

**FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING):**



| Session No: | Verifiers:                       | Pre date: | Pre time: | Post: Date: | Post time: |
|-------------|----------------------------------|-----------|-----------|-------------|------------|
| 43          | Callinan, L; Maxwell, C; Reed, D | 8/6/18    | 10am      | 8/10/18     | 11:45      |

| QA/QC Check      | Inst # | Probe # | Last Cal Date     |     | PRE: Verification Value |                                      | POST: Verification Value |                                      | Acceptable Range                           | Comments/ Notes                                  | QA? |
|------------------|--------|---------|-------------------|-----|-------------------------|--------------------------------------|--------------------------|--------------------------------------|--|--|-----|
| Temperature      |        |         | n/a               | Std | <u>NIST</u><br>23.2     | <u>NIST</u><br>23.1                  | <u>NIST</u><br>24.1      | <u>NIST</u>                          | ± 1°C of NIST                              | Within 1°C                                       |     |
|                  | 1      | 3       | n/a               |     | 23.1                    |                                      | 23.9                     |                                      |  |  |     |
|                  | 1      | 2       | n/a               |     |                         | 23.0                                 |                          |                                      |  |  |     |
| Salinity         |        |         | 3 months          | Std | Tap water<br>0.04 ppt   | Salin Std<br>12/12/16 date<br>35 ppt | Tap water<br>0.04 ppt    | Salin Std<br>4/9/18 date<br>33.0 ppt | ± 3%, blank                                | 33.95 – 36.05                                    |     |
|                  | 1      | 3       | 3-19-18<br>8/6/18 |     | 0.03                    | 34.9                                 | 0.04                     | 32.7                                 |  |  |     |
|                  | 1      | 2       | 3-19-18<br>8/6/18 |     | 0.03                    | 34.9                                 |                          |                                      |  |  |     |
| Dissolved Oxygen |        |         | 1 year            | Std | 100%                    |                                      | 100%                     |                                      | Post-check ± 5 % of pre-check              | 80 – 120 %                                       |     |
|                  | 1      | 1       | 4/2/18            |     | 99.4 %                  |                                      | 99.6 %                   |                                      |  |  |     |
|                  | 1      | 2       | 8/6/18            |     | 100.0 %                 |                                      |                          |                                      |  |  |     |
| pH               |        |         | 3 weeks           | Std | pH 7.00                 | pH 10.00                             | pH 7.00                  | pH 10.00                             | ± 3 % of cal solution (6-8)                | 6.79 – 7.21                                      |     |
|                  | 1      | 5(new)  | 8/6/18            |     | 7.00                    | 10.01                                | 7.02                     | 10.05                                | PRETEMP 20.5°C                             |  |     |
|                  | 1      | 6(new)  | 8/6/18            |     | 7.00                    | 10.01                                |                          |                                      | PRETEMP 20.5°C                             |  |     |
| Turbidity        |        |         | 3 months          | Std | <u>BLANK</u><br><0.1    | <u>LOW 1-10</u><br>6.14              | <u>BLANK</u><br><0.1     | <u>LOW 1-10</u><br>6.14              | Blank < 0.1<br>± 3 % of secondary standard | Low ± 0.18 NTU<br>Med ± 1.8 NTU<br>High ± 18 NTU |     |
|                  | 3      | N/A     | 5/14/18           |     | 0.05                    | 6.19                                 | 0.08                     | 6.20                                 |  |  |     |
|                  |        | N/A     |                   |     |                         |                                      |                          |                                      |  |  |     |

QA: \* Are pre- and post within one week?  
 \* Delay times are ok?  
 \* Other equipment issues?



|         |        |   |   |                      |          |             |
|---------|--------|---|---|----------------------|----------|-------------|
| Team    | R2RS   | Samplers<br>(Last Name,<br>1st Initial) | MORGAN, T<br>JARMKANI, B<br>FREIBERG, T | Meters and Probes ID |          |             |
| Session | 43     |   |   | HQ40d: 1             | 2100Q: 3 |             |
| Date    | 8/7/18 |   |   | pH: 5                | DO: 1    | Salinity: 3 |

