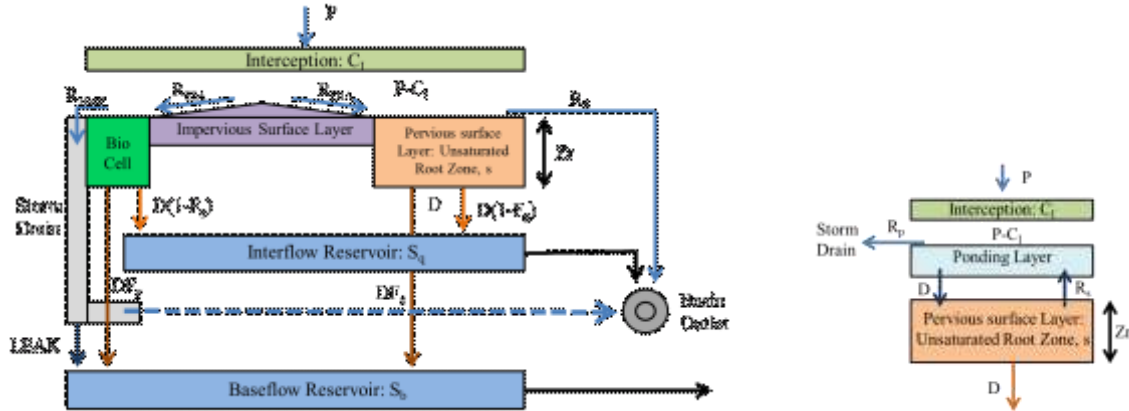


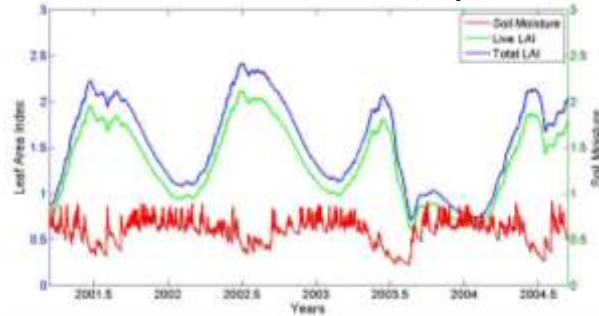
EPA Stormwater Retrofit Project Team Meeting (12/13/12)

By Olivia Wright and Erkan Istanbuluoglu

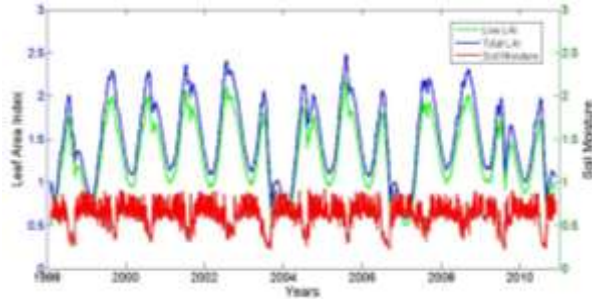
Figure 1. Urban Ecohydrology Model and Bioretention Cell Model Schematic



2a. Leaf Area Index for Urban Basin, 3-year calibration



2b. Leaf Area Index for Urban Basin, 12-year simulation



2c. Leaf Area Index for Forested Basin, 12-year simulation

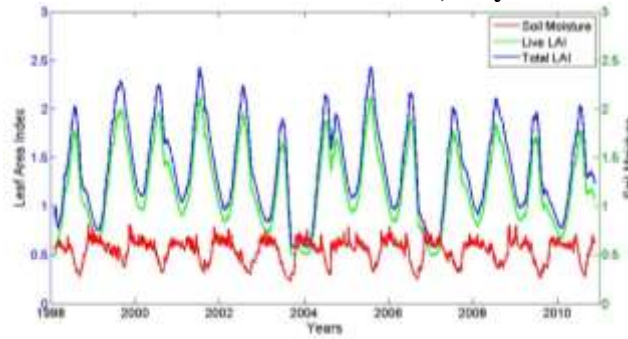
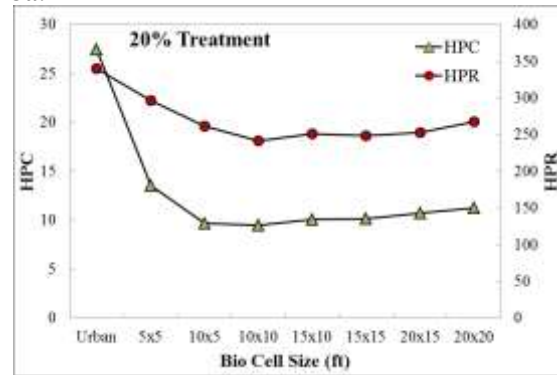
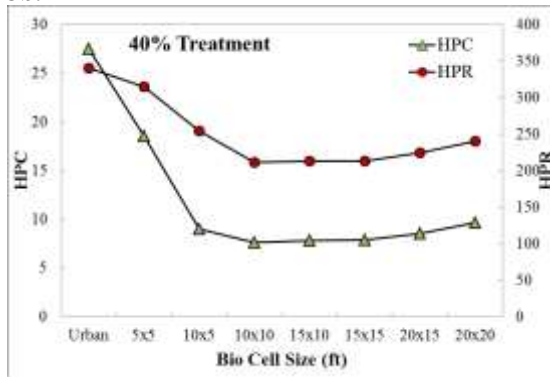


Figure 3. HPC and HPR results for bio cell treatment scenarios: (a) 20% of basin treated, (b) 40% of basin treated, (c) 60% of basin treated

3a.



