

Chesapeake Bay Watershed Impervious Cover Results by Land Use

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Purpose: Table Appendix D1 from Capiella and Brown (2001), *Impervious Cover and Land Use in the Chesapeake Bay Watershed (CWP_imperviouslanduse.pdf)*, which contains the results of an analysis of impervious coverage estimates for 210 polygons of land in 12 common land use categories in the Chesapeake Bay region. The multi-family, commercial, and industrial model project analysis frameworks use data from this table to characterize the ratio of paved and sidewalk surface areas to site-size for the model construction projects. The firm-level analysis of the proposed options also uses this table to estimate an acreage multiplier that is applied to the acreage-intensity distributions to account for disturbed acreage (primarily associated with roads) that is not counted in the Reed construction data used to develop the initial acreage-intensity distributions.

Worksheet:	Contents:
<i>MF_COMM_IND</i>	Impervious cover characteristics for land areas by region and land-use category, except for single-family housing
<i>SF</i>	Impervious cover characteristics for land areas by region for the single-family housing land-use category

Linked Files (files whose data is used in this file):
<i>No Linked Files</i>

Appendix D - Impervious Cover Data Table

Table D.1 - Chesapeake Bay Watershed Impervious Cover Results by Land Use Polygon

County	Landuse	Type	Polygon Area (acres)	Impervious			Other Impervious (sq ft)	Total Impervious (sq ft)	Impervious %	Polygon Area (sq ft)	Percent of building footprint to total polygon area	# Units	Age of Development	Impervious Cover/Housing Unit	Gross Density (units/acre)	Average House Size	Impervious Cover/Building sq ft	Parking/Building sq ft	% Forest or Open Space	% Roads	% Parking	% Buildings	% Driveways	% Sidewalks	% Other Impervious				
				Roads (sq ft)	Driveways (sq ft)	Parking (sq ft)																							
Lancaster	Agriculture		265.69	1062.76	132050.60	0.00	88639.34	0.00	221752.69	1.92%							2.50		98.08%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%				
Lancaster	Agriculture		271.86	134575.90	75349.92	57.93	55495.45	0.00	267479.21	2.24%							4.78		97.76%	1.14%	0.47%	0.00%	0.64%	0.00%	0.00%				
Lancaster	Agriculture		304.27	43136.29	58753.10	0.00	56031.96	0.00	135041.35	1.02%							2.41		98.98%	0.33%	0.42%	0.00%	0.27%	0.00%	0.00%				
Lancaster	Agriculture		373.27	14920.23	62367.11	0.00	102677.80	0.00	312484.64	0.00%							2.84		99.08%	0.86%	0.00%	0.00%	0.36%	0.00%	0.00%				
Lancaster	Agriculture		389.55	17665.22	69385.41	0.00	98385.41	0.00	312484.64	0.00%							3.23		97.03%	1.00%	0.84%	0.00%	0.38%	0.00%	0.00%				
Howard	Agriculture		852.08	191397.42	23214.88	2824.93	181328.61	0.00	167542.20	1.53%							3.12		98.47%	0.52%	0.49%	0.01%	0.06%	0.00%	0.45%				
James City	Agriculture		217.14	77154.17	0.00	0.00	5645.24	0.00	22290.00	1.11%							18.62		98.89%	0.82%	0.16%	0.00%	0.00%	0.00%	0.24%				
James City	Agriculture		94.58	21624.53	0.00	0.00	48933.49	0.00	74960.00	14.55%							2.97		96.47%	0.52%	1.09%	0.00%	0.00%	0.00%	1.82%				
James City	Agriculture		346.03	98224.55	45300.00	360.35	81792.10	0.00	33099.03	26.77%							5.06		95.98%	0.91%	0.01%	0.00%	0.00%	0.00%	0.00%				
Lancaster	Open Urban	golf course	128.07	3348.68	0.00	0.00	3689.02	0.00	15621.03	1.55%							7.10	1.67	94.10%	1.24%	0.51%	0.00%	0.00%	0.00%	0.00%				
Lancaster	Open Urban	golf course	128.07	43199.31	9543.27	94309.05	31615.29	55787.00	0.00	234453.93	4.20%						7.42	2.98	95.80%	0.77%	0.57%	1.69%	0.17%	1.00%	0.00%				
Lancaster	Open Urban	park	8.26	4498.48	0.00	2024.35	0.00	11105.00	17627.83	4.90%									95.10%	1.25%	0.00%	0.56%	0.00%	0.00%	3.09%				
Baltimore	Open Urban	cemetery	74.14	279250.15	0.00	0.00	14332.55	0.00	11784.00	9.64%							21.73		90.36%	8.65%	0.44%	0.00%	0.00%	0.00%	0.55%				
Baltimore	Open Urban	golf course	156.89	243585.07	8815.23	117663.77	87596.35	29448.00	188868.60	67597.02	9.89%						7.72	1.34	90.11%	3.05%	1.28%	1.72%	0.13%	0.43%	2.76%				
Baltimore	Open Urban	local park	4.92	8615.20	0.00	0.00	899.80	3365.00	9119.00	20909.00	9.76%						25.82		90.24%	4.06%	0.28%	0.00%	0.00%	1.57%	3.79%				
Howard	Open Urban	cemetery	150.22	104927.88	248473.05	116331.53	28413.36	31967.00	0.00	0.00							18.59		91.93%	1.00%	0.43%	0.00%	0.78%	0.00%	0.00%				
Howard	Open Urban	local park	10.94	2281.22	0.00	19699.1	2252.18	3968.28	37262.37	65663.65	13.78%						29.16		86.22%	0.48%	0.47%	4.18%	0.00%	0.83%	7.82%				
