

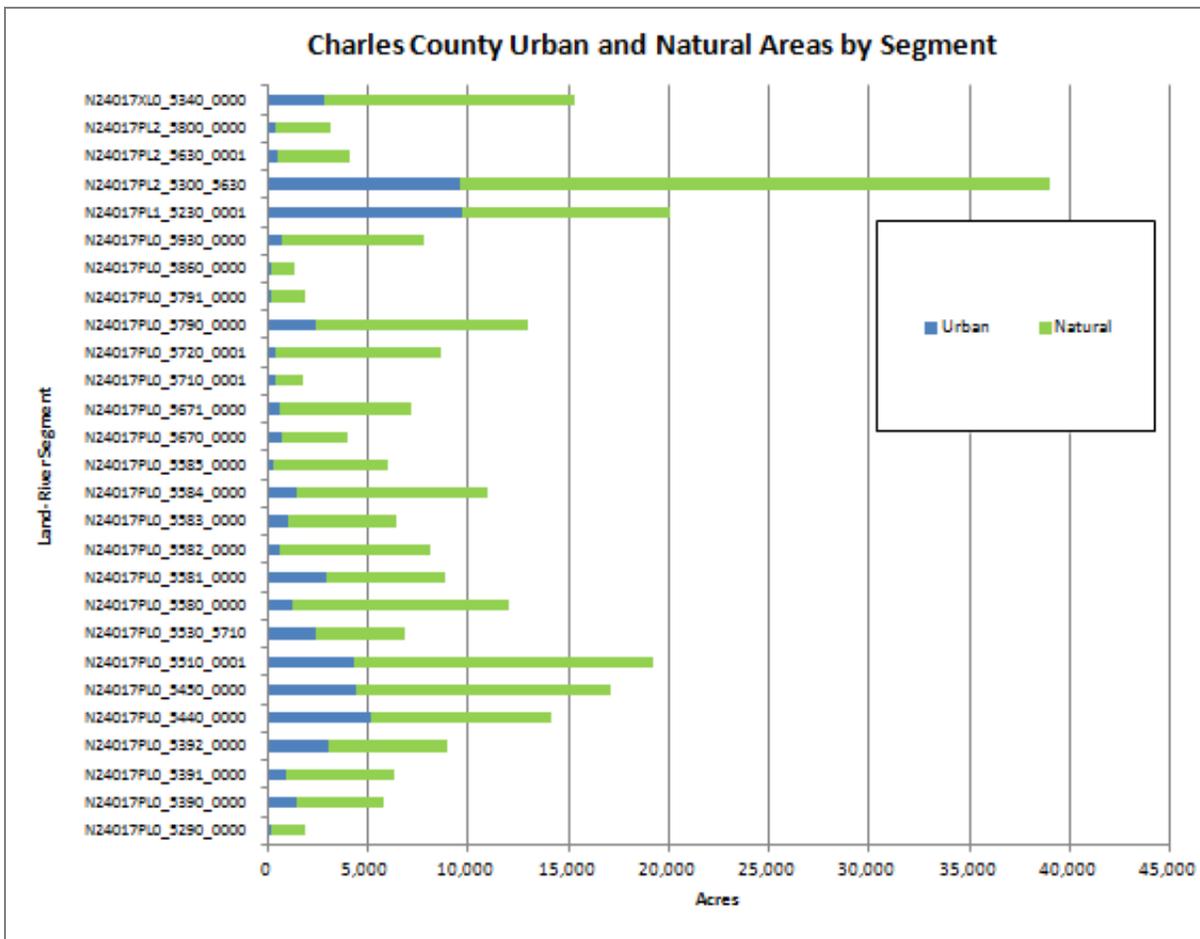
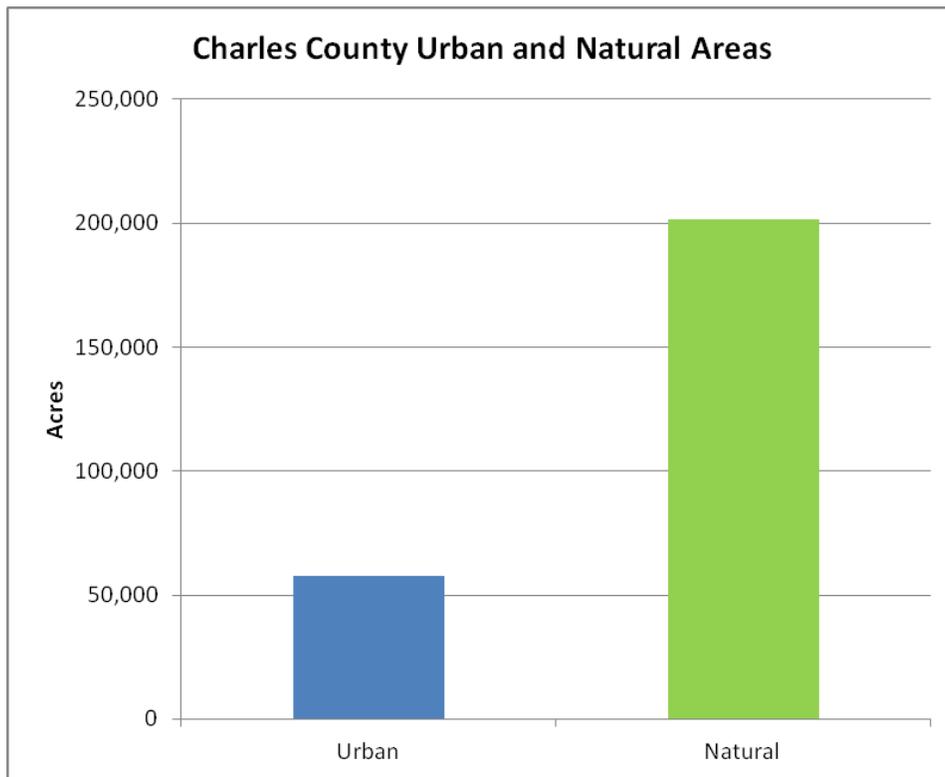
MD Estimates for the Chesapeake Bay Phase 6 Watershed Model

Land-Use, Version 1: Charles County Summary

Note: The estimates presented in this summary were provided by Maryland for 2012 conditions to the Chesapeake Bay Program for input into the Phase 6 watershed model land-use. Estimates were provided for urban and natural land-uses only. Per Chesapeake Bay Program decision rules, agricultural land-use acres in the watershed model are based on the United States Department of Agriculture (USDA) census data. Therefore, there was no reason for Maryland to provide estimates for agricultural lands to the Chesapeake Bay Program.

Charles County Urban and Natural Areas by Segment

Land-River Segment	Urban (Acres)	Natural (Acres)
N24017PLO_5290_0000	157.3	1,718.5
N24017PLO_5390_0000	1,427.6	4,327.9
N24017PLO_5391_0000	945.5	5,331.0
N24017PLO_5392_0000	3,025.5	5,951.8
N24017PLO_5440_0000	5,152.9	8,991.3
N24017PLO_5450_0000	4,423.3	12,725.6
N24017PLO_5510_0001	4,341.7	14,909.1
N24017PLO_5530_5710	2,371.7	4,498.8
N24017PLO_5580_0000	1,211.7	10,811.6
N24017PLO_5581_0000	2,928.9	5,930.6
N24017PLO_5582_0000	533.0	7,578.4
N24017PLO_5583_0000	961.8	5,411.8
N24017PLO_5584_0000	1,457.5	9,490.7
N24017PLO_5585_0000	281.7	5,670.7
N24017PLO_5670_0000	704.6	3,261.6
N24017PLO_5671_0000	618.4	6,576.6
N24017PLO_5710_0001	397.0	1,400.1
N24017PLO_5720_0001	346.1	8,258.8
N24017PLO_5790_0000	2,363.4	10,565.6
N24017PLO_5791_0000	215.1	1,597.6
N24017PLO_5860_0000	203.0	1,115.2
N24017PLO_5930_0000	730.0	7,007.5
N24017PL1_5230_0001	9,653.7	10,418.4
N24017PL2_5300_5630	9,595.0	29,414.0
N24017PL2_5630_0001	473.5	3,613.6
N24017PL2_5800_0000	370.7	2,745.5
N24017XL0_5340_0000	2,789.9	12,479.7
	57,680.3	201,802.0



Charles County Urban Area by Segment

Land-River Segment	Canopy Over Impervious (Acres)	Impervious - No Canopy (Acres)	Canopy Over Turf (Acres)	Turf - No Canopy (Acres)
N24017PL0_5290_0000	19	27	21	36
N24017PL0_5390_0000	57	308	194	1,210
N24017PL0_5391_0000	36	89	56	124
N24017PL0_5392_0000	30	51	41	9
N24017PL0_5440_0000	169	1,278	730	4,377
N24017PL0_5450_0000	113	507	304	1,505
N24017PL0_5510_0001	146	665	395	2,499
N24017PL0_5530_5710	53	383	233	1,519
N24017PL0_5580_0000	69	158	94	306
N24017PL0_5581_0000	126	485	433	2,060
N24017PL0_5582_0000	53	94	61	245
N24017PL0_5583_0000	44	107	76	274
N24017PL0_5584_0000	98	302	245	1,065
N24017PL0_5585_0000	37	62	32	98
N24017PL0_5670_0000	29	72	38	266
N24017PL0_5671_0000	35	157	69	451
N24017PL0_5710_0001	12	45	34	228
N24017PL0_5720_0001	44	132	68	177
N24017PL0_5790_0000	139	524	378	1,794
N24017PL0_5791_0000	9	29	14	145
N24017PL0_5860_0000	3	21	27	0
N24017PL0_5930_0000	45	49	35	32
N24017PL1_5230_0001	307	2,668	1,300	8,259
N24017PL2_5300_5630	346	2,269	1,461	8,096
N24017PL2_5630_0001	27	108	70	278
N24017PL2_5800_0000	17	83	36	254
N24017XL0_5340_0000	149	617	482	1,943
	2,211	11,292	6,928	37,249

Method Summary

Turf: Calculated by applying the ratio of Chesapeake Bay Phase 5.3.2 Watershed Model urban pervious acres to impervious acres to the Phase 6 2012 impervious acres. MD acknowledges the inaccuracy of these turf acres. Turf estimates should be significantly improved upon in the final model Land Use, scheduled for completion in September 2016, and will utilize MD's sampling and statistical modeling approach.

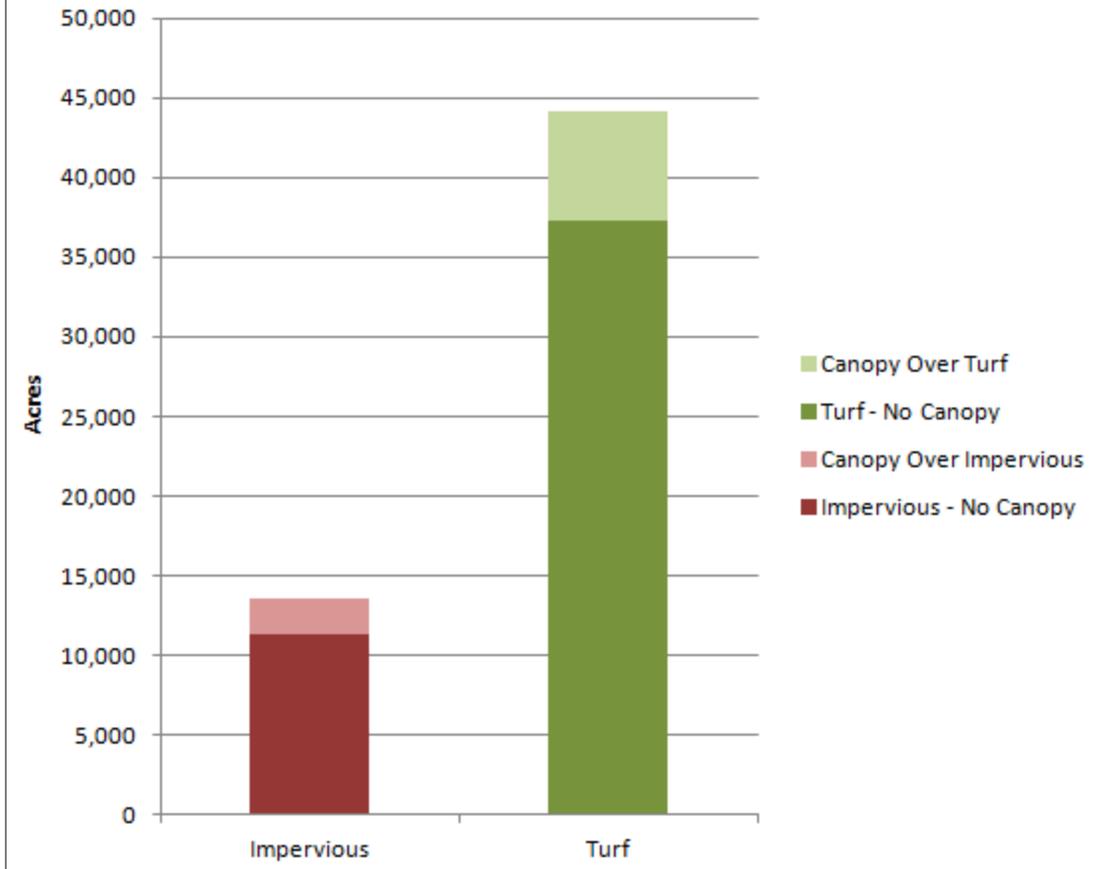
Impervious: Calculated using 2011 planimetric data provided by the County. Projected to 2012 conditions using 1) MDP data for residential and non-residential parcels developed between

the data imagery year and 2012, and 2) NAVTEQ roads data. Coefficients were applied to correct for the features missing from the planimetric dataset: driveways < 100 feet, patios < 200 square feet, and secondary sidewalks. Note: Charles County also included grass athletic fields in its impervious surface data, so these likely over-estimate impervious surface compared to other counties. Lastly, estimates were adjusted down to account for tree canopy over impervious surface.

