

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
48	Strickland, J & Maxwell, C	11/26/18	9 <sup>40</sup> am	Strickland, J & Maxwell, C	11/30/18	10:50 am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST 2	n/a	n/a	Std Val	NIST 24.9 °C	NIST 24.5 °C	NIST 23.3 °C	NIST °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	2	2	n/a		24.8		23.3				
	2	3	n/a			24.3					
Salinity			3 months	Std Val	Tap water Salin Std 14/12/18 date 35 ppt	Tap water Salin Std 8/23/18 date 32.6 ppt			± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	2	11/26/18		0.04	34.9	0.04	33.0			
	2	3	11/26/18		0.04	34.9					
Dissolved Oxygen			1 year	Std Val	100%	100%			± 5 %		
	2	2	8/6/18		99.3%	100.3%					
	2	1	4/2/18		99.2%						
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	11/26/18		7.00	10.01	7.04	10.1			
	2	5	11/26/18		7.00	10.01					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.46 NTU	BLANK <0.1	LOW 1-10 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	5.48	0.06	5.36			
		n/a									

QA:

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



Team	R2RS	Samplers (Last Name, 1st Initial)	Jarmakani, B; Fleciberto, T. Abromaitis A Maxwell, C.	Meters and Probes ID		
Session	48			HQ40d: 2	2100Q: 1	
Date	11/27/2018			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 RNS181127	N	0816	25.8	35.0	6.76	100.6	8.20	1.14	1.10	0.96	2	6	0
Pohaku RPO181127	N	0843	25.2	34.4	6.79	99.8	8.17	47.5	48.3	48.2	15 surfing	1	0
Kaanapali Sh RKS181127	not sure	0903	26.2	34.9	6.70	100.3	8.23	2.72	3.04	3.09	1 surfing	8	0
Canoe Beach RCB181127	not sure	0927	26.4	34.9	6.64	99.8	8.22	4.88	4.76	4.81	0	20+2	0
Wahikuli RWA181127	not sure	0944	26.3	34.9	6.71	100.7	8.24	2.32	2.22	2.43	2	0	0

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

Use the back of the form if needed.

RNS - Strong waves breaking @ shore high tide.  
Clear, Sunny, light winds, low lying clouds

RPO - High surf almost to highway, brown water close  
to shore. Clear, no wind, clouds over Mokua

RKS - a little brownish water still hard to push  
down into support

RNS + RPO - new BD syringes + 1 disposable 0.2µ filters

RKS, RCB, RWA - used med int syringes + usual  
disposable 0.2µ filters

RWA - water flat, no wind

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.46	57.2	647
Pre-sampling	0.06	5.53	57.9	650
Post-sampling	0.05	5.49	57.9	645

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

Team	R2RS	Samplers (Last Name, 1st Initial)	Jarmalcan; B, Freiberg, T., Abromaitis, A, Maxwell, C.
Session	48		
Date	11/27/2018		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS181127-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO181127-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS181127-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:03	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB181127-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:27	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA181127-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:44	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
RNS181127-S-1	Napili Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RPO181127-S-1	Pohaku	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKS181127-S-1	Kaanapali Sh	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RCB181127-S-1	Canoe Beach	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RWA181127-S-1	Wahikuli	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Printed Name:

Catherine Maxwell

Catherine Maxwell



<b>Team</b>	Polanui	<b>Samplers</b> (Last Name, 1st Initial)	Maxwell, J Bayley, R Harris, K	<b>Meters and Probes ID</b>		
<b>Session</b>	48			HQ40d: 2	2100Q: 1	
<b>Date</b>	11/28/2018			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
505 Front St PFF181128	Y	8:12	25.6	3 <sup>KH</sup> <sub>38</sub>	6.24	92.0	8.13	5.38	5.42	5.48	0	3	0
Lindsey Hale PLH181128	N	8:35	25.3	34.5	6.49	95.6	8.14	7.16	7.32	7.72	0	2	1
Lahaina Town PLT181128		8:55	25.5	34.5	5.89	87.0	8.11	20.8	19.5	20.1	0	1	0
Olowalu Pier OSF181128		9:25	25.0	34.8	6.80	99.8	8.16	2.77	2.57	2.49	0	5	0

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

PFF Stream flowing steadily

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	5.46	57.2	647
Pre-sampling	0.09	5.45	57.8	647
Post-sampling	0.09	5.47	57.9	649

#### CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	4	LHS	D. Reed
Bacteria			

Signature (Team Lead):