James City	Open Urban	golf course	183.93	122315.65	0.00	0.00	11556.04	56280.00	0.00	189751.69	2.37%						17.01		97.63%	1.53%	0.14%	0.00%	0.00%	0.70%	0.00%				
James City	Open Urban	cemetery	40.05	43569.09	0.00	0.00	1093.00	70588.75	124650.84	7.15%							12.85		92.85%	2.52%	0.00%	0.00%	0.00%	0.96%	4.56%				
James City	Open Urban	county park	20.17	42780.25	0.00	49601.20	0.00	8504.00	80055.82	188941.27	2.50%						16.82		78.50%	4.87%	0.00%	5.65%	0.00%	0.00%	10.02%				
James City	Open Urban	county park	20.17	42780.25	0.00	49601.20	0.00	8504.00	80055.82	188941.27	2.50%						16.82		78.50%	4.87%	0.00%	5.65%	0.00%	0.00%	10.02%				
Lancaster	2 Acre Lots		10.48	11022.33	6816.15	0.00	18136.26	0.00	32857.41	0.89							1.98	2.00	92.13%	2.41%	3.97%	0.00%	1.49%	0.00%	0.00%				
Lancaster	2 Acre Lots		13.28	24902.04	22184.44	0.00	69489.31	12.01%	9927.40	3.10	new						1.98		87.99%	4.30%	3.87%	0.00%	3.83%	0.00%	0.00%				
Lancaster	2 Acre Lots		20.54	28609.68	23014.84	0.00	27538.20	0.00	79162.73	8.85%	new						2.87		91.15%	3.20%	3.06%	0.00%	2.57%	0.00%	0.00%				
Lancaster	2 Acre Lots		56.93	124968.01	82770.89	0.00	106252.19	0.00	315991.09	12.74%	new						2.42		87.26%	5.04%	4.37%	0.00%	3.34%	0.00%	0.00%				
Lancaster	2 Acre Lots		42.70	42487.13	34488.22	0.00	55497.82	0.00	83820.00	14148.26	new						2.55		92.41%	2.28%	2.98%	0.00%	1.67%	0.00%	0.45%				
Baltimore	2 Acre Lots		42.70	42487.13	61313.82	0.00	10000.00	18776.15	17276.15	12.47%	new						2.33		91.14%	2.50%	4.2%	0.00%	2.18%	0.00%	0.00%				
Baltimore	2 Acre Lots		2.9	14332.12	7410.00	0.00	16533.27	0.00	2365.00	40480.49	9.03%						2.47		90.97%	3.20%	3.65%	0.00%	1.85%	0.00%	0.00%				
Baltimore	2 Acre Lots		152.87	225919.01	142528.90	0.00	224117.37	0.00	17280.00	609845.28	9.16%	new					7.19	59	90.84%	3.39%	3.37%	0.00%	2.14%	0.00%	0.26%				
James City	2 Acre Lots		25.85	42166.56	73191.69	0.00	31474.74	0.00	146832.99	13.04%	new						4.67		86.96%	3.74%	2.80%	0.00%	6.50%	0.00%	0.00%				
James City	2 Acre Lots		26.97	51727.03	76392.86	0.00	36888.12	0.00	146495.01	14.04%	new						4.47		85.96%	4.40%	3.14%	0.00%	6.50%	0.00%	0.00%				
James City	2 Acre Lots		43.88	84024.83	0.00	0.00	64024.83	0.00	60088.38	12.47%	new						3.97		87.37%	2.53%	4.33%	0.00%	6.50%	0.00%	0.00%				
James City	2 Acre Lots		28.27	18749.10	80043.68	0.00	17553.70	0.00	138346.48	11.07%	new						3.43		88.33%	1.52%	3.05%	0.00%	6.50%	0.00%	0.00%				
Lancaster	2 Acre Lots	AVERAGE	40.06	60722.43	59961.61	0.00	56661.62	0.00	316642	180512.08	0.11						18.67		10292.22	0.46	3147.76	3.32	0.89	0.3%	0.03	0.00	0.04	0.00	0.00
Lancaster	1 Acre Lots		16.93	33443.98	20735.16	0.00	41768.24	0.00	95887.39	13.00%	new						3.20		87.00%	4.53%	5.66%	0.00%	2.81%	0.00%	0.00%				
Lancaster	1 Acre Lots		18.07	40859.91	16779.87	0.00	52402.07	0.00	110041.85	13.96%	new	1979					3.30		86.02%	5.19%	6.66%	0.00%	2.13%	0.00%	0.00%				
Lancaster	1 Acre Lots		18.09	22814.10	19125.00	125.83	27638.07	5412.00	75315.03	9.98%	old						2.71		90.44%	2.90%	3.53%	0.02%	2.43%	0.00%	0.66%				
Lancaster	1 Acre Lots		18.76	33716.60	17427.00	0.00	90051.13	0.00	52971.14	0.91	old						2.41		88.07%	2.91%	3.01%	0.00%	3.54%	0.00%	0.00%				
Lancaster	1 Acre Lots		21.91	39491.25	31045.85	0.00	44503.67	0.00	115504.77	12.05%	old						2.58		87.95%	4.14%	4.66%	0.00%	3.25%	0.00%	0.00%				
Lancaster	1 Acre Lots		25.32	69137.90	32305.69	0.00	54367.81	16204.00	0.00	172015.40	15.60%	new					3.16		84.40%	6.27%	4.93%	0.00%	2.93%	1.47%	0.00%				
Lancaster	1 Acre Lots		34.34	63990.10	57800.00	0.00	93910.25	0.00	215700.35	14.42%	old						3.44		85.58%	4.28%	6.28%	0.00%	3.86%	0.00%	0.00%				
Lancaster	1 Acre Lots	34 acre only	69.73	242584.23	115500.00	0.00	138023.23	23120.00	0.00	519226.26	17.09%	new					3.70		82.91%	7.99%	4.54%	0.00%	3.80%	0.00%	0.78%				
Baltimore	1 Acre Lots		19.76	32193.68	0.00	0.00	32193.68	0.00	7150.00	11.70%	new						3.70		88.38%	5.01%	3.10%	0.00%	2.76%	0.00%	0.00%				
Baltimore	1 Acre Lots		32.30	64709.03	63188.71	0.00	96206.30	0.00	224104.05	15.93%	new						2.33		84.07%	4.60%	6.84%	0.00%	4.49%	0.00%	0.00%				
Baltimore	1 Acre Lots		39.53	71090.12	65736.96	0.00	78268.35	0.00	12276.00	227371.42	13.20%	new					2.91		86.80%	4.13%	4.55%	0.00%	3.82%	0.00%	0.71%				
Baltimore	1 Acre Lots		42.28	93227.07	46695.90	0.00	79900.28	0.00	6956.00	228879.25	12.32%	new					3.33		87.68%	5.07%	4.34%	0.00%	2.54%	0.00%	0.38%				
Baltimore	1 Acre Lots		84.44	252388.58	209021.23	0.00	313634.62	0.00	11090.00	786134.44	21.37%	new					2.81		78.63%	6.86%	8.53%	0.00%	5.68%	0.00%	0.30%				
Howard	1 Acre Lots		25.10	22681.00	44193.04	0.00	44950.25	0.00	156224.29	14.23%	new						3.48												