| Location Name<br>Sample ID | Time | Temp<br>(°C) | Salinity<br>(ppt) | Dissolved Oxygen |       | pH   | Turbidity<br>(NTU) |      |      | Waves<br>(0-3) | Wind<br>(0-6) | People |       |      | TSS | Nutrient<br>duplicate |
|----------------------------|------|--------------|-------------------|------------------|-------|------|--------------------|------|------|----------------|---------------|--------|-------|------|-----|-----------------------|
|                            |      |              |                   | (mg/L)           | (%)   |      |                    |      |      |                |               | water  | beach | camp |     |                       |
| Napili Bay<br>RNS180807    | 8:08 | 25.9         | 33.7              | 6.76             | 100.4 | 8.12 | 2.13               | 2.00 | 2.24 | 1              | 1             | 0      | 2     | 0    | □   | □                     |
| Pohaku<br>RPO180807        | 8:32 | 26.2         | 33.9              | 6.61             | 98.9  | 8.18 | 5.07               | 5.10 | 6.03 | 1              | 1             | 0      | 0     | 0    | □   | □                     |
| Kaanapali Sh<br>RKS180807  | 8:53 | 25.6         | 34.3              | 6.55             | 97.7  | 8.14 | 8.02               | 7.68 | 8.07 | 0              | 1             | 0      | 0     | 0    | □   | □                     |
| Canoe Beach<br>RCB180807   | 9:15 | 26.9         | 33.7              | 6.71             | 101.7 | 8.19 | 11.4               | 11.1 | 10.8 | 1              | 0             | 0      | 2     | 0    | □   | □                     |
| Wahikuli<br>RWA180807      | 9:31 | 27.1         | 33.9              | 6.60             | 100.4 | 8.21 | 2.34               | 2.87 | 2.41 | 0              | 1             | 2      | 0     | 0    | □   | □                     |
|                            |      |              |                   |                  |       |      |                    |      |      |                |               |        |       |      | □   | □                     |

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high

Wind: 0: calm; 3: gentle breeze; 6: strong breeze

| COASTAL AND ENVIRONMENTAL CONDITIONS      |                                    |                                    |
|---|------------------------------------|------------------------------------|
| Most recent tide time (falling or rising) | Low: 5:52 AM<br>High: 1:56 PM      | Lahaina Station<br>Lahaina Station |
| Moon day (from new)                       | 25                                 |                                    |
| Cloud cover (0-8)                         | 80%/80%/6/3/0                      |                                    |
| Rain conditions (last 24 hrs)             |                                    |                                    |
| Wind direction (Trades/Kona)              | Trades / Trades / Trades / NA / NA |                                    |
| Streams flowing? (Y/N)                    | N / N                              |                                    |

| TURBIDITY VERIFICATION |       |      |      |      |
|------------------------|-------|------|------|------|
|                        | Blank | Low  | Med  | High |
| Standard               | 0.05  | 6.14 | 55.7 | 596  |
| Pre-sampling           | 0.10  | 6.19 | 55.5 | 596  |
| Post-sampling          | 0.06  | 6.20 | 55.7 | 595  |

| NOTES AND COMMENTS (trends, equipment problems, errors, concerns).<br>Use the back of the form if needed.  |
|--|
| <p>Wahikuli Nuts from the stream causing bad RCB. Smell / water conditions. Strong shore break. Low tide.</p> <p>RWA: NO WAVES. STRONG SHORE BREAK</p> |

| CHAIN OF CUSTODY INFORMATION |              |                 |           |
|------------------------------|--------------|-----------------|-----------|
|                              | # of samples | Relinquished to | Contact   |
| Sediment                     | 0            | LHS             | C Maxwell |
| Nutrients                    | 5            | LHS             | C Maxwell |
| Bacteria                     | 0            |                 | C Maxwell |

Signature (Team Lead):

Printed Name:

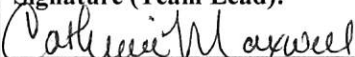
Catherine Maxwell

Catherine Maxwell

**WATER QUALITY SAMPLING:**

| Team:     | Samplers:  | Last Name, 1 <sup>st</sup> Initial | Date:  |
|-----------|--|------------------------------------|--------|
| R2RS - 43 | Morgan, T., Jarmakani, B., Fleiberg, T.,<br>Strickland, J. |                                    | 8/7/18 |

| Sample No             | Location Name | Sample taken?                       | Storm sample?            | Time | Vol (mL) | Protocol notes   | Comments                 |
|-----------------------|---------------|-------------------------------------|--------------------------|------|----------|--|--------------------------|
| <b>Nutrients</b>      |               |                                     |                          |      |          |  |                          |
| RNS180807-N-1         | Napili Bay    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RPO180807-N-1         | Pokahu        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RKS180807-N-1         | Kaanapali Sh  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RCB180807-N-1         | Canoe Beach   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RWA180807-N-1         | Wahikuli      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                       |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                       |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| <b>Sediment - TSS</b> |               |                                     |                          |      |          |  |                          |
| RNS180807-S-1         | Napili Bay    | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RPO180807-S-1         | Pokahu        | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RKS180807-S-1         | Kaanapali Sh  | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RCB180807-S-1         | Canoe Beach   | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RWA180807-S-1         | Wahikuli      | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
|                       |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |

|   |  |
|---|--|
| <b>Signature (Team Lead):</b><br> | <b>Print name here:</b><br>Catherine Maxwell |
|---|--|

|         |         |  |                             |          |             |
|---------|---------|--|-----------------------------|----------|-------------|
| Team    | Polanui | <b>Samplers</b><br>(Last Name, 1st Initial)<br><u>Santana, F (Observer only)</u><br><u>Brown M</u><br><u>Maxwell J</u><br><u>Strickland J (Observer)</u> | <b>Meters and Probes ID</b> |          |             |
| Session | 43      |  | HQ40d: 1                    | 2100Q: 3 |             |
| Date    | 8/8/18  |  | pH: 5                       | DO: 1    | Salinity: 3 |

| Location Name<br>Sample ID | Time | Temp<br>(°C) | Salinity<br>(ppt) | Dissolved Oxygen |       | pH   | Turbidity<br>(NTU) |      |      | Waves<br>(0-3) | Wind<br>(0-6) | People |       |      | TSS                      | Nutrient<br>duplicate    |
|----------------------------|------|--------------|-------------------|------------------|-------|------|--------------------|------|------|----------------|---------------|--------|-------|------|--------------------------|--------------------------|
|                            |      |              |                   | (mg/L)           | (%)   |      |                    |      |      |                |               | water  | beach | camp |                          |                          |
| 505 Front St<br>PFF180808  | 8:30 | 26.5         | 34.0              | 6.33             | 95.8  | 8.09 | 1.76               | 2.11 | 2.30 | 0              | 0             | 0      | 0     | 0    | <input type="checkbox"/> | <input type="checkbox"/> |
| Lindsey Hale<br>PLH180808  | 8:55 | 26.6         | 34.3              | 6.41             | 97.1  | 8.10 | 2.34               | 2.34 | 2.12 | 0              | 0             | 0      | 1     | 0    | <input type="checkbox"/> | <input type="checkbox"/> |
| Lahaina Town<br>PLT180808  | 9:19 | 26.9         | 34.6              | 6.56             | 100.2 | 8.12 | 2.15               | 2.31 | 2.20 | 0              | 2             | 1      | 1     | 0    | <input type="checkbox"/> | <input type="checkbox"/> |
| Olowalu Pier<br>OSF180808  | 9:55 | 27.2         | 34.6              | 6.92             | 106.3 | 8.14 | 2.14               | 2.04 | 2.15 | 0              | 0             | 0      | 0     | 0    | <input type="checkbox"/> | <input type="checkbox"/> |
|                            |      |              |                   |                  |       |      |                    |      |      |                |               |        |       |      | <input type="checkbox"/> | <input type="checkbox"/> |
|                            |      |              |                   |                  |       |      |                    |      |      |                |               |        |       |      | <input type="checkbox"/> | <input type="checkbox"/> |

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high  
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

| COASTAL AND ENVIRONMENTAL CONDITIONS              |   |
|---|---|
| Most recent tide time (falling or <u>rising</u> ) | Low: 6:46 AM Lahaina Station<br>High: 2:37 PM Lahaina Station |
| Moon day (from new)                               | 27  |
| Cloud cover (0-8)                                 | PFF-0   |
| Rain conditions (last 24 hrs)                     | PFF-?   |
| Wind direction (Trades/Kona)                      | TRADES  |
| Streams flowing? (Y/N)                            | PFF-LIGHT PLH-W   |

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| <b>NOTES AND COMMENTS</b> (trends, equipment problems, errors, concerns).<br>Use the back of the form if needed. |
|  |

| TURBIDITY VERIFICATION |       |      |      |      |
|------------------------|-------|------|------|------|
|                        | Blank | Low  | Med  | High |
| Standard               | 0.06  | 6.14 | 55.7 | 596  |
| Pre-sampling           | 0.09  | 6.23 | 55.7 | 596  |
| Post-sampling          | 0.10  | 6.23 | 55.9 | 596  |

| CHAIN OF CUSTODY INFORMATION |              |                 |             |
|------------------------------|--------------|-----------------|-------------|
|                              | # of samples | Relinquished to | Contact     |
| Sediment                     | 0            |                 |             |
| Nutrients                    | 4            | LHSH102         | L. Callinan |
| Bacteria                     | 0            |                 |             |

|                        |               |
|------------------------|---------------|
| Signature (Team Lead): | Printed Name: |
| <i>Lori Callinan</i>   | Lori Callinan |

**WATER QUALITY SAMPLING:**

|              |   |              |
|--------------|---|--------------|
| <b>Team:</b> | <b>Notetaker:</b>                       | <b>Date:</b> |
| Polanui - 43 | Brown, M. Maxwell, J.<br>Strickland, J. | 8/8/18       |

| Sample No        | Location Name | Sample taken?                       | Storm sample?            | Time | Vol (mL) | Protocol notes   | Comments                 |
|------------------|---------------|-------------------------------------|--------------------------|------|----------|--|--------------------------|
| <b>Nutrients</b> |               |                                     |                          |      |          |  |                          |
| PFF180808-N-1    | 505 Front St  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| PLH180808-N-1    | Lindsey Hale  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| PLT180808-N-1    | Lahaina Town  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| OSF180808-N-1    | Olowalu SF    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                  |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                  |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                  |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| <b>Sediment</b>  |               |                                     |                          |      |          |  |                          |
| PFF180808-S-1    | 505 Front St  | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| PLH180808-S-1    | Lindsey Hale  | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| PLT180808-S-1    | Lahaina Town  | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| OSF180808-S-1    | Olowalu SF    | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
|                  |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
|                  |               | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |

**Signature (Team Lead):**
*Lori C. Callnan*
**Printed Name:**
*Lori C. Callnan*



|         |         |   |                      |                             |   |        |   |
|---------|---------|---|----------------------|-----------------------------|---|--------|---|
| Team    | Olowalu | <b>Samplers</b><br>(Last Name, 1st Initial)<br><i>L. Otono</i><br><i>M. Griffith</i><br><i>L. Ranieri</i> | <i>J. Strickland</i> | <b>Meters and Probes ID</b> |   |        |   |
| Session | 43      |   |                      | HQ40d:                      | 1 | 2100Q: | 3 |
| Date    | 8/9/18  |   |                      | pH:                         | 5 | DO:    | 1 |

| Location Name<br>Sample ID  | Time | Temp<br>(°C) | Salinity<br>(ppt) | Dissolved Oxygen |       | pH   | Turbidity<br>(NTU) |      |      | Waves<br>(0-3) | Wind<br>(0-6) | People |       |      | TSS | Nutrient<br>duplicate |
|-----------------------------|------|--------------|-------------------|------------------|-------|------|--------------------|------|------|----------------|---------------|--------|-------|------|-----|-----------------------|
|                             |      |              |                   | (mg/L)           | (%)   |      |                    |      |      |                |               | water  | beach | camp |     |                       |
| Martin Hale<br>OPM180809    | 7:20 | 26.9         | 34.5              | 5.39             | 82.4  | 8.05 | 1.18               | 1.16 | 1.16 | 0              | 0             | 0      | 0     | 0    | □   | □                     |
| Camp Olowalu<br>OCO180809   | 7:35 | 26.9         | 34.3              | 6.09             | 93.0  | 8.06 | 3.79               | 4.55 | 3.85 | 1 ft.          | 0             | 0      | 0     | 0    | □   | □                     |
| Ukumehame<br>OUB180809      | 7:50 | 26.5         | 34.4              | 6.55             | 99.3  | 8.14 | 13.9               | 13.3 | 13.1 | 3'             | 0             | 0      | 0     | 0    | □   | □                     |
| Papalaua Beach<br>OPB180809 | 8:05 | 26.3         | 34.6              | 6.61             | 100.1 | 8.14 | 10.0               | 9.14 | 10.3 | 3'             | 0             | 0      | 0     | 0    | □   | □                     |
| Papalaua Pali<br>OPP180809  | 8:17 | 26.5         | 34.6              | 6.63             | 100.6 | 8.16 | 7.31               | 6.34 | 7.20 | 3'             | 0             | 0      | 2     | 0    | □   | □                     |
|                             |      |              |                   |                  |       |      |                    |      |      |                |               |        |       |      | □   | □                     |

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high  
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

| COASTAL AND ENVIRONMENTAL CONDITIONS              |   |
|---|---|
| Most recent tide time (falling or <u>rising</u> ) | Low: 7:36 AM Lahaina Station<br>High: 3:16 PM Lahaina Station |
| Moon day (from new)                               | 28  |
| Cloud cover (0-8)                                 | 2   |
| Rain conditions (last 24 hrs)                     | None  |
| Wind direction (Trades/Kona)                      | None  |
| Streams flowing? (Y/N)                            |   |

|  |
|--|
| <b>NOTES AND COMMENTS</b> (trends, equipment problems, errors, concerns).<br>Use the back of the form if needed. |
| Post Hurricane Hector<br>Another encounter with Peter Martin<br>OUB - surf asked questions                       |

| TURBIDITY VERIFICATION |       |      |      |      |
|------------------------|-------|------|------|------|
|                        | Blank | Low  | Med  | High |
| Standard               | 0.07  | 6.14 | 55.7 | 596  |
| Pre-sampling           | 0.06  | 6.21 | 55.8 | 596  |
| Post-sampling          | 0.074 | 6.23 | 55.9 | 596  |

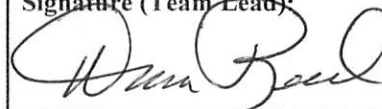
| CHAIN OF CUSTODY INFORMATION |              |                 |         |
|------------------------------|--------------|-----------------|---------|
|                              | # of samples | Relinquished to | Contact |
| Sediment                     | 0            |                 |         |
| Nutrients                    | 5            | LHS             | D. Reed |
| Bacteria                     | 0            |                 |         |

|                        |               |
|------------------------|---------------|
| Signature (Team Lead): | Printed Name: |
| <i>Dana Reed</i>       | Dana Reed     |

**WATER QUALITY SAMPLING:**

|              |                   |              |
|--------------|-------------------|--------------|
| <b>Team:</b> | <b>Notetaker:</b> | <b>Date:</b> |
| Olowalu - 43 | L. Otomo          | 8/9/18       |

| Sample No        | Location Name  | Sample taken?                       | Storm sample?            | Time | Vol (mL) | Protocol notes   | Comments                 |
|------------------|----------------|-------------------------------------|--------------------------|------|----------|--|--------------------------|
| <b>Nutrients</b> |                |                                     |                          |      |          |  |                          |
| OPM180809-N-1    | Martin Hale    | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:20 | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| OCO180809-N-1    | Camp Olowalu   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:35 | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| OUB180809-N-1    | Ukumehame      | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:50 | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| OPB180809-N-1    | Papalaua Beach | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:05 | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| OPP180809-N-1    | Papalaua Pali  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:17 | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                  |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                  |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| <b>Sediment</b>  |                |                                     |                          |      |          |  |                          |
| OPM180809-S-1    | Martin Hale    | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| OCO180809-S-1    | Camp Olowalu   | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| OUB180809-S-1    | Ukumehame      | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| OPB180809-S-1    | Papalaua Beach | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| OPP180809-S-1    | Papalaua Pali  | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
|                  |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |

**Signature (Team Lead):**

**Printed Name:**

Dana Reed

|         |         |  |                      |          |             |
|---------|---------|--|----------------------|----------|-------------|
| Team    | R2RN    | Samplers<br>(Last Name,<br>1st Initial)<br>Okomo, L.<br>Stone, A.<br>Reed, D.<br>Maxwell, C. | Meters and Probes ID |          |             |
| Session | 43      |  | HQ40d: 1             | 2100Q: 3 |             |
| Date    | 8/10/18 |  | pH: 5                | DO: 1    | Salinity: 3 |

| Location Name<br>Sample ID | Time  | Temp (°C) | Salinity (ppt) | Dissolved Oxygen |       | pH   | Turbidity (NTU) |      |                            | Waves (0-3) | Wind (0-6) | People |                    |      | TSS | Nutrient duplicate |
|----------------------------|-------|-----------|----------------|------------------|-------|------|-----------------|------|----------------------------|-------------|------------|--------|--------------------|------|-----|--------------------|
|                            |       |           |                | (mg/L)           | (%)   |      |                 |      |                            |             |            | water  | beach              | camp |     |                    |
| Honolua Bay<br>RHL180810   | 7:59  | 24.9      | 34.16          | 6.97             | 94.0  | 8.20 | 18.5            | 18.1 | 19.5                       | 1           | 1          | 0      | 2                  | 0    | □   | □                  |
| Oneloa Bay<br>RON180810    | 8:40  | 24.4      | 34.2           | 6.79             | 102.2 | 8.20 | 0.97            | 0.81 | 0.77                       | 1           | 4          | 1      | 2 <sup>+</sup> dog | 0    | □   | □                  |
| Kapalua Bay<br>RFS180810   | 9:42  | 26.6      | 32.2           | 7.07             | 105.8 | 8.16 | 10.6            | 10.5 | 8.87 <sup>cm</sup><br>8.94 | 0           | 1          | 31     | 50+                | 0    | □   | □                  |
| Ka'opala Bay<br>RKO180810  | 10:13 | 27.1      | 32.8           | 6.65             | 100.5 | 8.11 | 16.0            | 17.1 | 18.1                       | 1           | 0          | 0      | 2                  | 0    | □   | □                  |
| Kahana Vill<br>RKV180810   | 10:38 | 27.4      | 33.9           | 7.09             | 108.4 | 8.20 | 20.3            | 19.1 | 17.5                       | 0           | 0          | 6      | 11                 | 0    | □   | □                  |
|                            |       |           |                |                  |       |      |                 |      |                            |             |            |        |                    |      | □   | □                  |

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high  
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

## COASTAL AND ENVIRONMENTAL CONDITIONS

|   |   |
|---|---|
| Most recent tide time (falling or rising) | Low: 8:22 AM Lahaina Station<br>High: 3:54 PM Lahaina Station |
| Moon day (from new)                       | 28  |
| Cloud cover (0-8)                         | RHL3/ RON6/ RFS4/ RKO4/ RKV7                                  |
| Rain conditions (last 24 hrs)             | <del>ALL day</del> yes heavy                                  |
| Wind direction (Trades/Kona)              | Trade - a little jumbled by hurricane                         |
| Streams flowing? (Y/N)                    | RHL hi flow/ RKO - no   |

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).  
Use the back of the form if needed.

RHL - light sprinkling before sampling (during walk)  
RON - heavy sprinkles while sampling  
RFS - slight sprinkle  
RKO - 2 fishermen on beach, wastewater smell at north end, no rain  
RKV - no rain

Kahana Vill. sample - large particles present

## TURBIDITY VERIFICATION

|               | Blank | Low  | Med  | High |
|---------------|-------|------|------|------|
| Standard      | 0.04  | 6.14 | 55.7 | 596  |
| Pre-sampling  | 0.04  | 6.21 | 55.5 | 594  |
| Post-sampling | 0.08  | 6.20 | 55.6 | 595  |

## CHAIN OF CUSTODY INFORMATION

|           | # of samples | Relinquished to | Contact   |
|-----------|--------------|-----------------|-----------|
| Sediment  | 0            | LHS             | C Maxwell |
| Nutrients | 5            | LHS             | C Maxwell |
| Bacteria  | 0            |                 | C Maxwell |

Signature (Team Lead):

Printed Name:

Catherine Maxwell Catherine Maxwell



**WATER QUALITY SAMPLING:**

|              |  |              |
|--------------|--|--------------|
| <b>Team:</b> | <b>Samplers: Last Name, 1<sup>st</sup> Initial</b> | <b>Date:</b> |
| R2RN - 43    | Otomo, L., Stone, A., Reed, D., Maxwell, C.        | 8/10/18      |

| Sample No      | Location Name  | Sample taken?                       | Storm sample?            | Time | Vol (mL) | Protocol notes   | Comments                 |
|----------------|----------------|-------------------------------------|--------------------------|------|----------|--|--------------------------|
| Nutrients      |                |                                     |                          |      |          |  |                          |
| RHL180810-N-1  | Honolua Bay    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RON180810-N-1  | Oneloa Bay     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RFS180810-N-1  | Kapalua Bay    | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RKO180810-N-1  | Ka'opala Bay   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| RKV180810-N-1  | Kahana Village | <input checked="" type="checkbox"/> | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders | <input type="checkbox"/> |
|                |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 125      | Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders | <input type="checkbox"/> |
| Sediment - TSS |                |                                     |                          |      |          |  |                          |
| RHL180810-S-1  | Honolua Bay    | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RON180810-S-1  | Oneloa Bay     | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RFS180810-S-1  | Kapalua Bay    | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RKO180810-S-1  | Ka'opala Bay   | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
| RKV180810-S-1  | Kahana Village | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |
|                |                | <input type="checkbox"/>            | <input type="checkbox"/> |      | 500      |  | <input type="checkbox"/> |

**Signature (Team Lead):**
*Catherine Maxwell*
**Print name here:**
*Catherine Maxwell*