

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

Session No:	Verifiers (pre-sampling):	Pre Date:	Pre Time:	Verifiers (post-sampling):	Post Date:	Post Time:
92	M. Sharpe Y. St Louis L. Yannel	1/23/23	09:45	M. Sharpe Y St-Louis	01/26/23	1000

QA/QC Check	Inst #	Probe #	Last Cal Date	PRE: Verification Value	POST: Verification Value	Acceptable Range	Comments/ Notes	QA?
Temperature	NIST	n/a	NIST Exp. Date	Std Val	NIST	NIST	NIST	± 0.6 °C of NIST
	1	2	28 Jun 2024		24.2	24.1	25.0	°C
	1	3			24.0			
Salinity			3 months	Std Val	Tap water 0.13	Salin Std 9/29/22 date 33.7 ppt	Tap water 0.13	Salin Std 9/29 date 33.7 ppt
	1	2	1/23/23		0.09	33.2	0.08	30.1
	1	3	1/23/23		0.10	33.3		
Dissolved Oxygen			1 year	Std Val	100%	100%		± 5 %
	1	1	12/08/22		99.7			
	1	2	12/08/22		98.2	99.2		
pH			3 weeks	Std Val	pH 7.00	pH 10.00	pH 7.00	± 0.1 pH of pH std value
	1	4	1/23/23		7.01	10.03	7.03	yms
	1	5	1/23/23		7.02	10.01	10.02	
Turbidity			3 months	Std Val	BLANK <0.1	LOW 1-10 NTU	BLANK <0.1	LOW 1-10 NTU
	2	n/a	1/14/23		0.07	6.77	8.94	4ms
	5	n/a	1/14/23		0.05	6.84	6.69	

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

NMS LAB

Team	Kamaole	Samplers (Last Name, 1st Initial)	Kristine, Scott Groves, H. Hecht						Meters and Probes ID			
Session	92								HQ40d: 2	2100Q: 2		
Date	01/24/2023								pH: 4	DO: 2	Salinity: 2	

Location Name Sample ID	Freshwater 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 NKN230124	N	800	24.5	34.9	6.25	91.3	8.08	11.5	13.2	11.6	∅ 2 ♂
Waipuilani Park KWP230124	N	825	25.0	35.2	6.62	97.8	8.10	49.9	45.2	46.7	1 3 2
Kihei South KKS230124	N	843	25.1	34.9	6.58	97.1	8.09	9.60	10.4	10.7	0 0 0
Kalama Park KKP230124	N	901	25.1	35.2	6.67	98.6	8.09	7.02	8.56	8.25	2 2 1

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

Use the back of the form if needed.

NKN: extreme high tide, turbid water, lots of wave action
additional NTU 12.6, see back

KWP: Very high tide, High turbidity
#2 Shore break K-surf 1-2', sunny, no wind/ very light breeze

KKS: High tide, waves 1-2 ft, lots of debris on beach Shorebreak - 1-2' waves

XKP Shore break - 2-3 feet - sand in water rough conditions -

Sites with potential for freshwater flow: All

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.07	6.73	58.5	593
Pre-sampling	0.07	6.19	58.5	592
Post-sampling	0.05	6.62	58.4	594

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	4	NMS	Sharpe
Bacteria	-	-	-

Signature (Team Lead):

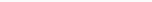
Printed Name:

Sharpe

Team	Kamaole	Samplers (Last Name, 1st Initial)	<i>McHugh, K Graves, S Hecht, H</i>
Session	92		
Date	01/24/2023		

Nutrients							
Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
NKN230124-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	
KWP230124-N-1	Waipuilani Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:25	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKS230124-N-1	Kihei South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:43	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
KKP230124-N-1	Kalama Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:01	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: Sharpe

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	J. Dunning, B. Sousa, Marco Martella						Meters and Probes ID			
Session	92								HQ40d: 2		2100Q: 2	
Date	01/25/2023				pH: 4		DO: 2		Salinity: 2			

