

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
69	M. Brown, T. Stark	9/13/21	8:35am	T. Stark, M. Brown	9/16/21	10:10 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	3	10/20/22		24.8 °C	24.9 °C	30.9 °C	— °C		pre NIST temp: 23.8 °C	
	1	2				25.2		—		post NIST temp: 25.3 °C	
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	3	8/2/21		0.20	5/10/21 date 35.0 ppt	0.20	5/10/21 date 35.0 ppt		used salinity standard (calibration) instead of homemade std. because had to use some to calibrate probe #2.	
	1	2	9/13/21		0.17	35.0	0.19	34.9			
					0.16	35.1	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	11/2/20		97.0		97.4 %				
	1	2	11/2/20		96.8		—				
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	9/13/21		6.99	9.99	6.96	9.99			
	1	4	9/13/21		7.01	9.99	—	—			
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	n/a	6/21/21		0.04	6.26	—	—		Low Std: 6.21	
	3	n/a	8/2/21		0.07	6.12	0.04	6.17		Low Std: 6.11	

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

Lab: NMS

Team	Kamaole	Samplers (Last Name, 1st Initial)	Rick Cyr Marge Cyr Harry Decht	Meters and Probes ID		
Session	69			HQ40d: 1		2100Q: 3
Date	9/14/21			pH: 3	DO: 1	Salinity: 3

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 NKN210914	N	8:01	25.4	33.5	6.23	91.9	8.12	2.36	2.49	2.72	0	10	0
Waipuilani Park KWP210914	N	8:10	24.7	33.0	5.86	85.2 90.0	8.05	17.7	18.2	18.6	0	3	0
Kihei South KKS210914	N	8:37	25.4	34.0	5.99	88.8	8.07	16.9	18.0	18.0	0	2	0
Kalama Park KKP210914	N	8:06	26.1	35.3	6.33	95.6	8.11	8.38	8.17	9.51	3	4	0

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

8:05 - 8:07
KWP - 8:23 -
8:42

KKS - 0845 - 0851

KKP - 9:09 - 9:11

NKN
KWP Broken Spring

Triplicate sampling @ KKS

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	6.11	54.1	602
Pre-sampling	0.08	6.25	54.1	602
Post-sampling	0.03	6.14	54.4	602

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	7	NMS	M Brown
Bacteria	-	-	-

Signature (Team Lead):

Mitch Brown


Printed Name:

Mitch Brown

Team	Kamaole	Samplers (Last Name, 1st Initial) Cyr M Cyr R Hecht H
Session	69	
Date	9/14/21	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN210914-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:01	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP210914-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS210914-N-1	Kihei South	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8:37	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP210914-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:06	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: Mitch Brown
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Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Wolf A, Sharpe N, B. Sovs	Meters and Probes ID		
Session	69			HQ40d: 1	2100Q: 3	
Date	09/15/21			pH: 3	DO: 1	Salinity: 3

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 KCP210915	N	8:50	26.0	32.9	6.37	94.6	8.10	6.56	7.41 10.4	8.79	15	2	3
S Maluaka Beach MMB210915	N	9:47	27.3°	35.4	6.29	97.1	8.15	0.91	1.27	0.86	16	14	0
Ahihi Kinau North MAN210915	N	10:05	26.8	35.5	8.63	107.9	8.16	1.17	1.24	1.21	4	3	0
Ahihi Kinau South MAS210915	N	10:25	26.7	35.6	6.65	101.6	8.15	0.90	0.87	0.95	7	13	0

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

Triplicate sampling at the Cove
for UH Maui Lab & SOEST
Lab Comparison

Sites with potential for freshwater flow: Cove Park

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.03	6.11	54.1	602
Pre-sampling	0.04	6.69	53.9	601
Post-sampling	0.03	6.11	54.4	602

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	7	NMS	T. Stark
Bacteria	-	-	-

Signature (Team Lead):

[Signature]


Printed Name:

Tiara Stark

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Wolf, A., Sharpe, N., Sousa B.
Session	69		
Date	09/15/21		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
KCP210915-N-1	Cove Park	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Triplicate sampling @ Cove
MMB210915-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:47	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN210915-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS210915-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:25	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:
	Tiara Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	BURNETT, G. WOLF, A	Meters and Probes ID		
Session	69			HQ40d: 1	2100Q: +3 66B	66B
Date	09/16/21			pH: 3	DO: 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 NMH210916	Y	0750	26.1	35.1	6.01	90.6	8.13	1.60	1.77	1.40	0	0	0
Maalaea Condos NMC210916	N	0810	26.0	34.4	6.87	102.9	8.12	3.12	3.24	2.94	0	0	0
Haycraft Park NHP210916	-	0825	26.3	34.8	6.57	99.1	8.09	9.03	8.94	8.79	0	5	0
Kealia Pond NKP210916	N	0855	26.5	35.7	6.59	100.3	8.18	1.03	1.24	1.07	2	4	0
Kihei Canoe Club NKC210916	N	0935	27.1	35.2	6.54	100.3	8.15	1.86	1.88	2.10	1	0	0

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

WATER SOMEWHAT MUDDY AT MAH HARBOR WHERE
THE PIPE ENTERS THE HARBOR, WATER CLEAR AT
THE MOUTH OF MAH HARBOR.

4 NUTRIENT SAMPLES TAKEN AT NKP PER INSTRUCTIONS
ALL BEACHES HAD 1-2' SURF OCCASIONAL HIGHER
2 SYRINGES DIFFICULT TO PUSH WATER THROUGH -
SAVED ONE OF THEM

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	0.03	6.11	54.1	602
Pre-sampling	0.04	6.15	54.3	602
Post-sampling	0.04	6.17	54.5	602

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	8	NM S	T. Stark
Bacteria	-	-	-

Signature (Team Lead):



Printed Name:

Tiara Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	Burrette, G. Wolf, A.
Session	69		
Date	09/16/21		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH210916-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC210916-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP210916-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP210916-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Part of triplicate sampling (n=4)
NKC210916-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:35	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:

Tiara Stark