

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
51	K. Stark, N. Brown	8/31/20	10:15 am	M. Brown, G. Burrell	9/3/20	10:00 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	
					27.6 °C	27.6 °C	27.9 °C	— °C			
	1	1	n/a		27.5		28.0				
	1	2	n/a			27.4		—			
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	
					—	11/13/20 date 35.0 ppt	—	11/13/20 date 35.6 ppt			
	1	1	8/10/20		0.34	35.1	0.34	35.2		tap water from Mike's warehouse	
	1	2	8/10/20		0.34	35.0	—	—		used back Std for veri	
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
					98.8		99.3				
	1	1	10/18/19		105.1		—				
	1	2	10/18/19								
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	1	9/1/20		6.97	9.95	6.98	9.92			
	4	1	9/1/20		7.01	9.97					
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10	BLANK <0.1	LOW 1-10	± 0.18 NTU Low 1-10	Compare to Gel LOW 1-10 Std Calibration value	
						0.60 NTU					
	1	n/a	8/31/20		0.04	6.63	—	—		Std: 6.60	
	2	n/a	8/10/20		6.63	6.31	0.07	6.35		Std: 6.31	

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

0.05

1000

Team		Samplers (Last Name, 1st Initial)	Meters and Probes ID	
Session	HQ40d: 1		2100Q: 1 2	
Date	pH: 3		DO: 1	Salinity: 1
Kamaole		Harry Hecht 97.0 MARGIE Cyr 98.1 Rick Cyr 97.2		
51				
9/1/20				

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)			Entero	People (within 100-ft)		
					(mg/L)	(%) 85-105 normal					CFU	water	beach	camp
Kalepolepo North NKN200901	N	7:54	26.7	33.4	5.39	81.4	8.05	1.05	1.14	1.02		0	0	0
Waipuilani Park KWP200901	N	8:20	26.8	32.6	5.59	84.2	8.03	5.11	5.19	5.93		2	1	0
Kihei South KKS200901	N	8:33	27.3	33.7	5.52	84.2	8.01	4.02	4.47	4.94		0	1	0
Kalama Park KKP200901	N	8:50	27.1	33.9	6.42	97.8	8.08	8.39	8.42	8.00		1	0	0
Cove Park KCP200901	N	9:04	27.3	31.2	4.74	71.4	7.97	8.99	14.8	12.5 10.0		0	0	0

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

4th TRID (12.2) @ KCP

high tide during sample

*Sites no longer sampled - Mai Poina Oe Ia'u,

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.31	55.6	564
Pre-sampling	0.07	6.32	55.5	564
Post-sampling	0.06	6.34	56.9	565

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment			
Nutrients	5	diffs	in Brown

Signature (Team Lead)

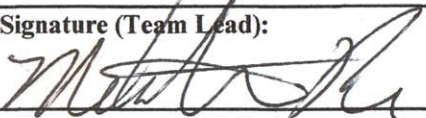
Printed Name:

[Signature] Mitch Brown

Team	Kamaole	Samplers (Last Name, 1st Initial) <i>A. Hecht</i> <i>M. Cyr</i> <i>R. Cyr</i>
Session	51	
Date	9/1/20	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NKN200901-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP200901-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS200901-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP200901-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP200901-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:04	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
		<input 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		

Signature (Team Lead): 	Printed Name: Michael Brown
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Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	J. Dunning, B. Sousa, A. Allison	Meters and Probes ID		
Session	51			HQ40d: 1		2100Q: 2
Date	9/02/20			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)			Entero	People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					CFU	water	beach	camp
Kilohana Dr WKD200902	Ø	7:55	26.6	34.9	6.31	95.7	8.08	0.75	0.82	0.70	—	3	5	Ø
Keawakapu Beach WKB200902	Ø	8:13	26.4	35.1	6.42	97.4	8.09	0.48	0.50	0.46		3	3	Ø
Ulua Beach WUL200902	Ø	8:29	26.4	34.3	6.38	96.4	8.06	0.64	0.81 1.23	0.63		3	6	Ø
S Maluaka Beach MMB200902	Ø	8:55	26.5	34.6	6.31	95.9	8.09	0.53	0.53	0.64		1	5	Ø
Ahihi Kinau North MAN200902	Ø	9:17	26.5	34.2	7.56	114.2	8.05	1.87	2.69	2.22		Ø	4	Ø
Ahihi Kinau South MAS200902	Ø	9:37	26.8	34.5	6.69	101.6	8.11	0.55	0.49	0.75 1.60		Ø	2	Ø

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

* 2nd turbidity repeated - Ulua
 * 2nd O₂% at 113.7 - MAN
 * 2nd #3 Turbidity repeated - MAS

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.31	55.6	564
Pre-sampling	0.10	6.33	55.6	563
Post-sampling	0.06	6.34	55.9	564

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):



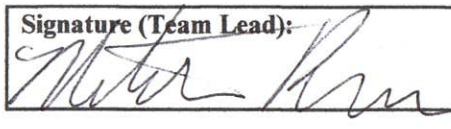
Printed Name:

Mitch Brown

Team	Wailea-Makena	Samplers (Last Name, 1st Initial) J. Dunning B. Sousa A. Allison
Session	51	
Date	09/02/20	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
WKD200902-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB200902-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:13	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL200902-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB200902-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN200902-N-1	Ahihi Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:17	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS200902-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:37	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: Mitch Brown
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Team	North Kihei	Samplers (Last Name, 1st Initial)	BUNNELL, G. Bahar, F	Meters and Probes ID		
Session	51			663		
Date	09/03/20			HQ40d: 1	2100Q: 2	
		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)			Entero	People (within 100 ft)		
					(mg/L)	(%)					CFU	water	beach	camp
Maalaea Harbor NMH200903		0755	25.6	34.4	6.21	92.4	8.07	1.02	1.05	1.01		0	0	0
Maalaea Condos NMC200903		0815	26.1	33.3	6.89	102.6	8.04	1.17	1.34	1.35		0	0	0
Haycraft Park NHP200903		0833	26.4	34.3	6.42	96.8	8.01	3.50	3.31	3.43		0	0	0
Kealia Pond NKP200903	N	0854	26.5	35.1	6.49	98.4	8.09	0.76	0.87	0.94		0	0	0
Kihei Canoe Club NKC200903		0910	26.7	34.5	6.36	96.8	8.08	0.56	0.83	1.15		1	1	0

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

TWO TIMES WHEN TURNING ON HQ40d:1
IT WENT TO DATE & TIME.

READ ACTION ON TURBIDITY METER SOMEWHAT
DUSTED.

Sites with stream outflow: Kealia

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.31	33.6	364
Pre-sampling	0.08	6.39	33.6	364
Post-sampling	0.07	6.35	33.8	364

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Mitch Brown Mitch Brown

Team	North Kihei	Samplers (Last Name, 1st Initial) <i>G. Burnette</i> <i>F. Baker</i>
Session	51	
Date	9/03/20	

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH200903-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:55	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC200903-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:15	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP200903-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP200903-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:54	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB200903-N-1	Sugar Beach	<input type="checkbox"/>	<input type="checkbox"/>		125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC200903-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): <i>Michael Brown</i>	Printed Name: Michael Brown
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