

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
73	T. Stark, G. Burette	12/13/21	9:15 am	T. Stark, G. Burette	12/16/21	10:30

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		10/16/22		23.3°C	23.1 °C	26.0°C	— °C			
	1		10/16/22		23.5		26.2				
	1		10/16/22			23.3		—			
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	11/15/21		0.13	8/5/21 date 33.6 ppt	0.13	8/5/21 date 33.6 ppt			
	1	2	11/15/21		0.18	33.9	0.18	33.9			
	1	2	11/15/21		0.17	33.2	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	11/2/20		96.2		98.9			sensor cap replaced 12/16/21	
	1	2	11/2/20		99.6		—			sensor cap replaced 12/16/21	
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	12/13/21		7.00	10.01	—	—		* pH #3 needs to be replaced. Using #4 till order new one	
	1	4	12/13/21		7.00	10.02	7.03	10.02			
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	10/25/21		0.07	6.69	0.07	6.66		Low STD: 6.74	
	2	n/a	10/25/21		0.04	6.19	—	—		Low STD: 6.14	

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

Lab: NMS

Note: These samples all were actually taken on 12/14/2021

Team	Kamaole	Samplers (Last Name, 1st Initial)	Harry Hacht Scott Graves Margie Rick	Meters and Probes ID		
Session	73			HQ40d: 1	2100Q: 1	
Date	12/13/2021			pH: 4	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 NKN211213	N	8:03	24.6	32.2	6.26	89.9	8.11	*30.2	44.6	45.7	2	1	✓
Waipuilani Park KWP211213	N	8:22	24.4	33.3	5.92	85.4	8.03	40.3	41.5	43.6	✓	2	✓
Kihei South KKS211213	N	8:38	24.9	30.1	5.67	81.0	8.00	6.39	6.70	6.66	✓	0	✓
Kalama Park KKP211213	N	8:51	24.9	35.0	5.97	87.9	8.14	4.69	4.79	4.86	✓	✓	✓

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

Low tide
8:10 Prob in - 8:12 - *Extra Turb. 47.7*
8:24 ✓ 8:27 -
8:40 8:43 -
8:54 8:54

KKS: volunteers pointed out low pH. Why could that be?

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	6.74	54.8	587
Pre-sampling	0.09	6.67	54.3	587
Post-sampling	0.05	6.69	54.7	587

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:


Harry Hacht

Tiara Stark

Team	Kamaole	Samplers (Last Name, 1st Initial)	Harry Hecht Scott Graves	Margie Cyr Ride Cyr
Session	73			
Date	12/13/2021			

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN211213-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:03	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP211213-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS211213-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:38	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP211213-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:51	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
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Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Sharpe N, Sousa B	Meters and Probes ID			
Session	73			HQ40d:	1	2100Q:	1
Date	12/15/2021			pH:	4	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
Cove Park KCP211215	N	8:45	25.2	33.6	5.58	81.8	8.1	3.94	3.09	4.19	1	0	2
S Maluaka Beach MMB211215	N	9:19	24.9	35.0	6.55	96.3	8.14	1.49	1.85	2.39	9	4	0
Ahihi Kinau North MAN211215	N	9:40	25.1	35.0	7.59	111.9	8.12	1.86	2.00	1.94	6	0	0
Ahihi Kinau South MAS211215	N	10:03	25.6	35.0	6.50	96.8	8.09	1.00	1.18	1.18	4	9	0

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

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.05	6.74	54.8	587
Pre-sampling	0.10	6.68	54.4	588
Post-sampling	0.05	6.72	55.0	587

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Tiana Stark

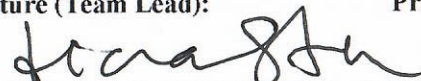
Sites with potential for freshwater flow: Cove Park

When gel standards expired?

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Sharpe, N. Cousa, B.
Session	73		
Date	12/15/2021		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
KCP211215-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB211215-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:19	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN211215-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS211215-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:03	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:
	Tiarn Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	BLUNGE, G. BAHR, F.	Meters and Probes ID		
Session	73			HQ40d: 1	2100Q: 1	
Date	12/16/2021			pH: 4	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
Maalaea Harbor NMH211216	N	0755	24.6	*35.5	6.12	89.7	8.13	1.32	1.18	1.36	0	0	0
Maalaea Condos NMC211216	N	0820	24.3	33.9	6.90	99.7	8.04	4.88	4.79	4.28	0	0	0
Haycraft Park NHP211216	Y	0835	24.7	35.0	6.61	97.0	8.13	4.94	5.09	4.93	3	2	0
Kealia Pond NKP211216	N	0855	24.8	*36.0	6.76	99.9 99.9	8.21	0.98	0.81	0.90	0	0	0
Kihei Canoe Club NKC211216	N	0920	25.6	34.6	6.55	97.3	8.12	13.5 66B 14.7	13.0	13.0	0	0	0

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

No EXTRA KCL IN HQ40d 1 BOX
NAH - SALINITY A BIT HIGH
NKP - SALINITY READS 36 HSGH, READ IT TWICE
SAME RESULT
NKC - BROWN WATER FROM BEACH OUT TO ABOUT
50 FEET FROM BEACH
HQ40d #1 METER SHUT OFF FIRST 2 TIMES WHEN
READ WAS PRESSED. WORKED FINE AFTER THAT.

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	6.74	54.8	587
Pre-sampling	0.06	6.76	54.7	588
Post-sampling	0.07	6.66	54.9	588

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	T. Stark
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Tiara Stark Tiara Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	Burnette, G. Bahr, F.
Session	73		
Date	12/16/2021		

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH211216-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC211216-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP211216-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP211216-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC211216-N-1	Kihei Canoe Club	<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):  Printed Name: **Tiara Stark**