

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

Teams:	Technician:	Session No:	Pre date:	Pre time:	Post: Date:	Post time:
	Dana Reed	19	3/24/17	11:16 AM	3/30/17	10:56

QA/QC Check	Inst #	Probe #	Last Cal Date	Verification Standard		PRE: Verification Value		POST: Verification Value		Acceptable Range (Check range)	Comments/ Notes
Temperature						24.7 C		25.2		± 1°C of NIST	Within 1°C
	2	5-32	N/A			25.0 C		25.5			
	<del>2</del>	<del>5-2</del>	<del>N/A</del>								
Salinity				0ppt	35ppt	0.04	33.4	.04	33.4	± 3%, blank	33.95 – 36.05
	2	2	3/6/17	0.04	33.4	0.04	33.2	.04	33.2		before PRE 25.5°C / 26.4°C POST after
Dissolved Oxygen				100%		100%		100%		Post-check ± 5 % of pre-check (0-100%)	80 – 120 %
	2	2	7/25/16	100		98.2%		99.7			
pH	<del>2</del>	<del>3</del>	<del>3/24/17</del>	7	10	7.00	10.01	7.00	10.01	± 3 % of calibration solution (6-8)	6.79 – 7.21
	2	3	3/24/17			7.00	10.02	7.01	10.00		Before Temp 24.7 / Temp 26.0°C After
											4.01 is also 4.0 after weeks sampling

Notes:



session 19

IN-SITU READINGS:

Team:	Samplers:	Instrument #	Probe #s	Date:	Start time:	Finish time:
R2R 19	Mane, Terry Ty	40d: 2 2100q 1	S: 2 pH: 3 DO: 2	3/28/17	7:31	9:31

Location Name	Time	Temp (C)	Sal (ppt)	DO (mg/L)	DO Saturation (%)	pH	Turbidity <sup>1</sup> (NTU)			Comments		
										Waves	Swimmers	Wind
Napili Bay RNA RNS170328	7:41	24.5 24.4 24.3	34.4	6.75	97.6	8.11	1.00	0.80	0.72	yes some not bad.	2 Supers 1 swimmer couple beach	breezy
Pohaku RPO RPO170328	8:06	24.4 24.4 24.3	33.4	6.62	95.1	8.11 8.12	3.37	3.02	3.59	Some waves smaller - surfer stopped	7 surfers a super with P's	calmer
Kaanapali Shores RKS RKS170328	8:28	24.7 24.6 24.6	34.4	6.62	96.3	8.11✓	5.70	4.86	5.15	Big Beach Now some waves	2 kids w/ mom	calm
Airport Beach RAB RAB170328	8:43	25.4 25.4 25.2	34.0	6.71	98.4	8.18✓	1.59	1.98	2.07	Very Calm occasional wave	beach walkers several families	calm
Canoe Beach RCB RCB170328	9:02	25.6 25.6 25.4	33.3	6.76	99.1	8.18	1.81	2.46	2.25	brown-calm sets of waves	beach walkers families	calm
Wahikuli RWA RWA170328	9:21	25.4 25.5 25.4	32.9	6.77	98.8	8.14	0.58	0.62	0.70	calm-flat	2 couples 1 couple walking	calm
Turbidity Verification Pre:	Blank:	5.64	Low: 0-10	57.9 5.64	Med: 10-100	628 57.9	High: 100-1000	628	Comment			
	Post:	0.04	0-10	5.69	10-100	58.0	100-1000	627				

COASTAL AND ENVIRONMENTAL CONDITION NOTES

Tide height 7:00 a.m. (Lahiana station) 0.8 feet, falling

Moon: 1/2

Cloud Cover (1-8): 3 RNA → 0 AT RWA

Wind conditions (general): breezy 2 BFT

Rain Conditions (general): not raining

\* Replicate nutrient sample: Use 2 syringes and take 2 samples. Filter both into N-1 bottle. Mix sample and pour half into N-2 bottle.

Hui O Ka Wai Ola, 12/12/2016



**WATER QUALITY SAMPLING:**

Team:	Samplers:	Date:	Start time:	Finish time:
R2R	Ty, Terry	3/28/17	7:31	9:31

Sample No	Location Name	Time	Vol (mL)	Nutrient Bottle?	SSC ?	Quality control notes	Grab sample?
RNS170328-N-1	Napili	7:46	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RNS170328-S-1	Napili		500		X		<input type="checkbox"/>
RPO170328-N-1	Pokahu	8:06	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RPO170328-S-1	Pokahu		500		X		<input type="checkbox"/>
RKS170328-N-1	Kaanapali Sh	8:28	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RKS170328-S-1	Kaanapali Sh		500		X		<input type="checkbox"/>
RAB170328-N-1	Airport Beach	8:43	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RAB170328-S-1	Airport Beach		500		X		<input type="checkbox"/>
RCB170328-N-1	Canoe Beach	9:02	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RCB170328-N-2	Canoe Beach	9:08	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RCB170328-S-1	Canoe Beach		500		X		<input type="checkbox"/>
RWA170328-N-1	Wahikuli	9:21	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
RWA170328-S-1	Wahikuli		500		X		<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

Hui O Ka Wai Ola, 12/12/2016



Session 19

Jim Maxwell  
 Kit Harris  
 Cathy Maxwell (Cici Hemann)  
 Observing

IN-SITU READINGS:

Team:	Samplers:	Instrument #	Probe #s	Date:	Start time:	Finish time:
Polanui		40d: 2	S: 2 pH: 3	3/29/17	8:21 am	
19		2100q 1	DO: 2		10:50 am	

Location Name	Time	Temp (C)	Sal (ppt)	DO (mg/L)	DO Saturation (%)	pH	Turbidity <sup>1</sup> (NTU)			Comments		
										Waves	Swimmers	Wind
505 Front St PFF PFF170329	8:21	25.4	33.1	6.23	90.8	8.07	11.5	12.4	10.1	slight chop	none	Ø
Lindsey Hale PLH PLH170329	8:50	26.0	33.4	5.72	84.5	8.06	6.46	5.86	8.74 7.69	slight chop	none	<del>25</del> knots
Lahaina Town PLT PLT170329	9:10	26.3	33.1	5.93	87.9	8.07	7.17	7.95	7.47	flat just a little texture	Surfer coming in stirred up sediment	25 Knots
Puamana PPU PPU170329	9:36	26.2	33.9	6.78	100.8	8.18	2.69	2.51	2.31	1 foot waves	none	1 Knot
Launiupoko OLP OLP170329	10:10	27.3	34.3	6.70	101.8	8.16	4.08	4.08	3.81	0.5 feet	Surfers	25 knots
Olowalu Pier OSF OSF170329	10:36	26.8	34.0	6.95	104.5	8.13	1.93	2.20	2.40	flat	none	25 knots
Turbidity Verification Pre:	Blank:	.04	Low: 0-10	5.68	Med: 10-100	58.5	High: 100-1000	629	Comment			
Post:	Blank:	.07	0-10	5.65	10-100	58.3	100-1000	626				

COASTAL AND ENVIRONMENTAL CONDITION NOTES

Tide height 7:00 a.m. (Lahiana station) 1.0 feet falling

Moon: 2/3

Cloud Cover (1-8): none at 505 shops, none at PLH, none at PLT,  
 none at PPU, none at OLP,

Rain Conditions (general):

no rain

Wind conditions (general): very little wind

Hui O Ka Wai Ola, 12/12/2016



**WATER QUALITY SAMPLING:**

Team:	Samplers:	Date:	Start time:	Finish time:
Polanui	Jim Maxwell Kit Harris Cathy Maxwell	3/29/17	8:21 am	10:50 am