Appendix D - Impervious Cover Data Table

Table D.1 - Chesapeake Bay Watershed Impervious Cover Results by Land Use Polygon

County	Landuse	Type	Polygon Area (acres)	Other Impervious					Total Impervious (sq ft)	Impervious %	Polygon Area (sq ft)	Percent of building footprint to total polygon area	# Units	Age of Development	Impervious Cover/Housing Unit	Gross Density (units/acre)	Average House Size	Impervious Cover/Building sq ft	Parking/Building sqft	% Forest or Open Space	% Roads	% Parking	% Other		
				Roads (sq ft)	Driveways (sq ft)	Parking (sq ft)	Buildings (sq ft)	Sidewalks (sq ft)																% Buildings	% Driveways
James City	1/8 Acre Lots		14.37	58759.82	30100.00	0.00	68143.69	11710.00	0.00	168713.51	26.95%	43	new	3923.57	2.99	1584.74	2.47	73.05%	9.39%	10.89%	0.00%	4.81%	1.87%	0.00%	
James City	1/8 Acre Lots		7.32	44278.73	15000.00	0.00	24252.78	0.00	0.00	83531.51	26.20%	25	new	3341.26	3.44	970.11	3.44	73.80%	13.81%	7.61%	0.00%	4.70%	0.00%	0.00%	
	AVERAGE		14.84	79953.10	29451.98	0.00	71035.05	14219.46	0.00	194659.59	0.33	68.10		3261.77	4.61	1221.11	2.95	6.87	13%	0.12	0.00	0.00	0.02	0.00	
Lancaster	Townhomes		10.37	53416.26	24800.00	0.00	98681.82	19200.00	0.00	168329.10	40.57%	63	new	2663.41	6.17	1516.03	1.29	59.29%	14.33%	21.47%	0.00%	5.53%	1.75%	0.00%	
Lancaster	Townhomes		14.56	81732.00	32760.00	0.00	114372.18	12620.00	0.00	181718.42	41.34%	54	new/1989	2884.42	4.33	1180.51	1.89	61.00%	14.21%	19.30%	0.00%	5.4%	1.99%	0.00%	
Lancaster	Townhomes		22.60	151147.33	69300.00	0.00	201049.60	18404.00	0.00	456433.70	46.36%	154	new	2963.86	6.81	1357.47	2.18	0.04	53.84%	15.35%	21.24%	0.87%	7.04%	1.87%	0.00%
Lancaster	Townhomes		32.54	182950.08	97760.00	0.00	201637.13	32666.00	0.00	515011.21	36.33%	188	new	2739.42	5.68	1072.54	2.55	63.67%	12.91%	14.23%	0.00%	6.90%	2.30%	0.00%	
Lancaster	Townhomes		33.71	187386.76	108150.00	0.00	263773.55	32560.00	0.00	591870.31	40.31%	224	new	2875.16	6.11	1280.45	2.24	59.69%	12.76%	17.26%	0.00%	7.37%	2.22%	0.00%	
Baltimore	Townhomes		14.18	117554.07	0.00	0.00	102586.38	11952.00	3997.00	209069.45	45.96%														
Baltimore	Townhomes	Duvelves	33.30	214676.28	116480.00	0.00	301638.36	40124.00	57139.00	5443.00	381181.66	38.11%													
Baltimore	Townhomes		5.46	3655.00	0.00	0.00	37296.00	13584.00	0.00	95471.00	40.14%														
Baltimore	Townhomes		6.36	70079.27	0.00	0.00	45501.91	15436.00	0.00	131017.18	47.29%														
Baltimore	Townhomes		6.39	65773.29	0.00	0.00	56059.20	16120.00	2871.00	140823.49	50.59%														
Baltimore	Townhomes		13.25	131228.64	0.00	0.00	88329.25	19388.00	0.00	238945.89	41.40%														
Baltimore	Townhomes		50.92	414676.22	0.00	0.00	362984.70	45552.00	0.00	823212.92	37.11%														
Baltimore	Townhomes		12.59	21463.14	0.00	0.00	114729.32	105499.10	0.00	25408.90	0.00														
Howard	Townhomes		18.00	18416.83	21870.29	172089.52	129255.20	29458.20	0.00	371090.04	47.33%														
Howard	Townhomes		18.49	63762.05	0.00	0.00	178487.88	104503.30	24857.36	17078.96	37.8689.55	47.02%													
Howard	Townhomes		31.15	11674.78	0.00	0.00	250085.02	143518.10	28217.08	0.00	433494.98	31.95%													
Howard	Townhomes		58.25	142522.06	0.00	0.00	338533.09	223808.10	65732.52	0.00	713232.77	30.40%	352												
James City	Townhomes		1.61	1359.61	0.00	0.00	38606.00	33358.95	0.00	61935.35	36.11%		new					1.16							
James City	Townhomes		17.67	158760.68	0.00	0.00	148182.92	0.00	634.82	312784.42	40.44%														
James City	Townhomes		7.42	25969.41	0.00	0.00	82767.18	4800.00	19800.00	133336.59	41.25%														
	AVERAGE		20.66	107617.03	23564.01	56917.97	135625.19	22243.50	2775.59	384743.29	37.14%	171.17		2864.85	5.84	1281.20	2.58	0.71	15.9%	0.16	0.06	0.02	0.03	0.01	
Lancaster	Multifamily		1.751	17.51	18289.05	0.00	141423.27	115638.47	8344.00	0.00	283965.23	0.19		762.736	15.2%	2.45	1.22	62.81%	2.40%	15.16%	18.54%	0.00%	1.09%	0.00%	
Lancaster	Multifamily		2.498	24.98	106899.50	0.00	126203.27	157285.53	6886.00	0.00	441600.54	40.59%		1,088.129	14.5%	2.81	1.33	59.42%	9.82%	14.65%	14.93%	0.00%	0.63%	0.74%	
Lancaster	Multifamily		14.18	142174.17	2044.67	0.00	204473.18	270792.00	1395.00	0.00	718654.33	51.7%		1,806.885	15.0%	4.63	2.17	61.46%	12.52%	17.24%	0.00%	1.48%	0.00%		
Lancaster	Multifamily		4.593	45.93	239209.68	0.00	384883.35	357519.53	28872.00	0.00	1047194.93	52.34%		2,060.711	17.9%	2.93	1.08	47.96%	11.96%	17.87%	19.24%	0.00%	1.44%	1.83%	
Lancaster	Multifamily		6.412	64.12	196864.53	0.00	500518.47	379797.38	27072.00	0.00	28491.62	1132563.99	40.55%		2,793.067	13.6%	2.98	1.32	59.45%	7.94%	13.60%	17.92%	0.00%	0.97%	1.02%
Baltimore	Multifamily		0.876	8.76	105401.41	0.00	0.00	76916.70	12560.00	8477.10	203356.21	53.29%		381.586	20.2%	2.64	1.03	46.71%	27.62%	20.16%	0.00%	0.00%	3.29%	2.22%	
Baltimore	Multifamily		1.496	14.96	95007.71	0.00	84245.46	99949.14	15872.00	0.00	300822.31	47.43%		634.234	15.8%	3.01	0.84	62.57%	15.07%	15.76%	13.28%	0.00%	2.50%	0.78%	
Baltimore	Multifamily		11.17	111.7	209135.78	0.00	17717.17	104743.78	14744.00	0.00	388533.23	61.33%		747.935	18.4%	2.83	0.13	48.26%	27.96%	18.33%	2.37%	0.00%	1.97%	1.26%	
Baltimore	Multifamily		2.245	22.45	235812.64	0.00	0.00	273306.23	18584.00	7411.00	587813.92	61.13%		977.322	27.9%	2.19	3.18	38.87%	30.53%	27.95%	0.00%	0.00%	1.90%	0.81%	
Baltimore	Multifamily		3.65	36.50	271617.10	0.00	106997.55	238702.56	48236.00	8987.00	674540.21	42.43%		1,589.940	15.0%	2.83	0.45	57.57%	17.08%	15.01%	6.73%	0.00%	3.03%	0.57%	
Baltimore	Multifamily		5.103	51.03	506722.08	0.00	0.00	245315.03	10556.00	8238.00	770831.11	34.68%		2,222.867	11.0%	3.14	1.65	65.32%	22.80%	11.04%	0.00%	0.00%	4.07%	0.37%	
Howard	Multifamily		0.98	9.80	29878.03	0.00	97375.17	79739.00	13988.00	0.00	220981.50	51.77%		426.888	18.7%	2.77	1.48	48.23%	7.00%	16.88%	22.81%	0.00%	3.28%	0.00%	
Howard	Multifamily		1.199	11.99	16318.32	0.00	127820.00	15638.95	15351.96	3255.50	238584.73	45.68%		522.284	14.5%	3.15	0.54	54.32%	3.12%	14.52%	24.47%	0.00%	2.94%	0.62%	
James City	Multifamily		1.611	16.11	168139.78	0.00	106393.23	170446.18	6882.62	0.00	204461.66	61.66%		701.632	15.6%	2.47	1.32	61.46%	13.86%	15.62%	13.62%	0.00%	1.96%	1.06%	
James City	Multifamily		1.134	11.34	6802.41889	0.00	138619	50399.9664	0.00	5304.95	19326.34	40.35%		493.970	10.2%	3.95	2.71	59.65%	1.38%	10.20%	27.70%	0.00%	0.00%	1.07%	
James City	Multifamily		4.682	46.82	352982.242	0.00	3648	157145.264	13884	28700.6	556360.11	27.28%		2,039.479	7.7%	3.54	0.02	72.72%	17.31%	7.71%	0.18%	0.00%	0.68%	1.41%	
James City	Multifamily		1.195	11.95	139274.877	0.00	0.00	59966.2675	0.00	8303.23	20854.47	40.00%		520.542	11.5%	3.48	0.94	59.49%	26.76%	11.52%	0.00%	0.00%	0.00%	1.79%	
James City	Multifamily		0.696	6.96	0.00	0.00	92234.00	70392.1663	0.00	40493.57	166676.74	54.96%		303.178	23.2%	2.37	1.31	45.02%	0.00%	23.22%	30.42%	0.00%	0.00%	1.54%	
	AVERAGE		26.53	151547.06	113.76	0.00	97265.64	96952.68	7308.00	10798.61	64.14%	0.44		1,112.087	14.8%	2.86	1.40	46.70%	14.13%	10.16%	0.00%	0.00%	0.00%	0.00%	
Lancaster	Institutional school		6.16	18098.36	0.00	0.00	97625.64	96952.68	7308.00	0.00	219884.68	81.93%				2.27	1.01	18.02%	6.74%	36.13%	36.38%	0.00%	2.72%	2.00%	
Lancaster	Institutional school		7.66	8672.23	0.00	0.00	84467.34	32442.75	2004.00	8178.00	135764.32	40.69%				4.18	2.60	59.31%	2.60%	9.72%	25.31%	0.00%	0.60%	2.45%	
Lancaster	Institutional school		66.69	116801.04	0.00	0.00	304583.52	292345.45	5888.00	183751.00	903369.01	31.10%				3.09	1.04	68.90%	4.02%	10.06%	10.48%	0.00%	0.20%	6.33%</	

