

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

Hui O Ka Wai Ola

2/7/20

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
44	M Brown J. Starke	2/3/20	8.50	M Brown J. Starke	11:45 AM	

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	
					23.3°C	23.2°C	°C	24.4°C			
	1	1	n/a		23.4°C		—			2/3: lab temp 22.9°C starting	
	1	2	n/a			23.2		24.4		" " 22.9°C end	
										post 22.9°C	
Salinity			3 months	Std Val	Tap water	Salin Std	Tap water	Salin Std	± 1 ppt	Tap water - compare pre & post values	
					0.13	date 2/2/20	0.13	date 2/2/20		Salinity Std - compare to value on Salinity Std bottle	
	1	1	1/13/20		0.14	33.1	—	—			
	1	2	1/13/20		0.14	33.1	0.12	33.3			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
	1	1	10/18/19		98.7%		—				
	1	2	10/18/19		102.5%		101.6				
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	2/3/20		6.99	9.97	—	—			
	1	4	2/3/20		7.02	10.00	7.06	10.03			
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	12/9/19		.04	6.68	—	—		std 6.79	
	2	n/a	12/9/19		.06	6.44	.03	6.46		" 6.43	

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

Team	Kamaole	Samplers (Last Name, 1st Initial) <i>CyR, R. Scott Brown</i> <i>CyR, M.</i> <i>M. H. H.</i>	Meters and Probes ID		
Session	44		HQ40d: 2	2100Q: 2	
Date	2/4/20		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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kalepolepo North NKN2000204	N	7:59	24.9	32.8	6.40	93.2	8.18	1.18	1.82	1.33	0	2	0
Waipuilani Park KWP200204	N	8:18	24.6	32.7	6.32	91.3	8.20	9.21	9.84	9.05	0	2	0
Kihei South KKS200204	N	8:34	25.3	34.3	5.93	87.6	8.16	3.35	3.21	5.13	0	2	0
Kalama Park KKP200204	N	9:00	25.2	34.7	6.38	94.2	8.15	4.90	4.29	5.04	1	2	0
Cove Park KCP200204	N	9:07	25.4	33.2	6.10	89.9	8.15	2.25	2.29	2.53	0	5	0
Mai Poina Oe Iau NMP200204	N	9:32	25.6	33.1	6.41	94.4	8.12	2.26	2.59	2.42	0	4	0

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

RKS - Turb 4th 4.12 Extra Readings

KKP- TIME RECORDED AT END OF
SAMPLING SESSION. I LOOKED
THROUGH HQ40d READING LOG
AND SEE READINGS WERE TAKEN
BETWEEN 8:54AM & 8:56AM J.S.
(Sal, D.O.) (PH)

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

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.43	57.4	594
Pre-sampling	0.08	6.47	57.2	595
Post-sampling	0.07	6.45	57.7	594

CHAIN OF CUSTODY INFORMATION

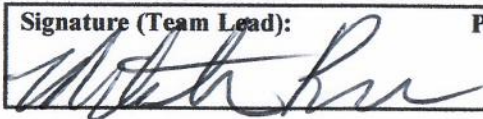
	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	6	NMS	M. Brown
Bacteria	6	NMS	M. Brown

Mitch Brown
Mitch Brown

Team	Kamaole	Samplers (Last Name, 1st Initial)	Cyr R Cyr M Hecht H	graves. S
Session	44			
Date	2/4/20			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN200204-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP200204-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.18	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS200204-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.34	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP200204-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP200204-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.07	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP200204-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9.32	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
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Team	Makena	Samplers (Last Name, 1st Initial)	Bob Sousa, Cheryl Fries, James Strickland	Meters and Probes ID		
Session	44			HQ40d: 2		2100Q: 2
Date	1/15/20 2/5/20			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Makena Landing MML200205	—	7:58	24.5	34.4	6.76	98.4	8.16	1.03	1.01	0.87	3	5	0
S Maluaka Beach MMB200205	—	8:26	24.9	34.5	6.89	100.1	8.15	1.13	1.10	1.45	1	4	0
Oneuli MON200205	—	8:50	25.0	34.9	6.32	93.2	8.09	0.81	0.86	0.88	0	4	0
Ahihi Kinau North MAN200205	—	9:12	25.1	34.3	7.40	108.7	8.08	1.07	1.09	1.50	2	2	0
Ahihi Kinau South MAS200205	—	9:35	25.1	34.4	6.70	98.8	8.11	1.19	1.18	1.16	17	23	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	0.07	6.43	57.4	594
Pre-sampling	0.06	6.40	56.9	594
Post-sampling	0.06	6.46	57.5	594

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:

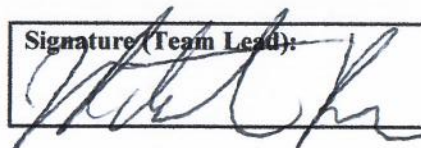
[Signature] Mitch Brown

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

Team	Makena	Samplers (Last Name, 1st Initial)	Sousa B. Strickland J. Fries S.
Session	44		
Date	2/5/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
MML200205-N-1	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:58	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB200205-N-1	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:26	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON200205-N-1	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN200205-N-1	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS200205-N-1	Ahihi-Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:35	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>Flo Bahr Danae Rybak R. Riley</i>	Meters and Probes ID		
Session	44		HQ40d: 2		2100Q: 2
Date	2/06/2020		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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Maalaea Harbor NMH200206	N	7:30	24.6	34.4	6.48	95.1	8.14	.90	1.03	1.16	0	0	0
Maalaea Condos NMC200206	N	7:55	24.6	33.5	6.04	88.2	8.01	2.31	1.97	1.99	0	0	0
Haycraft Park NHP200206	N	8:10	24.8	34.1	6.63	97.3	8.13	2.13	2.15	2.47	0	2	0
Kealia Pond NKP200206	N	8:27	25.1	35.1	6.81	101	8.19	.78	.77	.80	1	3	1
Sugar Beach NSB200206	N	8:53	24.9	34.6	6.93	102.3	8.15	2.87	3.64	3.06	0	11	0
Kihei Canoe Club NKC200206	N	9:05	25.3	33.6	6.87	101.5	8.13	2.36	3.41	2.70	0	14	0

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

Rainy - light at NMH, NMC

Outrigger Canoe unloading at NKC

* Rained previous night

Sites with streams/outflows: Kealia Pond

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.48	57.4	594
Pre-sampling	0.10	6.42	57.0	594
Post-sampling	0.06	6.46	57.5	595

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Tiara Stark

Printed Name:

Tiara Stark

Team	North Kihei	Samplers (Last Name, 1st Initial)	F. Bahr D. Rybak R. Riley
Session	44		
Date	02/06/2020		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH200206-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC200206-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	
NHP200206-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP200206-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:27	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB200206-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC200206-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	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

Team	Wailea	Samplers (Last Name, 1st Initial)	Allison, A Wolk, A S. Dillereta	Meters and Probes ID		
Session	44			HQ40d: 2		2100Q: 2
Date	2/07/2020			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kilohana Dr WKD200207	7:54 N	7:54	24.1	35.1	6.93	101.2	8.16	0.76	0.76	0.67	0	5	0
Keawakapu Beach WKB200207	N	8:12	24.3	35.1	7.07	103.4	8.16	1.15	1.73	1.46	0	13	0
Ulua Beach WUL200207	N	8:33	23.8	34.7	7.09	102.7	8.15	1.70	1.17	1.33	2	6	0
Palauea WPL200207	N	8:54	24.3	34.9	7.06	103.3	8.17	2.42	2.38	2.20	0	0	0
Poolenalena WPO200207	N	9:09	24.3	34.9	7.07	103.5	8.19	0.97	0.76	0.79	0	3	0

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

2.1" of rain in 24 hrs.

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.43	57.4	594
Pre-sampling	0.12	6.45	57.1	599
Post-sampling	0.03	6.46	57.6	594

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Mitchell Brown Mitchell Brown

Team	Wailea	Samplers (Last Name, 1st Initial) <i>Allison A. Wolf A. D'Alverta S.</i>
Session	44	
Date	2/07/2020	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD200207-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB200207-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL200207-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL200207-N-1	Palauea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO200207-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:

