

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
34	M Brown T. Stark	7/1/19	8:00	T. Stark J. Strickland	7/5/19	10:00

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 26.6 °C	NIST 26.2 °C	NIST 29.1 °C	NIST 30.0 °C	± 0.6 °C of NIST
	2 1	n/a			26.4 °C		29.0		Probes #1 verified with west side #2 meter for post
	2 2	n/a			26.0		29.9		

Salinity		3 months	Std Val	Tap water 0.13	Salin Std 43/9 date 34.3 ppt	Tap water 0.13	Salin Std 43/19 date 34.3 ppt	± 1 ppt	Tap water - compare pre & post values Salinity Std - compare to value on Salinity Std bottle
	2 1	6/10/19		0.12	33.1	0.14	33.2	+1.2	lab temp pre 24°C Salin std 24.1°C
	2 2	6/10/19		0.12	33.5	0.14	33.2		lab temp during probe #1 = 24.0 °C ; didn't take air temp during probe #2

Dissolved Oxygen		1 year	Std Val	100%	100%	± 5 %	
	C 1	10/1/18		99.1	99.5		
	2 2	10/1/18		100.8	100.2		

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
	C 1	7/1/19		7.00	10.02	7.00	10.01		Probes #1 verified w/ west side #2 meter for post
	2 2	7/1/19		7.01	10.02	7.09	10.10		

Turbidity		3 months	Std Val	BLANK <0.1 NTU	LOW 1-10 BLANK <0.1 NTU	LOW 1-10 NTU	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value
	1	n/a	5/20/19	0.04	6.59	0.04	6.25	
	2	n/a	5/20/19	0.04	6.30	0.04	6.55	

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

North Kihei team used HQ40d # 2 from west side. South side meter #2 not working. Probes 1 were used (from South).

Team	Kamaole	Samplers (Last Name, 1st Initial)	Graves, S Kimmel, J Saunders, T	Meters and Probes ID							
Session	34			HQ40d: 1							
Date	7/2/19			pH: 2		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 NKN190702	N	8:02	27.3	32.4	6.18	93.5	8.15	7.36 6.04	8.38	9.71	0	0	0
Waipuilani Park KWP190702	N	8:20	27.4	34.0	5.87	89.7	8.12	9.03	10.2	10.5	0	1	0
Kihei South KKS190702	N	8:36	27.8	33.1	6.21	95.0	8.13	6.84	7.63	8.44	2	1+1 dog	0
Kalama Park KKP190702	N	8:55	28.0	35.0	6.69	103.9	8.21	11.4	10.7	11.0	2	4	0
Cove Park KCP190702	N	9:10	28.2	33.4	7.0	108.1	8.22	6.39	5.61	5.69 4.47	0	0	0

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

Use the back of the form if needed.

Re-did first reading for kalepolepo N after the following
two readings were higher6.56 - 4th reading for kihei south (kks). ~~ff~~

5.69 3rd NTU KCP replacement

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.30	56.6	576
Pre-sampling	0.05	6.28	57.1	576
Post-sampling	0.09	6.31	57.2	576

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Matt Brown Matt 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>Graves S.</i>			
Session	34		<i>Kimmel J</i>			
Date	7/2/19		<i>Saunders T</i>			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN190702	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:02	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP190702	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS190702	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:36	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP190702	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP190702	Cove Park	<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): *Mitch Brown* Printed Name: *Mitch Brown*

Team	Makena	Samplers (Last Name, 1st Initial)	<i>J. Fries, B. Arosa, M. Sharpe</i>						Meters and Probes ID			
Session	34								HQ40d: 1			2100Q: 2
Date	7/3/19		pH: 2			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 MML190703	NA	8:55	27.4	34.7	6.59	101.1	8.20	2.71	3.28	3.77	2	2	0
S Maluaka Beach MMB190703	NA	8:27	27.5	33.6	6.58	100.6	8.15	1.90	1.79	1.99	5	13	0
Oneuli MON190703	NA	8:45	28.0	34.3	6.64	102.6	8.15	2.23	2.96	2.45	0	5	0
Ahihi Kinau North MAN190703	NA	9:05	27.5	35.2	6.90	106.3	8.19	2.09	2.47	2.88	8	1	0
Ahihi Kinau South MAS190703	NA	9:25	27.6	35.1	6.63	102.2	8.21	3.31	3.69	3.35	11	2	0

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

Use the back of the form if needed.

TURBIDITY VERIFICATION

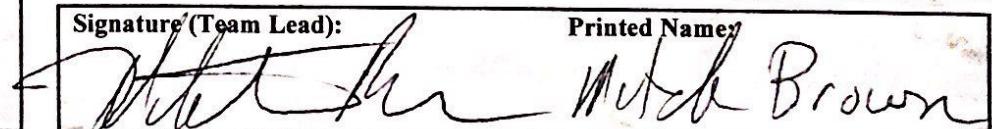
	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.30	56.6	576
Pre-sampling	0.05	6.29	56.8	577
Post-sampling	0.04	6.30	56.8	577

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

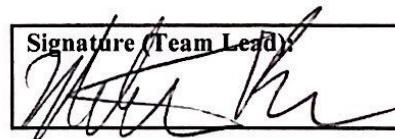


Sites with streams/outflows: Makena Landing

Team	Makena	Samplers (Last Name, 1st Initial)	Fres S.			
Session	34		Sousa B			
Date	7/3/19		Sharpe M.			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
MML190703	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB190703	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON190703	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN190703	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS190703	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

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	North Kihei	Samplers (Last Name, 1st Initial)	Brown M. Strickland J.						Meters and Probes ID		
Session	34								HQ40d: WIZ	2100Q: 1	
Date	7/03/19								pH: 1	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
Haycraft Park NHP190703		8:39	27.6	34.4	6.55	100.7	8.12	5.20	6.22	6.20	1
Kealia Pond NKP190703		9:19	27.8	35.1	6.45	100.0	8.17	2.19	2.53	2.57	0
Sugar Beach NSB190703		9:46	28.3	34.9	6.43	100.6	8.14	2.24	3.10	3.63	0
Kihei Canoe Club NKC190703		10:08	28.4	34.3	6.48	101.1	8.10	11.2	11.3	11.0	0
Mai Poina Oe Iau NMP190703		10:39	29.0	34.2	6.38	100.4	8.15	1.56	2.58	2.44	0
									1	4	15
									0	4	0
									0	5	0
									0	4	0
									1	0	0

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

Use the back of the form if needed.

Big Sulf @ all beaches

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.59	59.1	593
Pre-sampling	0.05	0.50	39.3	593
Post-sampling	0.04	6.55	59.4	591

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

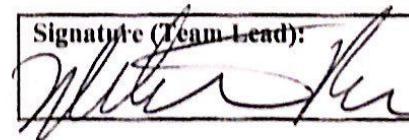


Printed Name:

Team	North Kihei	Samplers (Last Name, 1st Initial)	<i>Brown M Strickland T.</i>			
Session	34					
Date	7/03/19					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NHP190703	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP190703	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB190703	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC190703	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP190703	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							
<i>NHC190703</i>	<i>Condo Harbor</i>	<input checked="" 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: *Walter K. M. Brown*

J.S.

Team	Wailea	Samplers (Last Name, 1st Initial)	WOLF JARVIE, J. HARRON, J. A. KIRKHAM, A. BEN LANE, GREGORY ALERTA J.S.				Meters and Probes ID		
Session	34		HQ40d: 1		2100Q: 2				
Date	7/05/19		pH: 2		DO: 2		Salinity: 2		

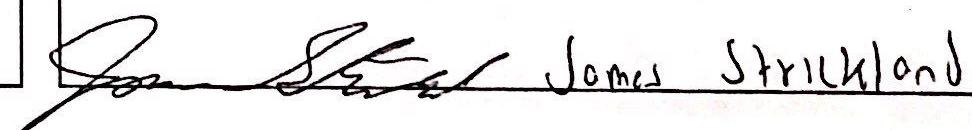
Location Name Sample ID	Streams Flowing (Y/N)	Time (of collection)	Temp (°C) variable	Salinity (ppt) 30-35 normal	Dissolved Oxygen		pH 8-8.3 normal	Turbidity (NTU)		People (within 100 ft)			
					(mg/L)	(%) 85-105 normal				water	beach	camp	
Kilohana Dr WKD190705	N	7:54	27.7	35.1	6.59	101.9	8.17	1.25	1.44	1.42	0	1	0
Keawakapu Beach WKB190705	N	8:20	28.0	35.4	6.54	101.8	8.20	1.22	1.05	0.96	3	9	0
Ulua Beach WUL190705	N	8:42	28.1	35.2	6.63	103.7	8.22	1.02	1.29	0.99	35	21	0
Palauae WPL190705	N	9:05	28.1	35.0	6.57	102.2	8.22	2.76	3.30	3.18	1	8	0
Poolenalena WPO190705	N	9:25	28.5	35.1	6.54	103.6	8.24	0.80	0.77	0.80	6	7	4

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

Re: Pre-Sampling "Lost" Turbidity:
I called Alfred and he said blank
cell was poised out before reading
it. - J.S.

TURBIDITY VERIFICATION				
	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.30	56.6	576
Pre-sampling	lost	6.30	56.8	577
Post-sampling	0.04	6.35	56.9	578

CHAIN OF CUSTODY INFORMATION			
	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	nms	J. Strickland
Bacteria	-	-	-

Signature (Team Lead):  Printed Name: James Strickland

Hui O Ka Wai Ola - Sample Collection Datasheet

Team	Wailea	Samplers (Last Name, 1st Initial)	A. Wolf	S. D'Alerta
Session	34		J. Jarvis	
Date	7/05/19			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD190705	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB190705	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL190705	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:42	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL190705	Palauaea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO190705	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	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):

dmast

Printed Name:

Tiara Stark