

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
90	Sharpe, St-Louis	5 Dec 2022	0930	M.Sharpe, Y. St-Louis	12/8/22	10:18

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 24.2°C	NIST 23.7°C	NIST 27.7°C	— °C	± 0.6 °C of NIST Compare to NIST Std value in tap water
	2	6/28/24			24.0		27.9		
	3	6/28/24			23.1		—		
Salinity		3 months	Std Val	Tap water 0.13 ppt	Salin Std date 33.7 ppt	Tap water 0.13	Salin Std date 33.7 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	2	10/24/22		0.18	33.5	0.18	33.2		
	3	10/24/22		0.19	33.5	—	—		
Dissolved Oxygen		1 year	Std Val	100%		100%		± 5 %	11 days remaining on O <sub>2</sub> sensor. Calibration done on 12/5/22
	1	12/05/22		100		—			
	2	12/05/22		97.7	100.1				
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	5 Dec 2022		6.97	9.94	7.01	9.99		
	5	5 Dec 2022		7.03	10.01	7.02	10.02		
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	11/14/22	0.05	6.71	0.05	6.76		Low: 6.73
	5	n/a	11/14/22	0.07	6.92	—	—		Low: 6.91

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

NMS

Team	Kamaole	Samplers (Last Name, 1st Initial)	Hecht Graves St-louis						Meters and Probes ID		
Session	90								HQ40d: 2	2100Q: 2	
Date	12/06/2022								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 NKN221206	N	0756	25.4	34.4	6.23	92.3	8.15	226	2.82	243	0
Waipuilani Park KWP221206	N	0817	25.3	34.2	6.04	89.1	8.12	10.24	9.94	10.15	0
Kihei South KKS221206	N	0836	25.6	34.3	5.94	88.2	8.09	5.20	5.14	5.10	0
Kalama Park KKP221206	N	0852	25.8	35.0	6.38	95.9	8.13	6.96	6.14	5.98	2

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

Use the back of the form if needed.

NKN-KCC paddling out of water (12 people)  
 During sampling, very calm water, No wind  
 calm day.

KWP- Calm water, People walking by. Tide  
 going out. Paddle boarding (4 people)  
 1 coming close to sample site, but  
 turned back around.

KKS- 2 fisherman on beach getting ready to  
 go out. People walking by. Very light swell

KKP- Two paddle boarders going out right before  
 Sampling, one came in about soft away  
 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	6.73	58.5	593
Pre-sampling	0.07	6.73	58.5	592
Post-sampling	0.05	6.71	58.5	594

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Ylenia St-Louis

Team	Kamaole	Samplers (Last Name, 1st Initial)	S. Graves Y. St-Louis H. Hecht			
Session	90					
Date	12/06/2022					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NKN221206-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0756	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP221206-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0817	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS221206-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0836	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP221206-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0852	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

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	J. Dunning, D. Bentley, B. Sousa M Sharpe						Meters and Probes ID		
Session	90								HQ40d: 2	2100Q: 2	
Date	12/07/2022								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 KCP221207	N	8:10	25.4	34.0	6.15	91.0	8.08	2.12	3.25	3.86	Ø	Ø 2
S Maluaka Beach MMB221207	N	8:53	25.7	35.7	6.40	96.0	8.13	0.67	0.58	0.57	2	9 Ø
Ahihi Kinau North MAN221207	N	9:17	25.4	35.3	7.01	104.5	8.06	1.45	1.84	1.69	Ø	Ø Ø
Ahihi Kinau South MAS221207	N	9:35	25.4	35.4	6.57	98.0	8.09	1.35	1.26	1.27	2	5 Ø

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

Use the back of the form if needed.

Cove Park: cloudy, high tide  
3.86 - 4th reading.  
Maluaka: cloudy, calm water, receding tide  
4th reading 0.57 receding  
Ahihi South: cloudy, mid tide, calm  
Ahihi North: cloudy, tide receding, calm  
Ahihi South: cloudy, tide receding, calm

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	6.73	58.5	593
Pre-sampling	0.08	6.73	58.2	594
Post-sampling	0.06	6.73	58.7	593

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

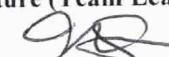
M Sharpe

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	J. Dunning	M. Sharpe
Session	90		D. Bentley	
Date	12/07/2022		B. Sorsa	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
KCP221207-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB221207-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	08:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN221207-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:17	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS221207-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	09:35	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:

Sharpe

Team	North Kihei	Samplers (Last Name, 1st Initial)	Wolf A, Bahr, F St-Louis, Y						Meters and Probes ID		
Session	90								HQ40d: 2	2100Q: 2	
Date	12/08/2022								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 NMH2212908	N	0745	24.8	35.3	6.23	91.3	8.08	3.97	4.34 <i>yrd</i>	0	0
Maalaea Condos NMC221208	N	0803	24.2	34.9	6.59	95.4	8.03	9.43	4.36 8.50 3.81	0	0
Haycraft Park NHP221208	N	0823	24.6	35.0	6.49	94.9	8.10	59.7	60.0 65.9 59.7	0	0
Kealia Pond NKP221208	N	0844	24.8	35.7	6.69	98.6	8.14	1.47 2.32 1.46	1.47 2.32 1.46 1.86	0	0
Kihei Canoe Club NKC221208	N	0904	26.2	35.1	6.45	96.7	8.11	5.39 10.5 12.3	10.5 9.42 12.3 11.1	0	0

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

Use the back of the form if needed.

NMH - 4.49 Did 5 reading last two high.  
 Very windy morning  
 NMC - Windy, overcast, calm water. Cool temp  
 $73^{\circ}\text{F}$ , Tide going out (082) 5<sup>th</sup> reading (9.91)  
 NHP - People walking by. Calm water water  
 look brown, sample water (NTU) is brown  
 Floating particles in sample. 4<sup>th</sup> reading (62.7)  
 5<sup>th</sup> 60.0

NKP - Small swell, windy, water looks brownish  
 green, people walking by: smell from swamp

4th 6.47  
Sites with potential for freshwater flow: Maalaea Harbor, Maalaea  
 Condos, Kealia Pond, Kihei Canoe Club

NKC - Calm wind, water looks cleaner, flats people walking  
 running by. Canoe club gathering on grass area. Sand in NTU sample

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Pre-sampling	0.06	6.78	58.5	593
Post-sampling	0.05	6.76	58.6	592

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	<i>ymj</i>
Bacteria	-	-	-

Signature (Team Lead):

*Mayer*

Printed Name:

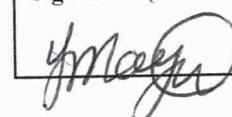
Ylenia Mayer St-Louis

Team	North Kihei	Samplers (Last Name, 1st Initial)	A. Wolf F. Bahr Y. St- Louis			
Session	90					
Date	12/08/2022					

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NMH221208-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	
NMC221208-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0803	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP221208-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0823	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP221208-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0844	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC221208-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0904	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:

Ylenia Mayen St-Louis