



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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
91	Sharpe, St-Louis	1/3/2023	0945	M Sharpe, L. Yarnell	1/6/23	9:45 AM

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	
	1	2	6/28/24		24.4 °C	24.2 °C	—	27.9 °C			
	1	3	6/25/24		24.3	23.8	—	28.0		NIST Exp June 2024	
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	
	1	2	10/24/22		0.13	9/29/22 date 33.7 ppt	—	9/29/22 date 33.7 ppt			
	1	3	10/24/22		0.16	33.4	0.17	33.1			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	12/05/22		104.3		99.6				
	1	2	—		—		—			Broken shroud still stuck could not take off	
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	
	1/3/2023	1	5	1/3/2023	7.04	10.03	7.03	10.02			
		1	4	1/3/2023	7.00	9.98	—	—			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 NTU	BLANK <0.1	LOW 1-10 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1/3/2023	5	n/a	11/14/22	0.06	6.93	0.08	6.82		Low: 6.91	
		2	n/a	11/14/22	0.07	6.75	—	—		Low: 6.73	

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

NMS Lab

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	B. Sousa, D. Bentley J. Danning	Meters and Probes ID		
Session	91			HQ40d: 1	2100Q: 5	
Date	01/04/2023			pH: 5	DO: 1	Salinity: 1

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
Cove Park KCP230104	Y	7:55	24.1	32.5	6.62	94.4	8.08	3.31	3.20	3.11 3.42	Ø	Ø	2
S Maluaka Beach MMB230104	N	8:40	24.9	35.2	6.82	100.6	8.15	2.31	2.37	2.26	Ø	Ø	Ø
Ahihi Kinau North MAN230104	N	9:04	25.0	34.9	7.14	105.0	8.09	1.02	1.39	1.27 2.08	1	6	Ø
Ahihi Kinau South MAS230104	N	9:20	24.8	34.1	6.64	97.0	8.04	1.97	1.90	2.03	Ø	10	Ø

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

Cove park water running in creek ~~is~~ absorbed
turb. 4th read 3.11 ~~not flowing~~
to ocean

MMB- ~~High~~ ^{Low} tide, moderate surf, shorebreak
Δ'd filter because sand clogging filter

MAN- ~~High~~ ^{Low} tide #4 + reading turbidity

MAS- moderate surf

Tides L @ 10:10 am
Kinej H @ 3:50 am 3.6' swell Wind NE 7 mph
Jan 04

Sites with potential for freshwater flow: Cove Park

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	6.91	60.1	608
Pre-sampling	0.04	6.97	60.1	609
Post-sampling	0.05	6.91	60.0	609

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

[Signature]

Printed Name:

Sharpe

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Sousa, B Bentley, D Dunning, J
Session	91		
Date	01/04/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients <i>am</i>							
KCP230104-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	07:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB230104-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	
MAN230104-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:04	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS230104-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	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):

CR Sharpe

Printed Name:

Sharpe

Team	North Kihei	Samplers (Last Name, 1st Initial)	Angela Helgeland, Flo Bahr Ylenia Mayen St-Louis	Meters and Probes ID		
Session	91			HQ40d: 1	2100Q: 5	
Date	01/05/2023			pH: 5	DO: 1	Salinity: 1

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
Maalaea Harbor NMH230105	N	7:54	24.6	34.9	6.40	93.7	8.15	0.93	0.92	0.91	0	0	0
Maalaea Condos NMC230105	N	0813	24.6	34.2	6.58	96.4	8.06	4.24	4.30	4.23	0	3	0
Haycraft Park NHP230105	N	0835	24.8	34.8	6.73	98.7	8.14	7.61	7.74	7.60	2	1	0
Kealia Pond NKP230105	N	0859	24.7	35.3	6.86	100.8	8.19	0.68	0.77	0.82	0	5	0
Kihei Canoe Club NKC230105	N	0917	25.4	34.2	6.57	97.2	8.11	35.4	36.2	34.2	0	0	0

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

NMH- Calm Harbor, No wind
NMC- Water Calm, tide is going out
PARTICLES IN SAMPLE WATER (turbidity)
NHP- One person walking by. Water calm
light wind.
NKP- Swell is small, No wind.
NKC- Water is brown, calm, water
in sample brown.

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	0.05	6.91	60.0	609
Pre-sampling	0.08	6.92	60.4	606.09
Post-sampling	0.05	6.90	60.3	609

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Ylenia Mayen St-Louis

Printed Name:

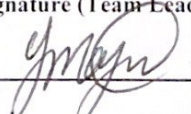
Ylenia M St-Louis

Hui O Ka Wai Olu - Sample Collection Data Sheet

Team	North Kihei	Samplers (Last Name, 1st Initial)	A. Helgeland F. Bahr Y. St-Louis
Session	91		
Date	01/05/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH230105-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0754	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC230105-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0813	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP230105-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0835	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP230105-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0859	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC230105-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0917	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 M St-Louis
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Maui Water Sample Collection Datasheet

Team	Kamaole	Samplers (Last Name, 1st Initial)	H. Hecht, Scott Graves, Dan Grever M. Sharpe	Meters and Probes ID		
Session	91			HQ40d: 1		2100Q: 5
Date	01/06/2023			pH: 5	DO: 1	Salinity: 1

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
Kalepolepo North NKN230106	N	8:08	24.6	34.5	6.23	90.4	8.09	6.52 5.93 6.91	0	2	0
Waipuilani Park KWP230106	N	8:36	23.9	32.6	6.63	94.1	8.05	2.6 23.4 23.9	0	0	1
Kihei South KKS230106	N	8:57	23.5	34.1	5.96	87.9	8.12	6.95 7.46 6.54	1	12	1
Kalama Park KKP230106	N	9:15	25.1	34.6	6.31	92.7	8.11	2.84 3.11 3.19	2	4	0

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

NKN - 6.87 4th Reading
Midium Tide
site 2 - calm, wind low, no waves, silt
site 3 calm, wind low, no waves
silt in water
site 4. No wind, small waves, clear
+ 4th reading -
* outgoing tide = low tide @ 11am
no shore breaks, calm water - small waves
insignificant wind @ all sites

Sites with potential for freshwater flow: All

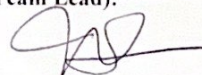
TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.05	6.91	60.1	608
Pre-sampling	0.07	6.84	59.8	609
Post-sampling	0.06	7.06	60.4	610

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):



Printed Name:

Sharpe

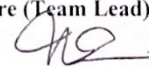
Holo Ka Wai Ihi - Sample Collection Datasheet

Team	Kamaole	Samplers (Last Name, 1st Initial)	Height H Graves, S Grever, D Sharpe, M
Session	91		
Date	01/06/2023		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN230106-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP230106-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS230106-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:57	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP230106-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:15	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:

Sharpe