

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
46	Maxwell, C.	10/8/18	9:50 am	Otomo, L., Maxwell, C.	10/12/18	11:00 am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	<u>NIST</u> 2	n/a	n/a	Std Val	<u>NIST</u> 23.3 °C	<u>NIST</u> 23.0 °C	<u>NIST</u> 22.2 °C	<u>NIST</u> °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	2	2	n/a		23.2		21.9				
	2	3	n/a			22.8					
Salinity			<u>3 months</u>	Std Val	<u>Tap water</u>	<u>Salin Std</u> 8/28/18 date 32.6 ppt	<u>Tap water</u>	<u>Salin Std</u> 8/28/18 date 32.6 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	2	8/6/18		0.04	32.8	0.04	32.7			
	2	3	8/6/18		0.04	32.8					
Dissolved Oxygen			<u>1 year</u>	Std Val	100%		100%		± 5 %		
	2	2	8/6/18		99.6 %		100.3 %				
	2	1	4/2/18		99.6 %						
pH			<u>3 weeks</u>	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	10/8/18		7.00	10.01	7.04	10.10			
	2	5	10/18/18		7.00	10.01					
Turbidity			<u>3 months</u>	Std Val	<u>BLANK</u> <0.1	<u>LOW 1-10</u> 5.46 NTU	<u>BLANK</u> <0.1	<u>LOW 1-10</u> 5.46 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	10/8/18		0.05	5.46	0.13	5.46			
		n/a									

QA:

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

Team	R2RS	Samplers (Last Name, 1st Initial)	Fitzgerald, T Morgan, T Abromaitis, A Jarmakani, B	Meters and Probes ID		
Session	46			HQ40d: 2	2100Q: 1	
Date	10/9/2018			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
Napili Bay RNS181009	N	8:20	26.9	33.5	6.65	100.5	8.14	11.0	12.0	12.5	2	2	0
Pohaku RPO181009	N	8:44	26.7	32.5	6.49	97.3	8.17	4.07	4.13	4.30	0	8	0
Kaanapali Sh RKS181009	A	9:05	26.9	34.0	6.60	99.9	8.20	2.97	3.48	3.15	8	15	0
Canoe Beach RCB181009	N/A	9:25	27.9	33.6	6.59	101.2	8.21	9.39	9.45	10.2	0	0	0
Wahikuli RWA181009		9:42	27.7	32.7	6.62	100.9	8.24	3.14	3.45	3.29	0	2	0

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

- RNS181009 - 2 in stagnant water in nearby stream bed
- Batteries were replaced in turbidity probe
- KS stream ocean water flowing into canal
greenish/brown water 1-2' high in canal.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.46	57.2	647
Pre-sampling	0.06	5.49	57.7	647
Post-sampling	0.06	5.45	57.6	646

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	0	J. Strickland
Nutrients	5	8 LHS	J. Strickland
Bacteria	0	0	J. Strickland

Signature (Team Lead):

Printed Name:

James Strickland

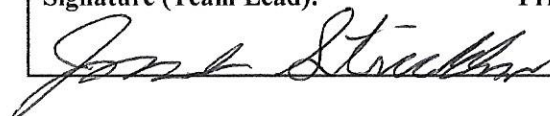
James Strickland

Team	R2RS	Samplers (Last Name, 1st Initial)	Fitzberg, T ; Abromaitis, A ; Jarmakoni, B ; Morgan, T
Session	46		
Date	10/9/2018		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS181009-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO181009-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS181009-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	
RCB181009-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA181009-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							
RNS181009-S-1	Napili Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RPO181009-S-1	Pohaku	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKS181009-S-1	Kaanapali Sh	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RCB181009-S-1	Canoe Beach	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RWA181009-S-1	Wahikuli	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:


 James Strickland

Team	Polanui	Samplers (Last Name, 1st Initial) <i>Brown M Harris K Strickland J.</i>	Meters and Probes ID		
Session	46		HQ40d: <i>2</i>	2100Q: <i>1</i>	
Date	10/10/2018		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 PFF181010	<i>Y</i>	<i>8:18</i>	<i>27.1</i>	<i>32.9</i>	<i>6.48</i>	<i>97.7</i>	<i>8.11</i>	<i>14.9</i>	<i>15.5</i>	<i>15.0</i>	<i>0</i>	<i>9</i>	<i>0</i>
Lindsey Hale PLH181010	<i>N</i>	<i>8:47</i>	<i>27.5</i>	<i>33.8</i>	<i>6.11</i>	<i>93.3</i>	<i>8.11</i>	<i>16.2</i>	<i>18.6</i>	<i>19.5</i>	<i>0</i>	<i>4</i>	<i>0</i>
Lahaina Town PLT181010	<i>N</i>	<i>9:09</i>	<i>27.5</i>	<i>34.0</i>	<i>6.04</i>	<i>92.4</i>	<i>8.10</i>	<i>5.82</i>	<i>7.49</i>	<i>7.19</i>	<i>1</i>	<i>2</i>	<i>0</i>
Olowalu Pier OSF181010	<i>N</i>	<i>9:44</i>	<i>28.2</i>	<i>34.5</i>	<i>6.76</i>	<i>104.8</i>	<i>8.19</i>	<i>3.94</i>	<i>4.29</i>	<i>4.29</i>			

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

Use the back of the form if needed.

monk seal at 505 Front St park beach
PFF stream stronger than usual
OSF water not clear again

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	<i>0.05</i>	<i>5.46</i>	<i>57.2</i>	<i>647</i>
Pre-sampling	<i>0.07</i>	<i>5.44</i>	<i>57.6</i>	<i>646</i>
Post-sampling	<i>0.08</i>	<i>5.41</i>	<i>57.5</i>	<i>648</i>

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	<i>0</i>	<i>0</i>	<i>J. Strickland</i>
Nutrients	<i>4</i>	<i>4 LHS</i>	<i>J. Strickland</i>
Bacteria	<i>0</i>	<i>0</i>	<i>J. Strickland</i>

Signature (Team Lead):

Printed Name:

James Strickland *James Strickland*

Team	Polanui	Samplers (Last Name, 1st Initial) Brown M Harris, K Strickland, J
Session	46	
Date	10/10/2018	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF181010-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH181010-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:47	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT181010-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:09	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF181010-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
PFF181010-S-1	505 Front St	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
PLH181010-S-1	Lindsey Hale	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
PLT181010-S-1	Lahaina Town	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
OSF181010-S-1	Olowalu Pier	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:


 James Strickland

Team	Olowalu	Samplers (Last Name, 1st Initial) RANIERI, L OTOMO, L GRIFFOUE, M	Meters and Probes ID		
Session	46		HQ40d: 2	2100Q: 1	
Date	10/11/2018		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 OPM181011	N	0714	27.0	34.6	6.28	95.7	8.11	17.0	18.1	18.1	0	0	0
Camp Olowalu OCO181011	N	0734	27.7	34.6	6.41	98.7	8.12	24.2	23.8	23.3	0	0	0
Ukumehame OUB181011	N	0750	27.5	34.6	6.49	99.8	8.17	6.54	6.82	6.41	20 surfers	2	0
Papalaua Beach OPB181011	N	0800	27.4	34.5	6.61	101.4	8.16	6.79	7.11 7.11	6.86	0	0	0
Papalaua Pali OPP181011	N	0812	27.5	34.5	6.57	101.0	8.14	5.43	6.09	5.88	0	0	0

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

- turbidity samples being reused. only 2 were provided
pre-sampling turbidity blank > 0.10

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.08	5.46	57.2	647
Pre-sampling	0.12	5.47	57.7	657
Post-sampling	0.19	5.43	57.6	650

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0		J. Strickland
Nutrients	5	E. S. LHS	J. Strickland
Bacteria	0		J. Strickland

