

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

| Session No: | Verifiers (pre-sampling): | | | Pre Date: | Pre Time: | Verifiers (post-sampling): | | | Post Date: | Post Time: | |
|------------------|---------------------------|---------|----------------|-----------|-------------------------|----------------------------|--------------------------|--------------|--------------------------|--|-----|
| 103 SM | Y. St-Louis, M. Sharpe | | | 09/25/23 | 0940 | Yannell, L. Keyham, C. | | | 9/28/23 | 11:30 AM | |
| S Lanai | | | | 09/25/23 | | St-Louis, Y., Sharpe, M. | | | | | |
| QA/QC Check | Inst # | Probe # | Last Cal Date | | PRE: Verification Value | | POST: Verification Value | | Acceptable Range | Comments/ Notes | QA? |
| Temperature | NIST | n/a | NIST Exp. Date | Std Val | NIST | NIST | NIST | NIST | ± 0.6 °C of NIST | Compare to NIST Std value in tap water | |
| | 2 | 7 | 6/28/24 | | 25.9 | 25.1 | 31.6 | 29.4 | | | |
| | 2 | 8 | 6/28/24 | | 25.9 | 25.2 | 31.6 | 29.2 | | | |
| Salinity | | | 3 months | Std Val | Tap water | Salin Std | Tap water | Salin Std | ± 1 ppt | Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle | |
| | 2 | 7 | 8/7/23 | | 0.13 | 34.0 | 0.13 | 34.0 | | | |
| | 2 | 8 | 8/7/23 | | 0.18 | 33.9 | 0.19 | 33.7 | | | |
| Dissolved Oxygen | | | 1 year | Std Val | 100% | | 100% | | ± 5 % | | |
| | 3 | 3 | 7/17/23 | | 101.5 | | 101.4 | | | | |
| | 3 | 4 | 7/17/23 | | 101.1 | | 101.8 | | | | |
| 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 | 9/25/23 | | 7.01 | 10.01 | 7.03 | 10.05 | | PH solutions Exp 5/2024 | |
| | 4 | 5 | 9/25/23 | | 7.00 | 10.01 | 7.02 | 10.02 | | | |
| Turbidity | | | 3 months | Std Val | BLANK <0.1 | LOW 1-10 NTU | BLANK <0.1 | LOW 1-10 NTU | ± 0.18 NTU Low 1-10 | Compare to Gel LOW 1-10 Std Calibration value | |
| | 2 | n/a | 8/7/23 | | 0.06 | 6.37 | 0.05 | 6.35 | | Low: 6.31 | |
| | 5 | n/a | 8/7/23 | | 0.05 | 6.54 | 0.04 | 6.59 | | Low: 6.54 | |

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

NMS Lab

Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | | | | |
|---------|------------|---|---------------------------------|----------------------|-------|-------------|
| Team | Kamaole | Samplers (Last Name, 1st Initial) | K. McHugh, S. Graves, M. Sharpe | Meters and Probes ID | | |
| Session | 103 | | | HQ2200:3 | | 2100Q: 5 |
| Date | 09/26/2023 | | | pH: 5 | DO: 3 | Salinity: 7 |

| Location Name Sample ID | Freshwater 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 |
| Kalepolepo North NKN230926 | N | 8:05 | 25.7 | 34.1 | 6.13 | 90.3 | 8.10 | 3.85 | 3.75 | 4.35 | 0 | 2 | 0 |
| Waipuilani Park KWP230926 | N | 8:23 | 25.2 | 33.2 | 6.69 | 97.2 | 8.08 | 12.8 | 13.8 | 14.2 | 0 | 2 | 0 |
| Kihei South KKS230926 | N | 8:48 | 26.1 | 34.2 | 6.12 | 90.9 | 8.07 | 5.27 | 5.45 | 4.76 | 1 | 4 | 1 |
| Kalama Park KKP230926 | N | 9:04 | 26.0 | 35.5 | 6.74 | 100.6 | 8.15 | 6.45 | 6.34 | 7.07 | 1 | 4 | 0 |

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

NKN: looks pretty clear, but some 1-2 ft waves, minimal wind, sunny
KWP: small waves, light breeze, water looks milky/murky. one surfer, people walking w/ dog. 4th reading = 12.9
*Read pH temp at second site
KKS: small waves, minimal wind, camper w/ grocery cart
KKP: small waves 2ft, a couple surfers far out, can't see at high tide line washed onshore

TURBIDITY VERIFICATION & PROBE TEMPERATURES

| | Blank (must be <0.10) | Low (+/- 0.18) | Med (+/- 1.80) | High (+/- 18) |
|---------------------|--------------------------|-------------------|-------------------|------------------|
| Turbidity Standard | 0.05 | 6.54 | 58.4 | 605 |
| Field - Pre-sample | 0.06 | 6.70 | 58.8 | 605 |
| Lab - Post sample | 0.05 | 6.47 | 58.5 | 604 |
| Probes (+/- 0.2 °C) | Salinity | DO | pH | Notes |
| Verify Probe Temps | 25.7 | 25.3 | 25.2 | *Read @ WKP |

