

Team	Kamaole	Samplers (Last Name, 1st Initial)	<i>M. Brown S. Graves</i>						Meters and Probes ID		
Session	36								HQ40d: 2		
Date	8/13/19		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 NKN190813	N	8:00	27.4	31.9	6.37	96.2	8.09	6.09	6.44*	0	1	0
Waipuilani Park KWP190813	N	8:30	27.3	30.1	6.95	91.0	8.03	8.53	10.1	10.3	0	2
Kihei South KKS190813	N	8:50	28.0	34.0	6.44	99.3	8.05	8.17	12.9	12.4	0	5
Kalama Park KKP190813	N	9:10	28.4	35.1	6.68	104.5	8.13	7.13	8.79	6.57	0	0
Cove Park KCP190813	N	9:30	28.3	34.2	6.68	102.7	8.12	6.59	5.35	6.27	4	4
Mai Poina Oe Iau NMP190813	N	9:55	29.0	33.6	6.54	102.7	8.08	2.94	3.39	2.68	0	0

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

Use the back of the form if needed.

\* NKN NTU reread 6.44 4th

\* KKS 15.8 4th read.

**TURBIDITY VERIFICATION**

	Blank (must be <0.10)	6.30 Low	56.6 Med	576 High
Standard	0.04	6.35	56.8	577
Pre-sampling	0.04	6.35	56.8	577
Post-sampling	0.04	6.32	57.3	576

**CHAIN OF CUSTODY INFORMATION**

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

Signature (Team Lead):

Printed Name:

Mitch Brown

Team	Kamaole	Samplers (Last Name, 1st Initial)	<i>M. Brown</i>			
Session	36		<i>S. Gravel</i>			
Date	1 streams/outflows: 8/13/19		North, Kalama Park, Cove Park			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NKN190813-N-1	Kalepolepo North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KWP190813-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS190813-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP190813-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KCP190813-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:30	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMP190813-N-1	Mai Poina Oe Iau	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:55	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  
Facilitated Sustainability Project

Team	Makena	Samplers (Last Name, 1st Initial)	<i>S. Fries, M. Sharpe, B. Sousa</i>						Meters and Probes ID		
Session	36								HQ40d: 2	2100Q: 2	
Date	8/14/19								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 MML190814	0	8:05	27.9	34.3	6.65	102.8	8.12	4.4/54.15	4.22	—	—
S Maluaka Beach MMB190814	0	8:35	28.0	34.4	6.63	102.9	8.10	1.66	1.60	1.65	8
Oneuli MON190814	0	8:58	28.0	34.5	6.71	104.1	8.09	3.51	3.86	3.75	—
Ahihi Kinau North MAN190814	0	9:16	27.7	35.1	6.90	106.6	8.11	1.91	1.32	1.73	2
Ahihi Kinau South MAS190814	0	9:35	27.7	35.0	6.46	101.5	8.14	2.61	2.66	2.67	7
									11		

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

(0.30) *the reading of the "spare" vial in the box end of week was 0.32. We think the vols used this for pre-sampling verification*

#### TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.30	56.6	576
Pre-sampling	0.04	6.28	56.8	577
Post-sampling	0.04	6.31	57.2	576

#### CHAIN OF CUSTODY INFORMATION

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

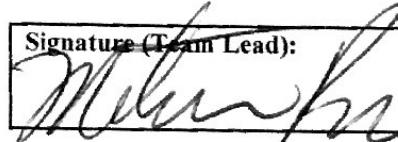
Signature (Team Lead):

Printed Name:

Team	Makena	Samplers (Last Name, 1st Initial)	<i>S. Fries</i>			
Session	36		<i>M. Sharpe</i>			
Date	8/14/19		<i>B. Sousa</i>			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
MML190814	Makena Landing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:05	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB190814	South Maluaka Beach	<input type="checkbox"/>	<input type="checkbox"/>	8:35	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MON190814	Oneuli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:58	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN190814	Ahihi-Kinau North	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:16	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAS190814	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	

<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	North Kihei	Samplers (Last Name, 1st Initial)	Piley, T. Cyr, M. Cyr, R. Thurholme, K						Meters and Probes ID		
Session	36								HQ40d: 2		2100Q: 2
Date	8/15/19								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
Maalaea Harbor NMH190815	N	8:10	27.4	34.9	6.25	96.1	8.11	1.51	1.67	2.04	0
Maalaea Condos NMC190815	N	8:40	28.1 <sup>B</sup> 27.9	33.6	7.59	116.9	8.18	.79	1.15	.78	0
Haycraft Park NHP190815	N	9:00	28.3	34.4	6.73	104.6	8.13	3.62	3.69	3.83	8
Kealia Pond NKP190815	N	9:25	28.4	35.3	6.58	103.1	8.13	1.55	1.81	1.70	0
Sugar Beach NSB190815	N	9:43	28.7	35.0	6.66	104.6	8.14	2.74	2.69	3.08	3
Kihei Canoe Club NKC190815	N	9:55	29.0	34.6	6.57	103.7	8.11	5.24	5.32	7.32	0
									2	2	0

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

Use the back of the form if needed.

Maalaea Condos - running over rocks  
O<sub>2</sub> came out high.

KCC - 4th reading for NTU 7.36 - we dried  
everything several times

Sites with streams/outflows: Kealia Pond

## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.05	6.30	56.6	57.0
Pre-sampling	0.05	6.31	56.8	57.7
Post-sampling	0.04	6.25	57.1	57.7

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

Tiara Stark

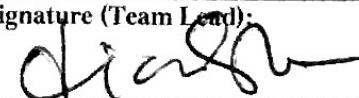
## Hawai'i Ocean Watch Sample Collection Data Sheet

Team	North Kihei	Samplers (Last Name, 1st Initial)	Riley, R. Cyr, R.			
Session	36		Cyr, M			
Date	8/15/19		Thunholm, K.			

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
NMH190815-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:10	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC190815-N-1	Maalaea Condos	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:40	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NHP190815-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKP190815-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NSB190815-N-1	Sugar Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC190815-N-1	Kihei Canoe Club	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:55	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):


 Tiara Stark

Printed Name:

Team	Wailea	Samplers (Last Name, 1st Initial)	S.D'Alerta, A Allison A Wolf B, C one				Meters and Probes ID		
Session	36		HQ40d: 2		2100Q: 2				
Date	8/16/19		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 WKD190816	N	7:54	28.1	35	6.63	102.9	8.12	1.17	1.68	1.34	0
Keawakapu Beach WKB190816	N	8:20	28.4	35.2	6.62	103.3	8.13	0.99	0.52	0.54	12
Ulua Beach WUL190816	N	8:41	28.6	35.1	6.71	105.0	8.15	0.58	1.30	.82	10
Palauca WPL190816	N	9:03	28.8	34.7	6.61	103.4	8.14	1.87	2.34	2.15	0
Po'olenalena WPO190816	N	9:19	28.8	35.	6.61	104	8.16	0.46	0.72	0.58	7
									1		0

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

Use the back of the form if needed.

3 scuba divers near entry - Ulua  
- Palauca reading not parked in shade

The reading of the "spore" vial  
in the box was 0.32 at the end  
of week post-verification. We think  
the vols used this for pre-vert.

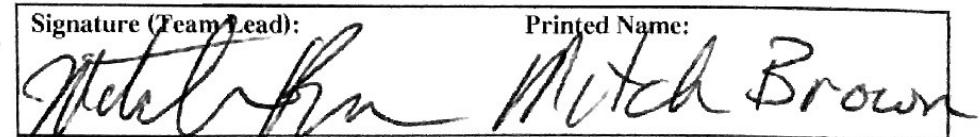
## TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low	Med	High
Standard	0.04	6.30	56.6	576
Pre-sampling	0.32	6.30	56.7	577
Post-sampling	0.04	6.29	56.8	577

## CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):



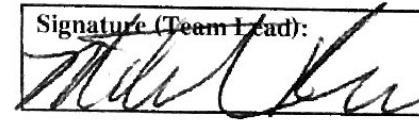
Printed Name:

Mitch Brown

Team	Wailea	Samplers (Last Name, 1st Initial)	S. D'Alerta, A. Allison			
Session	36		A-Wolf      B-Cone			
Date	8/16/19					

Sample ID	Location Name	Sample taken?	Storm sample?	Time	Volume	Protocol Notes	Comments
<b>Nutrients</b>							
WKD190816-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	
WKB190816-N-1	Keawakapu Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:20	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WUL190816-N-1	Ulua Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:41	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPL190816-N-1	Palauea	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:03	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
WPO190816-N-1	Poolenalena	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:19	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

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
36	M. Brown T. Stark	8/12/19	8:00 AM	M. Brown J. Strickland	8/16/19	10:30 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 28.3 °C	NIST 27.9 °C	NIST °C 26.6 °C	± 0.6 °C of NIST	Compare to NIST Std value in tap water
	1	1	n/a		28.1		—		
	1	2	n/a		27.6		26.5 °C		
Salinity			3 months	Std Val	Tap water 0.13	Salin Std 6/10/19 date 53.1 ppt	Tap water 0.18	Salin Std 6/10/19 date 33.1 ppt	± 1 ppt
	1	1	6/10/19		0.15	33.3	—	—	Ambient temp pre 23.2°C 8/12 post 23.8°C
	1	2	6/10/19		0.15	33.1	0.10	33.2	pre 24.2°C 8/16 post 25.1°C
Dissolved Oxygen			1 year	Std Val	100%		100%	± 5 %	
	1	1	10/1/18		100.4		—		
	1	2	10/1/18		102.5		98.9		
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	pH 10.00	± 0.1 pH of pH std value
	1	1	8/12/19		6.97	9.95	—	—	
	1	2	8/12/19		7.02	10.00	7.03	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
	1	n/a	5/20/19		.03	6.68	—	—	6.59 59.1 593
	2	n/a	5/20/19		-0.3	6.32	0.04	6.29	6.30 56.6 576

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