

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
97	Y.St-Louis, L.Yannell	05/08/2023	935	Y.St-Louis, L.Yannell	05/11/2023	0945

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 28.9 °C	NIST 28.3 °C	NIST — °C	NIST 25.9 °C	± 0.6 °C of NIST Compare to NIST Std value in tap water USING DO #1 For TEMP. IN FIELD
	DG #2	06/28/24			28.7	—	—	25.6	
	DO #1				28.0	—	—	—	
Salinity		3 months		Std Val	Tap water _____ date _____ ppt	Tap water _____ date _____ ppt	Tap water _____ date _____ ppt	Salin Std _____ ppt	± 1 ppt Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle USED REFRACTOMETER CALIBRATED USING DO WATER
	SM Refractometer	5/8/23			DI = 0 ppt	DI = 1 ppt	—	—	
	—	—	—	—	—	—	—	—	
Dissolved Oxygen		1 year		Std Val	100%	100%	—	—	± 5 %
	4 2	3/17/2023			97.4	—	—	—	
	3 1	1/3/2023			97.4	98.2	—	—	Read DO 2x (98.3%)
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
	4 NEW b	5/8/23			7.05 7.02	9.83 10.00	—	—	verifications off after 1st calibration calibration re-calibrated pH 4 Exp 12/23 * New probe #6 pH 7 Exp 10/24 HACti calibration passed 4/27/23
	3 5	5/8/23			7.01	10.00	7.03	10.02	PH10 Exp 10/24
Turbidity		3 months		Std Val	BLANK <0.1 NTU	LOW 1-10 NTU	BLANK <0.1 NTU	LOW 1-10 NTU	± 0.18 NTU Low 1-10 Compare to Gel LOW 1-10 Std Calibration value
	2	n/a	05/08/2023		0.05	6.93	—	—	LOW: 6.92
	5	n/a	05/08/2023		0.07	7.16	0.05	7.09	LOW: 7.14

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

NMS

Team	Kamaole	Samplers (Last Name, 1st Initial)	Y. St-Louis L. Yannell	Meters and Probes ID							
Session	97			HQ2200: 3							
Date	05/09/2023			pH: 7.5		DO: 1		Salinity: refractometer			

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 NKN230509	N	0846	26.0	33.0	5.86	87.4	8.10	17.4	17.8	0	1
Waipuilani Park KWP230509	N	0921	25.8	33.0	6.06	90.0	8.06	5.83 nd 4.49	16.0	2	2
Kihei South KKS230509	N	0945	26.6	33.5	5.87	88.4	8.10	4.91	4.52	2	0
Kalama Park KKP230509	N	1010	26.9	35.0	7.25 7.29 7.27	109.7 104.4 107.2	8.19	10.5 ^{2nd} 9.06 ^{3rd}	9.09 9.05	0	0

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

~~* Late start due to traffic & Road closures~~NKN: 4th turbidity = 13.2; 5th = 17.8

Calm, clearer than usual not as brown; low tide sunny, hot day.

KWP → water looks cleaner, clearer than usual. Stopped to talk to Brandy about Data, Fishpod

KKS → People passing by. HOT sunny DAY

KKP → lots of surfers out, walking around. 1-2" Shorebreak

4th turbidity = 9.062nd DO reading = 110.2% + 7.27 mg/LCleaned probes → 3rd = 109.7% + 7.25 mg/L
4th = 110.0% + 7.25 mg/L

Sites with potential for freshwater flow: All

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	7.14	61.4	626
Pre-sampling	0.08	7.10	61.3	626
Post-sampling	0.05	7.08	61.6	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	4	NMS	Liz Yannell
Bacteria	-	-	-

Signature (Team Lead):

Liz Yannell

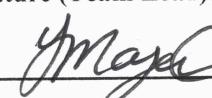
Printed Name:

Liz Yannell

Team	Kamaole	Samplers (Last Name, 1st Initial)	Y. St-Louis			
Session	97		L. Yannell			
Date	05/09/2023					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN230509-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0846	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	*Started
KWP230509-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0921	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Late due to Road closure
KKS230509-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0945	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	and lack of Team members
KKP230509-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1010	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

		<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:
	Y. Mayen St-Louis

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	B.Sousa, D. Bently, J.Dunning							Meters and Probes ID		
Session	97									HQ2200: 3		
Date	05/10/2023									2100Q: 5		

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 KCP230510	N	8:00	25.2	35	6.40	94.2	8.12	3.65	4.93	4.25	Ø	2	2
S Maluaka Beach MMB230510	N	8:48	25.9	35	6.42	95.8	8.14	0.69	0.59	0.49	6	5	Ø
Ahihi Kinau North MAN230510	N	9:07	25.5	33	7.29	107.7	8.16	0.97	1.17	1.30	Ø	Ø	Ø
Ahihi Kinau South MAS230510	N	9:26	25.2	34	6.27	92.4	8.06	0.76	0.71	0.61	1	7	Ø

NOTES AND COMMENTS (trends, equipment problems, errors, concerns).

Use the back of the form if needed.

KCP. two dogs in water, calm ocean.
refractometer ~~not tested~~ tested

MMB. ocean very calm

MAN. ^{less} calm ocean \approx 2 foot waves

MAS - calm ocean

Sites with potential for freshwater flow: Cove Park

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	7.14	61.4	626
Pre-sampling	0.05	7.21	61.6	626
Post-sampling	0.05	7.22	61.8	626

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	4	NMS	Liz Yannell
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	<i>Sousa, B. Bentley, D. Dunning, J.</i>			
Session	97					
Date	05/10/2023					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
KCP230510-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB230510-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:48	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN230510-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS230510-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:26	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:
<i>Liz Yannell</i>	<i>Liz Yannell</i>

Team	North Kihei	Samplers (Last Name, 1st Initial)	Y. St-Louis A. Wolf Christiane Keehani					Meters and Probes ID			
Session	97							HQ2200: 3		2100Q: 5	
Date	05/11/2023				pH: 5	DO: 1.2 mg/L	Salinity: refractometer				

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
Maalaea Harbor NMH230511	N	7:45	24.9	35	6.46	94.6	8.16	2.91	2.61	2.38	N N N
Maalaea Condos NMC230511	N	8:05	25.2	34	7.43 7.41	109.5 109.3	8.19	3.11	2.50	4.40	N N N
Haycraft Park NHP230511	N	8:28	25.5	36	6.83	101.1	8.18	4.88	4.59	4.77 5.69	O 4 O
Kealia Pond NKP230511	N	8:56	25.6	36	6.75	100.0	8.18	1.53	1.68	1.81	O 5 O
Kihei Canoe Club NKC230511	N	9:05	26.2	35	6.66	99.7	8.10	42.3 31.4	36.8	32.8	O O O

35.8 yrs

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

NMH - 2-3ft swell, waves going over wall ~~but~~ harbor is calm, not a lot of people, little to no wind sunny.

NMC - Turbidity 2.55, 3.46. Wave action.

A lot of algae at sample site (green brown)
Bubbles coming from algae. ~~red Read~~ Do 2x

NHP - Water look cleaner, some algae, wave action

NKP - More wave action, sand in Turbidity

NKC - water brown
particulates 43.7, 35.8
Sand in sample

Sites with potential for freshwater flow: Maalaea Harbor, Maalaea Condos, Kealia Pond, Kihei Canoe Club

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	7.14	61.4	626
Pre-sampling	0.05	7.07	61.3	626
Post-sampling	0.05	7.09	61.5	624

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	yml
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Ylenia M St-Louis

Team	North Kihei	Samplers (Last Name, 1st Initial)	Y. St-Louis			
Session	97		A. wolf			
Date	05/11/2023		C. Keyhani			

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH230511-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0745	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC230511-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0805	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP230511-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0828	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP230511-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0856	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC230511-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0905	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

		<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 M St-Louis