fast)

SPP: SIZE ♂ ♀ ?

Depth: 23 inches

N 20.10604
W 155.59651

COMMENTS:

Random No.: _____

Site No.: _____

Kamehameha **STREAM SURVEY FORM** (*Kamehameha*)

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: *Kaori student*
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: *Potagi* ELEVATION: *8* (ft.)
 DATE: *1* / *1* / _____ TIME: *9:40* AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND _____ GRAVEL *10%*
 COBBLE _____ BOULDERS *90%* BEDROCK _____
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth = 8 inches

*Location >
 N 20.10563°
 W 155.59482°*

COMMENTS:

Random No.: _____, _____

Site No.: _____

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: *Tami*
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: *Shukishuki* ELEVATION: _____ (ft.)
 DATE: *4* / *14* / *06* TIME: *10:00* AM TO *10:30* AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND *20%* GRAVEL *20%*
 COBBLE *50%* BOULDERS *5%* BEDROCK _____
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Hiliawe

Depth = 12 inches

*20.10719° N
 155.59685° W*

COMMENTS:

Random No.: *4*, *3*

Site No.: _____

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: TQM
 ISA CODE: - - - TEMPERATURE: - (°C)
 NAME: Shukishuki ELEVATION: - (ft.)
 DATE: 4 / 14 / 05 TIME: 10:35 (AM) TO - (STOP) AM PM

SUBSTRATE TYPE (%):
 SEDIMENT - SAND 30% GRAVEL 20%
 COBBLE 50% BOULDERS - BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): -
 POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Hililawe stream

Depth: 6 inches

20.10812°N
 155.59875°W

COMMENTS:

Random No.: 4, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

good: 10/14/05
at SKU
Markus & Kady

Site No.: -

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

G-212

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Nancy, Do Boiz
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: - ELEVATION: - (ft.)
 DATE: 1 / 1 / - TIME: 11:00 (AM) TO - (STOP) AM PM

SUBSTRATE TYPE (%):
 SEDIMENT 0% SAND 10% GRAVEL 70%
 COBBLE 15% BOULDERS 5% BEDROCK 0%
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): SURBUT
 POOL SIDE POOL PLUNGE POOL RUN (RIFFLE) CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Hililawe Stream

Fast run

Depth: 7 in

N: 20 10486°
 W: 155 59615°

COMMENTS:

Random No.: 3, 5

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

Site No.: -

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

G-212

KAHAWAHEA SCOUTS 9TH GRADE STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: DA BOITZ/LAUI

ISA CODE: _____ TEMPERATURE: _____ (°C)

NAME: _____ ELEVATION: _____ (ft.)

DATE: 4 / 14 / 05 TIME: 11.35 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 0% SAND 0% GRAVEL 10%
COBBLE 15% BOULDERS 15% BEDROCK 0%
DETRITUS 0%

HABITAT TYPE: SURVEY AREA (l" x w" x h"): SURBER

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.105010
W 159.595810

4/15

COMMENTS:

Random No.: 1, 4

DIVISION OF AQUATIC RESOURCES
BRH 2/02

URA
EARTHWORK

Site No.: _____

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Leinaola
 ISA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: Hihinal ELEVATION: 548 (m) (ft.)
 DATE: Apr 15 12008 TIME: 11:21 AM TO PM (START) (STOP) (AM) (PM)

SUBSTRATE TYPE (%):

SEDIMENT 100% SAND 5% GRAVEL 5%
 COBBLE 100% BOULDERS 80% BEDROCK 80%
 DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

depth
 6 ft

GPS: N 20.08808°
 W 155.60056°

COMMENTS:

Random No.: 6, 2

Site No.: 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02



G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Leinaola
 HSA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: Hihinal ELEVATION: 615 (ft.)
 DATE: Apr 15 12008 TIME: 11:55 AM TO PM (START) (STOP) (AM) (PM)

SUBSTRATE TYPE (%):

SEDIMENT 50% SAND 25% GRAVEL 25%
 COBBLE 50% BOULDERS 25% BEDROCK 25%
 DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth
 2 ft 8 in

GPS: N 20.08810°
 W 155.60071°

COMMENTS:

Random No.: ,

Site No.:

DIVISION OF AQUATIC RESOURCES
 GRH 2/02



G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hiiwai A
 HSA CODE: - - - - - TEMPERATURE: (°C)
 NAME: Lalakea ELEVATION: (ft.)
 DATE: 4 15 2005 TIME: 1:25 AM TO 1:44 AM
 Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
 COBBLE BOULDERS BEDROCK 100%
 DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

depth ~~3~~ 15 in

N 20.08775°

W 155.60068°

COMMENTS:

Random No.: 1, 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 43

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Nopili
 HSA CODE: - - - - - TEMPERATURE: (°C)
 NAME: ELEVATION: (ft.)
 DATE: 4 15 2005 TIME: 2:10 AM TO PM PI
 Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT SAND GRAVEL
 COBBLE BOULDERS BEDROCK 100%
 DETRITUS

HABITAT TYPE: SURVEY AREA (l" x w" x h"):
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

~~12~~ 0.14 in

COMMENTS:

Random No.: 3, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Nopali

HSA CODE: - - - TEMPERATURE: - (°C)

NAME: - - - ELEVATION: - (ft.)

DATE: 11/15/08 TIME: 2:34 AM TO - AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -

COBBLE - BOULDERS 100% BEDROCK -

DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): -

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: S E ♂ ♀ ?

COMMENTS: 1

Random No.: 2, -

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: -

11.20.08
11.55.60078

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Kealaula K. McNeil
 ISA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hui 'Opae / Kanu o ka 'ama ELEVATION: _____ (ft.)
 DATE: JUNE 16 2005 TIME: 9:30 AM TO 10:00 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT 0% SAND 0% GRAVEL 30%
 COBBLE 70% BOULDERS 0% BEDROCK 0%
 DETRITUS 0%

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Island: Big Island, Hawaii
 Locality: Hiiilawe stream
 GPS: N 20.1, W 155.5
 Way Point: 063

COMMENTS:

Random No.: 29

Site No.: _____

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteInTheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Kealaula K. McNeil
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hui 'Opae / Kanu o ka 'ama ELEVATION: _____ (ft.)
 DATE: JUNE 16 2005 TIME: 10:09 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT 30% SAND 10% GRAVEL 30%
 COBBLE 20% BOULDERS 10% BEDROCK 0%
 DETRITUS 0%

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Locality: Hiiilawe Stream
 Island: Big Island, Hawaii
 GPS: N 20.1, W 155.5
 Way Point: 064

COMMENTS:

Random No.: 22

Site No.: _____

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteInTheRain.com
 (253) 922-5000

10

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hihicwai/Tini
 ISA CODE: _____ TEMPERATURE: 19.5 (°C)
 NAME: Hihicwai/Tini ELEVATION: 1374 (ft.)
 DATE: 6/16/05 TIME: 10:40 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 0 SAND 10 GRAVEL 30
 COBBLE 60 BOULDERS 0 BEDROCK 0
 DETRITUS 0

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Locality: Hihicwai Stream
 Island: Big Island, Hawaii

N 20.106
 W 155.596
 WP/67

COMMENTS:

Random No.: _____

Site No.: _____

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (951) 992-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hihicwai/Tini
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hihicwai/Tini ELEVATION: 1534 (ft.)
 DATE: June 16/05 TIME: 11:00 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 20 GRAVEL 40
 COBBLE 40 BOULDERS _____ BEDROCK _____
 DETRITUS _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Locality: Hihicwai Stream
 Island: Big Island, Hawaii

N 20.10616°
 W 155.59599°
 WP/69

COMMENTS:

Random No.: _____

Site No.: _____

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Miliani Kelihoomalu
 ISA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hui Opa - Kame Okama ELEVATION: _____ (ft.)
 DATE: 06/16/05 TIME: 12:45 AM TO 1:16 AM
 Mo. Day Yr. (START) PM (STOP) PM
 SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND 20 GRAVEL 20
 COBBLE 60 BOULDERS _____ BEDROCK _____
 DETRITUS _____
 HABITAT TYPE: SURVEY AREA (l" x w" x h"): river
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER
 SPP: SIZE ♂ ♀ ?

depth 9/10
 GPS 070
 North 20.10
 West 155.60

COMMENTS:

Random No.: 2, 4

Site No.: 5

DIVISION OF AQUATIC RESOURCES
 GRH 2/02



STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Miliani Kelihoomalu
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hui Opa ELEVATION: _____ (ft.)
 DATE: 06/16/05 TIME: 1:20 AM TO 1:45 AM
 Mo. Day Yr. (START) ~~PM~~ (STOP) ~~PM~~
 SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND _____ GRAVEL 20
 COBBLE 60 BOULDERS 20 BEDROCK _____
 DETRITUS _____
 HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER
 SPP: SIZE ♂ ♀ ?

WP 71
 Depth 0.6
 North - 20.10663
 West 155.59624

COMMENTS:

Random No.: 1, 9

Site No.: 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: o'apu
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hiliawe ELEVATION: _____ (ft.)
DATE: June 16 / 2005 TIME: 1:55 AM TO 2:23 AM
Mo. Day Yr. (START) (STOP)
SUBSTRATE TYPE (%):
SEDIMENT _____ SAND 30% GRAVEL 35%
COBBLE 35% BOULDERS _____ BEDROCK _____
DETRITUS _____
HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

depth ~~1.2~~ ft 1.1 ft (wp) 72
N 20.10646°
W 155.59632°

COMMENTS:

Random No.: 1, 2

Site No.: 7

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: o'apu
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hiliawe ELEVATION: _____ (ft.)
DATE: June 16 / 2005 TIME: 2:30 AM TO _____ AM
Mo. Day Yr. (START) (STOP)
SUBSTRATE TYPE (%):
SEDIMENT _____ SAND _____ GRAVEL _____
COBBLE 30% BOULDERS 50% BEDROCK 20%
DETRITUS _____
HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

depth 1.5 ft
N 20.10621°
W 155.59606°
WP - 73

COMMENTS:

Random No.: 3, 8

Site No.: 8

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hillel
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hillawe ELEVATION: 177.3 (ft.)
DATE: 8/30/2005 TIME: 9:10 AM TO 9:30 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 5% GRAVEL 5%
COBBLE 90% BOULDERS _____ BEDROCK _____
DETritus _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

depth 1.1 ft

N: 20° 06.375

W: 155° 35.770

nothing collected

COMMENTS:

Random No.: 8070

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Iihl
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hillawe ELEVATION: _____ (ft.)
DATE: 8/30/2005 TIME: 9:35 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 3%
COBBLE 95% BOULDERS 2% BEDROCK _____
DETritus _____

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth: 0.9 ft

N: 20° 06.350

W: 155° 35.757

COMMENTS:

Random No.: 670

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: J.D., K.B., L.A.
 ISA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: _____ ELEVATION: N 20° 06' 35" (ft.)
 DATE: 9 / 30 / 05 TIME: 10:20 AM TO 11:00 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 10% SAND 15% GRAVEL 25%
 COBBLE 25% BOULDERS 25% BEDROCK _____
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
☒ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☐ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: SIZE ♂ ♀ ?

DEPTH: 0.7 Ft

COMMENTS:

Random No.: 8, 7

Site No.: 1

DIVISION OF AQUATIC RESOURCES
 3RH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: leibohu
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Jamaicans ELEVATION: N 20° 06' 34" (ft.)
 DATE: 8 / 30 / 2005 TIME: 11:00 AM TO 11:55 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 5% SAND 105% GRAVEL 10%
 COBBLE 80% BOULDERS 0 BEDROCK 0
 DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1
☐ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☒ RUN ☐ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth: 0.6 Ft.

COMMENTS:

Random No.: 8, 8

Site No.: 2

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF

G-212

J. L. DARLING CORP.
 www.RiteintheRain.com
 (253) 922-5000

Kaily, Iliana, Honu, Polani AKA - Da nopilis

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Polani
SA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hirilawe stream ELEVATION: _____ (ft.)
DATE: 8/30/2005 TIME: 12:30 AM TO 1:00 AM
Mo. Day Yr. (START) (PM) (STOP) (PM)
SUBSTRATE TYPE (%):
SEDIMENT 0% SAND 0% GRAVEL 0%
COBBLE 25% BOULDERS 75% BEDROCK 0%
DETRITUS 0%
HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

1.7 in. = dept.

about 200 feet above Rons
Station.

COMMENTS:

Random No.: 80, 8

Site No.: 1

DIVISION OF AQUATIC RESOURCES
GRH 2/02

URA

G-212

J. L. DARLING CORP.
www.RiteintheRain.com
(253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Da Nopilis
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Hirilawe stream ELEVATION: N 20° 06.331 (ft.)
DATE: 8/30/05 TIME: 1:05 AM TO _____ AM
Mo. Day Yr. (START) (PM) (STOP) PM
SUBSTRATE TYPE (%):
SEDIMENT 0% SAND 15% GRAVEL 15%
COBBLE 25% BOULDERS 45% BEDROCK 0%
DETRITUS 0%
HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

N 20° 06.331 - W 155° 35.732
6 in. = dept.

COMMENTS:

Random No.: 14, 5

Site No.: 2

DIVISION OF AQUATIC RESOURCES
GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Jamaican
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hirilawe ELEVATION: 1849 (ft.)
 DATE: 10/17/2005 TIME: 12:04 PM TO _____ AM
 Mo. Day Yr. (START) (STOP) PM
 SUBSTRATE TYPE (%):
 SEDIMENT 0% SAND 0% GRAVEL 0%
 COBBLE 80% BOULDERS 20% BEDROCK 0%
 DETRITUS 0%
 HABITAT TYPE: SURVEY AREA (l" x w" x h"): Lalakea
☒ POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

Dep. 1.5 ft wp 546

COMMENTS:

Random No.: 9, 7

Site No.: 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA *Site*

G-212

J. L. DARLING CORP.
 www.RiteInTheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Jamaican
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea Str. ELEVATION: 1961 (ft.)
 DATE: 10/17/05 TIME: 12:37pm PM TO 1:04 PM
 Mo. Day Yr. (START) (STOP) PM
 SUBSTRATE TYPE (%):
 SEDIMENT 0% SAND 0% GRAVEL 0%
 COBBLE 0% BOULDERS 0 BEDROCK 100%
 DETRITUS _____
 HABITAT TYPE: SURVEY AREA (l" x w" x h"): Lalakea
 POOL SIDE POOL PLUNGE POOL RUN ☒ RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

Depth 0.6 ft WP 547

N 20.08783°
 W 155.60062°

COMMENTS:

Random No.: 3, 8

Site No.: 2

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA *Site*

G-212

J. L. DARLING CORP.
 www.RiteInTheRain.com
 (253) 922-5000

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hillel, JR
 HSA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: lalakea ELEVATION: - - - - - (ft.)
 DATE: 10 / 17 / 05 TIME: 1:49 AM TO - - - - - AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - - - - - SAND - - - - - GRAVEL - - - - -
 COBBLE - - - - - BOULDERS - - - - - BEDROCK 100%
 DETRITUS - - - - -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): - - - - -

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.08854° (20.08851°)
 W 155.60054° (155.60062°)

depth 0.45 ft

COMMENTS:

Random No.: 1, 8

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Kaleo
 HSA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: - - - - - ELEVATION: - - - - - (ft.)
 DATE: 11 / 17 / 2005 TIME: - - - - - AM TO - - - - - AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - - - - - SAND - - - - - GRAVEL - - - - -
 COBBLE - - - - - BOULDERS - - - - - BEDROCK 100%
 DETRITUS - - - - -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): - - - - -

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wp 550
 N 20.08850
 W 155.60067

COMMENTS:

Random No.: 1, 13

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Hirk
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Lalakea ELEVATION: _____ (ft.)
DATE: 10/17/2005 TIME: 2:35 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
COBBLE 5% BOULDERS _____ BEDROCK 95%
DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"):

POOL SIDE POOL PLUNGE POOL (RUN) RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth 1.1ft
N 20.08796
W 155.60043
WP 551

COMMENTS:

Random No.: _____

Site No.: _____

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Da Napoli
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Lalakea ELEVATION: 2106 (ft.)
DATE: 10/17/05 TIME: 3:00 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 24% GRAVEL 24%
COBBLE 25% BOULDERS 25% BEDROCK _____
DETRITUS _____

HABITAT TYPE: SURVEY AREA (l" x w" x h"):

POOL SIDE POOL (PLUNGE POOL) RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

WP 553

COMMENTS:

Random No.: _____

Site No.: _____

STREAM SURVEY FORM

SURVEY TYPE: (RANDOM) NONRANDOM OBSERVER: Da Nopilis
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea ELEVATION: _____ (ft.)
 DATE: 10/17/05 TIME: 3:16 p.m. AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM
 SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND 50% GRAVEL 50%
 COBBLE _____ BOULDERS _____ BEDROCK _____
 DETRITUS _____
 HABITAT TYPE: SURVEY AREA (l" x w" x h"): _____
(POOL) SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER
 SPP: SIZE ♂ ♀ ?

~~Weight 557~~

weigh point 557

Depth .5 ft.

We caught an Opae

5-A

COMMENTS:

Random No.: _____

Site No.: _____

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA
 WATERPROOF *note*