Appendix D -Impervious Cover Data Table
Table D.1 - Chesapeake Bay Watershed Impervious Cover Results by Land Use Polygon

County	Landuse	Type	Polygon Area (acres)	Roads (sq ft)	Driveways (sq ft)	Parking (sq ft)	Buildings (sq ft)	Sidewalks (sq ft)	Other Impervious (sq ft)	Total Impervious (sq ft)	Impervious %	Polygon Area (sq ft)	Percent of building footprint to total polygon area	# Units	Age of Development	Impervious Cover/Housing Unit	Gross Density (units/acre)	Average House Size	Impervious Cover/Building sq ft	Parking/ Building sqft	% Forest or Open Space	% Roads	% Buildings	% Parking	% Driveways	% Sidewalks	% Other Impervious
Howard	Commercial		66.96	91265.93	0.00	1517402.95	457034.10	20596.60	17427.63	2103727.21	72.13%	2,916,778	15.7%						4.60		27.87%	3.13%	15.67%	52.02%	0.00%	0.71%	0.60%
James City	Commercial		39.89	69116.9939	0.00	809890	348379.929	0.00	0.00	1227386.92	70.64%	1,737,608	20.0%						3.52	2.32	29.36%	3.98%	20.05%	46.61%	0.00%	0.00%	0.00%
James City	Commercial		4.64	5185.26692	0.00	81183	35330.7332	0.00	0.00	121699.00	60.21%	202,118	17.5%						3.44	2.30	39.79%	2.57%	17.48%	40.17%	0.00%	0.00%	0.00%
James City	Commercial		14.26	47738.9587	0.00	254978	94950.2105	0.00	0.00	381166.88	63.30%	621,166	14.6%						4.35	2.82	36.70%	7.89%	14.56%	41.05%	0.00%	0.00%	0.00%
James City	Commercial		10	16288.9127	0.00	223433	75204.7885	0.00	0.00	316926.68	72.53%	435,600	17.5%						4.15	2.93	27.47%	3.74%	17.49%	51.29%	0.00%	0.00%	0.00%
James City	Commercial		1.55	9188.51054	0.00	27787	7790.67047	0.00	0.00	44766.18	66.30%	67,618	11.5%						5.75	3.57	33.70%	13.61%	11.54%	41.15%	0.00%	0.00%	0.00%
James City	Commercial		4.76	4199.08652	0.00	61759	38327.3628	0.00	0.00	104285.45	50.30%	207,346	18.5%						2.72	1.61	49.70%	2.03%	18.48%	29.79%	0.00%	0.00%	0.00%
James City	Commercial		4.16	22921.8615	0.00	66452	48218.091	0.00	0.00	137591.95	75.93%	181,210	26.6%						2.85	1.38	24.07%	12.65%	26.61%	36.67%	0.00%	0.00%	0.00%
	Commercial	AVERAGE	24.39	56185.41	283.17	501588.07	202412.13	2361.07	2573.64	765403.47	0.72	1,062,428	19.1%						3.88	2.45	0.28	7%	0.20	0.45	0.00	0.00	0.00

Appendix D - Impervious Cover Data Table
Table D.1 - Chesapeake Bay Watershed Impervious Cover Results by Land Use Polygon

