

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

| Session No: | Verifiers (pre-sampling): | Pre Date: | Pre Time: | Verifiers (post-sampling): | Post Date: | Post Time: |
|-------------|---------------------------|-----------|-----------|----------------------------|------------|------------|
| FR 2 | L. Yannell | 9/4/23 | 4:15 PM | L. Yannell | 9/7/23 | 11:45 AM |

| QA/QC Check | Inst # | Probe # | Last Cal Date | Std Val | PRE: Verification Value | POST: Verification Value | Acceptable Range | Comments/ Notes | QA? | |
|------------------|--------|---------|----------------|---------|-------------------------|--------------------------------|------------------|--|--------------------------|--|
| Temperature | NIST | n/a | NIST Exp. Date | Std Val | NIST 25.2 °C | NIST 32.7 °C | ± 0.6 °C of NIST | Compare to NIST Std value in tap water | | |
| | 2 | 8 | 6/28/2024 | | 25.0 | 32.5 | | | | |
| | — | — | — | | — | — | | | | |
| Salinity | | | 3 months | Std Val | Tap water 0.04 | Salin Std 8/7/23 date 33.7 ppt | Tap water 0.19 | Salin Std 8/7/23 date 33.7 ppt | ± 1 ppt | Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle Kula tap water (0.04 ppt the last time we used Kula H ₂ O) post sampling tap water from Kihel lab |
| | 4 | 8 | 8/7/2023 | | 0.04 | 33.6 | 0.19 | 33.4 | | |
| | — | — | — | | — | — | — | — | | |
| Dissolved Oxygen | | | 1 year | Std Val | 100% | 100% | ± 5 % | | | |
| | 4 | 4 | 7/17/2023 | | 103.7 | 102.8 | | | | |
| | — | — | — | | — | — | | | | |
| pH | | | 3 weeks | Std Val | pH 7.00 | pH 10.00 | pH 7.00 | pH 10.00 | ± 0.1 pH of pH std value | Compare to Manufacturer pH Std value on bottle |
| | 4 | 6 | 8/30/23 | | 6.99 | 9.96 | 6.99 | 9.99 | | pH 7+10 Exp 5/2024 |
| | — | — | — | | — | — | — | — | | |
| Turbidity | | | 3 months | Std Val | BLANK <0.1 | LOW 1-10 6.31 NTU | BLANK <0.1 | LOW 1-10 6.31 NTU | ± 0.18 NTU Low 1-10 | Compare to Gel LOW 1-10 Std Calibration value |
| | 2 | n/a | 8/7/23 | | 0.05 | 6.37 | 0.06 | 6.36 | | spare blank = 0.05 (Pre) |
| | — | n/a | — | | — | — | — | — | | |

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

Pre: LYL lab

Post: NMS Lab

Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | | | | |
|---------|-------------------|---|--|----------------------|-----------|-----------------|
| Team | Wai Pire Response | Samplers (Last Name, 1st Initial) | Hukking, L Berg, L Heckmann, C Yannell, L | Meters and Probes ID | | |
| Session | 2 | | | HCU221A: SAM 1 4 2g | | 211A: SAM 2 |
| Date | 09/07/2023 | | | pH: SAM 6 | DO: SAM 4 | Salinity: SAM 8 |

| Location Name Sample ID | Fresh water Flowing (Y/N) | Time (of collection) | Temp (°C) variable | Salinity (ppt) 30-35 normal | Dissolved Oxygen | | pH 8-8.3 normal | Turbidity (NTU) | | | People (within 100 ft) | | |
|-----------------------------|---------------------------------|----------------------------|---------------------------|--------------------------------------|-----------------------------|-------------------------|-----------------------|--------------------|------|---------------------------|------------------------|-------|------|
| | | | | | (mg/L) 5.2-7.0 normal | (%) 85-105 normal | | | | | water | beach | camp |
| Canoe Beach RCB230907 | N | 8:35A | 26.8 ^u 26.9 | 34.7 | 7.0 | 105.5 | 8.13 | 2.80 | 2.88 | 2.69 ^u 3.15 | 0 | 0 | 0 |
| Wahikuli RWA230907 | N | 9:10A | 26.5 ^u 27.0 | 34.9 | 6.88 | 104.1 | 8.16 | 3.72 | 4.08 | 3.97 | 0 | 0 | 0 |
| Camp Olowalu OCO230907 | N | 9:50A | 27.4 | 35.3 | 6.77 | 103.3 | 8.04 | 6.81 | 6.62 | 7.05 | 0 | 0 | 1 |
| Mile Marker 14 OMM230907 | N | 10:10A | 27.1 | 35.1 | 6.49 | 98.6 | 8.0 | 5.06 | 5.47 | 5.30 | 20 ^u | 0 | 0 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