3b.



3c.

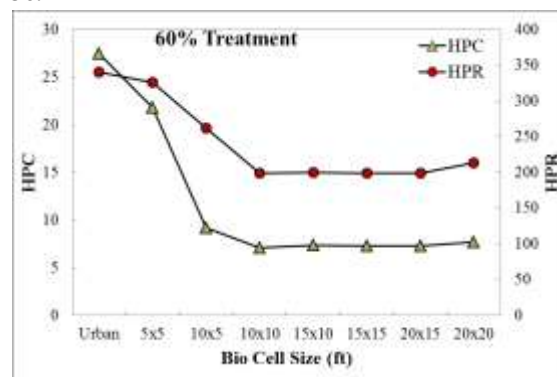


Table 1. HPC for bio cell scenarios

Treated Area	HPC		
	20%	40%	60%
5x5	13.58	18.58	21.83
10x5	9.67	9.00	9.17
10x10	9.50	7.67	7.08
15x10	10.08	7.83	7.33
15x15	10.17	7.92	7.25
20x15	10.75	8.58	7.25
20x20	11.25	9.67	7.67

Table 2. HPR for bio cell scenarios

Treated Area	HPR		
	20%	40%	60%
5x5	296.67	315.17	326.33
10x5	261.67	254.75	262.08
10x10	241.33	212.00	199.08
15x10	251.58	213.33	199.50
15x15	248.50	213.42	199.42
20x15	253.00	225.17	199.33
20x20	268.17	240.167	213.250

Fair	
Fair/Poor	
Poor	
Poor/VeryPoor	
Very Poor	

Figure 4. Mean Leaf Area Index for (a) bio cell unit area, (b) pervious surface unit area, (c) full basin

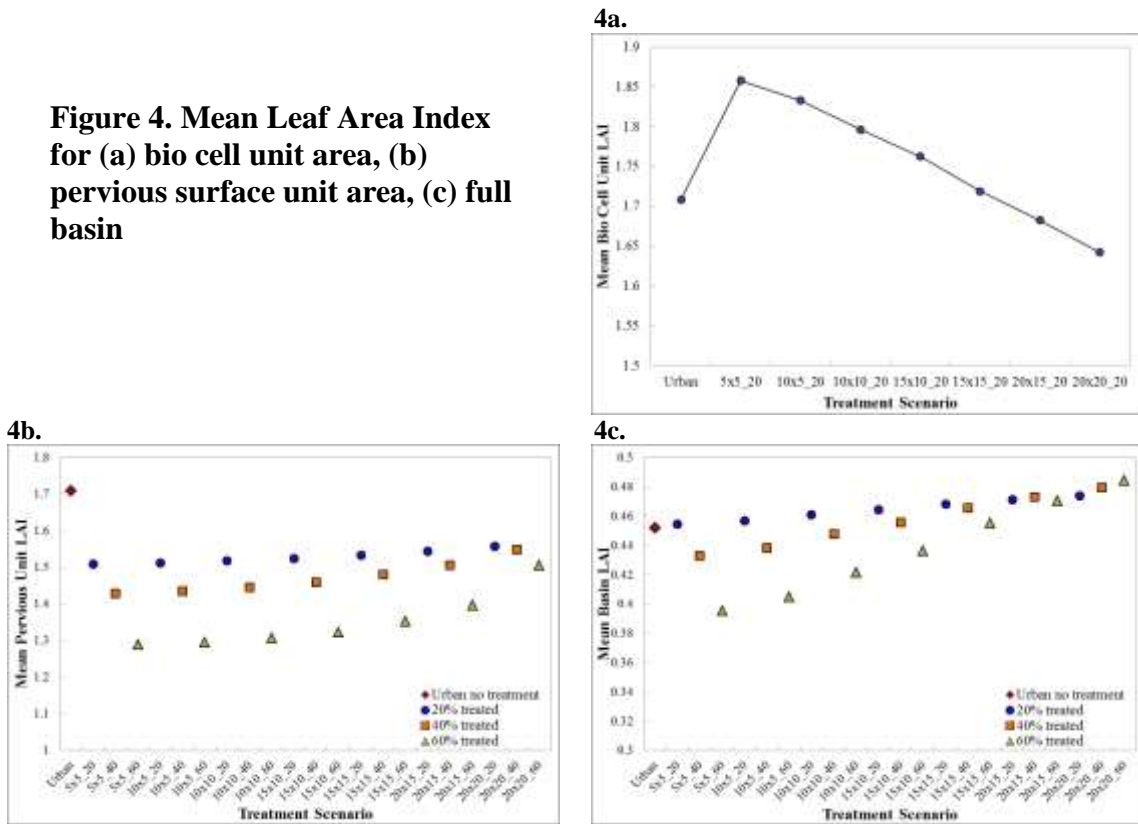


Figure 5. Hourly modeled Runoff (a) Urban no treatment, (b) forested, (c) optimal solution: 10x10, 40% treatment, (d) maximum treatment: 20x20, 60% treatment