County	Landuse	Type	Polygon Area (acres)	Roads (sq ft)	% Roads of Impervious Area	Driveways (sq ft)	Parking (sq ft)	Buildings (sq ft)	Sidewalks	% sidewalks of Impervious Area	Other Impervious (sq ft)	Total Impervious (sq ft)	Impervious %	# Units	Age of Development	Impervious Cover/ Housing Unit	Gross Density (units/ acre)	Average House Size	Impervious Cover/ Building sq ft	Parking/ Building sqft	% Forest or Open Space	% Roads	% Buildings	% Parking	% Driveways	% Sidewalks	% Other
Lancaster	2 Acre Lots		10.49	11002.33	30.60%	6816.15	0.00	18136.25	0.00	0.00%	0.00	35954.73	7.87%	5	new	7190.95	0.48	3627.25	1.98		92.13%	2.41%	3.97%	0.00%	1.49%	0.00%	0.00%
Lancaster	2 Acre Lots		13.28	24902.04	35.84%	22184.44	0.00	22402.82	0.00	0.00%	0.00	69489.31	12.01%	7	new	9927.04	0.53	3200.40	3.10		87.99%	4.30%	3.87%	0.00%	3.83%	0.00%	0.00%
Lancaster	2 Acre Lots		20.54	28609.68	36.14%	23014.84	0.00	27538.20	0.00	0.00%	0.00	79162.73	8.85%	8	new	9895.34	0.39	3442.28	2.87		91.15%	3.20%	3.08%	0.00%	2.57%	0.00%	0.00%
Lancaster	2 Acre Lots		56.93	124968.01	39.55%	82770.89	0.00	108252.19	0.00	0.00%	0.00	315991.09	12.74%	24	new	13166.30	0.42	4510.51	2.92		87.26%	5.04%	4.37%	0.00%	3.34%	0.00%	0.00%
Baltimore	2 Acre Lots		42.70	42498.13	30.11%	34840.22	0.00	55457.92	0.00	0.00%	8352.00	141148.26	7.59%	23	new	6136.88	0.54	2411.21	2.55		92.41%	2.28%	2.98%	0.00%	1.87%	0.00%	0.45%
Baltimore	2 Acre Lots		48.64	89770.89	47.85%	46133.82	0.00	41716.15	0.00	0.00%	10000.00	187620.87	8.86%	12	new	15635.07	0.25	3476.35	4.50		91.14%	4.24%	1.97%	0.00%	2.18%	0.00%	0.47%
Baltimore	2 Acre Lots		10.29	14332.12	35.42%	7410.00	0.00	16353.37	0.00	0.00%	2365.00	40460.49	9.03%	5		8092.10	0.49	3270.67	2.47		90.97%	3.20%	3.65%	0.00%	1.65%	0.00%	0.53%
Baltimore	2 Acre Lots		152.87	225919.01	37.05%	142528.90	0.00	224117.37	0.00	0.00%	17280.00	609845.28	9.16%	79	new	7719.56	0.52	2836.93	2.72		90.84%	3.39%	3.37%	0.00%	2.14%	0.00%	0.26%
James City	2 Acre Lots		25.85	42166.56	28.72%	73191.69	0.00	31474.74	0.00	0.00%	0.00	146832.99	13.04%	12		12236.08	0.46	2622.89	4.67		86.96%	3.74%	2.80%	0.00%	6.50%	0.00%	0.00%
James City	2 Acre Lots		26.97	51727.03	31.36%	76362.86	0.00	36868.12	0.00	0.00%	0.00	164958.01	14.04%	14		11782.71	0.52	2633.44	4.47		85.96%	4.40%	3.14%	0.00%	6.50%	0.00%	0.00%
James City	2 Acre Lots		43.88	54024.25	22.67%	124241.83	0.00	60068.62	0.00	0.00%	0.00	238334.70	12.47%	23		10362.38	0.52	2611.68	3.97		87.53%	2.83%	3.14%	0.00%	6.50%	0.00%	0.00%
James City	2 Acre Lots		28.27	18749.10	13.75%	80043.68	0.00	37553.70	0.00	0.00%	0.00	136346.48	11.07%	12		11362.21	0.42	3129.48	3.63		88.93%	1.52%	3.05%	0.00%	6.50%	0.00%	0.00%
	2 Acre Lots	AVERAGE	40.06	60722.43	33.64%	59961.61	0.00	56661.62	0.00	0.00%	3166.42	180512.08	11%	18.67		10292.22	0.46	3147.76	3.32		89%	3%	3%	0%	4%	0%	0%
Lancaster	1 Acre Lots		16.93	33443.98	34.88%	20735.16	0.00	41708.24	0.00	0.00%	0.00	95887.39	13.00%	13	new	7375.95	0.77	3208.33	2.30		87.00%	4.53%	5.66%	0.00%	2.81%	0.00%	0.00%
Lancaster	1 Acre Lots		18.07	40859.91	37.13%	16779.87	0.00	52402.07	0.00	0.00%	0.00	110041.85	13.98%	17	new 1979	6473.05	0.94	3082.47	2.10		86.02%	5.19%	6.66%	0.00%	2.13%	0.00%	0.00%
Lancaster	1 Acre Lots		18.09	22814.10	30.29%	19125.00	125.85	27838.07	5412.00	7.19%	0.00	75315.03	9.56%	17	old	4430.30	0.94	1637.53	2.71		90.44%	2.90%	3.53%	0.02%	2.43%	0.00%	0.00%
Lancaster	1 Acre Lots		18.75	23727.96	26.35%	28900.00	0.00	37423.40	0.00	0.00%	0.00	90051.37	11.03%	17	old	5297.14	0.91	2201.38	2.41		88.97%	2.91%	4.58%	0.00%	3.54%	0.00%	0.00%
Lancaster	1 Acre Lots		21.91	39491.25	34.33%	31045.85	0.00	44503.67	0.00	0.00%	0.00	115040.77	12.05%	19	new	6054.78	0.87	2342.30	2.58		87.95%	4.14%	4.66%	0.00%	3.25%	0.00%	0.00%
Lancaster	1 Acre Lots		25.32	69137.90	40.19%	32305.69	0.00	54367.81	16204.00	9.42%	0.00	172015.40	15.60%	22	new	7818.88	0.87	2471.26	3.16		84.40%	6.27%	4.93%	0.00%	2.93%	1.47%	0.00%
Lancaster	1 Acre Lots		34.34	63990.10	29.67%	57800.00	0.00	93910.25	0.00	0.00%	0.00	215700.35	14.42%	34	old	6344.13	0.99	2762.07	2.30		85.58%	4.28%	6.28%	0.00%	3.86%	0.00%	0.00%
Lancaster	1 Acre Lots	3/4 acre only	69.73	242584.23	46.72%	115500.00	0.00	138022.03	23120.00	4.45%	0.00	519226.26	17.09%	77	new	6743.20	1.10	1792.49	3.76		82.91%	7.99%	4.54%	0.00%	3.80%	0.76%	0.00%
Baltimore	1 Acre Lots		21.11	46029.90	42.78%	25306.19	0.00	29105.46	0.00	0.00%	7155.00	107596.56	11.70%	15		7173.10	0.71	1940.36	3.70		88.30%	5.01%	3.17%	0.00%	2.75%	0.00%	0.78%
Baltimore	1 Acre Lots		32.30	64709.03	28.87%	63188.71	0.00	96206.30	0.00	0.00%	0.00	224104.05	15.93%	32		7003.25	0.99	3006.45	2.33		84.07%	4.60%	6.84%	0.00%	4.49%	0.00%	0.00%
Baltimore	1 Acre Lots		39.53	71090.12	31.27%	65736.96	0.00	78268.35	0.00	0.00%	12278.00	227371.42	13.20%	29	new	7840.39	0.73	2698.91	2.91		86.80%	4.13%	4.55%	0.00%	3.82%	0.00%	0.71%
Baltimore	1 Acre Lots		42.28	93327.07	41.14%	46965.90	0.00	79900.28	0.00	0.00%	6956.00	226879.25	12.32%	33	new	6875.13	0.78	2421.22	2.84		87.68%	5.07%	4.34%	0.00%	2.54%	0.00%	0.38%
Baltimore	1 Acre Lots		84.44	252388.58	32.11%	209021.23	0.00	313634.62	0.00	0.00%	11090.00	786134.44	21.37%	119	new	6606.17	1.41	2635.59	2.51		78.63%	6.86%	8.53%	0.00%	5.68%	0.00%	0.30%
Howard	1 Acre Lots		25.10	62861.00	40.24%	48413.04	0.00	44950.25	0.00	0.00%	0.00	156224.29	14.29%	23		6792.36	0.92		3.48		85.71%	5.75%	4.11%	0.00%	4.43%	0.00%	0.00%
Howard	1 Acre Lots		48.77	95183.00	34.73%	61406.67	0.00	101595.90	0.00	0.00%	15844.96	274030.53	12.90%	40		6850.76	0.82		2.70		87.10%	4.48%	4.78%	0.00%	2.89%	0.00%	0.75%
Howard	1 Acre Lots		63.04	103816.00	33.26%	85114.71	0.00	114469.20	0.00	0.00%	8694.00	312093.91	11.37%	46		6784.65	0.73		2.73		88.63%	3.78%	4.17%	0.00%	3.10%	0.00%	0.32%
Howard	1 Acre Lots		192.77	499454.00	41.97%	272109.24	3261.68	375144.40	3261.68	0.27%	39936.00	1189905.32	14.17%	154		7726.66	0.80		3.17		85.83%	5.95%	4.47%	0.00%	3.24%	0.04%	0.48%
James City	1 Acre Lots		29.73	53043.9457	25.62%	90000	0.00	64016.525	0.00	0.00%	0.00	207060.47	15.99%	30	new	6902.02	1.01	2133.88	3.23		84.01%	4.10%	4.94%	0.00%	6.95%	0.00%	0.00%
James City	1 Acre Lots		91.76	152825.507	22.99%	273000	0.00	238788.774	0.00	0.00%	0.00	666414.28	16.63%	91		7303.45	0.99	2624.05	2.78		83.37%	3.82%	5.97%	0.00%	6.83%	0.00%	0.00%
James City	1 Acre Lots		39.71	63581.0177	24.42%	111000	0.00	85819.0874	0.00	0.00%	0.00	260400.11	15.05%	37		7037.84	0.93	2319.43	3.03		84.95%	3.68%	4.96%	0.00%	6.42%	0.00%	0.00%
James City	1 Acre Lots		46.43	96193.2751	31.64%	117000	0.00	90813.7804	0.00	0.00%	0.00	304007.06	15.03%	39		7795.05	0.84	2328.56	3.35		84.97%	4.76%	4.48%	0.00%	5.78%	0.00%	0.00%
James City	1 Acre Lots		20.53	42499.3837	32.76%	39100	0.00	48143.8685	0.00	0.00%	0.00	129743.25	14.51%	17		7631.96	0.83	2831.99	2.69		85.49%	4.75%	5.38%	0.00%	4.37%	0.00%	0.00%
James City	1 Acre Lots		63.03	130672.956	28.54%	181300	0.00	145863.157	0.00	0.00%	0.00	457836.11	16.68%	49	new	9343.59	0.78	2976.80	3.14		83.32%	4.76%	5.31%	0.00%	6.60%	0.00%	0.00%
	1 Acre Lots	AVERAGE	46.25	102770.62	34.15%	87416.71	5.47	104212.85	2086.86	0.69%	4432.69	300925.19	14%	42.17		6965.38	0.90	2495.53	2.87		86%	5%	5%	0%	4%	0%	0%
Lancaster	1/2 Acre Lots		21.18	102442.35	40.79%	34850.00	59.59	90332.18	23476.00	9.35%	0.00	251160.12	27.22%	41	new	6125.86	1.94	2203.22	2.78		72.78%	11.10%	9.79%	0.01%	3.78%	2.54%	0.00%
Lancaster	1/2 Acre Lots		24.66	81881.89	30.83%	42840.00	0.00	114348.14	26556.00	10.00%	0.00	265626.03	24.73%	36	new	7378.50	1.46	3176.34	2.32		75.27%	7.62%	10.65%	0.00%	3.99%	2.47%	0.00%
Lancaster	1/2 Acre Lots		26.31	96910.88	33.44%	50830.00	0.00	105626.07	36416.00	12.57%	0.00	289782.95	25.29%	46	new	6299.63	1.75	2296.22	2.74		74.71%	8.46%	9.22%	0.00%	4.44%	3.18%	0.00%
Lancaster	1/2 Acre Lots		26.54	110301.14	43.23%	36550.00	0.00	86103.76	22208.00	8.70%	0.00	255162.90	22.07%	43	old	5934.02	1.62	2002.41	2.96		77.93%	9.54%	7.45%	0.00%	3.16%	1.92%	0.00%
Lancaster	1/2 Acre Lots		33.17	159977.95	41.61%	56043.62	0.00	131621.62	36808.00	9.57%	0.00	384451.19	26.61%	57	new	6744.76	1.72	2309.15	2.92		73.39%	11.07%	9.11%	0.00%	3.88%	2.55%	0.00%
Lancaster	1/2 Acre Lots		41.44	148456.30	35.85%	60350.00	0.00	166112.98	39184.00	9.46%	0.00	414103.28	22.94%	61	new	5832.44	1.71	2339.62	2.49		77.06%	8.22%	9.20%	0.00%	3.34%	2.17%	0.00%
Lancaster	1/2 Acre Lots		47.09	202924.18	38.92%	93800.00	0.00	192164.54	32456.00	6.23%																	

