

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

NMS lab

Hui O Ka Wai Ola

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
68	M. Brown	8/23/21	9:00 am	T. Stark	8/26/21	10:05 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	
	2	3	10/16/22		25.3 °C	25.5 °C	— °C	26.5 °C			
	2	2			25.3		—			lab temp 8/23/21 24.0	
	2	2				25.7		26.7			
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	
	2	3	8/2/21		0.20	33.6 ppt	0.20	33.6 ppt			
	2	2	5/31/21		0.17	33.7	0.17	33.7			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	2	1	11/2/20		94.6		—				
	2	2	11/2/20		97.1		95.7				
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	
	2	3	8/23/21		7.03	9.96	—	—			
	2	4	8/23/21		7.01	9.98	7.02	10.00			
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	
	3	n/a	8/2/21		0.06	6.10	0.04	6.12		Turb. Calibration Std Exp: June 2022	
	1	n/a	6/2/21		0.04	6.20	—	—			

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

# 3 std: 6.11 low  
# 1 std: 6.21 low

Lab: NMS



Team	Kamaole	Samplers (Last Name, 1st Initial)	Cyr R Cyr M Hecker H	Meters and Probes ID		
Session	68			HQ40d: 2		2100Q: 3
Date	8/24/21			pH: 4	DO: 2	Salinity: 2

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 NKN210824	N	7:52	26.2	33.1	6.11	91.1	8.12	4.48	4.44	4.37	0	7	0
Waipuilani Park KWP210824	N	8:08	26.0	33.6	6.18	92.0	8.05	19.5	21.9	21.9	0	3	0
Kihei South KKS210824	N	8:25	26.8	33.8	5.62	89.9	8.04	13.2	12.9	13.6	0	5	0
Kalama Park KKP210824	N	8:42	26.5	34.8	6.26	94.7	8.10	7.43	7.22	7.22	0	5	0

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

7.56 - 7.58  
8.13 - 8.17  
8.31 - 8.35  
8.47 8.49

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.06	6.11	54.1	602
Pre-sampling	0.07	6.17	54.3	602
Post-sampling	0.05	6.12	54.4	601

#### CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

*[Signature]* Mufek Brown

**Sites with potential for freshwater flow: All**



Team	Kamaole	Samplers (Last Name, 1st Initial)	Cyr R Cyr M Hecht H
Session	68		
Date	08/24/21		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NKN210824-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:52	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP210824-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS210824-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP210824-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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



Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	N. Sharpe, B. Sousa, A. Wdf	Meters and Probes ID		
Session	68			HQ40d: 2		2100Q: 3
Date	08/25/21			pH: 4	DO: 2	Salinity: 2

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 KCP210825	N	8:35	26.9	34.2	6.03	91.4	8.12	0.84	0.87	0.95	3	Ø	1
S Maluaka Beach MMB210825	N	9:12	27.2	35.5	6.30	96.8	8.15	1.42	1.51	1.47	2	24	Ø
Ahihi Kinau North MAN210825	N	9:28	26.8	35.6	6.67	101.8	8.10	1.11	1.08	1.27	3	5	Ø
Ahihi Kinau South MAS210825	N	9:45	26.8	35.2	6.56	100.0	8.12	1.10	1.38	1.24	9	11	Ø

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

Cove Park: homeless encampment @ shoreline  
looks permanent

Maluaka: Beach wedding group

Sites with potential for freshwater flow: Cove Park

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.05	6.11	54.1	602
Pre-sampling	0.04	6.19	54.3	602
Post-sampling	0.04	6.12	54.2	601

#### CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	4	NMS	T. Stark
Bacteria	-	-	-

Signature (Team Lead):

*[Signature]*

Printed Name:

Tiara Stark

<b>Team</b>	Wailea-Makena	<b>Samplers (Last Name, 1st Initial)</b>	N. Sharpe B. Sousa A. Wolf
<b>Session</b>	68		
<b>Date</b>	08/25/21		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
KCP210825-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB210825-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN210825-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:28	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS210825-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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 Stade



Team	North Kihei	Samplers (Last Name, 1st Initial)	Burnette, G. Bahr, F.	Meters and Probes ID		
Session	68			HQ40d: 2		2100Q: 3
Date	08/26/21			pH: 4	DO: 2	Salinity: 2

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 NMH210826	N	7:45	25.1	34.9	5.81	86.0	8.10	0.83	0.84	0.83	Ø	Ø	Ø
Maalaea Condos NMC210826	N	8:05	25.3	34.4	6.88	101.7	8.09	1.98	2.07	2.01	Ø	Ø	Ø
Haycraft Park NHP210826	—	8:25	25.6	34.9	6.40	95.5	8.11	2.38	2.32	2.44	Ø	Ø	Ø
Kealia Pond NKP210826	N	8:45	25.8	35.7	6.46	97.1	8.17	0.61	0.64	0.66	Ø	Ø	Ø
Kihei Canoe Club NKC210826	N	9:10	26.9	35.2	6.42	98.1	8.13	1.86	2.14	1.79	3	Ø	Ø

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

KCL - Accidentally dumped out KCL at first beach

NKP - Almost unable to extract nutrient sampling at NKP. Suspected something wrong with green filter. Tried a spare green filter, no help. Took maybe 10 minutes to extract - something wrong.


Although there was recent rain - no stream flow.

HQ40d2 meter shuts off frequently when pressing read button.

**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	0.04	6.11	54.1	602
Pre-sampling	0.03	6.13	54.3	602
Post-sampling	0.04	6.12	54.5	601

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMC	T. Stark
Bacteria	-	-	-

Signature (Team Lead):	Printed Name:
	Tiara Stark

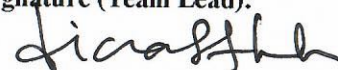


Team	North Kihei	Samplers (Last Name, 1st Initial)	Burrette, G. Bahr, F.
Session	68		
Date	08/26/21		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH210826-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC210826-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP210826-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	
NKP210826-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC210826-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	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