

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE (only)
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea - below divers ELEVATION: 1830* + Sherpa (ft)
 DATE: 11/6/04 TIME: 1030 AM TO 1031 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT 25 SAND _____ GRAVEL _____
 COBBLE _____ BOULDERS 75 BEDROCK _____
 DETRITUS _____

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

SPP: SIZE ♂ ♀ ?

Wght. 136
 N 20.08966
 155.59857

Embed = 20%¹⁰

0 Insects

Starting above wooden foot bridge,
 Lalakea below Diversion
 COMMENTS:

Random No.: 7, 7

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea below divers ELEVATION: 1837* Sherpa (ft)
 DATE: 11/6/04 TIME: 1050 AM TO 1051 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 3 inches
☐ POOL ☐ SIDE POOL ☐ PLUNGE POOL ☐ RUN ☒ RIFFLE ☐ CASCADE
☐ NO WATER ☐ DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wght. 137
 N 20.08964
 155.59875

Embed = 0%¹⁰
 2 insects - 1 hiro?

COMMENTS:

Random No.: 2, 1

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalaka below River ELEVATION: 1837 (ft.)
 DATE: 01/06/04 TIME: 1105 AM TO 1107 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 inch
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wght. 138
 N20.08966
 155.59880
 Embed = 15%

No Insects - Large Ephydriids observed
 outside of sample area

COMMENTS:

Random No.: 1, 3

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 H 2/02

100 A

J. L. DARLING CORP.
 www.BioethicsData.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalaka below River ELEVATION: _____ (ft.)
 DATE: 01/06/04 TIME: 1112 AM TO _____ 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"): 1m x 1m x 3 inch
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Wght. 139
 N20.08993
 155.59909

Embed = 10%

No aquatic Insects (one fruit fly)

COMMENTS:

Random No.: 6, 8

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalukca below diver ELEVATION: 1852* Shopp (ft.)
 DATE: 01/06/04 TIME: 1122 AM TO 1128 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 COBBLE _____ BOULDERS 80 BEDROCK _____
 DETRITUS 20 (Gravel)

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 ♂ ♀ ?

Nypt 140
 V20.08994
 155.59932
No insects

COMMENTS:

Random No.: 5, 8

Site No.: 5

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalukca ELEVATION: 1865* Shopp (ft.)
 DATE: 01/06/04 TIME: 1132 AM TO 1134 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"): 1m x 1m x 1inch

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

SPP: SIZE ♂ ♀ ?

Nypt. 141
 N20.08980
 155.59976
 5% Embed

1 aquatic insect

COMMENTS:

Random No.: 7, 9

Site No.: 6

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 SA CODE: - TEMPERATURE: - (°C)
 NAME: Lakehead below div. ELEVATION: 1868 * 5 4 1 9 (ft.)
 DATE: 01106104 TIME: 1141 AM TO 1143 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

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

SPP: SIZE ♂ ♀ ?

Nyph. 142

N20.08935

155.59982

Embed = 40%

1 aquatic Insect (at least?)

COMMENTS:

Random No.: 5, 8

Site No.: 7

DIVISION OF AQUATIC RESOURCES
 H 2/02

7/0/01

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

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lakehead below div. ELEVATION: 1876 (ft.)
 DATE: 01106104 TIME: 1151 AM TO 1153 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"): 1 m x 1 m x 0
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Nyph. 143

N20.08929

155.59959

No insects!

Embed = 50%

COMMENTS:

Random No.: 2, 3

Site No.: 8

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lakeview - Below Div. ELEVATION: 1877 (ft.)
 DATE: 01 106 104 TIME: 1157 (AM) TO 1159 (AM)
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

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

SP: SIZE ♂ ♀ ?

N 20.08938 wght 144
 155.59982

No insects

Embed = 5%

COMMENTS:

Random No.: 1, 8

Site No.: 9

DIVISION OF AQUATIC RESOURCES
 H 2/02

10 A RE

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

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lakeview - Below Div. ELEVATION: 1888 * 5200 ft
 DATE: 01 106 104 TIME: 1231 (AM) TO - (AM)
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL 10
 COBBLE 20 BOULDERS 70 BEDROCK -
 DETRITUS -

HABITAT TYPE: SURVEY AREA (l" x w" x h"): 1m x 1m x 8 inches
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SP: SIZE ♂ ♀ ?

N 20.08925 wght 145
 155.59990

1 insect

Embed = 5%

COMMENTS:

Random No.: 2, 8

Site No.: 10

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RF
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea below div. ELEVATION: 1904* Sheppa (ft.)
 DATE: 01106104 TIME: 1242 AM TO 1244 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 ♂ ♀ ?

N20.08907 Wyp. 146
 155.59990

No Insects

0% Embed

COMMENTS:

Random No.: 5.1

Site No.: 11

DIVISION OF AQUATIC RESOURCES
 11/2/02

100 A 12

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

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RF
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea below div. ELEVATION: 1909* Sheppa (ft.)
 DATE: 01106104 TIME: 1250 AM TO 1252 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 inch
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N20.08898 Wyp. 147
 155.59996

Embed = 10%

No Insects

COMMENTS:

Random No.: 1.2

Site No.: 12

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: AE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea-Below diversion ELEVATION: 1925^{ft} Shasta (ft.)
 DATE: 01/06/04 TIME: 1258 AM TO 1300 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 2.5A

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

SP: SIZE ♂ ♀ ?

N 20.08892 Wyp. K8
 155.60028
 Embed = 40%

No Insects

Anax strenuus observed outside
 sample area

COMMENTS:

Random No.: 7, 3

Site No.: 13

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Kalakra-Below Div. ELEVATION: 1925^{ft} Shasta (ft.)
 DATE: 01/06/04 TIME: 1311 AM TO 1313 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"): 1m x 1m x 1.5A

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

SPP: SIZE ♂ ♀ ?

N 20.08875
 W 155.60049
 Wyp. 149

Embed = 0
 Tons of Insects!!

* Cascade just below Lower Staff gage
 below Lalakea Diversion
 (Staff Gage = 1.94 ft
 at 1325 hrs.)

COMMENTS:

Random No.: 7, 6

Site No.: 14

STREAM SURVEY FORM

SURVEY TYPE: (RANDOM) NONRANDOM OBSERVER: RF
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lalakea - Below diversion ELEVATION: 1990 (ft.)
 DATE: 01 106 104 TIME: 1330 AM TO 1332 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"): 1m x 1m x 0

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

SPP: SIZE ♂ ♀ ?

Just below main Lalakea Diversion

Nypt. 150

N20.08823

155.60057

No Insects

* Downloaded Stream Rain Gage data
 at 1351 hrs. at Lalakea Diversion

* Shevpa Reading at Diversion = 1967 ft.

COMMENTS:

Random No.: 9, 8

Site No.: 15

DIVISION OF AQUATIC RESOURCES
 H 2/02

70 A B

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

STREAM SURVEY FORM

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

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 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 ♂ ♀ ?

COMMENTS:

Random No.: 6, 8

Site No.: 16

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea - Above Diversion ELEVATION: 2013 * GPS - Calibrated (ft.)
 DATE: 01/06/04 TIME: 1435 AM TO 1437 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"): 1m x 1m x 2.5ft
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?
* Now ABOVE Lalakea Diversion

N 20.08761 → Wyp. 151
 155.60069

* Calibrated GPS at Lalakea Diversion Dam
 (1000ft. at Dam)

3 insects

Embed = 0

COMMENTS:

Random No.: 7, 7

Site No.: 17

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Lalakea - Above Diversion ELEVATION: 2021 * GPS (ft.)
 DATE: 01/06/04 TIME: 1450 AM TO 1452 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"): 1m x 1m x 2.5ft
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

Embed = 0

N 20.08750 → Wyp. 152
 155.60091

Lots of insects

COMMENTS:

Random No.: 2, 4

Site No.: 18

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lakeview - Above Divers ELEVATION: 2048-GPS (ft.)
 DATE: 01/10/04 TIME: 1504 AM TO 1506 AM
Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND 30 GRAVEL 70
 COBBLE _____ BOULDERS _____ 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 ♂ ♀ ?

N 20.08756
 155.60110 > wgt. 153

Embed = 30%

No insects

COMMENTS:

Random No.: 1, 1

DIVISION OF AQUATIC RESOURCES
 2/02

70 A

Site No.: 19

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

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Lakeview - Above Divers ELEVATION: 2059-GPS (ft.)
 DATE: 01/10/04 TIME: 1515 AM TO 1517 AM
Mo. Day Yr. (START) (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT _____ SAND _____ GRAVEL 50
 COBBLE 30 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

SPP: SIZE ♂ ♀ ?

N 20.08758 wgt. 154
 155.60120

Embed = 50%
 No Insects

COMMENTS:

Random No.: 2, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 20

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: PE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Laticoa - Above Divers ELEVATION: 2070*6PS (ft.)
 DATE: 01106104 TIME: 1526 AM TO 1528 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 18 inches
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N20.08726 → Wgt. 155
 155.60146
 Embel = 0

COMMENTS:

Random No.: 7, 9
 DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 21

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: NB
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Laticoa - Above Divers ELEVATION: 2094 (ft.)
 DATE: 01106104 TIME: 1540 AM TO 1542 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 COBBLE - BOULDERS 100% BEDROCK -
 DETRITUS 1

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

SPP: SIZE ♂ ♀ ?

Wgt. 156
 N20.08709
 155.60159

COMMENTS:

Random No.: 4, 7
 DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 22

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RT
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: - ELEVATION: 2096 (ft.)
 DATE: 01 10 04 TIME: 1548 AM TO 1550 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

V20,08703, W4pt, 157
155.60161

090 (1 possible aquatic Insect)
Embed

COMMENTS:

Random No.: 1, 6

Site No.: 23

STREAM SURVEY FORM

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

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL -
 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 ♂ ♀ ?

COMMENTS:

Random No.: 7, 5

Site No.: 24

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe ELEVATION: 16476AS (ft.)
 DATE: 01/07/04 TIME: 1348 AM TO 1350 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 16 inch
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE 20, 104, 22 [♂] 155, 595, 98 [♀] 158 [?]
 1/2 Embed.

*coll. Insects

COMMENTS:

Random No.: 2, 7

DIVISION OF AQUATIC RESOURCES
 12/02

RAA

Site No.: 1

J. L. DARLING CORP.
 www.RiteInTheRain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - TEMPERATURE: - (°C)
 NAME: Hillawe - Below EKF Riv. ELEVATION: 175 (ft.)
 DATE: 01/07/04 TIME: 1402 AM TO 1404 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT - SAND - GRAVEL 10
 COBBLE 40 BOULDERS 30 BEDROCK 20
 DETRITUS -

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

SPP: SIZE 20 [♂] 10 [♀] 158 [?]

Embed = 20%
 No GP3 here

COMMENTS:

Random No.: 8, 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillawa-Below EKF ELEVATION: 1904 (ft.)
 DATE: 01/07/04 TIME: 1403 AM TO 1410 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 COBBLE 30 BOULDERS 40 BEDROCK 20
 DETRITUS 10

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 2ft.

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

SPP: SIZE ♂ ♀ ?

No GPS Here - No insects
 Embed 30%

Shorpa Altitude = 193ft.
 Here

COMMENTS:

Random No.: 8, 2

Site No.: 3

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillawa-Below EKF ELEVATION: 204 (ft.)
 DATE: 01/07/04 TIME: 1413 AM TO 1415 AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

N20.10284
 155.59554 > W3 pt. 159

No insects
 0% Embed

COMMENTS:

Random No.: 4, 8

Site No.: 4

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 SA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hillside - Below EKF ELEVATION: 218 (ft.)
 DATE: 01 10 7 2004 TIME: 1422 AM TO 1424 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"): 1m x 1m x 8in

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

PP: SIZE ♂ ♀ ?

Embed = 50%
N20. 10267 Wght. 160
155.59532

COMMENTS:

Random No.: 6, 3

Site No.: 5

VISION OF AQUATIC RESOURCES
 RH 2/02

MPA

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

STREAM SURVEY FORM

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

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL _____
 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 ♂ ♀ ?

COMMENTS:

Random No.: 5, 9

Site No.: 6

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hakalua - Below Divers ELEVATION: 1899* slope (ft.)
 DATE: 01/08/04 TIME: 1105 AM TO 1107 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 30 SAND - GRAVEL -
 COBBLE 10 BOULDERS 10 BEDROCK 30
 DETRITUS 20

HABITAT TYPE:

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

SPP: SIZE ♂ ♀ ?

N 20. 08370 wypt. 161
155. 60242

Embed = 60%

No Insects

COMMENTS:

Random No.: 1, 3

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 1

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: - - - TEMPERATURE: - (°C)
 NAME: Hakalua - Below Divers ELEVATION: 2020* Garmin (ft.)
 DATE: 01/08/04 TIME: 1109 AM TO 1111 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT 20 SAND - GRAVEL 15
 COBBLE 15 BOULDERS 50 BEDROCK -
 DETRITUS -

HABITAT TYPE:

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

SPP: SIZE ♂ ♀ ?

N 20. 08918 wypt. 162
155. 59679

Embed = 50%

1 insect

COMMENTS:

Random No.: 4, 3

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 2

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakatao ELEVATION: 2033*GPS (ft.)
 DATE: 01/08/04 TIME: 1120 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):
 SEDIMENT 10 SAND _____ GRAVEL 10
 COBBLE 20 BOULDERS 60 BEDROCK _____
 DETRITUS _____

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

SPP: SIZE ♂ ♀ ?

N 20.08892 → Wyp. 163
 155.59653

1 insect in net

*Anax strenuus observed
 outside sample area

COMMENTS:

Random No.: 9, 2

Site No.: 3

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakatao - Rebn Div ELEVATION: 2039 (ft.)
 DATE: 01/08/04 TIME: 1135 AM TO _____ AM
 Mo. Day Yr. (START) PM (STOP) PM

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

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

SPP: SIZE ♂ ♀ ?

N 20.08867 → Wyp. 164
 155.59634

Embed = 90%

1 insect

COMMENTS:

Random No.: 8, 2

Site No.: 4

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

www.BrainintheRain.com

J. L. DARLING CORP.
 www.BrainintheRain.com

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakalaka ELEVATION: 2063 (ft.)
 DATE: 01/08/04 TIME: 1153 AM TO 1155 AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

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 ♂ ♀ ?

Wght. 165
 N 20.08841
 155.59621
 (3 ft. below Lalakea Flume)

100% Embed

No Insects - Thick Ginger

COMMENTS:

Random No.: 7.2
 DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 5

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakalaka Above Diversion ELEVATION: 2111 (ft.)
 DATE: 01/08/04 TIME: 1246 AM TO 1248 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"): 0.5m x 0.5m x 4"
 POOL SIDE POOL PLUNGE POOL RUN RIFFLE CASCADE
 NO WATER DIRTY WATER

SPP: SIZE ♂ ♀ ?

N 20.08786 > Wght. 166
 155.59596
 Embed = 0%

COMMENTS:

Random No.: 6.7
 DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 6

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakataoa - Above Divers ELEVATION: 2120 + 605 (ft.)
 DATE: 01 10 04 TIME: 1303 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

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

HABITAT TYPE:

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

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

SPP: SIZE ♂ ♀ ?

N 20,08774 → Wyp. 167

155.59595

Embed = 0% (Algae Growth)

No Insects in sample area

I. posita common outside area

COMMENTS:

Random No.: 1, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 7

STREAM SURVEY FORM

SURVEY TYPE: RANDOM NONRANDOM OBSERVER: RE
 HSA CODE: _____ TEMPERATURE: _____ (°C)
 NAME: Hakataoa ELEVATION: _____ (ft.)
 DATE: 01 10 04 TIME: 1315 AM TO _____ AM
Mo. Day Yr. (START) PM (STOP) PM

SUBSTRATE TYPE (%):

SEDIMENT _____ SAND _____ GRAVEL 10
 COBBLE 70 BOULDERS _____ BEDROCK _____
 DETRITUS 20

HABITAT TYPE:

SURVEY AREA (l" x w" x h"): 1m x 1m x 2 inch

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

SPP: SIZE ♂ ♀ ?

shallow
Run

N 20,08731 → Wyp. 167
155.59590

Embed = 60%

Ginger is very thick, stream low-flowing
 and nearly impossible to sample

COMMENTS:

Random No.: 7, 1

DIVISION OF AQUATIC RESOURCES
 GRH 2/02

Site No.: 8