

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
71	J. Strickland, T. Stark	05/11/20	10:00am	J. Strickland, T. Stark	5/15/20	11:15am

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	
	1	1	n/a		27.4 °C	26.9 °C	29.6 °C	— °C		5/11 : pre : 23.2 °C post : 23.5 °C	
	1	2	n/a			26.7		—		5/ : pre : 24.0, post : 24.4	
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	
	1	1	5/4/20		0.13	2/3/20 date 33.1 ppt	0.13	2/3/20 date 33.1 ppt			
	1	2	5/4/20		0.15	33.2	0.15	33.2			
	1	2	5/4/20		0.15	33.1	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	10/18/19		97.1%		97.1%				
	1	2	10/18/19		101.9%		—				
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	
	1	3	5/11/20		7.02	9.96	7.09	10.13	will call back regarding pH probe 3 * Dial post for both b/c tried switched from probe 3 to 4 this week		
	1	4	5/11/20		7.03	9.99	7.05	10.03			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10	BLANK <0.1	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	8/11/20		0.04	6.68	0.05	6.64			
		n/a									

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



Team	R2RS	Samplers (Last Name, 1st Initial)	Strickland, J. Stark, T.	Meters and Probes ID			
Session	71			HQ40d:	1	2100Q:	1
Date	05/12/2020			pH:	3	DO:	1

Location Name Sample ID	Streams 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)	(%) 85-105 normal					water	beach	camp
Napili Bay RNS200512	N	8:10	25.0	34.4	6.68	97.8	8.24	1.80	1.51	1.78	0	0	0
Pohaku RPO200512	N	8:34	25.0	30.6	6.88	98.6	8.29	6.88	7.43 <del>10.3</del>	7.86	0	0	0
Kaanapali Sh RKS200512	N	9:00	25.1	34.7	6.74	99.1	8.26	1.53	1.47	1.60	0	1	0
Canoe Beach RCB200512	N	9:20	26.3	33.7	6.77	101.1	8.29	0.57	0.72	0.77 <del>1.30</del>	0	0	0
Wahikuli RWA200512	N	9:38	25.9	33.2	6.67	98.8	8.31	0.53	0.44	0.49 <del>1.10</del>	0	0	0

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

RNS: drizzled while sampling  
RPD: suspended particles visible in  
turbidity bottle

RKS: fisherman on beach

RCB: lifeguards saying 100s WAY  
more clear

RWA: Noticed high pH #'s - tried other  
pH probe #4 & got 8.21

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.68	60.6	623
Pre-sampling	0.06	6.74	60.4	623
Post-sampling	0.05	6.67	60.7	622

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	T. Stark
Bacteria	-	-	-

Signature (Team Lead):



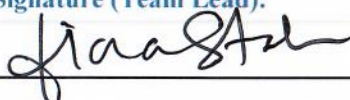
Printed Name:

Tiara Stark

Team	R2RS	Samplers (Last Name, 1st Initial)	Strickland J. Stark, T.
Session	71		
Date	05/12/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS200512-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO200512-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS200512-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB200512-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA200512-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:38	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: Tiara Stark
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Team	Polanui	Samplers (Last Name, 1st Initial)	J. Strickland T. Stark	Meters and Probes ID			
Session	71			HQ40d:	1	2100Q:	1
Date	05/13/2020			pH:	4	DO:	1

Location Name Sample ID	Streams 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)	(%) 85-105 normal					water	beach	camp
505 Front St PFF200513	N	8:25	26.1	34.7	6.17	92.4	8.11	1.50	1.33	1.26	○	○	○
Lindsey Hale PLH200513	N	<del>8:40</del> 8:40	26.4	33.4	5.79	86.7	8.10	<del>6.50</del> 5.76	5.17	5.21	○	○	○
Lahaina Town PLT200513	Y	<del>8:40</del> 8:40	26.4	34.5	6.27	94.4	8.12	3.49	2.92	3.08	○	○	○
Olowalu Pier OSF200513	N	9:45	27.2	34.5	6.70	102.3	8.13	2.00	2.07	1.94	○	○	○

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

\* Switched to pH probe #4

PFF: pH3 (8.19); pH4 (8.11)

PLT: Stream flowing nearby ~150ft  
to the North

PLH: pH3 (8.19)

