

BOOK #1 of Sept 04 TRIP

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
ISA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Lalakea above diversion ELEVATION: _____ (ft.)
DATE: 9 1 18 104 TIME: 10:40 AM TO 10:42 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"): 1' x 1' x 1'
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

Wpt 276
N 20.09143°
W 155.60495°
Got bugs

Caught blackburn above diversion across of pool.

COMMENTS:
Random No.: 3, 1
Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
HSA CODE: _____ TEMPERATURE: _____ (°C)
NAME: Lalakea above diversion ELEVATION: _____ (ft.)
DATE: 9 1 18 104 TIME: 10:57 AM TO 10:59 AM
Mo. Day Yr. (START) PM (STOP) PM
SUBSTRATE TYPE (%):
SEDIMENT _____ SAND 25 GRAVEL _____
COBBLE 50 BOULDERS 25 BEDROCK _____
DETRITUS _____ 1m x 1/2m x 2"
HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1' x 1' x 2"
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER
SPP: SIZE ♂ ♀ ?

Wpt 277
N 20.08759°
W 155.60077°

~~Got bugs~~

COMMENTS:
Random No.: 4, 8
Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: - - - ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 2:50 AM TO 2:51 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 0"

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

SPP: SIZE ♂ ♀ ?

wpt 301
 N 20,08970°
 W 155.59894°

Nothing

COMMENTS:

Random No.: 1, 3

Site No.: 15

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: lake below diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 2:51 AM TO 2:52 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 70 BOULDERS 30 BEDROCK -
 DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 0"

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

SPP: SIZE ♂ ♀ ?

wpt 302
 N 20,08968°
 W 155.59879°

Got stuff
 Near wooden bridge crossing

COMMENTS:

Random No.: 4, 1

Site No.: 16

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillawe above first stream gage ELEVATION: _____ (ft.)
 DATE: 9 / 19 / 04 TIME: 9:58 AM TO 9:59 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"): 1m x 1m x 1ft
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 303
 N 20.10363°
 W 155.59271°

Nothing

COMMENTS: started counting at the first stream gage

Random No.: 9, 6

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: _____ (ft.)
 DATE: 9 / 19 / 04 TIME: 10:06 AM TO 10:07 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"): 1m x 1m x 8in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 304
 N 20.10317°
 W 155.59309°

Got stuff

COMMENTS:

Random No.: 1, 6

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawa ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:16 AM TO 10:17 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 10 BOULDERS 80 BEDROCK -
 DETRITUS 10

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 18in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 305
 N 20.10482°
 W 155.59427°

Nothing

COMMENTS:

Random No.: 3, 7

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 12/02

DA

J. L. DARLING CORP.
 www.DarlingData.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawa above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:19 AM TO 10:20 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND 10 GRAVEL -
 COBBLE 40 BOULDERS 40 BEDROCK -
 DETRITUS 10

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

SPP: SIZE ♂ ♀ ?

wpt 306
 N 20.10481°
 W 155.59451°

Nothing

COMMENTS:

Random No.: 1, 7

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:22 AM TO 10:23 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 25 BOULDERS 75 BEDROCK -
 DETRITUS -

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

SPP: SIZE ♂ ♀ ?

wpt 307
 N 20.10490°
 W 155.59462°

Got stuff

COMMENTS:

Indom No.: 6, 4

Site No.: 5

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:31 AM TO 10:32 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 20 BOULDERS 80 BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 9in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 308
 N 20.10564°
 W 155.59576°

Got stuff

COMMENTS:

Random No.: 9, 3

Site No.: 6

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 SA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:41 AM TO 10:42 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 16in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 309
 N 20.10523°
 W 155.59572°

Got stuff

observed o'opu nāpili
 o'opu nākeka

COMMENTS:

Random No.: 8, 1

Site No.: 7

DIVISION OF AQUATIC RESOURCES
 H 2/02

DA

J. L. DARLING CORP.
 www.DarlingData.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:54 AM TO 10:55 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 5in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 310
 N 20.10515°
 W 155.59576°

Nothing

COMMENTS:

Random No.: 1, 9

Site No.: 8

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 SA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 10:58 AM TO 10:59 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 30 in

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

SPP: SIZE ♂ ♀ ?

wpt 311
 N 20.10486°
 W 155.59587°

Got stuff

COMMENTS:

Random No.: 5, 8

Site No.: 9

DIVISION OF AQUATIC RESOURCES
 H 2/02

DA

J. L. DARLING CORP.
 www.ElletotheDain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 11:05 AM TO 11:06 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 20 BOULDERS 80 BEDROCK -
 DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 3 in

SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 312
 N 20.10440°
 W 155.59578°

Nothing.

COMMENTS:

Random No.: 8, 3

Site No.: 10

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 11:08 AM TO 11:09 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND 10 GRAVEL 30
 COBBLE 30 BOULDERS 30 BEDROCK -
 DETRITUS -

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

Wpt 313
 N 20.10440°
 W 155.59587°

Nothing

COMMENTS:

Random No.: 1, 6

Site No.: 11

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 11:12 AM TO 11:13 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"): 1m x 1m x 18in

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

SPP: SIZE ♂ ♀ ?

Wpt 314
 N 20.10430°
 W 155.59612°

Got stuff

COMMENTS:

Random No.: 5, 7

Site No.: 12

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 SA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 11:20 AM TO 11:21 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 3.1m
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wpt 315
 N 20.10388°
 W 155.59602°

Nothing

COMMENTS:

Random No.: 8, 6

Site No.: 13

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 11:23 AM TO 11:24 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 1.4m
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wpt 316
 N 20.10373°
 W 155.59619°

Nothing

COMMENTS:

Random No.: 1, 4

Site No.: 14

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MMA
 SA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 12:04 AM TO 12:05 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"): 1m x 1m x 0"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

PP: SIZE ♂ ♀ ?

No GPS

Nothing

COMMENTS:

Random No.: 8, 7

Site No.: 15

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

70 A B

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MMA
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe above 1st stream gage ELEVATION: - (ft.)
 DATE: 9 / 19 / 04 TIME: 12:10 AM TO 12:11 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 25 BOULDERS 75 BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 0 in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

No GPS

Nothing

COMMENTS:

Random No.: 9, 1

Site No.: 16

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: _____ (ft.)
 DATE: 9 / 19 / 04 TIME: 12:16 AM TO 12:17 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 16in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

No GPS

Nothing

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hilawe above 1st stream gage ELEVATION: _____ (ft.)
 DATE: 9 / 19 / 04 TIME: 12:21 AM TO 12:22 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 18in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 317
 N 20.10245°
 W 155.59518°

Got stuff

COMMENTS:

Random No.: 7, 3

Site No.: 17

DIVISION OF AQUATIC RESOURCES
 4/2/02

J. L. DARLING CORP.

COMMENTS:

Random No.: 8, 2

Site No.: 18

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE+MM
 ISA CODE: - - - TEMPERATURE: - (°C)
 NAME: Lalakea above diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 11:05 AM TO 11:06 AM
Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND 10 GRAVEL -
 COBBLE 10 BOULDERS - BEDROCK 80
 DETRITUS -

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 1.2ft

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

SPP: SIZE ♂ ♀ ?

wpt 278
 N 20,08751°
 W 155,60077°

Nothing

COMMENTS:

Random No.: 2, 8

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE+MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Lalakea above diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 11:10 AM TO 11:11 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 25 BOULDERS 75 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 ♂ ♀ ?

wpt 280
 N 20,08762°
 W 155,60100°

Nothing

COMMENTS:

Random No.: 1, 7

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Lalakea above diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 11:15 AM TO 11:16 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"): 1m x 1m x 0"
 POOL - SIDE POOL - PLUNGE POOL - RUN - RIFFLE - CASCADE -
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt No GPS

