

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
43	M Brown J. Struck	11/13/20	8:35	M Brown J. Struck	11/17/20	11:40 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	
					24.1°C	24.2°C	25.9°C	—°C			
1	2	1	n/a		24.2		25.8				
2	2	2	n/a			24.2		—		post lab 24.1°C	
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	
					0.13	11/13/20 date 35.0 ppt		11/13/20 date 35.0 ppt			
1	2	1	11/13/20		0.13	34.8	0.14	34.7			
2	2	2	11/13/20		0.13	34.8	—	—			
Dissolved Oxygen			1 year	Std Val	100%		100%		± 5 %		
					98.6		98.5				
1	2	1	10/18/19		102.7		—				
2	2	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	2	3	11/13/20		7.03	10.00	7.03	10.02			
4	2	4	11/13/20		7.02	10.00	—	—			
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	1	n/a	12/9/19		0.06	6.76	0.04	6.74		std #1 6.79	
2	2	n/a	12/9/19		0.06	6.45	—	—		std #2 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>Harry Heath Scott &amp; mms Rick Menge Co</i>	Meters and Probes ID		
Session	43		HQ40d: 1		2100Q: 1
Date	1/14/20		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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kalepolepo North NKN200114	<i>Y</i>	<i>7:57</i>	<i>24.8</i>	<i>33.8</i>	<i>6.67</i>	<i>97.5</i>	<i>8.16</i>	<i>8.62</i>	<i>8.67</i>	<i>8.32</i>	<i>0</i>	<i>0</i>	<i>0</i>
Waipuilani Park KWP200114	<i>N</i>	<i>8:16</i>	<i>24.2</i>	<i>32.2</i>	<i>6.70</i>	<i>95.8</i>	<i>8.13</i>	<i>27.8</i>	<i>26.9</i>	<i>27.6</i>	<i>0</i>	<i>0</i>	<i>0</i>
Kihei South KKS200114	<i>N</i>	<i>8:36</i>	<i>24.0</i>	<i>32.5</i>	<i>6.64</i>	<i>94.7</i>	<i>8.13</i>	<i>4.96</i>	<i>7.93</i>	<i>7.79</i>	<i>0</i>	<i>5</i>	<i>1</i>
Kalama Park KKP200114	<i>N</i>	<i>8:59</i>	<i>24.5</i>	<i>33.5</i>	<i>6.29</i>	<i>91.1</i>	<i>8.13</i>	<i>4.03</i>	<i>3.99</i>	<i>4.50</i>	<i>0</i>	<i>10</i>	<i>0</i>
Cove Park KCP200114	<i>N</i>	<i>9:08</i>	<i>25.0</i>	<i>34.1</i>	<i>6.20</i>	<i>91.2</i>	<i>8.15</i>	<i>1.87</i>	<i>1.70</i>	<i>2.06</i>	<i>0</i>	<i>3</i>	<i>1</i>
Mai Poina Oe Iau NMP200114	<i>N</i>	<i>9:29</i>	<i>24.2</i>	<i>33.7</i>	<i>6.35</i>	<i>93.3</i>	<i>8.13</i>	<i>5.01</i>	<i>7.19</i>	<i>8.50</i>	<i>2</i>	<i>2</i>	<i>0</i>

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

*KMP Turbidity 7th Reading 9.13  
5th Reading 3.75  
6th Reading 2.93  
7th Reading 8.34*

*cleaned  
at 5th Reading*

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

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	<i>0.06</i>	<i>6.79</i>	<i>59.9</i>	<i>610</i>
Pre-sampling	<i>0.06</i>	<i>6.69</i>	<i>60.2</i>	<i>610</i>
Post-sampling	<i>0.06</i>	<i>6.76</i>	<i>100.1</i>	<i>611</i>

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	<i>-</i>	<i>-</i>	<i>-</i>
Nutrients	<i>6</i>	<i>NMS</i>	<i>in brown</i>
Bacteria	<i>6</i>	<i>NMS</i>	<i>in brown</i>

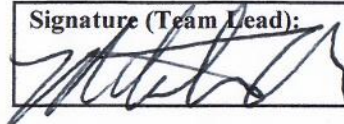


Team	Kamaole	Samplers (Last Name, 1st Initial)	Hecht H Graves S Cyr R	Cyr M
Session	43			
Date	1/14/20			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NKN200114-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:57	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP200114-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS200114-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	
KKP200114-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP200114-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:08	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP200114-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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)	<i>Sheryl Fries, Maile Sharpe George Burnette</i>	Meters and Probes ID		
Session	43			HQ40d: 1		2100Q: 1
Date	1/15/20			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Makena Landing MML200115	—	7:58am	25.3	34.5	6.57	97.3	8.14	0.92	1.08	0.96	4	17	—
S Maluaka Beach MMB200115	—	8:20	25.2	34.7	6.61	97.8	8.18	1.57	1.92	1.74	0	0	—
Oneuli MON200115	—	8:43	25.3	34.7	6.41	95.1	8.14	3.32	3.17	3.29	2	0	—
Ahihi Kinau North MAN200115	—	9:05	25.1	34.4	6.46	95.2	8.05	0.99	1.00	1.09	5	1	—
Ahihi Kinau South MAS200115	—	9:24	25.3	34.7	6.49	96.2	8.16	2.26	2.18	2.15	4	9	—

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

Use the back of the form if needed.

