

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



Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
38 ⁵⁷ 58 J.S.	M. Brown	9/23/19	8:25	T. Stark, J. Strickland	9/27/19	10:15

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		25.8 °C	25.9 °C	—	—		9/27 lab temp pre: 24.5 °C	
	2	2	n/a			25.8		30.6		9/27 " " post: 24.8 °C	
Salinity			3 months	Std Val	Tap water	Salin Std date	Tap water	Salin Std date	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle	
	2	1	9/23/19		0.13	34.8 ppt	—	—		9/28 ambient 24.5 °C pre	
	2	2	9/23/19		0.16	35.0	0.16	33.2		Lab made salinity standard read ins. Maui lab as 33.2 ppt, using meter #1	
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	2	1	10/1/18		98.8		—				
	2	2	10/1/18		160.5		101.1				
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	
3	2	3	9/23/19		7.05	10.02	—	—			
	2	4	9/23/19		7.02	10.00	7.03	10.02			
Turbidity			3 months	Std Val	BLANK #1	LOW 1-10	BLANK #2	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
	1	n/a	9/2/19		0.03	6.42 NTU	—	—		Send #1 6.57	
	2	n/a	9/2/19		0.03	6.42	0.05	6.46		#2 6.42	

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

6.65

Team	Kamaole	Samplers (Last Name, 1st Initial) Cyr. M. Cyr. R. Hecht, H.	Meters and Probes ID		
Session	38		HQ40d: 2	2100Q: 2	
Date	9/24/19		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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kalepolepo North NKN190924	N	8:10	28.1	33.5	6.24	96.3	8.13	2.53	3.49	3.03	0	1	0
Waipuilani Park KWP190924	N	8:42	27.4	33.8	5.82	89.3	8.00	10.8	12.9	12.9	0	2	1
Kihei South KKS190924	N	9:05	28.3	34.0	6.14	95.5	8.07	13.7	14.5	13.9	0	8	0
Kalama Park KKP190924	N	9:26	28.8	35.0	6.44	101.4	8.15	6.21	6.79	7.52	10	4	0
Cove Park KCP190924	N	9:45	28.8	32.4	6.70	104.0	8.14	2.71	3.38	3.90	2	0	0
Mai Poina Oe Iau NMP190924	N	10:13	28.9	34.1	6.40	101.8	8.11	3.34	3.21	3.44	0	1	0

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

KKS - female walking dog on beach
KKP - surf lessons - 10+
NMP - female walking dog on beach

Mild South swell

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.03	6.42	57.0	590
Pre-sampling	0.08	6.48	57.7	590
Post-sampling	0.06	6.42	57.5	590

CHAIN OF CUSTODY INFORMATION

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

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

M. Brown
1 Oct 2019

Team	Kamaole	Samplers (Last Name, 1st Initial) Cyr M Cyr R Hecht H-
Session	38	
Date	9/24/19	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN190924-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP190924-N-1	Waipuilani Park	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS190924-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP190924-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP190924-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP190924-N-1	Mai Poina Oe Iau	<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	Makena	Samplers (Last Name, 1st Initial)	J. Dunning, M. Sharpe, B. Sousa	Meters and Probes ID		
Session	38			HQ40d: 2	2100Q: 2	
Date	9/25/19			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Makena Landing MML190925	N	8:15	28.2	34.8	6.47	100.6	8.14	4.13	3.20	3.57	0	1	0
S Maluaka Beach MMB190925	N	8:40	28.6	34.2	6.42	100.5	8.12	2.62	1.40	2.30	8	83	0
Oneuli MON190925	N	9:05	28.5	34.3	6.70	104.6	8.13	2.34	2.58	2.37	0	4	0
Ahihi Kinau North MAN190925	N	9:25	28.5	35.3	6.96	109.5	8.17	1.37	2.10	2.65	0	0	0
Ahihi Kinau South MAS190925	N	9:50	28.7	35.2	6.63	104.4	8.16	2.46	3.47	2.65	2	5	0

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

4th MMB turbidity reading 1.97
disconnected probes -
35.3ppt, 6.98mg/L, 28.3°C, 109.3%DO₂

Large S. swell at all sites

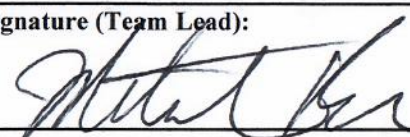
TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.42	57.0	590
Pre-sampling	0.09	6.42	57.6	590
Post-sampling	0.05	6.42	57.7	589

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	M. Brown
Bacteria	5	NMS	M. Brown

Signature (Team Lead):



Printed Name:

Mitch Brown

Sites with streams/outflows: Makena Landing

Team	Makena	Samplers (Last Name, 1st Initial) <i>J. Dunning</i> <i>M. Sharpe</i> <i>B. Sousa</i>
Session	38	
Date	9/25/19	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
MML190925-N-1	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB190925-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	
MON190925-N-1	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN190925-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	
MAS190925-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:
<i>Mitch Brown</i>	Mitch Brown

Team	North Kihel	Samplers (Last Name, 1st Initial)	Flor B. Kathy, T. Renee, R.	Meters and Probes ID		
Session	38			HQ40d: + 2		2100Q: + 2
Date	9/26/19			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Maalaena Harbor NMH190926	N	7:20	28.1	34.8	6.03	93.7	8.14	3.10	2.98	2.96	0	0	0
Maalaena Condos NMC190926	N	7:55	28.0	33.8	6.80	104.8	8.14	1.21	1.35	1.31	0	0	0
Haycraft Park NHP190926	N	8:15	28.0	34.6	6.60	102.4	8.13	3.98	4.22	3.98	2	3	1
Kealia Pond NKP190926	N	8:40	28.2	35.2	6.58	102.7	8.15	2.43	2.68	3.01	0	4	0
Sugar Beach NSB190926	N	9:00	28.5	35.2	6.44	101.1	8.15	2.22	1.69	1.83	5	8	0
Kihel Canoe Club NKC190926	N	9:20	28.9	34.9	6.52	103.0	8.13	3.27	4.27	3.94	1	5	0

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

Difficult to collect water in Entero bag
w/out bringing it up out of water -
was able to but didn't get as much water

NHP - big shore break

NKC - Pygmy false killer whales in water

Sites with streams/outflows: Kealia Pond

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.42	57.0	590
Pre-sampling	0.07	6.37	57.1	590
Post-sampling	0.04	6.42	57.4	589

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

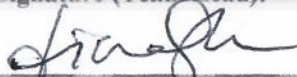
Printed Name:

Tiara Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	Flo, B. Renee, R.	Lathy, T.
Session	38			
Date	09/26/19			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH190926-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC190926-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP190926-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP190926-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB190926-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC190926-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

J.S.

Team	Wallea	Samplers (Last Name, 1st Initial)	Allison, A Woy, A Jarvie, J Seraph D'Alerta	Meters and Probes ID		
Session	38			HQ40d: + 2	2100Q: + 2	
Date	9/27/19			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kilohana Dr WKD190927	N	8:07	28.2	35.3	6.52	102.2	8.14	2.65	1.91	2.52	3	9	0
Keawakapu Beach WKB190927	N	8:30	28.5	35.4	6.54	102.7	8.16	0.96	0.96	1.31	2	7	0
Ulua Beach WUL190927	N	8:50	28.6	35.3	6.69	105.4	8.17	1.39	2.25	2.68	19	9	0
Palauea WPL190927	N	9:15	28.5	35.3	6.54	102.7	8.17	6.23	8.53	7.28	0	5	0
Poolenalena WPO190927	N	9:29	28.6	35.2	6.55	103.0	8.19	0.83	0.81	0.82	0	5	0

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

*3x due to rapid Turn over

Post-Sampling Turbidity
Blank - 0.05 J.S.
Low - 6.46

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.42	57.0	590
Pre-sampling	0.05	6.57	57.5	590
Post-sampling	0.03	6.55	57.7	589

CHAIN OF CUSTODY INFORMATION 6.46

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

Signature (Team Lead):

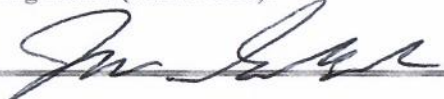
Printed Name:

[Signature] Jones Strickland

Team	Wallea	Samplers (Last Name, 1st Initial)	Allison A Wolf, A Jorvik, I
Session	38		
Date	9/27/19		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD190927-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB190927-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL190927-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL190927-N-1	Palauca	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO190927-N-1	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:29	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