



Forest Conservation Program Annual Report



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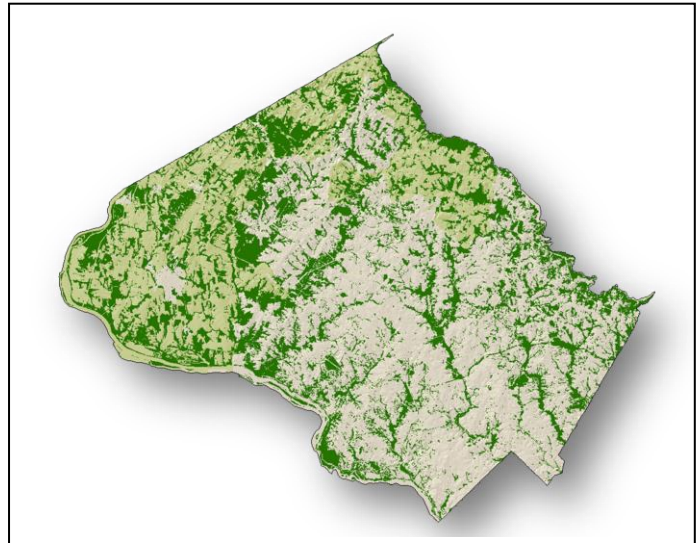
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Description

Forest Conservation Program Annual Report

Staff Recommendation: Transmit Data to Maryland Department of Natural Resources (DNR)

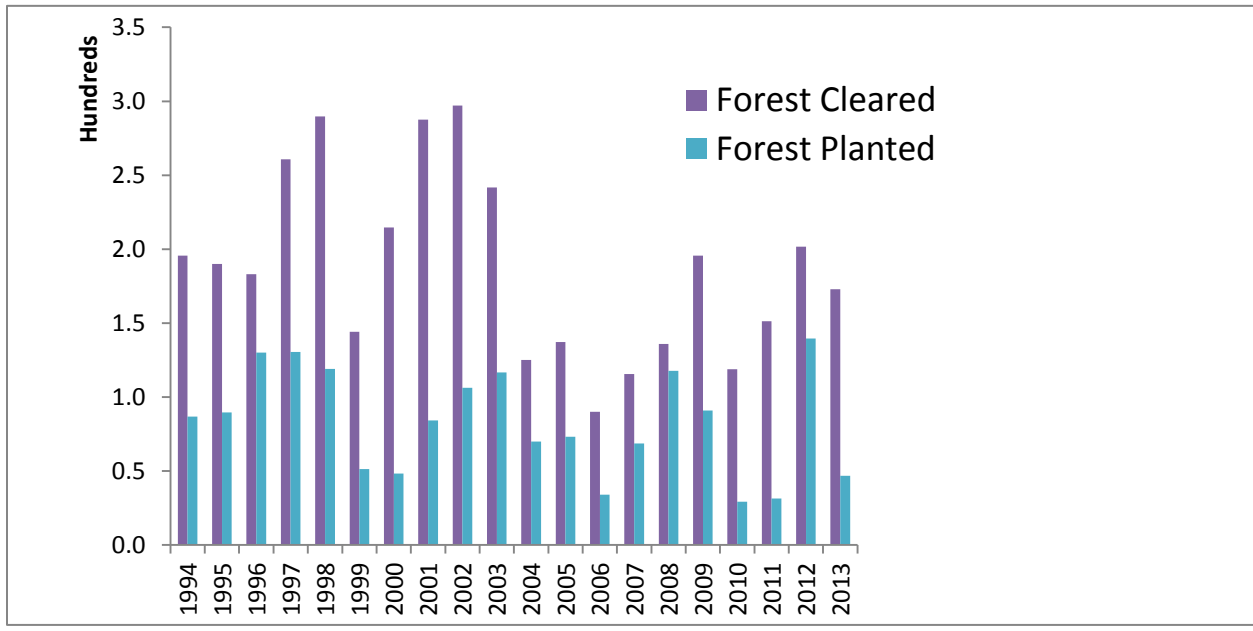


SUMMARY

The State Forest Conservation Law requires all jurisdictions to report to DNR each year regarding efforts to implement and enforce the law. See tables below. This report includes these findings as well as other aspects of the forest conservation program and forest related issues.

PROJECT DESCRIPTION

The Forest Conservation Program in Montgomery County has been in effect for over twenty years. The Maryland State Department of Natural Resources requires accurate record-keeping and annual reports from all jurisdictions administering the Forest Conservation Law (see attachment 1). The County continues to experience an average of just under 200-acres of forest loss due to development each year. Onsite forest planting averages 83 acres.



Forest Conservation Easements

Forest protected both on development sites and off-site averages approximately 470-acres per year. 238-acres were placed in conservation easements on private land in FY2013. This brings the total easement area owned by M-NCPPC to 10,800 acres, approximately 9,500-acres obtained through the forest conservation program. These figures do not include other easement types such as scenic easements or those held by other jurisdictions such as the City of Rockville. Nor do they privately held easements.



Reforestation Program

The reforestation program uses in-lieu fees from developers unable to meet their forest mitigation

requirements onsite or at a Forest Bank. In the spring of 2008, in partnership with the Parks Department, the Planning Department began using these funds to plant the forested areas for which they were intended. Staff targeted unforested areas of park land that would benefit from forest planting. Nearly 20 acres of forest have been planted through this program.

- **Reddy Branch Stream Valley Park** in Brookeville within the Patuxent River watershed. Nearly the entire denuded stream buffer has been planted with over seven acres of forest. The canopy is beginning to close over the first planting phases making the area less vulnerable to invasive species. More recent plantings continue to receive care from the Izaak Walton League which brings volunteers to the site twice a year. This site has also been adopted by a Parks Department volunteer who is part of the Tree Stewards Program.
- **Rock Creek Stream Valley Park** in Chevy Chase. This site covers about four acres along the mainstem of Rock Creek. Plantings have been done to create and increase a forested buffer in this area. This is a popular site for corporate volunteer efforts due to its location in the down County. This site has also been adopted by a Volunteer Tree Steward.
- **Watts Branch Stream Valley Park** in Potomac. This floodplain area along the mainstem of Watts Branch is just upstream from the Potomac Filtration Plant Intake. Over a 1400 trees totaling seven acres have been planted in this location since 2010. This site has also been adopted by a Volunteer Tree Steward.
- **Rachel Carson Conservation Park** in Laytonsville. Located along the Hawlings River mainstem in the Patuxent River watershed, this site was first planted in 2013 with 250 trees. This planting was done in partnership with the Parks Department with Pope Farm supplying the plant material.
- **Oak Ridge Conservation Park** in Damascus. Oak Ridge is the most recent planting site approved by the Parks Department. Located the headwaters of Little Bennett Creek, a high quality Use III stream, this area was recommended for Park acquisition in the 2006 Damascus master plan: “Adding the designated portion of the Little Bennett Creek Headwaters Area to the park system will provide critical additional protection for a sensitive watershed with very high water quality. Large section of the lower part of the watershed area already in park ownership as Little Bennett Regional Park and the proposed acquisition area will provide environmental protection to the connectivity with the existing parkland. This area of high quality forest contributes to protection of water quality of Little Bennett Creek.” Planting will begin in the fall of 2014 with emphasis on sensitive areas such as steep slopes and stream buffers that are currently farmed.

Volunteer Efforts

Once planting has taken place, the young trees need significant care for the next few years. Although staff continues to employ contractors to do some of this work, such as treatment for invasives and occasional mowing, we have relied heavily on volunteer efforts to maintain deer protection. Tasks include building and repair of deer protection around trees and removal of invasive vines.