RCB - Sunny, shore break, took temp 2x
RWA - Sunny, shore break, brown water
OCO - Sunny, small shore break,
breeze picking up after sample
Debris on Beach
OMM - Sunny breezy, shore break, no debris

TURBIDITY VERIFICATION & PROBE TEMPERATURES

| | Blank (must be <0.10) | Low (+/- 0.18) | Med (+/- 1.80) | High (+/- 18) |
|---------------------|--------------------------|-------------------|-------------------|------------------|
| Turbidity Standard | 0.05 | 6.31 | 56.8 | 601 |
| Field - Pre-sample | 0.08 | 6.38 | 56.8 | 602 |
| Lab - Post sample | 0.06 | 6.36 | 56.4 | 602 |
| Probes (+/- 0.2 °C) | 26.7 DO | 26.9 Salinity | pH | Notes |
| Verify Probe Temps | 26.5 | 26.8 | 26.8 | |

CHAIN OF CUSTODY INFORMATION

| | # of samples | Relinquished to | Contact |
|-----------|--------------|-----------------|-------------|
| Nutrients | 4 | NMS | Liz Yannell |

Signature (Team Lead):

Liz Yannell

Printed Name:

Liz Yannell

Sites with potential for freshwater flow: Canoe Beach

Last updated April 2023

| | | | |
|---------|------------------|---|--|
| Team | WM Fire Response | Samplers (Last Name, 1st Initial) | Hutchings, L. Berg, L. Hehemann, C. Yannell, L. |
| Session | 2 | | |
| Date | 09/07/2023 | | |

| Sample ID | Location Name | Sample taken? | Duplicate sample? | Time | Volume | Protocol Notes | Comments |
|---------------|----------------|-------------------------------------|--------------------------|-------|--------|---|----------|
| Nutrients | | | | | | | |
| RCB230907-N-1 | Canoe Beach | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:35 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| RWA230907-N-1 | Wahikuli | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:10 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| OCO230907-N-1 | Camp Olowalu | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:50 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| OMM230907-N-1 | Mile Marker 14 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10:10 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |

| | | | | | | | |
|-----------|--|--------------------------|--------------------------|--|--------|--|--|
| Sediments | | | | | | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |

| | |
|---------------------------------------|------------------------------|
| Signature (Team Lead): Liz Yannell | Printed Name: Liz Yannell |
|---------------------------------------|------------------------------|

Hui O Ka Ola - Sample Collection Datasheet

| | | | | | |
|---------|----------------------------|--|-------------------------------|----------|----------------|
| Team | Lahaina Town Fire Response | Samplers (Last Name, 1st Initial) Yannell, L. Callender, T. Kimmel, J. (DAR) | Meters and Probes ID | | |
| Session | 2 | | HQ2200: SM 134 xy 2100Q: SM 2 | | |
| Date | 09/05/2023 | | pH: SM 6 | DO: SM 4 | Salinity: SM 8 |

