

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



Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
5246	T. Stark, J. Strickland	5/4/20	10:30 am	T. Stark, J. Strickland	5/8/20	10:40

QA/QC Check	Inst #	Probe #	Last Cal Date		PRE: Verification Value		POST: Verification Value		Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	n/a	Std Val	NIST	NIST	NIST	NIST	± 0.6 °C of NIST	Compare to NIST Std value in tap water	
	2	1	n/a		28.5	27.7	—	31.2		5/4 pre: 24.4°C	
	2	2	n/a			27.6		31.1		post: 25.2°C	
										5/8 pre: 23.8°C; post: 21.2°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	
	2	1	5/4/20		0.13	2/3/20 date 33.1 ppt	0.13	2/3/20 date 33.1 ppt			
	2	2	5/4/20		0.14	33.2	—	—			
					0.14	33.1	0.13	32.9			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	2	1	10/18/19		96.8%		—				
	2	2	10/18/19		101.1%		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	
	2	3	5/4/20		6.97	10.00	—	—			
	2	4	5/4/20		7.03	10.00	7.03	10.0			
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10	BLANK <0.1	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	2	n/a	5/4/20		0.04	6.45 NTU	0.05	6.45 NTU		std: 6.45 (low)	
		n/a					—	—			

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



Team	Kamaole	Samplers (Last Name, 1st Initial)	STARK, T STRICKLAND, J	Meters and Probes ID		
Session	46			HQ40d: 2		2100Q: 2
Date	5/5/20			pH: 4	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			Enterococcus CFU	People (within 100 ft)		
					(mg/L)	(%) 85-105 normal						water	beach	camp
Kalepolepo North NKN200505	<del>Y</del> N	8:08	24.4	31.4	6.51	92.8	8.15	10.6 9.95	9.83	10.7	0	0	0	0
Waipuilani Park KWP200505	N	8:35	24.9	31.1	6.31	90.6	8.07	7.02	7.43	7.04	0	0	2	0
Kihei South KKS200505	N	8:58	25.9	29.4	6.49	94.3	8.08	2.76	2.77	2.83	110	0	0	0
Kalama Park KKP200505	N	9:22	26.3	34.0	6.95	104.4	8.15	9.57	10.2	9.30	0	0	0	0
Cove Park KCP200505	N	9:42	26.7	29.2	6.87	101.1	8.10	6.79	6.75	6.39	30	0	0	0
Mai Poina Oe Iau NMP200505	N	10:08	26.0	32.0	6.81	100.5	8.09	10.4	9.24	9.67	0	0	4	0

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

nice & calm everywhere, flat,  
no wind

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.45	58.9	602
Pre-sampling	0.04	6.56	58.8	603
Post-sampling	0.05	6.44	59.3	600

## CHAIN OF CUSTODY INFORMATION

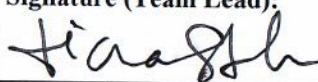
	# of samples	Relinquished to	Contact
Sediment	-	N	-
Nutrients	6	NMS	J. Strickland
Bacteria	6	NMS	J. Strickland



Team	Kamaole	Samplers (Last Name, 1st Initial)	Stark, T. Strickland, J.
Session	46		
Date	5/5/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN200505-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	
KWP200505-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS200505-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:58	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP200505-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP200505-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP200505-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:08	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		

Signature (Team Lead): 	Printed Name: Tiara Stark
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## Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Makena	Samplers (Last Name, 1st Initial)	Stark, T. Strickland, J.	Meters and Probes ID		
Session	46			HQ40d: 2		2100Q: 2
Date	<del>2/26/20</del> 5/6/20			pH: 4	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			Enterococcus (CFU)	People (within 100 ft)		
					(mg/L)	(%) 85-105 normal						water	beach	camp
Makena Landing MML200506	N	8:05	25.1	33.2	6.69	97.7	8.14	1.34	1.13	1.35	10	5	3	0
S Maluaka Beach MMB200506	N	8:30	25.4	33.5	6.71	98.7	8.14	0.57	0.48	0.52	0	6	5	0
Oneuli MON200506								3.16	2.57	2.46				
Ahihi Kinau North MAN200506	N	9:05	25.3	34.2	7.22	106.4	8.13	4.90	5.43	6.23	10	0	0	0
Ahihi Kinau South MAS200506	N	9:30	25.2	34.3	6.76	99.5	8.13				0	4	1	0

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

MML: 2 canoes near sample site, flat & clear  
MMB: clear, flat, no wind  
Oneuli: gate closed, couldn't get in - too far & rough to walk  
MAN: small waves, constant  
→ did salinity & D.O. 2x & numbers were the same

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.45	58.9	602
Pre-sampling	0.04	6.44	58.7	601
Post-sampling	0.05	6.37	58.9	602

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

*Tiafa Stark* Tiafa Stark

Sites with streams/outflows: Makena Landing



Team	Makena	Samplers (Last Name, 1st Initial)	Stark IT. Strickland, J.
Session	46		
Date	<del>2/26/20</del> 5/6/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
MML200506-N-1	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB200506-N-1	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON200506-N-1	Oneuli	<input type="checkbox"/>	<input type="checkbox"/>	<del>8:30</del>	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN200506-N-1	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS200506-N-1	Ahihi-Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	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		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead):

fionath

Printed Name:

Tiara Stark



## Hui O Ka Wai Ola - Sample Collection Datasheet

Team	North Kihei	Samplers (Last Name, 1st Initial)	Strickland, J. Stark, T.		Meters and Probes ID			
Session	46				HQ40d: 2		2100Q: 2	
Date	5/7/2020				pH: 4		DO: 2	

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			Entero CFU	People (within 100 ft)		
					(mg/L)	(%) 85-105 normal						water	beach	camp
Maalaea Harbor NMH200507		8:02	24.7	34.0	6.72	97.8	8.14	3.52	3.98	3.59	10	0	0	0
Maalaea Condos NMC200507		8:16	24.7	32.5	7.47	107.8	8.17	9.62	7.48	8.21	0	0	0	0
Haycraft Park NHP200507		8:35	24.7	33.9	7.03	102.1	8.15	6.89	7.61	8.05	20	0	4	0
Kealia Pond NKP200507		9:02	24.8	34.8	6.99	102.2	8.17	1.88	1.95	1.93	0	0	2	0
Sugar Beach NSB200507		9:20	25.2	34.4	6.82	103.0	8.13	2.78	3.27	3.65	0	0	3	0
Kihei Canoe Club NKC200507		9:41	25.9	33.7	6.90	102.5	8.11	7.28	8.80	7.91	20	2	3	0

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

NMH- 20' ZODIAL PASSING BY  
ABOUT 30' AWAY; windy  
NMC: Did DO/Salinity 2x, same; low tide;  
surf

NHP: water looked dirty; windy

NKC: fishermen nearby

Sites with streams/outflows: Kealia Pond

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.45	58.9	602
Pre-sampling	0.04	6.31	58.6	602
Post-sampling	0.04	6.43	58.8	600

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	NMS	T. Stark
Bacteria	6	-NMS	T. Stark

Signature (Team Lead):

Printed Name:

James Strickland

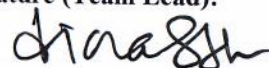


Team	North Kihei	Samplers (Last Name, 1st Initial)	Strickland, J. Stark, T.
Session	46		
Date	05/7/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NMH200507-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:02	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC200507-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP200507-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	
NKP200507-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:02	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB200507-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC200507-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:41	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 Stark



Team	Wailea	Samplers (Last Name, 1st Initial)	Strickland, J.  Stank, T.	Meters and Probes ID		
Session	46			HQ40d: 2		2100Q: 2
Date	5/8/2020			pH: 4	DO: 2	Salinity: 2

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)			Entero	People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					CFU	water	beach	camp
Kilohana Dr WKD200508	N	8:00	24.9	34.5	6.92	101.4	8.14	<del>2.36</del> 1.58	1.23	1.90	0	0	5	0
Keawakapu Beach WKB200508	N	8:22	25.0	34.6	6.92	101.8	8.15	1.06	1.02	1.7	0	2	1	0
Ulua Beach WUL200508	N	8:54	25.1	33.9	6.80	100.0	8.12	1.41	1.77	2.65	10	9	0	0
Palauea WPL200508	N	9:30	25.4	34.4	6.82	100.7	8.17	2.34	<del>2.47</del> 1.61	2.81	0	2	3	0
Poolenalena WPO200508	N	9:42	25.6	33.9	6.92	102.5	8.18	<del>1.19</del> 0.58	0.50	0.48	0	1	0	0

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

\*rained in Waialua night before  
WKD: smelt of poop (really bad) by water & car/street  
WKB: no stinky smell  
WUL: pete @ shops & walk;  
Turbidity (noticed suspended matter)

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.45	58.9	602
Pre-sampling	0.05	6.44	58.8	602
Post-sampling	0.05	6.44	58.9	602

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

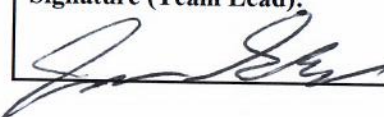
*James Strickland* James Strickland



Team	Wailea	Samplers (Last Name, 1st Initial)	Stark, T Strickland, J
Session	46		
Date	5/8/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD200508-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB200508-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:22	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL200508-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL2002028-N-1	Palauca	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO200508-N-1	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:42	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		
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml		

Signature (Team Lead): 	Printed Name: James Strickland
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