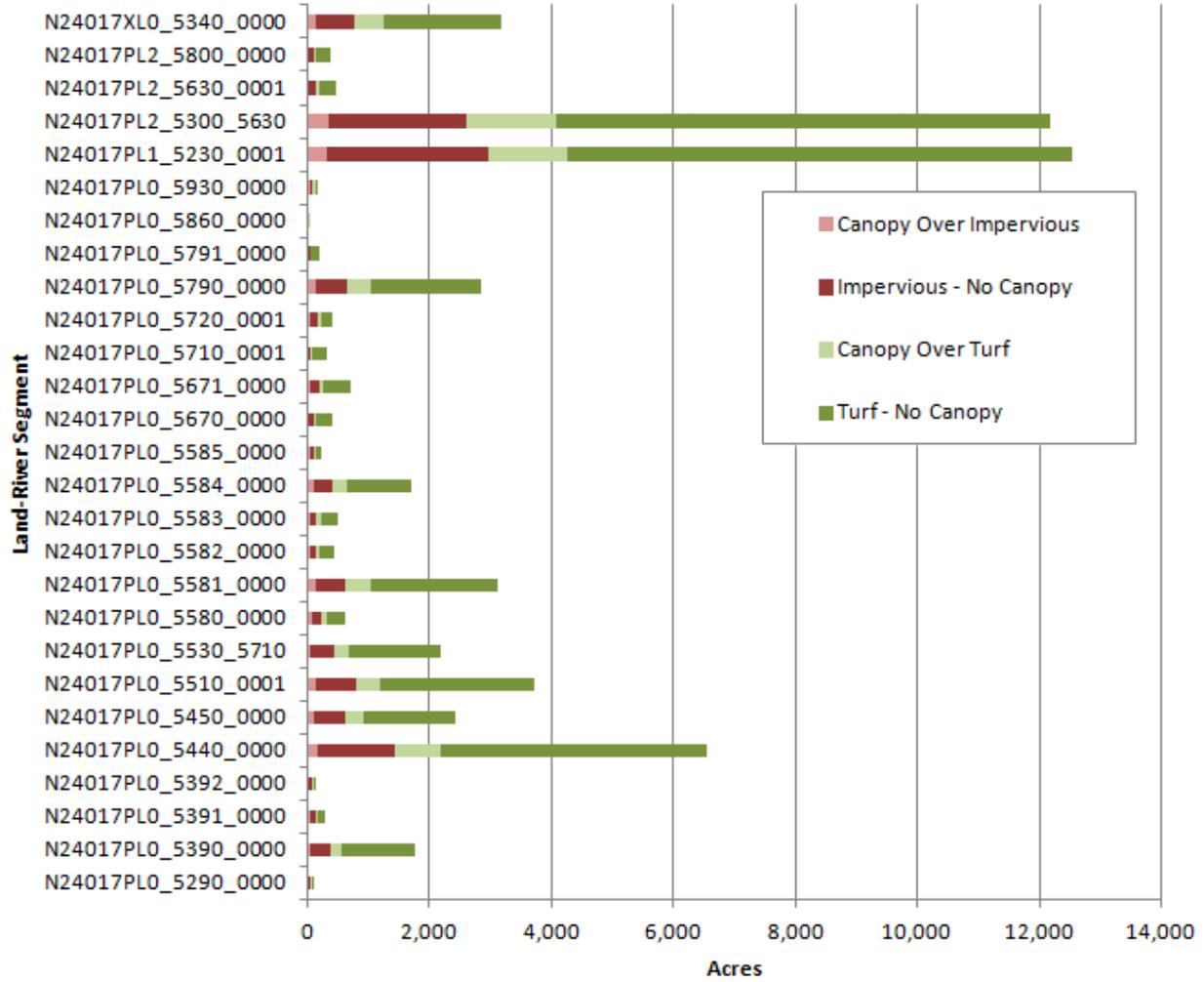
Canopy Over Turf: All mapped tree canopy (University of Maryland's 1 m resolution tree canopy cover data) that is not delineated as forest (> 1 acre of contiguous canopy cover and > 120 ft. wide) or associated with wetlands and is located within MD's urban mask. The urban mask contains Phase 5.3.2 model urban and suburban zones, all parcels that have a >\$10,000 improvement value and are not Agriculture or large-lot Residential development, and all road right-of-ways.

Canopy Over Impervious: Calculated as the intersection of the impervious surface data provided by the county and the University of Maryland's 1 m resolution tree canopy cover data. The intersect areas were adjusted up to account for any features missing from the county impervious surface data, based on the average percent of mapped impervious cover covered by canopy in the county.

Charles County Urban Area



Charles County Urban Area by Segment



Charles County Natural Area by Segment

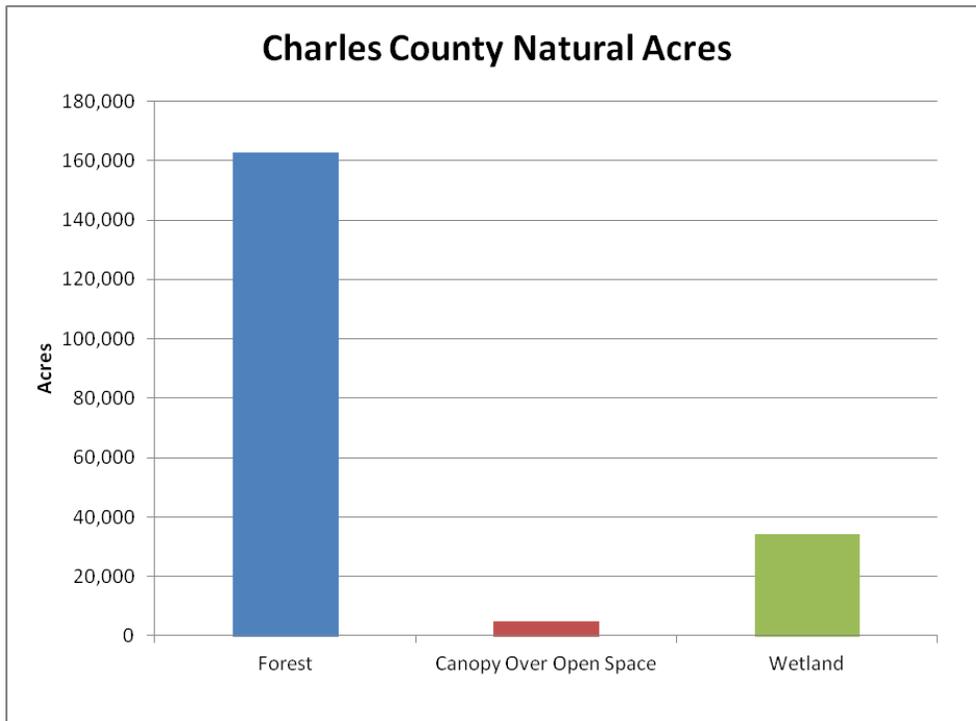
Land-River Segment	Forest (Acres)	Canopy over Open Space (Acres)	Wetland (Acres)
N24017PL0_5290_0000	1,416.2	36.9	265.4
N24017PL0_5390_0000	3,737.2	50.4	540.4
N24017PL0_5391_0000	4,743.9	62.9	524.3
N24017PL0_5392_0000	5,436.4	42.5	472.8
N24017PL0_5440_0000	7,554.9	198.1	1,238.3
N24017PL0_5450_0000	9,985.2	152.2	2,588.2
N24017PL0_5510_0001	12,254.9	565.8	2,088.3
N24017PL0_5530_5710	3,730.2	167.7	600.9
N24017PL0_5580_0000	8,551.5	277.6	1,982.5
N24017PL0_5581_0000	5,126.5	120.6	683.5
N24017PL0_5582_0000	6,852.5	123.7	602.2
N24017PL0_5583_0000	4,796.1	118.4	497.3
N24017PL0_5584_0000	8,434.1	189.7	866.9
N24017PL0_5585_0000	4,888.2	88.8	693.7
N24017PL0_5670_0000	1,873.6	216.9	1,171.1
N24017PL0_5671_0000	4,320.6	313.6	1,942.4
N24017PL0_5710_0001	993.9	46.8	359.4
N24017PL0_5720_0001	7,067.9	110.7	1,080.2
N24017PL0_5790_0000	8,524.0	408.0	1,633.6
N24017PL0_5791_0000	1,535.6	19.7	42.4
N24017PL0_5860_0000	796.6	1.5	317.1
N24017PL0_5930_0000	5,787.3	164.3	1,055.9
N24017PL1_5230_0001	7,386.3	247.2	2,784.8
N24017PL2_5300_5630	22,451.6	696.7	6,265.7
N24017PL2_5630_0001	2,178.8	58.5	1,376.3
N24017PL2_5800_0000	1,505.3	96.3	1,143.9
N24017XL0_5340_0000	10,785.5	243.7	1,450.5
162,714.7	4,819.2	34,268.1	

Method Summary

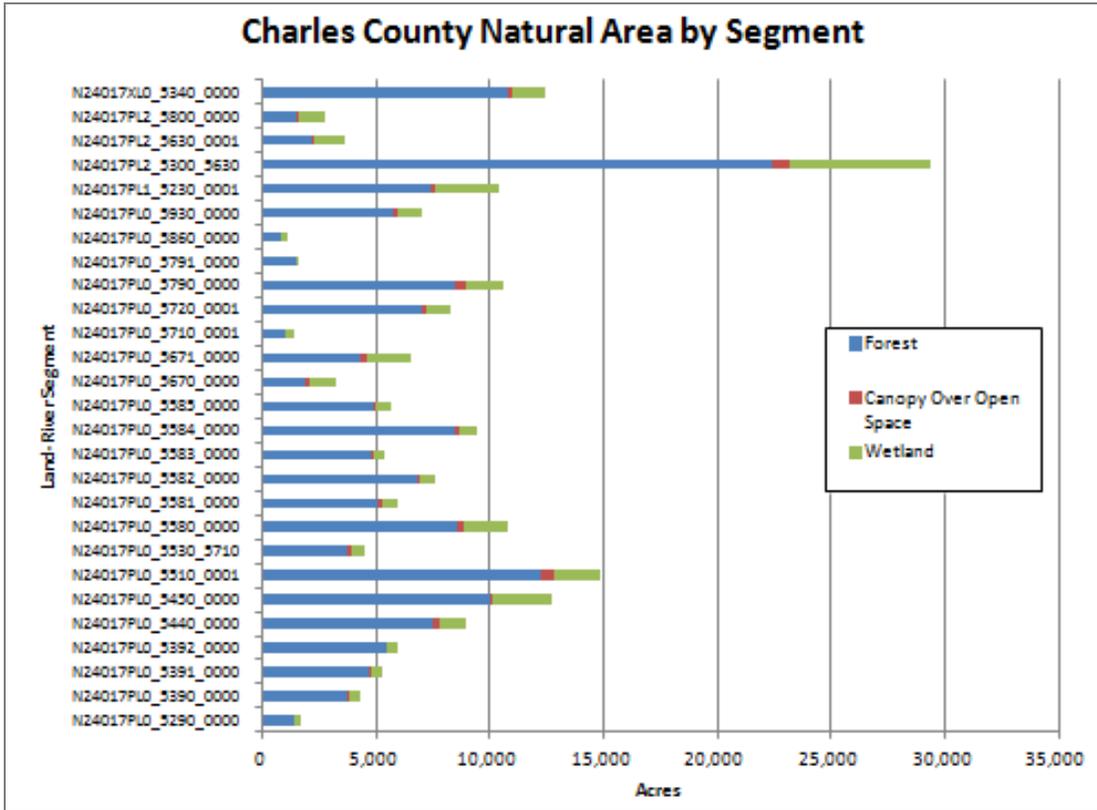
Forest: Contiguous tree canopy cover (University of Maryland’s 1 m resolution tree canopy cover data) that is greater than 1 acre in size and greater than 120 ft in width. This area excludes any canopy cover associated with wetlands.

Canopy over Open Space: All tree canopy cover that is not forest , is not associated with wetlands, and falls outside MD's urban mask. The urban mask contains Phase 5.3.2 model urban and suburban zones, all parcels that have a >\$10,000 improvement value and are not Agriculture or large-lot Residential development, and all road right-of-ways.

Wetlands: Estimated using NWI and DNR wetland delineations, with open water areas removed. The acres presented here include tidal wetlands, but it should be noted that the Chesapeake Bay Program Partnership recently decided to move tidal wetlands from the watershed model to the estuarine water quality model.



Charles County Natural Area by Segment



Charles County Land-River Segments

