

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
23	G. JUDWELL M. BROWN	11/13/2018	0715	M. BROWN	11/16/18	10:45 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 21.8 °C	NIST 21.6 °C	NIST 24.4 °C	NIST °C	± 0.6 °C of NIST Compare to NIST Std value in tap water
	1	1	n/a		22.0		24.5		
	2	2	n/a		21.8		—		
Salinity			3 months	Std Val	Tap water 0.13	Salin Std 3/10/18 date 32.6 ppt	Tap water 0.13	Salin Std 9/29/18 date 32.6 ppt	± 1 ppt Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	1	1	10/1/18		0.13	33.4	0.13	33.3	
	2	2	10/1/18		0.13	33.3	—	—	
Dissolved Oxygen			1 year	Std Val	100%		100%	± 5 %	
	1	1	10/1/18		101.7		101.2		
	2	2	10/1/18		102.0		—		
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	1	11/13/18		7.02	10.04	7.04	10.05	
	2	2	11/13/18		7.02	10.04	—	10.05	
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 6.28 6.00 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	10/1/18		0.09	6.21	0.05	6.22	
	2	n/a	10/1/18		0.05	5.92	—	—	

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

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Kamaole	Samplers (Last Name, 1st Initial)	S. Graves M. Brown H. Hock							Meters and Probes ID		
Session	23									HQ40d: 1	2100Q: 1	
Date	11/13/18					pH: 1	DO: 1		Salinity: 1			

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)		People (within 100 ft)		
					(mg/L)	(%)				water	beach	camp
Normal Values			variable	30 - 35 ppt		85 - 105%	8 - 8.3	variable				
Kalepolepo North NKN181113	N	8:45am	26.7	34.3	6.66	85.7	8.09	1.23	1.54	1.20	4	1
Waipuilani Park KWP181113	NA	9:05	24.0	32.4	6.23	90.5	8.08	14.2	13.1	13.2	-6	-6
Kihei South KKS181113	NA	9:26	24.4	33.5	6.60	95.7	8.21	3.84	3.66	3.50	7	2/1day
Kalama Park KKP181113	N	9:42	25.3	34.1	6.30	93.1	8.17	4.97	4.91	5.14	2	2/1day
Cove Park KCP181113	NA	10:00	26.8	34.4	6.07	92.1	8.14	1.07	1.21	0.99	-6	-6

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

Use the back of the form if needed.

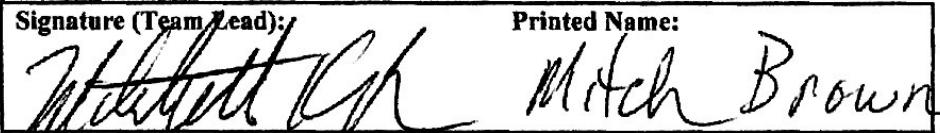
TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.09	6.28	58.4	601
Pre-sampling	0.05	6.38	58.7	600
Post-sampling	0.03	6.25	59.0	600

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):



Printed Name:

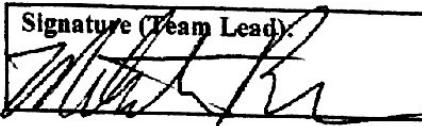
Mitch Brown

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

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Kamaole	Samplers (Last Name, 1st Initial)	<i>M. Brown</i>			
Session	23		<i>S. Graves</i>			
Date	11/13/18		<i>H. Hecht</i>			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN181113-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:45	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP181113-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS181113-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:26	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP181113-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP181113-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10:00	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*

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Makena	Samplers (Last Name, 1st Initial)	<i>DUNDEO, J FACES, S BULWETE, G</i>						Meters and Probes ID		
Session	23								HQ40d: 1		
Date	11/14/2018		pH: 1			DO: 1		Salinity: 1			

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
Makena Landing MML181114	N	0755	26.3	35.1	6.43	96.9	8.13	0.81	0.86	0.95	7	5	0
S Maluaka Beach MMB181114	NA	0819	26.4	35.3	6.49	98.4	8.17	0.35	0.38	0.37	0	3	0
Oneuli MON181114	NA	0839	26.7	35.3	6.37	96.6	8.15	0.90	1.06	0.90	1	0	0
Ahihi Kinau North MAN181114	NA	0859	26.5	35.1	6.69	100.9	8.08	0.39	0.42	0.44	1	4	0
Ahihi Kinau South MAS181114	NA	0916	26.8	35.3	6.20	94.4	8.13	0.29	0.31	0.32	8	12	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	0.03	6.28	58.4	601
Pre-sampling	0.03	6.19	58.8	600
Post-sampling	0.04	6.31	58.9	601

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NMS	George Bulwete
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

See attached George G. Bulwete III

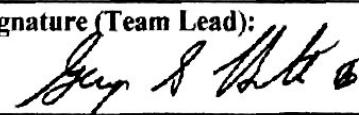
Team	Makena	Samplers (Last Name, 1st Initial)
Session	23	
Date	11/14/2018	

DUNNAG, J FRASER, S.
BURNETTE, G.

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
MML181114-N-1	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0755	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB181114-N-1	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0819	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON181114-N-1	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0839	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN181114-N-1	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0859	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS181114-N-1	Ahihi-Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0916	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):


 George G. Burnette

Printed Name:

Team	North Kihei	Samplers (Last Name, 1st Initial)	<i>Bahr, Flo</i> <i>SPLASH SCOTT</i> <i>Chase, Bill</i>						Meters and Probes ID				
Session	23								HQ40d: 1			2100Q: 1	
Date	11/15/18								pH: 1	DO: 1	Salinity: 1		

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)		People (within 100 ft)			
					(mg/L)	(%)				water	beach	camp	
Haycraft Park NHP181115	N/A	0825	26.5	34.5	6.51	98.0	8.14	2.26	2.35	2.28	0	8	1
Kealia Pond NKP181115	N	0850	26.4	35.3	6.65	100.5	8.18	1.11	0.92	0.93	0	0	0
Sugar Beach NSB181115	N/A	0910	26.7	35.2	6.68	101.4	8.17	2.12	2.13	1.95	2	8	0
Kihei Canoe Club NKC181115	N/A	0925	27.6	34.9	6.59	101.4	8.15	1.75	1.87	1.88	0	1	0
Mai Poina Oe Iau NMP181115	N/A	0950	27.4	34.5	6.53	100.0	8.16	1.64	1.35	1.25	0	3	0

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

TEAM REPORTED THAT THEY MADE SEVERAL ATTEMPTS TO HAVE TO CLEAN THE READ < 0.10 NTU INCLUSIONS USING THE BLACK CLOTH

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.28	58.4	601
Pre-sampling	0.10	6.24	58.5	600
Post-sampling	0.05	6.30	58.8	600

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	3	PWS	George Brunette
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Hui O Ka Wai Ola - Sample Collection Datasheet

Team North Kihei

Samplers
(Last Name,
1st Initial)

Session 23

Date 11/15/18

BAHN, F SPALGAN, S
COTAS, B

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NHP181115-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0825	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP181115-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0850	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB181115-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0910	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC181115-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0925	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP181115-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0950	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:

Guy S. Hahn & George G. BRUNETTE

Hui O Kauai Ola - Sample Collection Datasheet

Team	Wailea	Samplers (Last Name, 1st Initial)	Holly Rindge Alfred Wolf Sarah D'Alleata							Meters and Probes ID		
Session	23			HQ40d: 1						2100Q: 1		
Date	11/16/18			pH: 1			DO: 1			Salinity: 1		

Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C)	Salinity (ppt)	Dissolved Oxygen		pH	Turbidity (NTU)			People (within 100 ft)		
					(mg/L)	(%)					water	beach	camp
Kilohana Dr WKD181116		7:53	25.9	35.1	6.36	95.3	8.15	0.79	0.77	0.86	0	7	0
Keawakapu Beach WKB181116		8:14	26.1	34.9	6.44	96.5	8.10	0.76	0.83	0.82	0	10	0
Ulua Beach WUL181116		8:33	26.4	34.9	6.47	97.7	8.13	1.57	1.38	1.77	1	12	0
Palauea WPL181116		8:56	26.4	35.2	6.62	100.1	8.16	1.08	1.01	0.99	0	1	0
Poolenalena WPO181116		9:10	26.6	35.2	6.61	100.6	8.18	0.63	0.60	0.93	0	0	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	0.05	6.28	58.4	601
Pre-sampling	0.05	6.32	58.8	601
Post-sampling	0.05	6.22	59.0	600

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	NAS	Mitch
Bacteria	-	-	-

Signature (Team Lead):

Mitchell Mitch Brown

Printed Name:

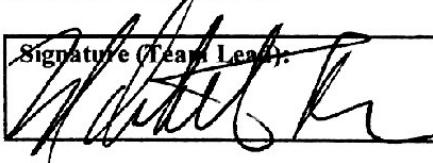
Sites with streams/outflows: NONE

Hui O Ka'au Ola - Sample Collection Datasheet

Team	Wailea	Samplers (Last Name, 1st Initial)	H. Rudge
Session	23		A. Wolfe
Date	11/16/18		S. D'Alese

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD181116-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB181116-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:14	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL181116-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	
WPL181116-N-1	Palaea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:56	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO181116-N-1	Poolenalena	<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	
		<input type="checkbox"/>	<input type="checkbox"/>		500 ml	

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