*Cathy Maxwell*

Sample No	Location Name	Time	Vol (mL)	Nutrient Bottle?	SSC ?	Quality control notes	Grab sample?
PFF170329-N-1	505 Front St	8:21	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
PFF170329-S-1	505 Front St	8:21	500		X		<input checked="" type="checkbox"/>
PLH170329-N-1	Lindsey Hale	8:50	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
PLH170329-S-1	Lindsey Hale	8:50	500		X		<input checked="" type="checkbox"/>
PLT170329-N-1	Lahaina Town	9:10	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
PLT170329-S-1	Lahaina Town	9:10	500		X		<input checked="" type="checkbox"/>
PPU170329-N-1	Puamana	9:36	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
PPU170329-S-1	Puamana	9:36	500		X		<input type="checkbox"/>
OLP170329-N-1	Launiupoko	10:10	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OLP170329-S-1	Launiupoko	10:10	500		X		<input checked="" type="checkbox"/>
OSF170329-N-1	Olowalu SF	10:36	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OSF170329-S-1	Olowalu SF	10:36	500		X		<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

Hui O Ka Wai Ola, 12/12/2016



## IN-SITU READINGS:

Team:	Samplers:	Instrument #	Probe #s	Date:	Start time:	Finish time:
Olowalu	GEORGE, NELL	40d: 2	S: 2 pH: 3	3/30/17	0703	0950
19	DANA	2100q 1	DO: 2			

Location Name	Time	Temp (C)	Sal (ppt)	DO (mg/L)	DO Saturation (%)	pH	Turbidity <sup>1</sup> (NTU)			Comments		
										Waves	Swimmers	Wind
Martin Hale OPM OPM170330	0720	25.0	34.0	6.00	87.7	8.02	5.45	5.59	5.77	—	—	None
Camp Olowalu OCO OCO170330	0742	26.0	34.5	6.41	95.3	8.08	7.42	7.59	8.21	mod	6 keepers dozens	5 K
Mile Marker 14 OMM OMM170330	0805	25.9	34.2	6.27	92.9	8.03	6.32	6.45	6.26	"	Campers above + below	7 K
Ukumehame OUB OUB170330	0830	25.7	34.3	6.73	99.6	8.11	7.64	8.12	7.79	2' SURF	2 SURFERS VERY CLOSE	CALM
Papalaua Beach OPB OPB170330	0900	26.2	34.3	6.92	103.2	8.14	5.55	6.05	6.13	1-2' SURF	NONE	CALM
Papalaua Pali OPP OPP170330	0920	26.5	34.4	6.79	101.9	8.13 <del>8.13</del>	4.01	4.01	3.86	1-2' SURF	1 SURFER 20' BENCH	CALM
Turbidity Verification Pre:	Blank:	0.06	Low: 0-10	5.66	Med: 10-100	57.9	High: 100-1000	628	Comment			
	Post:	0.05	0-10	5.65	10-100	58.2	100-1000	626				

## COASTAL AND ENVIRONMENTAL CONDITION NOTES

Tide height 7:00 a.m. (Lahiana station) 1.1 feet falling

Moon: 3/4

Cloud Cover (1-8): 0

Wind conditions (general): CALM

Rain Conditions (general): NONE



**WATER QUALITY SAMPLING:**

Team:	Samplers:	Date:	Start time:	Finish time:
Olowalu		3/30/17	0703	

Sample No	Location Name	Time	Vol (mL)	Nutrient Bottle?	SSC ?	Quality control notes	Grab sample?
OPM170330-N-1	Martin Hale	0720	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OPM170330-S-1	Martin Hale		500		X		<input type="checkbox"/>
OCO170330-N-1	Camp Olowalu	0742	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OCO170330-S-1	Camp Olowalu		500		X		<input type="checkbox"/>
OMM170330-N-1	Mile Marker 14	0805	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OMM170330-S-1	Mile Marker 14		500		X		<input type="checkbox"/>
OUB170330-N-1	Ukumehame	0830	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OUB170330-S-1	Ukumehame		500		X		<input checked="" type="checkbox"/>
OPB170330-N-1	Papalaua Beach	0906	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OPB170330-S-1	Papalaua Beach		500		X		<input type="checkbox"/>
OPP170330-N-1	Papalaua Pali	0920	125	X		Washed, rinsed syringes; acid washed bottles; 0.7 um filters; washed rinsed filter holders	<input checked="" type="checkbox"/>
OPP170330-S-1	Papalaua Pali		500		X		<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>
							<input type="checkbox"/>

*By S Mto #*

Hui O Ka Wai Ola, 12/12/2016