

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



Session No:	Verifiers:	Pre date:	Pre time:	Post Date:	Post time:
42	Callnan, L., Baptista, J. Otero, L., Maxwell, C.	7/16/18	9:45am	7/20/18	10:45am

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature			n/a	Std	NIST	NIST	NIST	NIST	± 1°C of NIST	Within 1°C	
					27.1	28.2	27.1				
	2	2	n/a		27.1		27.1 ^{cm}				
	2	3	n/a			28.0					
Salinity			3 months	Std	Tap water	4/9/18	Tap water	4/9/18	± 3%, blank	33.95 – 36.05 note: verification standard is 33.0 ppt tap water changed between probe 2 & 3	
					0.04	33.0 ppt	0.04	33.0 ppt			
	2	2	4/23/18		0.04	32.5	0.03	32.5			
	2	3	4/23/18		0.03	32.8					
Dissolved Oxygen	2 ^{cm}		1 year	Std	100%		100%		Post-check ± 5 % of pre-check	80 – 120 %	
	2	2	8/1/17		99.4 %		100.8 %				
	2	1	4/2/18		100.2 %						
pH			3 weeks	Std					± 3 % of cal solution (6-8)	6.79 – 7.21	
					7.00	10.00	7.00	10.00			
	2	3	7/16/18		7.00	10.01	7.07	10.05			
	2	4	7/16/18		7.00	10.01			PRETEMP 27.4		
Turbidity			3 months	Std	BLANK	LOW 1-10	BLANK	LOW 1-10	Blank < 0.1 ± 3 % of secondary standard	Low ± 0.18 NTU Med ± 1.8 NTU High ± 18 NTU	
					<0.1	5.37	<0.1	5.37			
	1	N/A	6/4/18		0.07	5.43	0.05	5.35			
		N/A									

QA:

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

Team	R2RS	Samplers (Last Name, 1st Initial)	Freiberg, T, Jaimakani, B, Maxwell, C Morgan, T. Baptista, J.	Meters and Probes ID			
Session	42			HQ40d:	2	2100Q:	1
Date	7/17/18			pH:	3	DO:	2

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
Napili Bay RNS180717	8:15	26.2	33.5	6.7	99.9	8.08	2.13	1.67	1.40	1	2	2	7	0	□	□
Pohaku RPO180717	8:35	26.2	33.0	6.20	92.1	8.08	1.87	2.47	2.28	0	2 ^{JB}	8	19	0	□	□
Kaanapali Sh RKS180717	8:58	26.1	33.7	6.77	100.7	8.12	5.51	5.51	5.57	1/2	2	0	0	0	□	□
Canoe Beach RCB180717	9:20	26.9	33.1	6.75	106.6	8.23	2.20	2.35	2.22	1	0	0	0 ^{JB}	0	□	□
Wahikuli RWA180717	9:32	27.0	33.7	6.56	99.3	8.17	1.73	1.70	1.62	0	0	0 ^{JB}	0 ^{JB}	0	□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS

Most recent tide time (falling or rising)	Low: 12:11 PM High: 6:50 AM	Lahaina Station Lahaina Station
Moon day (from new)	5	
Cloud cover (0-8)	RNS 5%, RPO 30%, RKS, RCB 30%, RWA 5%	
Rain conditions (last 24 hrs)	?	
Wind direction (Trades/Kona)	Trades	
Streams flowing? (Y/N)	See below	

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

RPO - People (2) within 10ft of the sampler.
RKS - Brown streaks out in the water,
right left (2-3ft out), mid (50ft out), stream
connected, clear
note: 2100g Read button getting difficult to use
turbidity meter

TURBIDITY VERIFICATION

	Blank	Low	Med	High
Standard	6.07	5.37	56.7	641
Pre-sampling	0.10	5.39	56.7	642
Post-sampling	0.04	5.37	56.6	640

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	LHS	C Maxwell
Nutrients	6	LHS	C Maxwell
Bacteria	0		C Maxwell

Signature (Team Lead):

Catherine Maxwell

Printed Name:

Catherine Maxwell

WATER QUALITY SAMPLING:

Team:	Samplers:	Last Name, 1 st Initial	Date:
R2RS - 42	Freiberg, T, Jaraman, B, Morgan, T		7/17/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
RNS180717-N-1	Napili Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RPO180717-N-1	Pokahu	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKS180717-N-1	Kaanapali Sh	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RCB180717-N-1	Canoe Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RWA180717-N-1	Wahikuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment - TSS							
RNS180717-S-1	Napili Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RPO180717-S-1	Pokahu	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKS180717-S-1	Kaanapali Sh	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RCB180717-S-1	Canoe Beach	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RWA180717-S-1	Wahikuli	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Team Lead

