Green Cost Tool - Combined Sewer Area Evaluation

Project Information								Typical Year										Years
Source	Impervious Area		Total Number	BMP Type	Implementation Level	BMP Unit Cost		Annual Runoff to CSS existing (gal)	Annual Runoff to CSS with Green Control (gal)	Gallons Removed from CSS	Total BMP Cost	Cost Per Gallon Removed	MSD Unit Benefit		Program Implementation				15
	ft^2	ac				Cost									sf	units	Unit Cost	Total Cost	Annual Cost
Roofs	138,366,262	3,176	100,038																
Public	17,555,568	403	1,956	Extensive Vegetated Roof	7%	$15	/ft^2	374,975,012	353,648,308	21,326,704	$18,433,346	$0.86	$5	/ft^2	1,228,890		$5	$6,398,011	$426,534
				Tray System Vegetated Roof	3%	$10	/ft^2	374,975,012	369,350,387	5,624,625	$5,266,670	$0.94	$3	/ft^2	526,667		$3	$1,687,388	$112,493
Commercial	25,214,491	579	5,468	Extensive Vegetated Roof	1%	$15	/ft^2	538,564,407	534,188,571	4,375,836	$3,782,174	$0.86	$5	/ft^2	252,145		$5	$1,312,751	$87,517
				Tray System Vegetated Roof	1%	$10	/ft^2	538,564,407	535,871,585	2,692,822	$2,521,449	$0.94	$3	/ft^2	252,145		$3	$807,847	$53,856
Industrial	37,639,241	864	2,963	Extensive Vegetated Roof	1%	$15	/ft^2	803,948,631	797,416,548	6,532,083	$5,645,886	$0.86	$5	/ft^2	376,392		$5	$1,959,625	$130,642
				Tray System Vegetated Roof	1%	$10	/ft^2	803,948,631	799,928,888	4,019,743	$3,763,924	$0.94	$3	/ft^2	376,392		$3	$1,205,923	$80,395
Single Family Residential	57,956,962	1,331	89,651	Downspout Disconnection	10%	$250	/downspout	1,237,921,357	1,114,129,221	123,792,136	$5,795,696	$0.05	$1,602	/downspout	n/a	23,183	$250	$5,795,696	$386,380
				Rain Barrel	0%	$165	/rain barrel	1,237,921,357	1,237,921,357	0	$0	$0.00	$0	/rain barrel		0	$0	$2,475,000	$165,000
Roads	135,311,649	3,106	NA																
Local	115,125,717	2,643	NA	Green Street	1%	$40	/ft^2	2,459,007,146	2,213,106,432	245,900,715	$46,050,287	$0.19	$64	/ft^2	1,151,257		$40	$46,050,287	$3,070,019
				Sink Holes	NA	NA	/sinkhole	2,459,007,146	NA	NA	NA	NA	NA	/sinkhole	NA		NA	NA	NA
				Dry Wells*	0%	$30,000	/dry well	2,459,007,146	2,459,007,146	0	$0	$0.00	N/A	/dry well		0	$30,000	$0	$0
				Urban Reforestation	14,000	N/A	/tree	2,459,007,146	2,447,807,146	11,200,000	NA	NA	$240	/tree		14,000	$240	$3,360,000	$224,000
Highways	10,010,932	230	NA	Dry Wells*	0%	$30,000	/dry well	213,826,708	213,826,708	0	$0	$0.00	N/A	/dry well		0	$30,000	$0	$0
				Biofiltration	0.5%	$20	/ft^2	213,826,708	203,135,373	10,691,335	$100,109	$0.01	$641	/ft^2	5,005		$20	$100,109	$6,674
Alleys	10,175,000	234	550	Green Alley - Type A	5%	$27	/ft^2	217,331,091	205,445,797	11,885,294	$13,736,250	$1.16	$7	/ft^2	508,750		$7	$3,565,588	$237,706
				Green Alley - Type B	5%	$18	/ft^2	217,331,091	205,445,797	11,885,294	$9,157,500	$0.77	$7	/ft^2	508,750		$7	$3,565,588	$237,706
Parking/Sidewalks/Driveways	158,576,057	3,640																	
Public	28,609,624	657	NA	Biofiltration	5%	$20	/ft^2	611,082,143	305,541,071	305,541,071	$2,860,962	$0.01	$641	/ft^2	143,048		$20	$2,860,962	$190,731
Commercial	39,372,747	904	NA	Biofiltration	1%	$20	/ft^2	840,975,142	756,877,628	84,097,514	$787,455	$0.01	$641	/ft^2	39,373		$20	$787,455	$52,497
Industrial	41,870,557	961	NA	Biofiltration	0.50%	$20	/ft^2	894,326,667	849,610,334	44,716,333	$418,706	$0.01	$641	/ft^2	20,935		$20	$418,706	$27,914
Single Family Residential	48,723,129	1,119	NA	Biofiltration	0.50%	$20	/ft^2	1,040,692,952	988,658,305	52,034,648	$487,231	$0.01	$641	/ft^2	24,362		$20	$487,231	$32,482
										946,316,153					5,414,112			$82,838,167	**$5,522,544**
															Program Admin		5%	$4,141,908	$276,127
															TOTAL			**$86,980,075**	**$5,798,672**

Rainfall Input	
Design Storm	Annual Rainfall
(in)	(in)
1	42.83

Gray Stormwater Control Unit Cost Assumptions	
Cost/gallon captured	$0.30

Green Cost per Gallon Removed:	$0.09