CHAIN OF CUSTODY INFORMATION

| | # of samples | Relinquished to | Contact |
|-----------|--------------|-----------------|---------|
| Nutrients | 4 | NMS | Sharpe |

Signature (Team Lead):



Printed Name:

M SHARPE

Sites with potential for freshwater flow: All

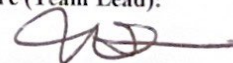
Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | |
|---------|------------|---|-------------------------------------|
| Team | Kamaole | Samplers (Last Name, 1st Initial) | McHugh, K Graves, S Sharpe, M |
| Session | 103 | | |
| Date | 09/26/2023 | | |

| Sample ID | Location Name | Sample taken? | Duplicate sample? | Time | Volume | Protocol Notes | Comments |
|---------------|------------------|-------------------------------------|--------------------------|------|--------|---|----------|
| Nutrients | | | | | | | |
| NKN230926-N-1 | Kalepolepo North | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:05 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| KWP230926-N-1 | Waipuilani Park | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:23 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| KKS230926-N-1 | Kihei South | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:48 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| KKP230926-N-1 | Kalama Park | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:04 | 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):



Printed Name:

M Sharpe

Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | | | | |
|---------|---------------|---|--|----------------------|-------|-------------|
| Team | Wailea/Makena | Samplers (Last Name, 1st Initial) | Bob, DEAN & DAN, Yannell, L. Sharpe, M. | Meters and Probes ID | | |
| Session | 103 | | | HQ2200: 3 | | 2100Q: 5 |
| Date | 09/27/2023 | | | pH: 5 | DO: 3 | Salinity: 7 |

| Location Name Sample ID | Freshwater Flowing (Y/N) | Time (of collection) | Temp (°C) variable | Salinity (ppt) 30-35 normal | Dissolved Oxygen | | pH 8-8.3 normal | Turbidity (NTU) RS | | | People (within 100 ft) | | |
|--------------------------------|--------------------------------|----------------------------|--------------------------|--------------------------------------|-----------------------------|-------------------------|-----------------------|------------------------------|------|------|------------------------|-------|------|
| | | | | | (mg/L) 5.2-7.0 normal | (%) 85-105 normal | | | | | water | beach | camp |
| Cove Park KCP230927 | N | 8:05 | 26.5 | 33.3 | 6.05 | 89.6 | 8.07 | 4.73 | 6.17 | 4.43 | 10 | 10 | 2 |
| S Maluaka Beach MMB230927 | N | 8:45 | 26.5 | 35.2 | 6.55 | 98.5 | 8.15 | 1.06 | 5.98 | 0.54 | 2 | 9 | 10 |
| Ahihi Kinau North MAN230927 | N | 9:11 | 26.4 | 35.2 | 7.90 | 119.6 | 8.14 | 1.10 | 1.30 | 1.17 | 10 | 4 | 10 |
| Ahihi Kinau South MAS230927 | N | 9:32 | 26.5 | 35.9 | 6.43 | 97.1 | 8.14 | 0.54 | 0.51 | 0.46 | 5 | 16 | 10 |

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

KCP - looked less brown; tide ~~nearly~~ ^{next} ~~high~~ ^{high} rising; high @ 2:42 PM
Low was at 7:57 AM; 4th turbidity
MMB - clear, calm, quiet
MAN - clear, some shorebreak. DO read 2x; 4th turbidity
MAS - clear, calm, easy to enter the water, sunny, no breeze

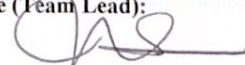
TURBIDITY VERIFICATION & PROBE TEMPERATURES

| | Blank (must be <0.10) | Low (+/- 0.18) | Med (+/- 1.80) | High (+/- 18) |
|--------------------|--------------------------|-------------------|-------------------|------------------|
| Turbidity Standard | 0.05 | 6.54 | 58.4 | 605 |
| Field - Pre-sample | 0.05 | 6.48 | 58.8 | 606 |
| Lab - Post sample | 0.06 | 6.48 | 58.4 | 602 |
| Probes (+/- 0.2°C) | Salinity | D.O | pH | |
| Verify Probe Temps | 26.5 | 26.2 | 26.4 | |

CHAIN OF CUSTODY INFORMATION

| | # of samples | Relinquished to | Contact |
|-----------|--------------|-----------------|---------|
| Nutrients | 4 | NMS | Sharpe |

Signature (Team Lead):



Printed Name:

Sharpe

spare 0.07

Sites with potential for freshwater flow: Cove Park

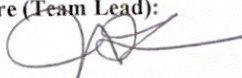
Last updated April 2023

Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | |
|---------|---------------|---|--|
| Team | Wailea/Makena | Samplers (Last Name, 1st Initial) | Sousa, B Bentley, D Crevier, D Yanhell, L Sharpe, 'M |
| Session | 103 | | |
| Date | 09/27/2023 | | |

| Sample ID | Location Name | Sample taken? | Duplicate sample? | Time | Volume | Protocol Notes | Comments |
|---------------|-------------------|-------------------------------------|--------------------------|------|--------|---|----------|
| Nutrients | | | | | | | |
| KCP230927-N-1 | Cove Park | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:05 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| MMB230927-N-1 | S Maluaka Beach | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:45 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| MAN230927-N-1 | Ahihi Kinau North | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:11 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| MAS230927-N-1 | Ahihi Kinau South | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:32 | 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): | Printed Name: |
|  | Sharpe |

Ihii O Ka Wai Ola - Sample Collection Datasheet

| | | | | | | |
|---------|-------------|---|--|----------------------|-------|-------------|
| Team | North Kihei | Samplers (Last Name, 1st Initial) | A. Helge land, A Wolf, C. Keyhani, H. Baillargeon | Meters and Probes ID | | |
| Session | 103 | | | HQ2200:3 | | 2100Q: 5 |
| Date | 09/28/2023 | | | pH: 5 | DO: 3 | Salinity: 7 |

| Location Name Sample ID | Freshwater 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 |
| Maalaea Harbor NMH230928 | N | 7:50 | 25.4 | 35.5 | 6.10 | 89.9 | 8.11 | 1.25 | 1.09 | 1.38 | Ø | Ø | Ø |
| Maalaea Condos NMC230928 | N | 8:15 | 25.8 | 34.7 | 7.21 | 106.8 | 8.09 | 3.39 | 3.50 | 3.33 | Ø | Ø | Ø |
| Haycraft Park NHP230928 | N | 8:40 | 25.9 | 35.4 | 6.90 | 102.9 | 8.11 | 5.81 | 5.45 | 5.68 | 2 | Ø | Ø |
| Kealia Pond NKP230928 | N | 9:12 | 26.4 | 36.2 | 6.83 | 103.1 | 8.17 | 1.25 | 1.22 | 1.14 | Ø | 4 | Ø |
| Kihei Canoe Club NKC230928 | N | 9:36 | 26.9 | 35.6 | 6.56 | 99.5 | 8.13 | 8.32 | 9.42 | 7.79 | Ø | Ø | Ø |

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

NMC - pop in floating water right in the sample site
2nd Reading - Dissolved Oxy (7.21 mg/L) (106%)
tide Low

NHP Construction in Parking Lot
Spring broke - 2nd Natic Sample 8:50 wave action
Lots of flies where we parked the car

NKP - wave action, light breeze

NKC - Brown water in nearshore, steep
drop off few feet into the water, wave action
(particles in sample / tiny particulates)

TURBIDITY VERIFICATION & PROBE TEMPERATURES

| | Blank (must be <0.10) | Low (+/- 0.18) | Med (+/- 1.80) | High (+/- 18) |
|--------------------|--------------------------|-------------------|-------------------|------------------|
| Turbidity Standard | 0.05 | 6.54 | 58.4 | 605 |
| Field - Pre-sample | 0.08 | 6.48 | 58.8 | 604 |
| Lab - Post sample | 0.04 | 6.59 | 58.5 | 604 |
| Probes (+/- 0.2°C) | Salinity | DO | pH | Notes |
| Verify Probe Temps | 25.4 | 25.2 | 25.3 | |

CHAIN OF CUSTODY INFORMATION

| | # of samples | Relinquished to | Contact |
|-----------|--------------|-----------------|------------|
| Nutrients | 5 | NMS | Christiane |

Signature Team Lead:

Christiane Keyhani

Printed Name:

Christiane Keyhani

Sites with potential for freshwater flow: Maalaea Harbor, Maalaea Condos,
Kealia Pond, Canoe Club

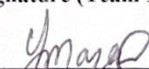
Last updated April 2023

Hui O Ka Wai Ola - Sample Collection Datasheet

| | | | |
|---------|-------------|---|---------------------------|
| Team | North Kihei | Samplers (Last Name, 1st Initial) | A. Helgeland |
| Session | 103 | | A. Wolf |
| Date | 09/28/2023 | | H. Baillargeon C. Keyhani |

| Sample ID | Location Name | Sample taken? | Duplicate sample? | Time | Volume | Protocol Notes | Comments |
|---------------|------------------|-------------------------------------|--------------------------|------|--------|---|---|
| Nutrients | | | | | | | |
| NMH230928-N-1 | Maalaea Harbor | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 7:50 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| NMC230928-N-1 | Maalaea Condos | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:15 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| NHP230928-N-1 | Haycraft Park | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 8:50 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | Had to take a 2nd nutrient sample because the syringe broke |
| NK230928-N-1 | Kealia Pond | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:12 | 125 ml | Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters | |
| NKC230928-N-1 | Kihei Canoe Club | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 9:36 | 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): | Printed Name: |
|  | Ylenia M St-Louis |