Location Name Sample ID	Freshwater 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
Cove Park KCP230125	Y	8:00	24.9	34.7	6.61	97.2	8.13	4.68	5.67	5.15	Ø Ø 2
S Maluaka Beach MMB230125	N	8:50	25.0	35.5	6.81	100.8	8.19	8.68	9.10	9.43	Ø Ø Ø
Ahihi Kinau North MAN230125	A	9:16	25.2	35.3	6.96	102.2 103.3 103.2	8.11	1.16	1.21	1.21	23 2 Ø
Ahihi Kinau South MAS230125	N	9:45	25.4	35.2	6.56	97.7	8.11	1.90	2.02	1.87	4 5 Ø

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

KCP - Rain previous evening, stream running north of collection site under Charlie Young bridge
MMB - High tide - Very narrow beach. 3-4 foot waves; shore break.
MAN - High tide, calm seas. O₂% = 103.2
MAS - High tide

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.05	6.62	58.4	594
Pre-sampling	0.12	6.56	58.6	592
Post-sampling	0.04	6.69	58.9	592

CHAIN OF CUSTODY INFORMATION

	# of samples	Relinquished to	Contact
Sediment	-	-	-
Nutrients	4	NMS	Sharpe
Bacteria	-	-	-

Signature (Team Lead):

Printed Name:

Sharpe

Sites with potential for freshwater flow: Cove Park

Team	Wailea-Makena	Samplers (Last Name, 1st Initial)	Dunning, J	Martella, M
Session	92		Sovsa, B	
Date	01/25/2023		Bentley, D	

Nutrients							
Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
KCP230125-N-1	Cove Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:00	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MMB230125-N-1	S Maluaka Beach	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
MAN230125-N-1	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	
MAS230125-N-1	Ahihi Kinau South	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:45	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: Sharpe

Team	North Kihei	Samplers (Last Name, 1st Initial)	Angela Helgeland, A. wolf, Dan Grever L. Yannel					Meters and Probes ID		
Session	92							HQ40d: 2		2100Q: 2
Date	01/26/2023		pH: 4	DO: 2	Salinity: 2					

Location Name Sample ID	Freshwater 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 NMH230126	N	7:50	24.1	24.0	6.67	90.5	8.17	1.70	1.44	0	0
Maalaea Condos NMC230126	X	8:15	24.0	29.7	6.32	89.0	8.07	4.30	4.60	4.35	0
Haycraft Park NHP230126	rain heavy	8:41	24.3	30.0	6.60	93.4	8.14	14.4	13.3	13.8	0
Kealia Pond NKP230126	N	9:06	24.4	30.9	7.00	99.9	8.19	3.87	2.79	2.58	0
Kihei Canoe Club NKC230126	N	9:25	25.4	30.2	6.70	96.5	8.12	52.1	57.9	59.9	0
									2	0	0

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

NMH - raining; 4th turbidity reading
NMC 2nd reading for Salinity - Rain
NHP heavy rain

TURBIDITY VERIFICATION

	Blank (must be <0.10)	Low (+/- 0.18)	Med (+/- 1.80)	High (+/- 18)
Standard	0.04	6.69	58.9	592
Pre-sampling	0.07	6.82	58.5	592
Post-sampling	0.04	6.69	58.2	593

CHAIN OF CUSTODY INFORMATION

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

Signature (Team Lead):

Printed Name:

A. St-Louis

Sites with potential for freshwater flow: Maalaea Harbor, Maalaea
Condos, Kealia Pond, Kihei Canoe Club



Team	North Kihei	Samplers (Last Name, 1st Initial)	A. Helgeland	L. Yannel
Session	92		A. Wolf	
Date	01/26/2023		D. Crevier	

Sample ID	Location Name	Sample taken?	Duplicate sample?	Time	Volume	Protocol Notes	Comments
Nutrients							
NMH230126-N-1	Maalaea Harbor	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7:50	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NMC230126-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	
NHP230126-N-1	Haycraft Park	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8:41	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	Heavy rain during sample
NKP230126-N-1	Kealia Pond	<input checked="" type="checkbox"/>	<input type="checkbox"/>	9:06	125 ml	Washed, rinsed syringes; acid washed bottles; 0.2 um disposable filters	
NKC230126-N-1	Kihei Canoe Club	<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		

Signature (Team Lead):

Printed Name:

Y. St-Louis