



Storm Event Summary Report

City and County of Honolulu Kaelepulu Pond Monitoring

Site Location: **Hamakua Marsh (Commercial)**

Sample ID: Hamakua
Sample Date: 7/20/2014
Event Rainfall: 5.74-inches

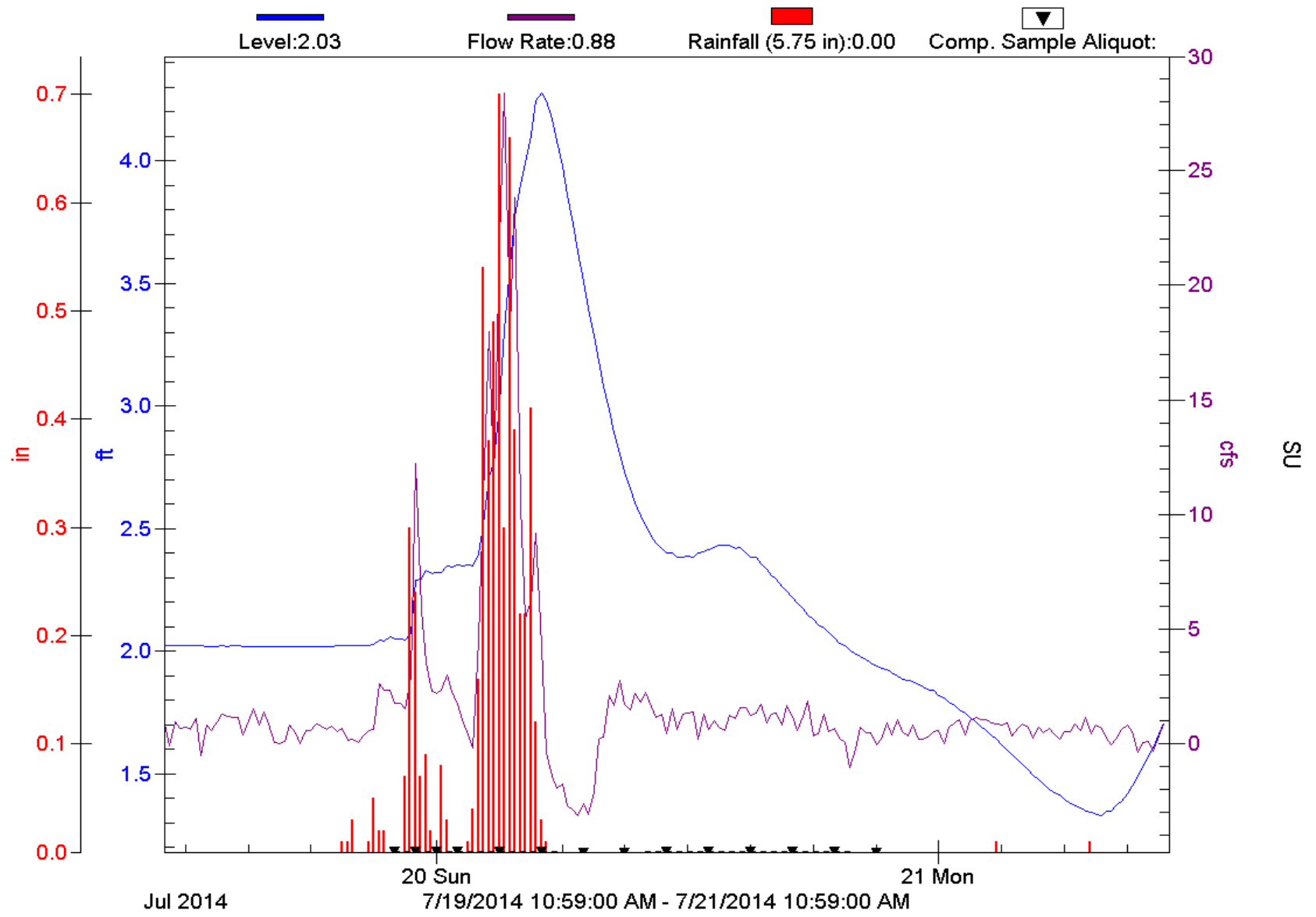
Sampling Results Summary Table

	Parameter (units)	Analytical Result	Method
	Enterococcus (count)	>2400	<i>Grab--EPA 1600</i>
C O M P	Total Suspended Solids (mg/l)	20.5	<i>SM 2540 D</i>
	Ammonia Nitrogen (mg/l)	0.129	<i>EPA 350.1</i>
	Nitrate + Nitrite as Nitrogen (mg/l)	0.068	<i>EPA 353.2</i>
	Total Phosphorous (mg/l)	0.182	<i>EPA 365.3</i>
*Composite parameters analytical results represent event mean concentration (EMC).			

Enclosures:

- 1. Storm Event Hydrograph with Rainfall Data and Composite Aliquot Sample Markers**
- 2. Storm event *Composite and Flow Calculation Form***
- 3. Columbia Analytical Services (CAS) Laboratory *COC and Analytical Report***

Hamakua Marsh (Commercial) Kaelepulu Watershed Study





Composite and Flow Calculation Form
City and County of Honolulu Kaelepulu Pond Monitoring

Site Location: **Hamakua Marsh (Commercial) Outfall**

Sample ID:	Hamakua
Sample Date:	7/20/2014
Sample Team:	BB/BK
Last Significant Rain Event:	6/20/2014 9:15
Rain Event Start Date/Time:	7/19/2014 19:30
Sampler Enable Date/Time:	7/19/2014 21:00
Grab Sample Date/Time:	7/20/2014 0:55
Composite Sample Date/Time:	7/20/2014 21:00
Sampler Part A- Aliquot Interval (hrs):	1.00
Sampler Part A- Number of Aliquots:	4
Sampler Part B- Aliquot Interval (hrs):	2.00
Sampler Part B- Number of Aliquots:	7
Composite Sample- Total Time (hrs):	24.00
Composite Sample- Total Aliquots:	11

Composite

Aliquot Period Date/Time	Aliquot (Bottle) Number	Aliquot Period Flow - Q _A (CF)	Aliquot Period Average Flow Intensity (CFS)	Aliquot Period % Q _A /Total Q (percent)	Volume for 2000 mL Composite Bottle (mL)	Volume for 1000 mL Composite Bottle (mL)	Volume for 500 mL Composite Bottle (mL)
7/19/2014 22:00	1	8166	2.268	5.63%	112.69	56.34	28.17
7/19/2014 23:00	2	16624	4.618	11.47%	229.39	114.70	57.35
7/20/2014 0:00	3	12533	3.481	8.65%	172.94	86.47	43.23
7/20/2014 1:00	4	8401	2.334	5.80%	115.93	57.96	28.98
7/20/2014 3:00	5	61089	8.485	21.07%	421.49	210.74	105.37
7/20/2014 5:00	6	95356	13.244	32.90%	657.91	328.96	164.48
7/20/2014 7:00	7	0	0.000	0.00%	0.00	0.00	0.00
7/20/2014 9:00	8	0	0.000	0.00%	0.00	0.00	0.00
7/20/2014 11:00	9	10991	1.527	3.79%	75.84	37.92	18.96
7/20/2014 13:00	10	7375	1.024	2.54%	50.88	25.44	12.72
7/20/2014 15:00	11	8166	1.134	2.82%	56.34	28.17	14.09
7/20/2014 17:00	12	9251	1.285	3.19%	63.83	31.92	15.96
7/20/2014 19:00	13	6198	0.861	2.14%	42.76	21.38	10.69
7/20/2014 21:00	14	0	0.000	0.00%	0.00	0.00	0.00
Storm Total:	14	244150	40.260	100%	2000	1000	500

Omitted bottles 7, 8, and 14 from final composite sample due to several negative velocity measurements indicating backwater pressure/flow at outfall.