Nothing

COMMENTS:

Random No.: 8, 6

Site No.: 5

DIVISION OF AQUATIC RESOURCES
 4/2/02

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE+MM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Lalakea above diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 11:20 AM TO 11:21 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"): 1m x 1m x 0"
 POOL - SIDE POOL - PLUNGE POOL - RUN - RIFFLE - CASCADE -
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 282
N 20,08727°
W 155,60144°

Nothing

COMMENTS:

Random No.: 4, 4

Site No.: 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MHA
 HSA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: Lalakea above diversion ELEVATION: - - - - - (ft.)
 DATE: 9/18/04 TIME: 11:24 AM TO 11:25 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - - - - - SAND - - - - - GRAVEL 20
 COBBLE - - - - - BOULDERS - - - - - BEDROCK 80
 DETRITUS - - - - -

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

wpt 283
 N 20.08694°
 W 155.60165°

Nothing

Bullfrog seen

COMMENTS:

Random No.: 1, 1

Site No.: 7

DIVISION OF AQUATIC RESOURCES
 12/02

© A B

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MHA
 HSA CODE: - - - - - TEMPERATURE: - - - - - (°C)
 NAME: Lalakea above diversion ELEVATION: - - - - - (ft.)
 DATE: 9/18/04 TIME: 11:28 AM TO 11:29 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - - - - - SAND - - - - - GRAVEL - - - - -
 COBBLE 25 BOULDERS 75 BEDROCK - - - - -
 DETRITUS - - - - -

HABITAT TYPE:

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

SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 284
 N 20.08684°
 W 155.60168°

Nothing

COMMENTS:

Random No.: 3, 4

Site No.: 8

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 A CODE: - TEMPERATURE: - (°C)
 ME: Lalakea above diversion ELEVATION: - (ft.)
 TE: 9 1 18 04 TIME: 11:35 AM TO 11:36 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"): 1m x 1m x 0"
 POOL NO WATER SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 DIRTY WATER

P: SIZE ♂ ♀ ?

No GPS

Nothing

COMMENTS:

Random No.: 6, 4

Site No.: 9

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea above diversion ELEVATION: - (ft.)
 DATE: 9 1 18 04 TIME: 11:38 AM TO 11:39 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"): 1m x 1m x 2"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wpt 285
 N 20.08648°
 W 155.60156°

COMMENTS:

Random No.: 2, 4

Site No.: 10

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MAM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Lalakea ELEVATION: 2000 (ft.)
 DATE: 9 / 18 / 04 TIME: 1:04 PM TO 1:05 PM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

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

SPP: SIZE ♂ ♀ ?

wpt 286
 N 20.08775°
 W 155.60022°

Pool of diversion
 just below

Nothing

COMMENTS: started at diversion and headed downstream.

Indom No.: 1, 6

Site No.: 1

DIVISION OF AQUATIC RESOURCES
 H 2/02

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MAM
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: - ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 1:08 PM TO 1:09 PM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 2"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 287
 N 20.08831°
 W 155.60046°

Got stuff

COMMENTS:

Random No.: 8, 5

Site No.: 2

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea below diversion ELEVATION: _____ (ft.)
 DATE: 9/18/04 TIME: 1:13 AM TO 1:14 AM
Mo. Day Yr. (START) (STOP) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 20"
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

up + 288
 N 20.08868°
 W 155.60052°

~~Not staff~~
 Nope, no we didn't!

COMMENTS: Next to staff gage.

Random No.: 3, 8

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 12/02

DA

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea below diversion ELEVATION: _____ (ft.)
 DATE: 9/18/04 TIME: 1:19 AM TO 1:20 AM
Mo. Day Yr. (START) (STOP) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 0"
POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

No GPS

Nothing

COMMENTS:

Random No.: 3, 4

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9/18/04 TIME: 1:25 AM TO 1:26 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"): 1m x 1m x 0"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 289
 N 20.08899°
 W 155.60011°

Nothing

COMMENTS:

Random No.: 9, 7

Site No.: 5

DIVISION OF AQUATIC RESOURCES
 1/2/02

DA As

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea ELEVATION: - (ft.)
 DATE: 9/18/04 TIME: 1:28 AM TO 1:29 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 25 BOULDERS 75 BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 4"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 290
 N 20.08903°
 W 155.59995°

Got stuff
 adult caddisfly?

COMMENTS:

Random No.: 3, 1

Site No.: 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE+MM
 SA CODE: - TEMPERATURE: - (°C)
 NAME: Lake below diversion ELEVATION: 5400 (ft.)
 DATE: 9/18/04 TIME: 1:38 AM TO 1:39 AM
 Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 75 BOULDERS 25 BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 0"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

wpt 293
 N 20.08924°
 W 153.39984°

Nothing

COMMENTS:

Random No.: 5, 9

Site No.: 7

DIVISION OF AQUATIC RESOURCES
 H 2/02

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STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE+MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lake below diversion ELEVATION: - (ft.)
 DATE: 9/18/04 TIME: 1:40 AM TO 1:41 AM
 Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 50 BOULDERS 50 BEDROCK -
 DETRITUS -

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

SPP: SIZE ♂ ♀ ?

wpt 294
 N 20.08947°
 W 155.59978°

Nothing

COMMENTS:

Random No.: 5, 1

Site No.: 8

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

RVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 A CODE: - TEMPERATURE: - (°C)
 ME: Lalakea below diversion ELEVATION: 2807.1 (ft.)
 TE: 9 / 18 / 04 TIME: 1:45 AM TO 1:46 AM
Mo. Day Yr. (START) (STOP) (STOP)

BSTRATE TYPE (%):

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

BITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 0"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

P: SIZE ♂ ♀ ?

wpt 295
 N 20,08964°
 W 155,59973°

Nothing

MENTS:

andom No.: 4, 2

Site No.: 9

SION OF AQUATIC RESOURCES
 2/02

3/1/02

J. L. DARLING CORP.

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 1:52 AM TO 1:53 AM
Mo. Day Yr. (START) (STOP) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 40 BOULDERS 60 BEDROCK -
 DETRITUS -

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

SPP: SIZE ♂ ♀ ?

wpt 296
 N 20,08978°
 W 155,59956°

Nothing

MENTS:

Random No.: 4, 7

Site No.: 10

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

BOOK #2 of Sept 04 TRIP

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9/18/04 TIME: 2:20 AM TO 2:21 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

Wpt 297
 N 20.08986°
 W 155.59956°

COMMENTS:

Random No.: 11, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 11

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9/18/04 TIME: 2:27 AM TO 2:28 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"): 1m x 1m x 8 in

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

SPP: SIZE ♂ ♀ ?

wpt 298
 N 20.08986°
 W 155.59941°

Got stuff
 mostly immatures.

COMMENTS:

Random No.: 7, 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

DURA

Site No.: 12

J. L. DARLING CORP.
 www.RiteintheRain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 2:38 AM TO 2:39 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

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

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 5in
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

npt 299
 N 20.08984°
 W 155.59921°

Cont stuff

COMMENTS:

Random No.: 4, 7

Site No.: 13

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE + MM
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea below diversion ELEVATION: - (ft.)
 DATE: 9 / 18 / 04 TIME: 2:46 AM TO 2:47 AM
Mo. Day Yr. (START) (STOP)

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE 50 BOULDERS 50 BEDROCK -
 DETRITUS -

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

SPP: SIZE ♂ ♀ ?

npt 300
 N 20.08965°
 W 155.59904°

Nothing

COMMENTS:

Random No.: 5, 8

Site No.: 14

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

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