

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
52	Strickland, J., Maxwell, C.	2/19/19	11:00 AM	maxwell, C; Strickland, J	2/22/19	11:05 am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	n/a	Std Val	NIST	NIST	NIST	NIST	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	2	2	n/a		22.1°C	21.8°C	22.8°C	°C			
	2	3	n/a		21.9		22.7				
	2	3	n/a			21.5					
Salinity			3 months	Std Val	Tap water	Salin Std 11/11/19 date 33.1 ppt	Tap water	Salin Std 11/11/19 date 33.1 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	2	11/26/2018		.04	33.1	2.02/33.0	33.0			
	2	3	11/26/2018		.04	33.1					
Dissolved Oxygen	2		1 year	Std Val	100%		100%		± 5 %		
	2	2	8/6/2018		98.7		99.7				
	2	1	4/2/2018		99.6						
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	
	2	6	2/19/2019		7.00	10.01	7.04	10.08			
	2	5	2/19/2019		7.00	10.01					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.37/5.06 NTU	BLANK <0.1	LOW 1-10 6.37 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	3	n/a	11/26/2018		0.05	6.36	0.03	6.36			
	3	n/a	1/29/2019		0.07	5.02					

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

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T. Strickland, J Maxwell, C	Daniels, B	Meters and Probes ID			
Session	52				HQ40d:	1	2100Q:	1
Date	2/20/2019				pH:	5	DO:	1

Location Name Sample ID	Streams Flowing (Y/N)	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
Napili Bay RNS190220	N	8:18	23.4	34.5	7.04	101.0	8.19	1.85	1.97	2.19	0+1	17	0
Pohaku RPO190220	N	8:39	23.0	32.9	7.10	100.1	8.18	10.4	10.2	10.2	0	0	0
Kaanapali Sh RKS190220	N _{cm}	9:05	22.9	31.3	7.23	100.7	8.22	5.00	5.03	5.02	0	0	0
Canoe Beach RCB190220	—	9:26	23.7	34.4	6.80	97.9	8.21	6.02	6.59	6.20	0	7	0
Wahikuli RWA190220	—	9:42	23.6	32.9	7.20	102.6	8.25	0.78	0.80	0.93	0	0	0

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

Use the back of the form if needed.

Note: Sampling on Wed not Tues (the usual day)
2/19/19 heavy rains throughout Maui (whole state)

RWA - sample site large boulders & rocks
exposed where it's usually all sand

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.07	5.69	58.6	627
Pre-sampling	0.07	5.61	55.0	626
Post-sampling	0.06	5.61	59.0	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0		
Nutrients	5	LLHS	C Maxwell
Bacteria	0		

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T. Strickland, J. Maxwell, C	Daniels, B
Session	52			
Date	2/20/2019			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS190220-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO190220-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:39	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS190220-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB190220-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:26	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA190220-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
RNS190220-S-1	Napili Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RPO190220-S-1	Pohaku	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKS190220-S-1	Kaanapali Sh	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RCB190220-S-1	Canoe Beach	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RWA190220-S-1	Wahikuli	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	Polanui	Samplers (Last Name, 1st Initial) <i>Maxwell, J</i> <i>Boyle, R</i> <i>Harris, R</i>	Meters and Probes ID		
Session	52		HQ40d: <i>2</i>	2100Q: <i>3</i>	
Date	02/20/2019		pH: <i>6</i>	DO: <i>2</i>	Salinity: <i>2</i>

Location Name Sample ID	Streams Flowing (Y/N)	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
505 Front St PFF190220	<i>Y</i>	<i>8:07</i>	<i>23.1</i>	<i>33.9</i>	<i>6.31</i>	<i>89.3</i>	<i>8.14</i>	<i>6.18</i>	<i>5.36</i>	<i>4.76</i>	<i>1</i>	<i>5</i>	<i>0</i>
Lindsey Hale PLH190220	<i>N</i>	<i>8:30</i>	<i>23.0</i>	<i>33.7</i>	<i>5.98</i>	<i>84.5</i>	<i>8.12</i>	<i>26.3</i>	<i>25.0</i>	<i>26.1</i>	<i>1</i>	<i>1</i>	<i>0</i>
Lahaina Town PLT190220	<i>✓</i>	<i>8:42</i>	<i>23.4</i>	<i>33.2</i>	<i>5.93</i>	<i>84.1</i>	<i>8.11</i>	<i>16.0</i>	<i>14.9</i>	<i>16.0</i>	<i>1</i>	<i>2</i>	<i>0</i>
Olowalu Pier OSF190220	<i>—</i>	<i>9:30</i>	<i>24.2</i>	<i>34.2</i>	<i>6.74</i>	<i>97.4</i>	<i>8.15</i>	<i>6.68</i>	<i>7.22</i>	<i>6.31</i>	<i>0</i>	<i>0</i>	<i>0</i>

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

The sand in the water is unusually loose which allowed Rich to sink 6 or so inches at PLH + PLT
HQ4D-2 (50% battery)

* Request Liz Foote to drop brochures at Lahaina Shores for Lori Fisher

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	<i>0.05</i>	<i>6.27</i>	<i>56.2</i>	<i>605</i>
Pre-sampling	<i>0.06</i>	<i>6.31</i>	<i>56.4</i>	<i>605</i>
Post-sampling	<i>0.04</i>	<i>6.37</i>	<i>56.7</i>	<i>605</i>

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	<i>4</i>	<i>LHS</i>	<i>J. Strickland</i>
Bacteria			

Signature (Team Lead):

Printed Name:

[Signature] James Strickland

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Polanui	Samplers (Last Name, 1st Initial) MAYNELL, J BAYLY, R HARRIS, K
Session	52	
Date	02/20/2019	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF190220-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH190220-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT190220-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF190220-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	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		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:

James Strickland

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Olowalu	Samplers (Last Name, 1st Initial) NOPONEN, R OTOMO, L RANIERI, L	Meters and Probes ID		
Session	52		HQ40d: 2	2100Q: 3	
Date	02/21/2019		pH: 6	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
Martin Hale OPM190221	N/A	0707	23.2	34.5	6.60	94.1	8.12	13.1	13.7	12.7	0	0	0
Camp Olowalu OCO190221	N/A	0722	24.1	34.5	6.20	89.7	8.12	1.31	1.44	1.45	2	12	0
Ukumehame OUB190221	N/A	0736	23.9	34.5	6.52	93.9	8.15	2.65	2.69	2.83	0	2	2
PAPALUA BEACH OPB190221	N/A	0751	24.1	34.5	6.79	98.3	8.15	10.4	10.7	10.9	0	2	0
Papalua Pali OPP190221	N/A	0801	23.8	34.7	6.69	96.4	8.19	4.56	4.67	4.54	0	0	0

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

TURBIDITY VERIFICATION

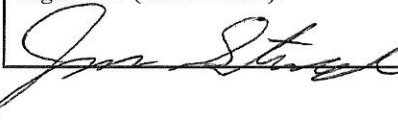
	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.27	56.2	605
Pre-sampling	0.11	6.35	56.9	605
Post-sampling	0.04	6.36	56.8	606

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	5	LHS	J. Strickland
Bacteria			

Signature (Team Lead):

Printed Name:



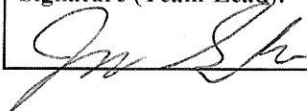
James Strickland

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Olowalu	Samplers (Last Name, 1st Initial) WOPONEN, R OTOMO, L RANIERI, L
Session	52	
Date	02/21/2019	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM190221-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO190221-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:23	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB190221-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB190221-N-1	PAPALAU BEACH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:51	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP190221-N-1	Papalua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:01	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		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):



Printed Name:

James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial) Maxwell, C Strickland, J Hutchings, L Garfield, E	Meters and Probes ID		
Session	52		HQ40d: 2	2100Q: 3	
Date	2/22/2019		pH: 6	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
Honolua Bay RHL190222	Y	7:55A	22.4	33.6	6.59	92.1	8.16	14.4	13.1	12.4	0	2	0
Oneloa Bay RON190222	—	8:40	23.5	34.8	7.03	101.1	8.21	0.82	0.82	0.81	0	1 dog	0
Kapalua Bay RFS190222	—	9:05A	23.9	33.0	6.96	99.5	8.16	0.68	0.64	0.83	12	24	0
Ka'opala Bay RKO190222	N	9:37	23.8	34.2	6.57	94.5	8.16	5.42	5.22	5.52	0	1	0
Kahana Village RKV190222	—	10:00A	24.3	33.6	6.43	92.9	8.16	2.75	3.15	3.30	1	4	0

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

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.27	56.2	605
Pre-sampling	0.04	6.31	56.5	606
Post-sampling	0.03	6.36	56.8	605

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	5	LHS	J. Strickland
Bacteria			

Signature (Team Lead):



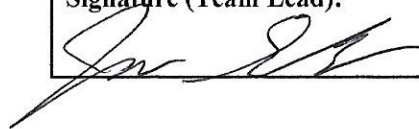
Printed Name:

James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial)	MAXWELL, C STRICKLAND, J HUTCHINGS, L GARFIELD, E
Session	52		
Date	2/22/2019		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL190222-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON190222-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS190222-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO190222-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:37	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV190222-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
RHL190222-S-1	Honolua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RON190222-S-1	Oneloa Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RFS190222-S-1	Kapalua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKO190222-S-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKV190222-S-1	Kahana Village	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):



Printed Name:

James Strickland