Signature (Team Lead):



Printed Name:

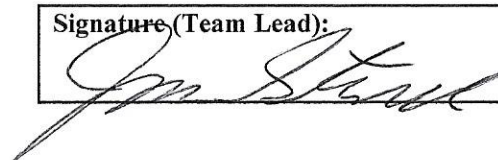
James Strickland

Team	Olowalu	Samplers (Last Name, 1st Initial)	Renieri, L O'tomo, L CARIFSOUL, M
Session	46		
Date	10/11/2018		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM181011-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:14	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO181011-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB181011-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB181011-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP181011-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
OPM181011-S-1	Martin Hale	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
OCO181011-S-1	Camp Olowalu	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
OUB181011-S-1	Ukumehame	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
OPB181011-S-1	Papalaua Beach	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
OPP181011-S-1	Papalaua Pali	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:


 James Strickland

Team	R2RN	Samplers (Last Name, 1st Initial) <i>Hutchings, L</i> <i>Bonker, B</i> <i>Hehemann, C</i>	Meters and Probes ID		
Session	46		HQ40d: <i>2</i>	2100Q: <i>1</i>	
Date	10/12/2018		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
Honolua Bay RHL181012	<i>Y</i>	<i>7:50A</i>	<i>26.5</i>	<i>32.1</i>	<i>6.44</i>	<i>96.0</i>	<i>8.21</i>	<i>5.46</i> <i>3.58</i>	<i>3.18</i>	<i>3.50</i>	<i>1</i>	<i>0</i>	<i>0</i>
Oneloa Bay RON181012	<i>N</i>	<i>08:30</i>	<i>27.2</i>	<i>34.4</i>	<i>6.67</i>	<i>101.6</i>	<i>8.21</i>	<i>0.94</i>	<i>0.78</i>	<i>0.83</i>	<i>1</i>	<i>5</i>	<i>0</i>
Kapalua Bay RFS181012	<i>N</i>	<i>9:00</i>	<i>27.8</i>	<i>33.7</i>	<i>6.60</i>	<i>101.6</i>	<i>8.14</i>	<i>2.01</i>	<i>2.47</i>	<i>2.35</i>	<i>8</i>	<i>9</i>	<i>0</i>
Ka'opala Bay RKO181012	<i>N</i>	<i>9:30</i>	<i>27.3</i>	<i>33.8</i>	<i>6.47</i>	<i>98.8</i>	<i>8.14</i>	<i>17.3</i>	<i>17.6</i>	<i>18.2</i>	<i>0</i>	<i>0</i>	<i>0</i>
Kahana Village RKV181012	<i>N</i>	<i>9:55A</i>	<i>27.8</i>	<i>33.6</i>	<i>6.46</i>	<i>99.3</i>	<i>8.15</i>	<i>41.5</i>	<i>48.6</i>	<i>50.9</i>	<i>0</i>	<i>6</i>	<i>0</i>

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

KAHANA VILLAGE - BROWN WATER

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard		<i>5.46</i>	<i>57.2</i>	<i>647</i>
Pre-sampling	<i>0.07</i>	<i>5.52</i>	<i>57.7</i>	<i>646</i>
Post-sampling	<i>0.13</i>	<i>5.46</i>	<i>58.0</i>	<i>644</i>

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	<i>0</i>		<i>C Maxwell</i>
Nutrients	<i>5</i>	<i>LLHS</i>	<i>C Maxwell</i>
Bacteria	<i>0</i>		<i>C Maxwell</i>

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	R2RN	Samplers (Last Name, 1st Initial) <i>Hutchings, L.</i> <i>Banker, B.</i> <i>Hehemann, C.</i>
Session	46	
Date	10/12/2018	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL181012-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON181012-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS181012-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO181012-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV181012-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
RHL181012-S-1	Honolua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RON181012-S-1	Oneloa Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RFS181012-S-1	Kapalua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKO181012-S-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKV181012-S-1	Kahana Village	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell