

STREAM SURVEY FORM

Surber

STREAM SURVEY FORM

RVEY TYPE: RANDOM NONRANDOM

OBSERVER: The 'Ohu's

A CODE: _____ TEMPERATURE: _____ (°C)

ME: Lalakea Hawaii ELEVATION: _____ (ft.)

TE: April 24 / 2007 TIME: 12:48 AM TO (STOP) PM

BSTRATE TYPE (%):

SEDIMENT SAND GRAVEL 25%

COBBLE 75% BOULDERS BEDROCK

DETRITUS

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

(POOL) SIDE POOL PLUNGE POOL RUN RIFLE CASCADE

NO WATER DIRTY WATER

SIZE ♂ ?

GPS: N 20°05.489' W 155°36.196'

Depth:

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: The 'Ohu's

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Lalakea/Hawaii ELEVATION: _____ (ft.)

DATE: April 24 / 2007 TIME: 12:32 AM TO 12:42 PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT SAND 5% GRAVEL

COBBLE 5% BOULDERS BEDROCK 80%

DETRITUS 10%

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

POOL SIDE POOL PLUNGE POOL (RUN) RIFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ?

GPS: N 20°05.507' W 155°36.194'

Depth: 0.9

MENTS:

dom No.: 4, 3

ON OF AQUATIC RESOURCES

2002

Site No.: 2

MENTS:

Random No.: 1, 7

DIVISION OF AQUATIC RESOURCES

GRH 2002

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Gumish
 ISA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Handmade Dam, T. ELEVATION: _____ (ft.)
 DATE: 4/19/07 TIME: 1146 (START) AM TO PM (STOP)
 SUBSTRATE TYPE (%):
 SEDIMENT ✓ 1% SAND ✓ 5% GRAVEL ✓ 15%
 COBBLE ✓ 12% BOULDERS ✓ 70% BEDROCK _____
 DETRITUS _____
 HABITAT TYPE: _____ SURVEY AREA (l' x w' x h'): _____

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

SPP: SIZE ♂ ♀ ?
Suber Sand

-7 inches deep

N 20° 06.586'
 W 155° 35.940'

couple more bunnies

COMMENTS:

Random No.: 1, 4
 DIVISION OF AQUATIC RESOURCES
 2/02

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Gumish
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Handmade Dam, T. ELEVATION: _____ (ft.)
 DATE: 4/19/07 TIME: _____ (START) AM TO PM (STOP)
 SUBSTRATE TYPE (%):
 SEDIMENT ✓ 20% SAND ✓ 10% GRAVEL ✓ 20%
 COBBLE ✓ 10% BOULDERS ✓ 30% BEDROCK _____
 DETRITUS _____
 HABITAT TYPE: _____ SURVEY AREA (l' x w' x h'): _____

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

SPP: SIZE ♂ ♀ ?
WP. 774

N 20° 06.576'
 W 155° 35.938'

-1 foot

COMMENTS:

Random No.: 3, 8
 DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 2

STREAM SURVEY FORM

KEY TYPE: RANDOM NONRANDOM OBSERVER: THICK
 CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea ELEVATION: _____ (ft.)
 DATE: 4/24/2007 TIME: 2:47 AM TO 3:10 AM
 Mo. Day Yr. (START) (STOP) (END)
 STRATE TYPE (%):
 SEDIMENT: _____ SAND _____ GRAVEL 50%
 COBBLE 25% BOULDERS 25% BEDROCK _____
 DETRITUS _____
 TAT TYPE: SURVEY AREA (l" x w" x h"): _____
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER
 SIZE ♂ ♀ ?

Depth = 2.9 ft
 No GPS
 10 paces from sample 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: THICK
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea Big Island ELEVATION: _____ (ft.)
 DATE: 4/24/2007 TIME: 2:24 AM TO 2:45 AM
 Mo. Day Yr. (START) (STOP) (END)
 SUBSTRATE TYPE (%):
 SEDIMENT 15% SAND 10% 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 = 2.3 ft
 N 20° 05.523'
 W 155° 36.180'
 WP-788

COMMENTS:

Random No.: 1, 9

DIVISION OF AQUATIC RESOURCES
 GRH 2002

Site No.: 1

MENTS:

idom No.: 1, 6

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Shark

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hillside Stream Pond ELEVATION: _____ (ft.)

DATE: 4/19/2007 TIME: _____ (START) _____ (STOP) _____ (STOP) _____ (STOP)

SUBSTRATE TYPE (%): _____

SEDIMENT 20% SAND _____ GRAVEL _____

COBBLE _____ BOULDERS 80% BEDROCK _____

DETRITUS _____

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

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

WP 774

N 20° 60.583'

W 155° 35.950'

13" depth

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Shark

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hillside Stream Pond ELEVATION: _____ (ft.)

DATE: 4/19/2007 TIME: _____ (START) _____ (STOP) _____ (STOP) _____ (STOP)

SUBSTRATE TYPE (%): _____

SEDIMENT 20% SAND _____ GRAVEL 25%

COBBLE _____ BOULDERS _____ BEDROCK 50%

DETRITUS _____

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

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SPP: _____ SIZE _____ ♂ _____ ♀ _____ ?

WP 775

N 20° 06.559'

W 155° 35.930'

8.5 depth

COMMENTS:

Random No.: 3

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 1

COMMENTS:

Random No.: 8.1

DIVISION OF AQUATIC RESOURCES
GRH 2/02

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: Potageez

HSA CODE: -

H1's lane

TEMPERATURE: 47 (°C)

NAME: H1's lane

island

ELEVATION: 47 (ft.)

DATE: 4/19/2007

Mo. Day Yr.

TIME: 7:00

(START)

AM

TO

(STOP)

PM

SUBSTRATE TYPE (%): 25%

SEDIMENT 25%

SAND

GRAVEL

COBBLE 90%

BOULDERS

35%

BEDROCK

DETRITUS

HABITAT TYPE:

SURVEY AREA (l' x w' x h''): (RUN)

POOL SIDE POOL

PLUNGE POOL

(RUN)

RIFLE

CASCADE

NO WATER

DIRTY WATER

SPP:

SIZE

♂

♀

?

WP777

location

surber

N 20° 06.545'

W 155° 35.916'

COMMENTS:

Random No.: 1, 2

Site No.: 1

DIVISION OF AQUATIC RESOURCES

GRH 2002

DURA
POLYMER
WATERPROOF

G-212

J. L. DARLING CORP.
www.RiverHealth.com
(253) 922-9000

STREAM SURVEY FORM

Sublet

Y TYPE: ☒ RANDOM ☐ NONRANDOM

OBSERVER: *THICK*

ID: _____ TEMPERATURE: _____ (°C)

NAME: *Huilane, Big Island* ELEVATION: _____ (ft.)

DATE: *4/23/2007* TIME: *3:10* AM TO _____ (STOP) PM

MO. Day Yr. (START) (STOP)

RATE TYPE (%):

SEDIMENT SAND *25%* GRAVEL *30%*

COBBLE *15%* BOULDERS *5%* BEDROCK *20%*

DETRITUS *5%*

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

POOL SIDE POOL PLUNGE POOL RUN ☒ RIFFLE ☐ CASCADE

NO WATER DIRTY WATER

SIZE *0* *0* *0* *?*

NTS:

No.: *7*, *8*

AQUATIC RESOURCES

Site No.: *1*

STREAM SURVEY FORM

Sublet

Y TYPE: ☒ RANDOM ☐ NONRANDOM

OBSERVER: *THICK*

ID: _____ TEMPERATURE: _____ (°C)

NAME: *Huilane, Big Island* ELEVATION: _____ (ft.)

DATE: *4/23/2007* TIME: *3:10* AM TO _____ (STOP) PM

MO. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT SAND *25%* GRAVEL *30%*

COBBLE *15%* BOULDERS *5%* BEDROCK *20%*

DETRITUS *5%*

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

POOL SIDE POOL PLUNGE POOL RUN ☒ RIFFLE ☐ CASCADE

NO WATER DIRTY WATER

SPP: SIZE *0* *0* *0* *?*

COMMENTS:

Random No.: *7*, *8*

DIVISION OF AQUATIC RESOURCES

GRH 2/02

Site No.: *1*

0.8
20°06.513
155°35.904

depth 0.8
N 20°06.513
W 155°35.904

STREAM SURVEY FORM

TYPE: Surber ~~RANDOM~~ NONRANDOM

OBSERVER: Aloha

TEMPERATURE: _____ (°C)

ELEVATION: _____ (ft.)

DATE: 4/24/2007 TIME: _____ (START) _____ (STOP) AM PM

RATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 25%

BOBBLE 25% BOULDERS 50% BEDROCK _____

DETRITUS _____

TYPE: SURVEY AREA (l' x w' x h'): _____

POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE

NO WATER DIRTY WATER

SIZE ♂ ♀ ?

10005,427 wpt 787 DPA 0.7

55036248

STREAM SURVEY FORM

SURVEY TYPE: Surber ~~RANDOM~~ NONRANDOM

OBSERVER: Aloha

TEMPERATURE: _____ (°C)

ELEVATION: 626 (ft.)

DATE: 4/24/2007 TIME: 10:45 (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 - 1.2 ft

Caught - Mountain opae

GPS = N-20°05,454'

W-155°36.198'

COMMENTS: Above diversion

Random No.: 1, 8

Site No.: 1

AGENTS:

Site No.: 1, 3



Survey Stream Survey Form

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Aloha

1 CODE: _____ TEMPERATURE: _____ (°C)

ME: Lalakea ELEVATION: 0.7 (ft)

DATE: 4/24/2007 TIME: _____ (START) _____ (STOP) AM PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND 15% GRAVEL 10%

COBBLE 25% BOULDERS 50% 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°05.437'

W - 155°36.235'

1 large crayfish

COMMENTS:

Random No.: 1 5 Site No.: 3



Survey Stream Survey Form

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: Aloha

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Lalakea Hawaii ELEVATION: _____ (ft.)

DATE: April 24/2007 TIME: _____ (START) _____ (STOP) AM PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 25%

COBBLE 25% BOULDERS 50% 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°05.427 Wpt 787 Dpt 0.7

W 155°36.248

COMMENTS:

Random No.: 1, 2 Site No.: 4

STREAM SURVEY FORM

REVEY TYPE: RANDOM NONRANDOM

OBSERVER: The Onus

A CODE: _____ TEMPERATURE: _____ (°C)

ME: Hawai'i / H.I. 16 Ave ELEVATION: _____ (ft.)

TE: April / 23 / 2007 TIME: _____ AM TO _____ PM (ft.)

Mo. Day Yr. (START) (STOP) PM

BSRATE TYPE (%): _____

SEDIMENT _____ SAND _____ GRAVEL _____

COBBLE 30% BOULDERS 20% BEDROCK _____

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

POOL SIDE POOL PLUNGE POOL RUN (RIFLE) CASCADE

NO WATER DIRTY WATER

SIZE ♂ ♀ ?

Depth. 0.6

N. 20° 06.550

N. 155° 35.894

U.P. 783

AMENTS:

form No.: 8.2

ON OF AQUATIC RESOURCES

G-212

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

Site No.: _____

Suber

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM

OBSERVER: the Onus

HSA CODE: _____ TEMPERATURE: _____ (°C)

NAME: Hawai'i / H.I. 16 Ave ELEVATION: _____ (ft.)

DATE: 4 / 23 / 07 TIME: 2:05 PM AM TO _____ PM (ft.)

Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%): _____

SEDIMENT 10% SAND _____ GRAVEL 10%

COBBLE 30% BOULDERS 50% BEDROCK _____

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

POOL SIDE POOL PLUNGE POOL (RUN) RIFLE CASCADE

NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Depth. 1.5

N. 20° 06.572

W. 155° 38.962

U.P. 782

COMMENTS:

Random No.: 5.6

ON OF AQUATIC RESOURCES

Site No.: 1