Catherine Maxwell

Catherine Maxwell

Team Polanui	Samplers (Last Name, 1st Initial) <i>Maxwell, J; Bayley, R; Harris, K; Baptista, J (observer)</i>	Meters and Probes ID		
Session 42		HQ40d: 2	2100Q: 1	
Date 7/18/18		pH: 3	DO: 2	Salinity: 2

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
505 Front St PFF180718	8:15	27.0	33.6	6.33	95.6	8.08	5.74	4.57	5.96	1	0	0	0	0	□	□
Lindsey Hale PLH180718	8:40	27.2	33.7	6.18	93.8	8.10	20.0	22.2	20.3	0	0	0	3	0	□	□
Lahaina Town PLT180718	9:00	27.4	33.9	6.05	92.3	8.13	14.1	17.8	20.3	0	0	1	0	0	□	□
Olowalu Pier OSF180718	9:35	27.3	34.3	102.38 6.30	103.7	8.15	2.20	2.93	2.19	0	1	0	1	0	□	□
															□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS

Most recent tide time (<u>falling</u> or rising)	Low: 1:05 PM Lahaina Station High: 8:16 AM Lahaina Station
Moon day (from new)	6
Cloud cover (0-8)	PFF-2, PLH-2, PLT-2, OSF-3
Rain conditions (last 24 hrs)	?
Wind direction (Trades/Kona)	Trades
Streams flowing? (Y/N)	PFF - clear water (basement)

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

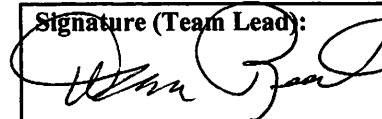
TURBIDITY VERIFICATION

	Blank	Low	Med	High
Standard	0.04	5.37	56.7	641
Pre-sampling	0.08	5.38	56.5	641
Post-sampling	0.05	5.42	56.6	639

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	0	LHS	
Nutrients	5	LHS	D. Reed
Bacteria	0		

Signature (Team Lead):



Printed Name:

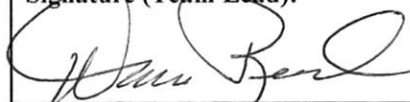
Dana Reed

WATER QUALITY SAMPLING:

Team:	Notetaker:	Date:
Polanui - 42		7/18/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
PFF180718-N-1	505 Front St	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
PLH180718-N-1	Lindsey Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
PLT180718-N-1	Lahaina Town	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OSF180718-N-1	Olowalu SF	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:35	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment							
PFF180718-S-1	505 Front St	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
PLH180718-S-1	Lindsey Hale	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
PLT180718-S-1	Lahaina Town	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OSF180718-S-1	Olowalu SF	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):



Printed Name:

Dana Reed

Team	Olowalu	Samplers (Last Name, 1st Initial) NOPONEN, R OTOMO, L RANIERI, L	Meters and Probes ID		
Session	42		HQ40d: - 2	2100Q: - 1	
Date	7/19/18		pH: 3	DO: 2	Salinity: 2

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
Martin Hale OPM180719	0715	25.5	34.1	5.96	88.0	8.10	6.51	5.49	5.10	1	2	0	0	0	□	□
Camp Olowalu OCO180719	0733	25.9	34.2	6.51	96.9	8.12	13.6	11.6	12.4	2	1	0	13	1	□	□
Ukumehame OUB180719	0749	26.3	34.3	6.62	99.1	8.19	16.9	17.1	16.5	2	1	0	0	0	□	□
Papalaua Beach OPB180719	0802	26.1	34.3	6.75	100.7	8.20	8.82	8.92	8.48	2	1	0	3	0	□	□
Papalaua Pali OPP180719	0814	26.1	34.2	6.72	100.3	8.20	5.27	3.80	3.75	2	1	20	4	1	□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS

Most recent tide time (falling or <u>rising</u>)	Low: 3:12 AM Lahaina Station High: 10:11 AM Lahaina Station
Moon day (from new)	7
Cloud cover (0-8)	1
Rain conditions (last 24 hrs)	NONE
Wind direction (Trades/Kona)	TRADES
Streams flowing? (Y/N)	N/A

