

FIELD EQUIPMENT VERIFICATION (PRE/POST A WEEKLY SAMPLING)



Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
100	Sharpe, M., St-Louis Y. Yannell, L.	7/17/23	11:15	Sharpe St. Louis	20 July 2023	11:00

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value	POST: Verification Value	Acceptable Range	Comments/ Notes	QA?
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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 Salinity probe is not reading temp. Values are way off.
	2	6	7/17/23		26.3 °C	26.0 °C	26 °C	— °C		
	—	6	6/20/24		26.4		29.2	25.8		

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 New salinity probe calibrated and verified verified w/m salinity probe as back up. Waiting on 2nd probe.
	3	6	7/17/23		0.13	6/26/23 date 33.9 ppt	0.13	7/12/23 date 34.7 ppt		
	3	6	6/12/23		0.16	33.8	* 0.09	* 31.4		
	3	6			0.16	34.7	0.14	34.8		

Dissolved Oxygen			1 year	Std Val	100%	100%	± 5 %	2 New DO Probes calibrated 7/17/23
	4	3	7/17/23		100 %	—		
	3	4	7/17/23		100 %	104.7 %		

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	5	7/17/23		7.00	10.01	—	—		
	4	6	7/17/23		7.01	10.01	7.03	10.02		

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
	2	n/a	5/09/23		0.08	6.90	0.07	6.87		
	5	n/a			0.07	7.09	—	—		

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

NMS

Team	Kamaole	Samplers (Last Name, 1st Initial) K. McHugh, Y. St. Louis, H. Hecht G. Yannelis M. Banfi (photographer)	Meters and Probes ID		
Session	100		HQ2200: 4	2100Q: 2	Salinity: 26
Date	07/18/2023		pH: 6	DO: 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) 5.2-7.0 normal	(%) 85-105 normal					water	beach	camp
Kalepolepo North NKN230718	N	0756	25.4	31.4	6.46	95.2	8.14	6.94	6.74	6.62	0	3	0
Waipuilani Park KWP230718	N	0820	25.1	33.2	6.74	99.1	8.14	6.08	6.99	5.63	0	0	0
Kihei South KKS230718	N	840	26.6	34.2	6.25	94.1	8.12	6.37	6.41	5.93	0	6	0
Kalama Park KKP230718	N	0910	27.2	34.6	6.52	99.4	8.12	9.23	9.16	9.38	2	4	0

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

NKN: Very windy, tide going out, one child near water line. Water is choppy.
KWP: water looks green, choppy, tide going out. Sunny no to very few clouds.
4th 6.99
KKS Fishermen on beach, people walking by calmer waters, lighter wind w/ occasional strong wind gust. Partly cloudy. Particles in NTU vial. 4th 7.84 5th 7.00
Took a few extra minutes to get back to the car and test (DO + temp?)
KKP-Smells swampy, lighter winds, calmer water

Sites with potential for freshwater flow: All small waves, water looks slightly brown

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.08	6.92	58.9	612
Pre-sampling	0.06	6.90	59.3	615
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	25.1	25.3	25.2	+ took sal temp 2x
Post-sampling (Lab)	0.04	6.90	59.5	616

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	4	NMS	YMS

Signature (Team Lead):

Printed Name:

[Signature]

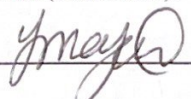
Ylenia Mayan St-Louis

Hilo Okeanos Sample Collection Datasheet

Team	Kamaole	Samplers (Last Name, 1st Initial)	K. McHugh, Y. St-Louis, H. Hecht L. Yannell m. Banfi (photographer)
Session	100		
Date	07/18/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN230718-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0756	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP230718-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0820	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS230718-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0840	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP230718-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0910	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:
	Ylenia Mayen St-Louis

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Bentley, D Sousa, B Sharpe, M	Meters and Probes ID		
Session	100			HQ2200: 4	2100Q: 2	Salinity pH: 6
Date	07/19/2023			pH: 6	DO: 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) 5.2-7.0 normal	(%) 85-105 normal					water	beach	camp
Cove Park KCP230719	N	8:05	27.1	31.5	5.87	88	8.05	40.1 42.2	35.4	32.6	0	0	1
S Maluaka Beach MMB230719	N	8:40	27.1	34.6	6.90	104.4	8.14	1.72	1.85	1.35 2.41	0	3	0
Ahihi Kinau North MAN230719	N	8:59	27.1	34.8	6.90	104.5	8.08	1.97	1.89	1.42	0	0	0
Ahihi Kinau South MAS230719	N	9:22	27.2	34.7	6.85	104.1	8.08	6.52	6.34	6.57 5.03	0	0	0

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

KCP: TURB 4th read 40.1 & 5th read 47.6
Overcast, calm, no wave action, light wind
receding tide.

MMB: heavy overcast, wind waves w/ strong shore
break increasing turb in collection (sand)
windy 4th TURB = 1.35

MAN: receding tide, overcast, calm, no shorebreak
clear water

MAS: receding tide, overcast, small wave, beach empty
windy, clear water
4th TURB = 6.57

Some rain across island last night. Strong
winds last night

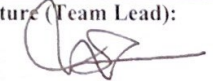
Sites with potential for freshwater flow: ~~at~~ Cove Park

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.08	6.92	58.9	612
Pre-sampling	0.06	6.92	* 59.6	615
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	26.6	27.1	26.8	
Post-sampling	0.05	6.85	* 59.6	614

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	4	Sharpe	Sharpe

Signature (Team Lead):	Printed Name:
	MSharpe

* Reading High in Field = re-read 3x with same result
wiped clean between readings

→ These values look okay
to me - Ly

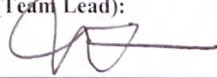
NMS

Maui Kai Waipaho - Sample Collection Datasheet

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Bentley, D Souza, B Sharpe, M
Session	100		
Date	07/19/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
KCP230719-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB230719-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN230719-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS230719-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:22	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:
	M Sharpe

NMS

Team	North Kihei	Samplers (Last Name, 1st Initial)	Angela Helgeland Ylenia St Louis	Liz Yannell	Meters and Probes ID		
Session	100				HQ2200: 4	2100Q: 2	
Date	07/20/2023				pH: 6	DO: 2.4 ysl	Salinity pH 6 ysl

Ref. Sal.	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) 5.2-7.0 normal	(%) 85-105 normal					water	beach	camp
36	Maalea Harbor NMH230720	N	0752	25.3 25.9	35.6 33.5	6.40	94.5	8.15	1.86	1.64	1.53	0	0	0
35	Maalea Condos NMC230720	N	8:37	25.4	34.4	7.57	111.7 10.2	8.11	2.34 ymd 4.89	2.56	1.98	0	0	0
37	Haycraft Park NHP230720	N	0900	25.6	36.1	7.01	103.8	8.14	2.79 ymd 2.08	2.90	2.81	0	5	0
37.5	Kealia Pond NKP230720	N	0930	26.1	36.5	7.04	105.5	8.19	1.99	1.45	2.01	0	0	0
36	Kihei Canoe Club NKC230720	N	0945	26.5	35.7	6.88	103.6	8.16	12.9 ymd 4.08	10.2	11.1	0	30	0

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

Maalea - windy, cloudy, four boats
salinity probe not reading correctly used
temp value from D.O.; read Salinity 2x:
NMC - windy, cloudy, tide going out.
Rained upcountry last night.
Turbidity 4th reading = 2.34; DO 2nd read = 111.6%
4th 3.36, small particles in vile
NKP - very windy, diver in water
NKC - canoe club going in & out of
water is brown.

TURBIDITY VERIFICATION

	Blank (must be < 0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.08	6.92	58.9	612
Pre-sampling	0.07	6.87	59.5	614
Probes (+/- 0.2 °C)	D.O	Salinity	pH	Notes
Temperature Verification	25.3	25.9	25.4	Read 2x salinity not working
Post-sampling (Lab)	0.07	6.87	59.5	614

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Nutrients	5	NMS	YMS

Signature (Team Lead):

Ylenia St Louis

Printed Name:

Ylenia M St-Louis

Sites with potential for freshwater flow: All

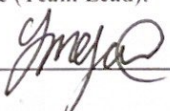
*Collecting salinity samples to read back at lab
values on sheet read w/ WM probe & verified w/ Refractometer

Hilo Kihei Water - Sample Collection Worksheet

Team	North Kihei	Samplers (Last Name, 1st Initial)	A. Helgeland Y. St Louis L. Yameli
Session	100		
Date	07/20/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH230720-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC230720-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP230720-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP230720-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC230720-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>		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:
	Ylema M St-Louis