PLH TIME OF COLLECTION - 8:40

PLT TIME OF COLLECTION - 9:10

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.68	60.6	623
Pre-sampling	0.05	6.75	60.5	622
Post-sampling	0.03	6.64	60.6	621

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	4	NMS	T. Stark
Bacteria			

Signature (Team Lead):

Printed Name:

Tiara Stark

<b>Team</b>	Polanui	<b>Samplers (Last Name, 1st Initial)</b>	J. Strickland T. Stark
<b>Session</b>	71		
<b>Date</b>	05/13/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
PFF200513-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH200513-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT200513-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OSF200513-N-1	Olowalu Pier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	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		

<b>Signature (Team Lead):</b> 	<b>Printed Name:</b> Tiara Stark
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Team	Olowalu	Samplers (Last Name, 1st Initial)	J. Strickland T. Stark	Meters and Probes ID			
Session	71			HQ40d:	1	2100Q:	1
Date	05/14/2020			pH:	4	DO:	1

Location Name Sample ID	Streams 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)	(%) 85-105 normal					water	beach	camp
Martin Hale OPM200514	N	7:10	25.6	34.6	5.26	78%	8.02	1.59	1.62	1.62	0	0	0
Camp Olowalu OCO200514	N	7:30	26.8	34.4	6.18	93.6	8.09	2.98	3.27	3.31	0	0	0
Ukumehame OUB200514	N	7:48	26.5	34.6	6.40	96.4	8.12	14.2	14.0	13.2	0	0	0
Papalaua Beach OPB200514	N	8:08	26.8	35.1	6.52	99.1	8.14	6.65	5.63	6.05	0	0	0
Papulua Pali OPP200514	N	8:20	26.8	34.9	6.57	99.0	8.13	4.80	4.96	4.95	0	0	0

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

OPM: calm, like mirror lake - Did DO/  
Salinity 2x (5.27 mg/L, 78.2%)  
OUB: surfers - no one within 100 yards

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.68	60.6	623
Pre-sampling	0.04	6.68	60.6	623
Post-sampling	0.05	6.72	60.5	622

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	N/A	N/A
Nutrients	5	N/A NMS J. Strickland	N/A
Bacteria	0	N/A	N/A

Signature (Team Lead):


Printed Name:

*James Strickland* James Strickland

Team	Olowalu	Samplers (Last Name, 1st Initial)	T. Stark J. Strickland
Session	71		
Date	05/14/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
OPM200514-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO200514-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OUB200514-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	
OPB200514-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP200514-N-1	Papulua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:13	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:
	James Strickland



Team	R2RN	Samplers (Last Name, 1st Initial)	T. STARK  J. STRICKLAND	Meters and Probes ID		
Session	71			HQ40d: 1	2100Q: 1	
Date	05/15/2020			pH: 4	DO: 1	Salinity: 1

Location Name Sample ID	Streams 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)	(%) 85-105 normal					water	beach	camp
Honolua Bay RHL200515	N	8:15	25.3	33.5	6.23	91.4	8.13	2.13	1.99	1.63	0	0	0
Oneloa Bay RON200515	N	8:50	26.2	34.9	6.63	99.7	8.15	0.33	0.35	0.50	0	1	0
Kapalua Bay RFS200515	N	9:15	26.9	33.5	6.44	97.4	8.13	1.84	<del>2.29</del> <sup>2.02</sup>	2.31	0	2	0
Ka'opala Bay RKO200515	N	9:35	26.4	33.6	6.36	95.2	8.13	11.2	11.0	10.9	0	0	0
Kahana Village RKV200515	N	9:55	26.4	34.1	6.45	96.8	8.13	11.0	11.2	12.4	0	0	0

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

RHL: catamaran w/noise ~ 30 ft from shore  
RON: fisherman nearby  
RKV: construction nearby

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.68	60.6	623
Pre-sampling	0.04	6.67	60.3	622
Post-sampling	0.05	6.64	60.4	621

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	J. STRICKLAND
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

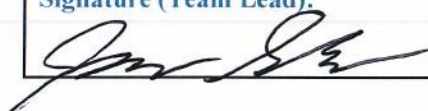
*James Strickland* James Strickland



Team	R2RN	Samplers (Last Name, 1st Initial)	T. STARK J. STRICKLAND
Session	71		
Date	05/15/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL200515-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON200515-N-1	Oncloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS200515-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO200515-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV200515-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							
		<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