Appendix D -Impervious Cover Data Table
Table D.1 - Chesapeake Bay Watershed Impervious Cover Results by Land Use Polygon

County	Landuse	Type	Polygon Area (acres)	Roads (sq ft)	% Roads of Impervious Area	Driveways (sq ft)	Parking (sq ft)	Buildings (sq ft)	Sidewalks (sq ft)	% sidewalks of Impervious Area	Other Impervious (sq ft)	Total Impervious (sq ft)	Impervious %	# Units	Age of Development	Impervious Cover/ Housing Unit	Gross Density (units/ acre)	Average House Size	Impervious Cover/ Building sq ft	Parking/ Building sqft	% Forest or Open Space	% Roads	% Buildings	% Parking	% Driveways	% Sidewalks	% Other Impervious
James City	1/4 Acre Lots		24.65	101191.70	36.04%	57600.00	0.00	100544.87	21470.00	7.65%	0.00	280806.58	26.15%	64		4387.60	2.60	1571.01	2.79		73.85%	9.42%	9.36%	0.00%	5.36%	2.00%	0.00%
James City	1/4 Acre Lots		15.15	60835.33	35.70%	38000.00	0.00	59657.39	11900.00	6.98%	0.00	170392.72	25.82%	38	new	4484.02	2.51	1569.93	2.86		74.18%	9.22%	9.04%	0.00%	5.76%	1.80%	0.00%
James City	1/4 Acre Lots		34.19	126084.67	32.90%	80960.00	0.00	176170.90	0.00	0.00%	0.00	383215.57	25.73%	92		4165.39	2.69	1914.90	2.18		74.27%	8.47%	11.83%	0.00%	5.44%	0.00%	0.00%
James City	1/4 Acre Lots		53.70	178734.74	36.92%	115000.00	0.00	163587.07	26820.00	5.54%	0.00	484141.80	20.70%	100	new	4841.42	1.86	1635.87	2.96		79.30%	7.64%	6.99%	0.00%	4.92%	1.15%	0.00%
	1/4 Acre Lots	AVERAGE	50.81	248519.74	39.28%	95002.44	348.28	246169.41	40087.18	6.34%	2582.57	632709.61	28%	145.61		4223.52	2.91	1657.73	2.58	0.02	72%	11%	11%	0%	4%	2%	0%
Lancaster	1/8 Acre Lots		2.53	24287.90	55.93%	5460.00	0.00	8579.98	5096.00	11.74%	0.00	43423.88	39.40%	12	new	3618.66	4.74	715.00	5.06		60.60%	22.04%	7.79%	0.00%	4.95%	4.62%	0.00%
Lancaster	1/8 Acre Lots		7.21	42905.13	38.94%	14220.13	0.00	53062.46	0.00	0.00%	0.00	110187.73	35.08%	36	old	3060.77	4.99	1473.96	2.08		64.92%	13.66%	16.90%	0.00%	4.53%	0.00%	0.00%
Lancaster	1/8 Acre Lots		12.74	73041.64	39.51%	15925.00	0.00	79764.82	16160.00	8.74%	0.00	184891.47	33.32%	35	new	5282.61	2.75	2278.99	2.32		66.68%	13.16%	14.37%	0.00%	2.87%	2.91%	0.00%
Lancaster	1/8 Acre Lots		15.14	86977.08	39.44%	39000.00	0.00	75246.45	19288.00	8.75%	0.00	220511.53	33.44%	100	new	2205.12	6.61	752.46	2.93		66.56%	13.19%	11.41%	0.00%	5.91%	2.92%	0.00%
Lancaster	1/8 Acre Lots		16.72	103883.90	46.81%	39468.00	0.00	56497.76	22080.00	9.95%	0.00	221929.66	30.47%	92	new	2412.28	5.50	614.11	3.93		69.53%	14.26%	7.76%	0.00%	5.42%	3.03%	0.00%
Lancaster	1/8 Acre Lots		53.57	273646.36	45.02%	94651.82	0.00	188580.23	50960.00	8.38%	0.00	607838.41	26.05%	234	new1989	2597.60	4.37	805.90	3.22		73.95%	11.73%	8.08%	0.00%	4.06%	2.18%	0.00%
Howard	1/8 Acre Lots		11.74	54727.00	28.78%	24194.89	0.00	105938.50	5280.56	2.78%	0.00	190140.95	37.18%	71		2678.04	6.05	1492.09	1.79		62.82%	10.70%	20.72%	0.00%	4.73%	1.03%	0.00%
James City	1/8 Acre Lots		7.08	37023.46	32.08%	16500.00	0.00	50283.83	11620.00	10.07%	0.00	115427.29	37.43%	33	new	3497.80	4.66	1523.75	2.30		62.57%	12.00%	16.30%	0.00%	5.35%	3.77%	0.00%
James City	1/8 Acre Lots		14.37	58759.82	34.83%	30100.00	0.00	68143.69	11710.00	6.94%	0.00	168713.51	26.95%	43	new	3923.57	2.99	1584.74	2.48		73.05%	9.39%	10.89%	0.00%	4.81%	1.87%	0.00%
James City	1/8 Acre Lots		7.32	44278.73	53.01%	15000.00	0.00	24252.78	0.00	0.00%	0.00	83531.51	26.20%	25		3341.26	3.42	970.11	3.44		73.80%	13.89%	7.61%	0.00%	4.70%	0.00%	0.00%
	1/8 Acre Lots	AVERAGE	14.84	79953.10	41.07%	29451.98	0.00	71035.05	14219.46	7.30%	0.00	194659.59	33%	68.10		3261.77	4.61	1221.11	2.95		67%	13%	12%	0%	5%	2%	0%