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

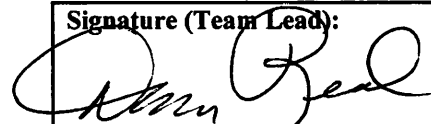
TURBIDITY VERIFICATION

	Blank	Low	Med	High
Standard	0.05	5.37	56.7	641
Pre-sampling	.05	5.35	56.3	641
Post-sampling	0.04	5.39	56.6	640

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	6		
Nutrients	5	LHS	D. Reed
Bacteria	6		

Signature (Team Lead):



Printed Name:

Dana Reed

WATER QUALITY SAMPLING:

Team:	Notetaker:	Date:
Olowalu - 42	otomo, Layne	7/19/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
OPM180719-N-1	Martin Hale	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:15	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OCO180719-N-1	Camp Olowalu	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:33	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OUB180719-N-1	Ukumehame	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:49	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OPB180719-N-1	Papalaua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:02	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
OPP180719-N-1	Papalaua Pali	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:14	125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment							
OPM180719-S-1	Martin Hale	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OCO180719-S-1	Camp Olowalu	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OUB180719-S-1	Ukumehame	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OPB180719-S-1	Papalaua Beach	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
OPP180719-S-1	Papalaua Pali	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):
Printed Name:

 Dana Reed

Team	R2RN	Samplers (Last Name, 1st Initial)	Hutchings, L Banker, B Hehemann, C	Meters and Probes ID			
Session	42			HQ40d:	2	2100Q:	1
Date	7/20/18			pH:	3	DO:	2

Location Name Sample ID	Time	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			Waves (0-3)	Wind (0-6)	People			TSS	Nutrient duplicate
				(mg/L)	(%)							water	beach	camp		
Honolua Bay RHL180720	7:45	25.9	33.5	5.80	86.0	8.17	2.02	2.91	1.73	0	1	8	10	0	□	□
Oneloa Bay RON180720	8:45	26.4	34.3	6.43	100.2	8.25	0.93	0.90	0.93	1	3	1	1	0	□	□
Kapalua Bay RFS180720	9:15	26.8	33.5	6.49	97.9	8.18	2.55	2.27	2.20	0	0	20	45	0	□	□
Ka'opala By RKO180720							12.6			0	0	0	0	0	□	□
Kahana Vill RKV180720	9:50	27.1	33.8	6.60	100.1	8.16	18.6	18.6	16.6	0	0	0	0	0	□	□
															□	□

Waves: 0ft: no waves; 1ft: small waves; 2ft: knee high; 3ft: waist high
Wind: 0: calm; 3: gentle breeze; 6: strong breeze

COASTAL AND ENVIRONMENTAL CONDITIONS	
Most recent tide time (falling or rising)	Low: 4:08 AM Lahaina Station High: 12:05 PM Lahaina Station
Moon day (from new)	8
Cloud cover (0-8)	3
Rain conditions (last 24 hrs)	0
Wind direction (Trades/Kona)	T
Streams flowing? (Y/N)	Y-HNL

NOTES AND COMMENTS (trends, equipment problems, errors, concerns). Use the back of the form if needed.
Path to HNL - major clearing by state (very sad) RKO blocked by tree trimming - no samples OR ROAD WORK

TURBIDITY VERIFICATION				
	Blank	Low	Med	High
Standard	0.05	5.38	56.5	641
Pre-sampling	0.05	5.38	56.5	642
Post-sampling	0.05	5.35	56.5	638

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	0	LHS	C Maxwell
Nutrients	4	LHS	C Maxwell
Bacteria	0		C Maxwell

Signature (Team Lead):	Printed Name:
Catherine Maxwell	Catherine Maxwell

WATER QUALITY SAMPLING:

Team:	Samplers: Last Name, 1st Initial	Date:
R2RN - 42	Hutchings, L., Banker B., Hehemann C.	7/20/18

Sample No	Location Name	Sample taken?	Storm sample?	Time	Vol (mL)	Protocol notes	Comments
Nutrients							
RHL180720-N-1	Honolua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RON180720-N-1	Oneloa Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RFS180720-N-1	Kapalua Bay	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKO180720-N-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
RKV180720-N-1	Kahana Village	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.2 um filters; washed rinsed filter holders	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		125	Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input type="checkbox"/>
Sediment - TSS							
RHL180720-S-1	Honolua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RON180720-S-1	Oneloa Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RFS180720-S-1	Kapalua Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKO180720-S-1	Ka'opala Bay	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
RKV180720-S-1	Kahana Village	<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		500		<input type="checkbox"/>

Signature (Team Lead):
Catherine Maxwell
Print name here:
Catherine Maxwell