| Location Name Sample ID | Fresh water Flowing (Y/N) | Time (of collection) | Temp (°C) variable | Salinity (ppt) 30-35 normal | Dissolved Oxygen | | pH 8-8.3 normal | Turbidity (NTU) | | | People (within 100 ft) | | |
|-----------------------------|---------------------------------|-------------------------|--------------------------|--------------------------------------|-----------------------------|-------------------------|-----------------------|--------------------|------|------|------------------------|-------|------|
| | | | | | (mg/L) 5.2-7.0 normal | (%) 85-105 normal | | | | | water | beach | camp |
| Mala Tavern LMT230905 | N | 7:22 | 26.1 | 35.0 | 6.80 | 101.4 | 7.99 | 2.21 | 1.82 | 1.66 | 0 | 0 | 0 |
| Mala Ramp LMR230905 | Y small | 7:51 | 26.7 | 34.5 | 6.51 | 97.6 | 8.07 | 5.38 | 6.52 | 6.89 | 0 | 0 | 0 |
| Papalaua St LPS230905 | N | 8:19 | 26.7 | 35.2 | 6.77 | 102.1 | 8.04 | 2.33 | 2.72 | 3.21 | 0 | 0 | 0 |
| Lahaina Harbor LLH230905 | N | 8:44 | 27.4 | 35.0 | 5.87 | 89.8 | 8.08 | 0.81 | 0.73 | 0.78 | 0 | 0 | 0 |
| 505 Front St PFF230905 | N | 9:13 | 27.7 | 35.3 | 6.68 | 103.3 | 8.11 | 2.91 | 3.27 | 2.83 | 0 | 0 | 0 |
| Lindsey Hale PLH230905 | N | 9:55 | 28.4 | 35.1 | 6.49 | 101.3 | 8.06 | 19.0 (16.4) | 22.2 | 22 | 0 | 0 | 0 |
| Lahaina Town PLT230905 | N | 10:16 | 28.7 | 34.7 | 6.52 | 101.8 | 8.06 | 61.4 | 61.1 | 59.2 | 0 | 0 | 0 |

Turbidity Spare blank
Standard = 0.05

Turbidity blank Pre-Sample: 0.06

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

LMT - read pH 2x to confirm; rot smell from mala Tavern; Tide Falling next Low = 12:39 PM
LMR - water brown, visible ash + debris
LLH - much less oil + ash in harbor and sample water
PFF - Small shorebreak, sunny, no clouds, light breeze. Same amount of water in flooded parking lot (as last week)
PLH - Brown wtr, fine sediment, sand in sample. 4th turbidity taken = 19.0 NTU; multiple schools of fish
PLT - extremely brown water; lots of large debris

Sites with potential for freshwater flow: 505 Front St, Mala Ramp

TURBIDITY VERIFICATION & PROBE TEMPERATURES

| | Blank (must be <0.10) | Low (+/- 0.18) | Med (+/- 1.80) | High (+/- 18) |
|------------------------|--------------------------|-------------------|-------------------|------------------|
| Turbidity Standard | 0.05 | 6.31 | 56.8 | 601 |
| Field - Pre-Sample | 0.06 | 6.36 | 56.0 | 599 |
| Lab - Post Sample | 0.04 | 6.34 | 56.5 | 601 |
| Probes (+/- 0.2 °C) | D.O | Salinity | pH | Notes |
| Verify Probe Temps | 25.9 | 26.1 | 26.0 | |
| CHAIN OF CUSTODY | # of Samples | Relinquish to | Contact | |
| Nutrients | 7 | NMS | Liz Yannell | |
| Signature (Team Lead): | Liz Yannell | Print: | Liz Yannell | |

in water near sample collection

Last updated April 2023

| | | | |
|---------|----------------------------|-----------------------------------|---|
| Team | Lahaina Town Fire Response | Samplers (Last Name, 1st Initial) | Yannell, L. Callender Callender, T. Kimmel, J. (DAR) |
| Session | 2 | | |
| Date | 09/05/2023 | | |

| Sample ID | Location Name | Sample taken? | Duplicate sample? | Time | Volume | Protocol Notes | Comments |
|---------------|----------------|-------------------------------------|--------------------------|-------|--------|---|----------|
| Nutrients | | | | | | | |
| LMT230905-N-1 | Mala Tavern | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:22 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| LMR230905-N-1 | Mala Ramp | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:51 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| LPS230905-N-1 | Papalaua St. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:19 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| LLH230905-N-1 | Lahaina Harbor | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:44 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| PFF230905-N-1 | 505 Front St | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:13 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| PLH230905-N-1 | Lindsey Hale | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:55 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| PLT230905-N-1 | Lahaina Town | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 10:16 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |

| | | | | | | | |
|-----------|--|--------------------------|--------------------------|--|--------|--|--|
| Sediments | | | | | | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |
| | | <input type="checkbox"/> | <input type="checkbox"/> | | 500 ml | | |

Signature:

Liz Yannell

Print:

Liz Yannell