— MAS "swirl bag" placed in extra (unmarked) "swirl bag" after appearing to having a slow, drip leak on the way back to the car.

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	6.79	59.9	610
Pre-sampling	0.07	6.69	60.0	621
Post-sampling	0.05	6.67	60.2	627

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

*[Signature]* Mike Brown

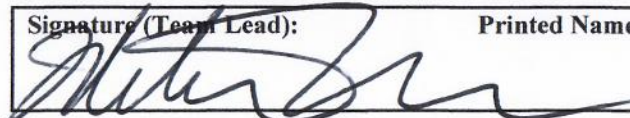
Sites with streams/outflows: Makena Landing



Team	Makena	Samplers (Last Name, 1st Initial)	Fries S Burnette G. Sharpe M.
Session	43		
Date	1/15/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
MML200115-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	
MMB200115-N-1	South Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON200115-N-1	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN200115-N-1	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS200115-N-1	Ahihi-Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:24	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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:
	M. Brown



Team	North Kihei	Samplers (Last Name, 1st Initial) <i>Rybake D</i> <i>Riley R</i>	Meters and Probes ID		
Session	43		HQ40d: 1		2100Q: 1
Date	1/16/20		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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Maalaea Harbor NMH200116	NA	7:35	24.6	34.1	6.21	90.8	8.14	1.14	1.04	0.93	0	0	0
Maalaea Condos NMC200116	NA	7:59	24.7	33.5	5.95	86.8	8.06	7.74	8.07	8.16	0	1	0
Haycraft Park NHP200116	NA	8:27	25.1	34.3	6.38	94.0	8.17	4.40	5.83	4.84	0	1	0
Kealia Pond NKP200116	N	8:53	25.0	34.7	6.70	98.9	8.20	0.93	0.91	0.91	0	3	0
Sugar Beach NSB200116	NA	9:12	24.7	34.3	6.65	97.5	8.18	2.03	1.92	2.08	1	4	0
Kihei Canoe Club NKC200116	NA	9:30	25.6	34.2	6.58	98.2	8.16	1.31	1.53	1.55	0	0	0

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

NSB pH 8.18

Sites with streams/outflows: Kealia Pond

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.79	59.9	610
Pre-sampling	0.07	6.91	60.2	621 615
Post-sampling	0.06	6.95	60.1	612

#### CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

*Michael Brown* Michael Brown




Team	North Kihei	Samplers (Last Name, 1st Initial)	Rybalek D. Riley R
Session	43		
Date	1/16/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NMH200116-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC200116-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:59	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP200116-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:18:29	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP200116-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:53	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB200116-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC200116-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:32	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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	Wailea	Samplers (Last Name, 1st Initial)	Brown M	Meters and Probes ID		
Session	43			HQ40d: 1		2100Q: 1
Date	1/17/20			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)			People (within 100 ft)		
					(mg/L)	(%) 85-105 normal					water	beach	camp
Kilohana Dr WKD200117	N	8:12	24.8	34.6	6.67	97.8	8.15	1.02	0.86	0.92	0	3	0
Keawakapu Beach WKB200117	N	8:33	24.7	34.7	6.64	97.3	8.16	0.93	1.23	0.78	0	5 <sup>3</sup>	0
Ulua Beach WUL200117	N	9:03	25.6	34.5	6.39	94.0	8.15	0.63	1.08	1.07	2 suba	0	0
Palauea WPL200117	N	9:28	24.8	34.5	6.66	97.6	8.18	2.86	2.99	3.16	0	3	0
Poolenalena WPO200117	N	9:43	25.5	34.7	6.64	98.7	8.20	0.47	0.62	0.64	0	2	0

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

Use the back of the form if needed.

pre sampling 6.69 2nd try after wiping  
hard rain for 2 hrs before  
sampling  
WKB took 4th reading (0.82)

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.06	59.9	59.9	610
Pre-sampling	0.05	7.03	59.8	619 612
Post-sampling	0.04	6.74	60.1	612

## CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	5	WMS	M Brown
Bacteria	1th	-	-

Signature (Team Lead):

Printed Name:

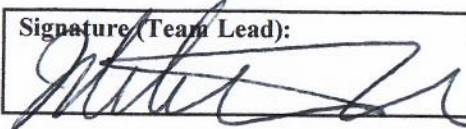
*[Signature]* Mitch Brown



Team	Wailea	Samplers (Last Name, 1st Initial)	Brown M
Session	43		
Date	1/17/20		

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
WKD200117-N-1	Kilohana Dr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:12	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WKB200117-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:33	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL200117-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:03	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL200117-N-1	Palauea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:28	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO200117-N-1	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	

<b>Sediments</b>							
		<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