Volunteer Events				
Fiscal Year	Events	Participants	Total Hours	Cost
2010	2	24	72	0
2011	5	61	183	\$1,353.10
2012	5	89	167	\$2,642.98
2013	6	134	377	\$1,678.87
2014	5	106	268	\$2,322.78
Average	5	98	249	\$1,999.43

In-lieu fees provided fence materials and tools for these efforts. The average expenditure per year for the volunteer program has been about \$2,000.00 per year. This is minimal compared to the cost of hiring contractors for the same work. We have established relationship with the local Wildlife Achievement Chapter of the Izaak Walton League who brings volunteer groups to the Reddy Branch planting site twice each year. In partnership with the Parks Department, other efforts have included high school youth groups and corporate groups such as Marriot and MedImmune.

Leaves for Neighborhoods Program

Leaves for Neighborhoods is a coupon program established in 2010 and funded by in-lieu fees from developers unable to meet forest mitigation requirements on-site. Coupons are worth \$25.00 when a qualifying tree is purchased from participating private nurseries in Montgomery County. The program continues to be popular with 816 coupons were redeemed in FY2013, with the program averaging 650 coupons per year.

Shades of Green

In 2009 Maryland State DNR amended the restrictions that governed the use of in-lieu-fee funds. Rather than being restricted to use for forest only, the fund could now be used to meet urban tree canopy goals. This opened up the potential for using developer funds to enhance urban forest and improve the quality of life in urban areas. Since then staff has work to develop an urban planting program. Over the last four years this has evolved into the Shades of Green program. Last year staff partnered with Casey Trees to plant trees in targeted urban areas.

GIS Forest Layer Update

Area and Countywide forest analysis requires an accurate GIS layer. The Planning Department did the first comprehensive forest layer update in 2010 using the 2008 air photos. Prior to that, the GIS forest layer was updated concurrent with every master plan update resulting in an analysis tool that was not consistent throughout the County. The 2008 forest layer established an accurate tool and has been used extensively since then both for large and small scale analyses.

Baseline Countywide Data from the 2008 Forest Analysis:

- 29% of the county is forested
- The agriculture reserve is 34% forested
- The urban ring is 13% forested.
- Corridor areas outside the urban ring are 18% forested
- Other suburban areas are 38% forested

Staff has recently undertaken to create an updated forest layer using the 2013 air photos. At six-inch resolution, this layer will be the most accurate yet. With this new data, trends in forest gains, losses and quality can begin to be observed. Staff from the Parks Department is participating in the editing effort with a focus on forest within the Park system.

Tree Canopy Assessment

In 2009 the Planning Department recently contracted with the University of Vermont's Spatial Analysis Laboratory (SAL) to perform a canopy cover assessment that included a high-resolution land cover dataset and tree-canopy/land-cover data.

Canopy cover differs from forest cover in that a canopy analysis includes the canopy of individual trees and small groups of trees that are too small, too narrow, or co-existing with too many built structures to be considered a functioning forest. A forest analysis uses leaf-off (winter) air photos and places a great emphasis on the existence of a forest floor. A canopy analysis uses leaf-on (summer) air photos and includes both the canopy area of forest and of individual trees no matter what other structures, lawns or road exist around them.

The goal of the tree canopy assessment is to increase our understanding of our green infrastructure that currently exists within urban areas. This analysis focuses on urban and suburban areas where little or no forest is likely to exist. In these areas the presence of trees, although lacking many of the functions of a forest, still have a significant impact of air quality, stormwater runoff, energy use, and the heat-island effect. The analysis is used to answer questions such as:

- What percentage of urban areas in the County are shaded by tree canopy?
- Which areas in a sector plan lack shade and should be targeted for planting?
- What is a realistic tree-canopy goal in any given area?
- Which urban areas have the greatest percentage of unshaded impervious surfaces?
- What neighborhoods have below-average tree canopy?

The Planning Department has again contracted with the University of Vermont to update the 2009 canopy analysis using 2013 data. Results should be available by the end of the year.

CONCLUSION

The Forest conservation Program Annual Report is a summary of the impact of development on the forest in Montgomery County. Staff recommends transmitting the report to the Maryland Department of Natural Resources.

