

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

Session No:	Verifiers (pre-sampling):			Pre Date:	Pre Time:	Verifiers (post-sampling):			Post Date:	Post Time:	
119	E JOHNSON, J ERWIN L YANNELL			03/20/23	2:00 PM	E JOHNSON, J ERWIN L YANNELL			03/23/23	3:00 PM	
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	
	3	3	8/17/23		30.1 °C	30.3 °C	27.0 °C	°C			
	4	4	8/17/23		29.5		26.9				
						30.5					
Salinity			3 months	Std Val	Tap water	Salin Std 3/6/23 date 33.7 ppt	Tap water	Salin Std 3/22/23 date 34.5 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	3	3	2/28/23		0.06	34.8	0.05	34.6		Probes 3 + 4 recalibrated and verified on 3/22/23	
	4	4	2/28/23		0.06	34.6					
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	3	1	2/6/23		102.6 %		100.9				
	4	4	8/15/22		101.3 %						
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	
	3	7	3/20/23		7.00	10.01	7.02	10.03			
	4	6	3/20/23		7.00	10.01					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 5.23 NTU	BLANK <0.1	LOW 1-10 5.23 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	2/6/23		0.06	5.22	0.05	5.32		LOW 5.23 NTU > STANDARD	
	4	n/a	1/16/23		0.09	6.45				LOW 6.43 NTU	

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

OLP LAB

Team	R2RS	Samplers (Last Name, 1st Initial) FRIEBERG, T. KIZANBERG, J. Erwin, J.	Meters and Probes ID		
Session	119		HQ2200: 3	2100Q: 1	
Date	3/21/2023		pH: 7	DO: 1	Salinity: 3

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)	(%) 85-105 normal					water	beach	camp
Napili Bay RNS230321	N	8:15	24.6 JE 36.8	36.8	6.94	102.4	8.18	1.45	1.31	1.14	1	6	0
Pohaku RPO230321	N	8:45	24.3	35.6	6.99	102.1	8.13	10.5	11.3	10.8	0	0	0
Kaanapali Shores RKS230321	N	9:10	24.4	36.4	6.82	100.6	8.19	2.98	2.70	2.58	6	10	0
Kahekili Beach Two RKT230321	N	9:30	25.0	36.7	6.77	100.6	8.20	4.13	4.47	4.06	3	11	0
Canoe Beach RCB230321	N	10:00	25.4	34.6	6.78	100.4	8.17	1.51	1.60	1.42	3	2	4
Wahikuli RWA230321	N	10:20	25.5	34.9	6.79	100.6	8.19	3.51	3.33	3.35	1	3	0

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

RNS-2-3A Swell, Temp 24.6°C, Salinity 36.8 ppt
 mid tide (JE)

RPO - 2ft swell, murky. Smell of sewage
 Need pm to read 2100Q

RKT - ~1-2ft shorebreak, mid-tide, churned up

RCB - calm water RWA - calm conditions

Sites with potential for freshwater flow: Kaanapali Shores, Canoe Beach

Salinity out of range? OLP

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	5.23	57.4	619
Pre-sampling	0.07	5.27	56.4	622
Post-sampling	0.05	5.37	56.9	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	OLP	Jess Erwin
Bacteria	-	-	-

Signature (Team Lead):

Jessica Erwin

Printed Name:

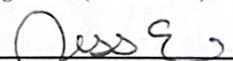
Jessica Erwin

WATER - Sample Collection Data Sheet

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T. Kranberg, J. Erwin, J.
Session	119		
Date	03/21/23		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RNS230321-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RPO230321-N-1	Pohaku	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKS230321-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKT230321-N-1	Kahekili Beach Two	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RCB230321-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RWA230321-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:20	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:
	Jessica Erwin

OLP

Team	Polanui	Samplers (Last Name, 1st Initial)	GUND, K GONZALEZ, T HARRIS, K	JOHNSON, E	Meters and Probes ID		
Session	119				HQ2200: 3	2100Q: 1	
Date	3/22/2023				pH: 7	DO: 1	Salinity: 3

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)	(%) 85-105 normal						water	beach	camp
505 Front St PFF230322	Y	8:16 AM	25.0	36.4	6.20	91.9%	8.08	8.83	11.9	11.2		0	6	0
Lindsey Hale PLH230322	N	8:43 AM	25.1	36.1	5.66	83.8%	8.05	10.1	10.6	10.3		0	4	0
Lahaina Town PLT230322	N	9:02 AM	25.1	36.3	5.61	83.1%	8.05	4.85	5.35	6.45		4	1	0
Camp Olowalu OCO230322	N	9:36 AM	26.0	36.2	6.50	98.1%	8.03	9.00	10.3	9.03		0	0	0
Papalaua Pali OPP230322	N	9:57 AM	26.1	36.9	6.79	102.6%	8.13	6.77	6.93	7.37		0	0	1

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

PFF - RAN 4TH READ FOR PRE-SAMPLE "HIGH". 624 2X
OVERCAST + SPRINKLE OF RAIN
505 STREAM FLOWING, DIFFERENT
DIRECTION; Photo taken by Kristy
505 - TOOK SECOND READING BECAUSE SALINITY
WAS OUT OF RANGE BUT STATED AT 36.4 PPT
PLH DRAINAGE PIPE IS CLEARED
PLH - TOOK SECOND READING BECAUSE SALINITY
DO% OUT OF RANGE - NEW VALUES ENTERED
PLT SURF + WAVE ACTION
PLT - TURBIDITY, DIDNT INVERT IN BETWEEN READINGS
TOOK 4TH READING
LOW TIDE - LOWEST TIDE @ 10:40 AM
Sites with potential for freshwater flow: 505 Front St.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	5.23	57.4	619
Pre-sampling	0.05	5.26	57.1	624
Post-sampling	0.06	5.27	57.0	623

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	OLP	EJOHNSON
Bacteria	-	-	-

Signature (Team Lead):

Emily

Printed Name:

EMILY JOHNSON

Team	Polanui	Samplers (Last Name, 1st Initial)	GUND, K JOHNSON, E GONZALEZ, T HARRIS, K
Session	119		
Date	3/22/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
PFF230322-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16 AM	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLH230322-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:43 AM	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
PLT230322-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:02 AM	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OCO230322-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:36 AM	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
OPP230322-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:57 AM	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:
Emily Johnson	EMILY JOHNSON

Team	R2RN	Samplers (Last Name, 1st Initial) Hutchings, L. Erwin, J. Hehemann, C.	Meters and Probes ID		
Session	119		HQ2200: 3	2100Q: 1	
Date	03/23/23		pH: 7	DO: 1	Salinity: 34.4

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)	(%) 85-105 normal					water	beach	camp
Honolua Bay RHL230323	N	8:20	23.9	35.4	6.42	92.9	8.12	3.57	3.39	3.50	2	10	0
Oneloa Bay RON230323	N	9:05	24.2	36.3	6.91	101.3	8.17	0.51	0.45	0.53	0	5	0
Kapalua Bay RFS230323	N	9:25	24.5	35.8	6.71	98.3	8.12	1.81	1.95	1.83	24	45	0
Ka'opala Bay RKO230323	N	10:10	24.6	35.3	6.55	96.0	8.07	7.49	7.82	7.80	0	0	0
Kahana Village RKV230323	N	10:25	24.5	35.3	6.51	95.2	8.07	2.53	2.43	2.53	0	2	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).
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RHL - calm conditions, 2nd salinity 35.3
RON - surf, 2nd salinity 36.2, 4th turbidity 0.45
RFS - calm, 1st of people in water and beach
RKO - calm
RKV - calm
Overcast all morning

Sites with potential for freshwater flow: Honolua Bay, Kahana Village

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	5.23	57.4	619
Pre-sampling	0.07	5.35	56.9	627
Post-sampling	0.05	5.32	57.2	623

CHAIN OF CUSTODY INFORMATION

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Nutrients	5	OLP	Jess Erwin
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

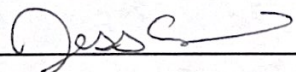
Jess Erwin

Jessica Erwin

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L. Erwin, J. Hehemann, C.
Session	119		
Date	03/23/23		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
RHL230323-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RON230323-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RFS230323-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKO230323-N-1	Ka'opala Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
RKV230323-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:25	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:
	Jessica Erwin