

APPENDIX-G: SUMMARY OF PREVIOUSLY CALIBRATION  
SWMM BUILDUP AND WASHOFF VALUES  
FOR E. COLI AND ENTEROCOCCI

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		Study Location	
		Boston, MA	Lakewood, OH
<b>(Single-family) Low-density residential</b>			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	85.6 x 10 <sup>9</sup>	6.9 x 10 <sup>11</sup>
	Enterococci	26.6 x 10 <sup>9</sup>	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	10
	Enterococci	2	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	18	10
	Enterococci	18	-
Exponent – C2	E. coli	2.2	0.5
	Enterococci	2.2	-
<b>(Multi- family) Medium density residential</b>			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	85.6 x 10 <sup>9</sup>	2.5 x 10 <sup>10</sup>
	Enterococci	25.6 x 10 <sup>9</sup>	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	10
	Enterococci	2	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	18	10
	Enterococci	18	-
Exponent – C2	E. coli	2.2	0.5
	Enterococci	2.2	-
<b>High density residential</b>			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	-	1.41 x 10 <sup>11</sup>
	Enterococci	-	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	-	10
	Enterococci	-	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	-	10
	Enterococci	-	-
Exponent – C2	E. coli	-	0.5
	Enterococci	-	-
<b>Commercial</b>			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	0.42 x 10 <sup>9</sup>	1.4 x 10 <sup>12</sup>
	Enterococci	0.72 x 10 <sup>9</sup>	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	10
	Enterococci	2	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	18	10
	Enterococci	18	-
Exponent – C2	E. coli	2.2	0.5
	Enterococci	2.2	-

Industrial			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	$1.26 \times 10^9$	$1.4 \times 10^{12}$
	Enterococci	$2.12 \times 10^9$	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	10
	Enterococci	2	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	18	10
	Enterococci	18	-
Exponent – C2	E. coli	2.2	0.5
	Enterococci	2.2	-
Transportation			
Buildup Equation		Exponential	NA
Max per acre (C1)	E. coli	$0.001 \times 10^9$	-
	Enterococci	$0.002 \times 10^9$	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	-
	Enterococci	2	-
Washoff Equation		Exponential	NA
Coefficient – C1	E. coli	18	-
	Enterococci	18	-
Exponent – C2	E. coli	2.2	-
	Enterococci	2.2	-
Open Space			
Buildup Equation		Exponential	Saturation
Max per acre (C1)	E. coli	$126 \times 10^9$	$1.25 \times 10^{10*}$
	Enterococci	$214 \times 10^9$	-
C2 - Buildup rate constant (1/days) or Days to ½ max buildup	E. coli	2	10*
	Enterococci	2	-
Washoff Equation		Exponential	Exponential
Coefficient – C1	E. coli	18	10*
	Enterococci	18	-
Exponent – C2	E. coli	2.2	0.5