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ATTACHMENT



Composite Montgomery County Forest Conservation Annual Report

Fiscal Year	Total Reviews Project Reviews	Exemptions Total exemptions and NRs	Projects Reviewed Total regulated activities reviewed	Net Tract Area Net tract area under review	Existing Forest Forest in net tract area minus floodplain	Cleared Forest All forest cleared including floodplain	Retained Forest			Planted Forest All forest planted for all projects			Fiscal Year	Long Term Protection Acreage of forest placed in easement on private land	Forest Mitigation Banks			
							onsite	offsite	total	onsite	offsite	total			Newly Created	Debited	Newly Created	Debited
1994	183	54	129	2,147.7	651.7	195.5	449.9	20.9	470.7	86.9	33.5	120.4	1994	394.4	NR	NR	NR	NR
1995	310	206	104	1,351.3	417.2	189.9	226.6	23.5	250.1	89.6	20.0	109.6	1995	432.0	NR	NR	NR	NR
1996	176	88	88	1,771.0	504.0	183.1	320.7	75.1	395.8	130.0	6.7	136.7	1996	347.1	NR	NR	NR	NR
1997	158	79	79	2,803.6	819.4	260.7	558.6	84.2	642.7	130.5	13.5	144.0	1997	383.8	NR	NR	NR	NR
1998	191	97	94	2,316.1	926.2	289.8	635.9	14.2	650.2	119.0	19.6	138.6	1998	679.5	NR	NR	NR	NR
1999	175	88	87	1,144.6	391.2	144.0	248.8	23.3	272.1	51.4	19.1	70.4	1999	611.5	NR	NR	NR	NR
2000	199	100	99	1,412.2	541.2	214.8	327.2	58.6	385.7	48.3	23.6	71.8	2000	605.2	NR	NR	NR	NR
2001	169	84	85	2,001.2	797.7	287.6	515.1	14.9	530.0	84.2	8.8	93.0	2001	667.3	NR	NR	NR	NR
2002	183	95	88	2,748.5	959.1	297.2	660.1	59.7	719.8	106.3	23.0	129.4	2002	516.1	NR	NR	NR	NR
2003	315	233	82	3,871.1	1,768.9	241.7	1,481.6	23.2	1,504.8	116.7	30.1	146.8	2003	729.5	NR	NR	NR	NR
2004	130	57	73	1,217.8	397.8	125.0	273.1	26.3	299.4	70.0	24.5	94.5	2004	417.8	NR	NR	NR	NR
2005	440	379	61	1,356.6	478.1	137.2	344.8	9.7	354.5	73.2	20.2	93.4	2005	431.3	NR	NR	NR	NR
2006	459	394	65	933.8	271.4	90.0	182.4	27.0	209.4	33.9	5.6	39.5	2006	494.4	NR	NR	NR	NR
2007	140	70	70	1,085.4	352.0	115.6	236.9	23.1	260.0	68.6	16.3	84.9	2007	522.8	NR	NR	NR	NR
2008	321	236	85	2,513.9	711.8	135.8	573.3	98.1	671.3	117.8	13.0	130.7	2008	1117.0	160.5	24.0	0.0	17.9
2009	330	253	77	1,695.6	542.7	195.6	346.2	28.3	374.5	90.9	35.5	126.3	2009	154.3	70.9	45.4	0.0	0.1
2010	307	252	55	1,550.6	827.8	118.8	708.9	34.1	743.0	29.2	14.6	43.7	2010	131.1	0.0	39.7	0.0	0.0
2011	309	240	69	970.9	348.5	151.2	193.5	43.0	236.4	31.4	12.2	43.6	2011	244.5	3.9	39.0	7.3	2.4
2012	254	196	58	2,527.7	650.3	268.1	381.4	54.6	435.9	202.9	40.4	243.3	2012	358.3	7.8	27.1	2.1	0.0
2013	274	203	71	1,505.6	531.9	172.9	371.5	89.0	460.5	46.9	48.3	95.1	2013	237.5	6.6	50.1	0.9	0.0
Totals:	5,023	3,404	1,619	36,925.2	12,888.6	3,814.3	9,036.3	830.8	9,867.1	1,727.3	428.3	2,155.6	Totals:	9,475.4				
Average:	251	170	81	1,846	644	191	452	42	493	86	21	108	Average:	474				