

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
393	M Brown T. Starck	10/14/19	8:45 am	M Brown T. Starck	10/18/19	10:45

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	
	1	31	n/a		24.9 °C	24.7 °C	29.3 °C	— °C		10/14 : pre: 22.9 °C post: 22.8 °C	
	1	2	n/a		24.7		29.2			10/18: pre: 24.8 °C post: 22.0 °C	
	1	2	n/a			24.5		—			
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	1	9/23/19		0.13	9/27 date 33.2 ppt	0.13	9/27 date 33.2 ppt			
	1	2	9/23/19		0.15	33.3	0.14	33.1			
	1	2	9/23/19		0.15	33.4	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	10/14/19		99.6		98.5			10/14: Found DO replacement after & did it.	
	1	2	10/14/18		102.4		—			10/18 calibrated #2	
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	10/14/19		7.06	9.92	7.02	10.00			
	1	4	10/14/19		7.00	10.01	—	—			
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	9/2/19		0.03	6.63	0.03	6.60		6.57 59.2 600	
	2	n/a	9/2/19		0.03	6.43	—	—		6.42	

QA:

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

Team	Kamaole	Samplers (Last Name, 1st Initial) <i>Ricky Cyr Bunker, 6 Cyr M. Cyr R. Howard</i>	Meters and Probes ID		
Session	39		HQ40d: 1	2100Q: 1	
Date	10/15/19		pH: 3	DO: 1	Salinity: 1

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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kalepolepo North NKN191015	N	07:50	27.3	33.4	6.20	94.1	8.12	6.28	6.41	6.50	0	1	0
Waipuilani Park KWP191015	N	8:15	26.6	32.8	6.14	92.0	8.12	21.6	22.8	22.1	0	0	0
Kihei South KKS191015	N	8:32	27.3	33.8	6.09	93.0	8.13	9.33	11.0	11.2	0	4	0
Kalama Park KKP191015	N	8:53	27.7	34.6	6.33	97.6	8.12	12.5	12.9	13.4	18	6	0
Cove Park KCP191015	N	9:08	28.0	32.6	6.01	92.0	8.10	6.71	7.93	9.07	0	0	0
Mai Poina Oe Iau NMP191015	N	9:33	28.2	33.4	6.24	96.3	8.12	4.15	8.34	5.98	0	2	

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

② KCP connected Salinity & DO.
NO READING on D.O.

Reconnected both probes

NMP 4th Turbidity 9.46

HEAVY TRADES

Sites with streams/outflows: Kalepolepo North, Kalama Park, Cove Park

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.57	59.2	600
Pre-sampling	0.05	6.64	59.0	600
Post-sampling	0.04	6.62	59.5	599

CHAIN OF CUSTODY INFORMATION

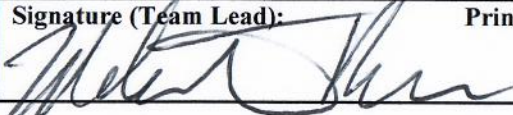
	# of samples	Relinquished to	Contact
Sediment			
Nutrients	6	NMS	M Brown
Bacteria	6	NMS	M Brown

Michael A. Brown *Michael Brown*

Team	Kamaole	Samplers (Last Name, 1st Initial)	R. Cyr M. Cyr D. Howard G. Burnett
Session	39		
Date	10/15/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN191015-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP191015-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS191015-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP191015-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP191015-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP191015-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:33	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:
	Mitch Brown

Team	Makena	Samplers (Last Name, 1st Initial)	A. Fries, B. Sousa, M. Shape, J. Dunning	Meters and Probes ID		
Session	39			HQ40d: 1	2100Q: 1	
Date	10/16/19			pH: 3	DO: 1	Salinity: 1

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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Makena Landing MML191016	—	7:51	27.7	26.3	6.55	96.2	8.14	1.61	1.51	1.53	1	7	0
S Maluaka Beach MMB191016	—	8:20	27.5	35.2	6.27	96.5	8.15	0.67	0.88	0.69	3	5	0
Oneuli MON191016	—	8:43	27.6	35.2	6.04	92.9	8.09	2.38	2.07	2.49	0	0	0
Ahihi Kinau North MAN191016	—	9:04	27.7	35.1	6.32	97.3	8.06	0.73	0.86	0.55	21	4	0
Ahihi Kinau South MAS191016	—	9:23	28.5	34.8	6.27	97.9	8.12	0.39	0.41	0.38	6	17	0

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

- 1st enterococcus sample bag may have a seal concern (mml) - seemed to be leaking initially. Small amount of water expelled through smallest opening in seal possible, then resealed.

- @mml, salinity lower? green probe attached to blue, and blue probe to green here, & at all sights so done the same each time; and pH attached singularly.

- enterococcus samples drawn from MAS

TURBIDITY VERIFICATION				
	Blank (must be 0.00)	Low	Med	High
Standard	0.04	6.57	59.2	600
Pre-sampling	0.04	6.56	59.2	600
Post-sampling	0.04	6.64	59.4	600

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	M Brown
Bacteria	5	NMS	M Brown

Signature (Team Lead): *[Signature]* Printed Name: *Mitch Brown*

Sites with streams/outflows: **Makena Landing**

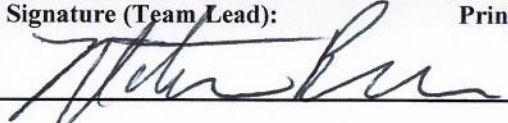
Team	Makena	Samplers (Last Name, 1st Initial) B. Sousa J. Dunning S. Fries
Session	39	
Date	10/16/19	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
MML191016-N-1	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB191016-N-1	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON191016-N-1	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN191016-N-1	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS191016-N-1	Ahihi-Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>		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:


 Mitch Brown

Team	North Kihei	Samplers (Last Name, 1st Initial) <i>Thunholm, K</i> <i>Bahr, F. Riley, R</i>	Meters and Probes ID		
Session	39		HQ40d: 1	2100Q: 1	
Date	10/17/19		pH: 3	DO: 1	Salinity: 1

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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Maalaea Harbor NMH191017	N	7:15	26.6	34.6	5.85	88.3	8.11	1.08	1.04	1.13	0	3	0
Maalaea Condos NMC191017	N	7:45	26.9	34.4	6.32	95.7	8.05	3.34	3.35	3.66	0	2	0
Haycraft Park NHP191017	N	8:00	27.2	34.6	6.09	92.9	8.12	^{1.70} 2.62	1.74	1.64	3	2	0
Kealia Pond NKP191017	N	8:30	27.5	35.1	6.49	99.8	8.16	.74	.60	.64	0	1	0
Sugar Beach NSB191017	N	8:50	27.9	35.0	6.42	99.2	8.17	1.75	^{1.86} 2.30	1.93	8	2	0
Kihei Canoe Club NKC191017	N	9:10	29.3	34.3	6.27	98.6	8.17	1.17	1.70	1.47	0	12	0

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

*NMC - is very rocky - & slippery!!
Could we take samples from the
cliff shore with the bucket?*

We need more than one distilled H₂O

The base of The Pusher needs glue

NKC - Has two car campers
Sites with streams/outflows: Kealia Pond

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.57	59.2	600
Pre-sampling	.06	6.60	58.9	599
Post-sampling	0.04	6.61	59.3	599

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Jia 8th

Printed Name:

Tiara Stank

Team	North Kihei	Samplers (Last Name, 1st Initial)	Thunholm, K. Riley, R. Bahr, F.
Session	39		
Date	10/17/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH191017-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC191017-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP1901017-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP191017-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB191017-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC191017-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 Starke

Team	Wailea	Samplers (Last Name, 1st Initial)	A. Wolf, Seraph D'Alerta Ben Lone, Judy Jarvie	Meters and Probes ID		
Session	39			HQ40d: 1		2100Q: 1
Date	10/18/19			pH: 3	DO: 1	Salinity: 1

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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kilohana Dr WKD191018	No	7:59	27.4	35	6.71	97.8	8.15	1.07	0.99	0.96	0	8	5
Keawakapu Beach WKB191018	No	8:18	27.6	35.1	6.39	98.2	8.13	0.75	0.86	0.79	7	8	0
Ulua Beach WUL191018	No	8:36	27.7	35.0	6.43	99.1	8.15	1.17	1.21	1.01	8	20	0
Palauca WPL191018	No	8:50	28.0	35.1	6.24	96.5	8.15	1.02	1.12	1.11	7	15	0
Poolenalena WPO191018	No	9:09	28.4	35.1	6.42	100.1	8.19	0.64	0.61	0.59	9	13	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	Med	High
Standard	0.04	6.57	59.2	600
Pre-sampling	0.06	6.63	59.1	600
Post-sampling	0.03	6.60	59.1	599

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

diaa8tel

Printed Name:

Tiara Stark

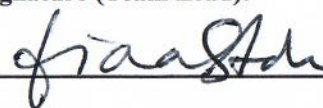
Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Wailea	Samplers (Last Name, 1st Initial)	A. Wolf B. Conc S. D'Alerta J. Jarvie
Session	39		
Date	10/18/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD191018-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB191018-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL191018-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL191018-N-1	Palauea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:56	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO191018-N-1	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:09	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:

Tiara Starke