

Deliverable 4.9: Progress Report 9

Overview of Work Period: 11/10/2022-6/20/2023

		Water Quality		Toxicology		Stormwater	
Water Year	Event	Basic	Full	Zfish	Coho	Collection Date (2023)	Treatment Dates
12	67	x				3/23-3/24	3/28-3/29
12	68	x				4/2-4/3	4/4-4/5
12	69	x				4/10	4/11-4/12
12	70	x				4/11	4/13-4/14
12	71	x				4/16	4/18-4/19
12	72		TBC	TBC	TBC	TBD	TBD

We are still waiting on an appropriate storm for Event 72 to complete WY12

TBC = to be completed

TBD = to be determined

Report Summary

Work Progress Status

Project Tasks	% Completion
1. QAPP development	100
2. Prepare experimental columns	100
3. Condition experimental columns	100
4. Bioretention performance throughout accelerated aging	91
5. Outreach and communication	0

Discussions/decisions made since last report period

- None

Summary of Events

Full water chemistry (n/a)

Dosing Notes

- Some pooling water noted in several replicates of different depths receiving stormwater; pooling has also been noted in previous events
- Pooling water overflowed from 6R1 during Events 67, 68 and 18R2 during Event 68

In the absence of full water chemistry for this report, we include a summary of the parameters measured for each column for each of the simple sampling events (Table 1).

Table 1. Average (SD) measurements from the triplicate columns for each event during Water Year 12 included in this report. R = columns receiving stormwater runoff to media 6", 12", or 18" deep. C = columns 18" receiving clean control water.

Event	Bioretention Media Treatment			
	6R	12R	18R	18C
<i>Temperature (°F)</i>				
67	41.6 (0.1)	39.7 (0.8)	40.1 (0.6)	39.4 (0.1)
68	44.3 (0.7)	44.1 (1.1)	44.5 (0.2)	43.4 (1)
69	50.7 (0.5)	50.3 (0.2)	50.2 (0.1)	50.4 (0.3)
70	61.8 (0.2)	61.3 (0.3)	62.1 (1.9)	62.2 (0.8)
71	69 (0.6)	69.1 (0.3)	69.9 (0.4)	68.5 (0.5)
<i>pH</i>				
67	7.5 (0)	7.4 (0)	7.4 (0.1)	7.6 (0.2)
68	7.4 (0.1)	7.4 (0.1)	7.3 (0.1)	7.3 (0)
69	7.5 (0.1)	7.4 (0)	7.4 (0.1)	7.4 (0)
70	7.3 (0.1)	7.4 (0.1)	7.3 (0.1)	7.6 (0.2)
71	7.2 (0.1)	7.2 (0)	7.2 (0.1)	7.4 (0)
<i>Conductivity (µS/cm)</i>				

67	524.7 (6.4)	530.3 (22.1)	536.3 (10.1)	894.7 (25.7)
68	198 (34)	200.3 (14.9)	200.6 (11.8)	850.3 (0.6)
69	94.2 (19.8)	99.6 (8.7)	96.1 (3.8)	843.3 (3.1)
70	95.9 (9)	105.1 (13.6)	106.6 (3.1)	878.7 (73.1)
71	109.6 (1.2)	115.7 (3.7)	364.2 (418.1)*	844.7 (1.5)
<i>Turbidity (NTU)</i>				
67	8.6 (5.9)*	3.8 (0.5)	3.2 (0.5)	2.5 (0.2)
68	2.3 (0.6)	2.4 (0.6)	3.6 (1.5)	1.8 (0.2)
69	7.9 (1.2)	7.3 (1.5)	7.8 (1.6)	2.6 (0.1)
70	3.5 (1.3)	3.1 (0.7)	4.4 (1)	2.2 (0.5)
71	1.8 (0.2)	2.1 (0.1)	2.9 (0.3)	3.2 (0.5)

*High variability indicative of overflow from one replicate on this event