*[Signature]*

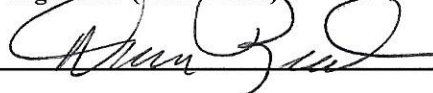
Printed Name:

Dana Reed

<b>Team</b>	Polanui	<b>Samplers (Last Name, 1st Initial)</b> Maxwell, J. Bayley, R. Harris, K.
<b>Session</b>	48	
<b>Date</b>	11/28/2018	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
PFF181128-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH181128-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT181128-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF181128-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
<b>Sediments</b>							
		<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:

Dana Reed



<b>Team</b>	Olowalu	<b>Samplers</b> (Last Name, 1st Initial)	Ranieri, Lindsay Otomo, Lagne Strickland, James	<b>Meters and Probes ID</b>		
<b>Session</b>	48			HQ40d: 2	2100Q: 1	
<b>Date</b>	11/29/2018			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 OPM181129	N	7:15	24.4	34.7	5.42	78.8	8.07	1.60	1.93	2.02	0	0	0
Camp Olowalu OCO181129	N	7:32	24.9	34.9	6.47	95.0	8.15	1.22	1.03	1.10	2	1	0
Ukumehame OUB181129	N	7:48	24.9	34.8	6.28	92.2	8.17	7.40	7.65	7.46	0	0	0
Papalaua Beach OPB181129	N	8:00	25.3	35.0	6.45	95.4	8.18	3.85	3.88	3.64	0	0	0
Papalaua Pali OPP181129	N	8:13	25.7	34.8	6.59	98.2	8.21	6.51	6.37	6.94	0	0	0

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

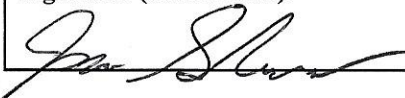
**TURBIDITY VERIFICATION**

	Blank (must be <0.10)	Low	Med	High
Standard	5	5.46	57.2	647
Pre-sampling	0.06	5.46	57.7	650
Post-sampling	0.06	5.47	57.9	646

**CHAIN OF CUSTODY INFORMATION**

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

Signature (Team Lead):



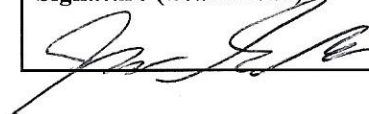
Printed Name:

James Strickland

<b>Team</b>	Olowalu	<b>Samplers (Last Name, 1st Initial)</b> Romero, Lindsay Atomo, Layne Strickland, Jones
<b>Session</b>	48	
<b>Date</b>	11/29/2018	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
OPM181129-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO181129-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB181129-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:48	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPB181129-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	
OPP181129-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:13	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
<b>Sediments</b>							
		<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:

Jones Strickland



<b>C Team</b>	<b>R2RN</b>	<b>Samplers</b> (Last Name, 1st Initial)	Hutchings, L Bunker, B Hehemann, C	<b>Meters and Probes ID</b>		
<b>Session</b>	<b>48</b>			HQ40d: 2	2100Q: 1	
<b>Date</b>	<b>11/30/2018</b>			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 RHL181130	N	7:50A	23.8	34.2	5.96	85.6	8.15	2.45	2.19	2.34	0	3	0
Oneloa Bay RON181130	—	8:40A	25.6	34.9	6.70	99.9	8.20	0.79	0.71	0.71	2	3	0
Kapalua Bay RFS181130	—	9:05A	26.0	34.6	6.37	95.4	8.17	0.84	0.88	0.90	10	16	0
Ka'opala Bay RKO181130	N	9:30A	25.6	34.1	5.95	88.6	8.14	4.20	4.25	4.18 <sup>#</sup> <del>3.87</del>	0	0	0
Kahana Village RKV181130	—	9:50A	26.2	34.3	6.47	96.8	8.16	10.4	9.51	10.3	0	7	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	0.06	5.46	57.2	647
Pre-sampling	0.07	5.52	57.8	648
Post-sampling	0.06	5.56	58.0	645

**CHAIN OF CUSTODY INFORMATION**

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

**Signature (Team Lead):**

Catherine Maxwell

**Printed Name:**

Catherine Maxwell



Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Bancker, B Hehemann, C
Session	48		
Date	11/30/2018		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL181130-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50 a.m.	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON181130-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40 a.m.	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS181130-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05 a.m.	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO181130-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30 a.m.	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV181130-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:50 a.m.	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
Sediments							
RHL181130-S-1	Honolua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RON181130-S-1	Oneloa Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RFS181130-S-1	Kapalua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKO181130-S-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		
RKV181130-S-1	Kahana Village	<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell