



Montgomery County Tree Canopy Law 2017 Annual Report

This report is prepared pursuant to Section 55-9 of the Montgomery County Code, which requires the Departments of Permitting Services (DPS) and Environmental Protection (DEP) to jointly submit an annual report on the “County shade tree planting program” established by the Montgomery County Tree Canopy Law.

This year’s report shifts from reporting data based on calendar year to fiscal year. The Tree Canopy Law stipulates that shade trees can only be installed through the fall, winter, and early spring, between October 15th and April 30th. Therefore, reporting on a fiscal year basis (July 1 – June 30) will align the data with the tree planting period, as well as with the County’s budget cycle. This 2017 report reflects activities and data from the effective date of the law on March 1, 2014 through June 30, 2016, the end of the 2016 fiscal year. However, some additional information related to tree planting activities has been provided through March 1, 2017 to assist with the transition to reporting by fiscal year.

Background

The Tree Canopy Law generally applies to development activity subject to a sediment control permit from Montgomery County. Activities required to mitigate under the Forest Conservation Law, activities conducted by Montgomery Parks, and routine activities conducted by public utilities are exempt from the Tree Canopy Law. Generally, agricultural activities are not required to obtain sediment control permits and as such are not subject to the Tree Canopy Law. The Cities of Rockville and Gaithersburg issue their own sediment control permits and, therefore, are not subject to Montgomery County’s sediment control permits or the Tree Canopy Law. In addition, under state law, incorporated municipalities have the authority to decide whether the Tree Canopy Law applies within their boundaries. To date, the Town of Barnesville, the Town of Brookeville, Chevy Chase Section 5, and the Town of Glen Echo have opted to have the law apply to properties within their jurisdiction.

Activities regulated by the Tree Canopy Law are required to provide mitigation in the form of planting shade trees on the site where the disturbance occurs. Applicants can choose not to plant the required shade trees and, instead, pay fees into the Tree Canopy Conservation Account for any reason. This account is a dedicated fund that can only be used by the County to plant and establish shade trees. A significant portion of the funds deposited into the Tree Canopy Account come from the building and development community.

DPS is responsible for implementing the Tree Canopy Law and DEP is responsible for implementing programs to utilize the funds in the Tree Canopy Conservation Account to plant and establish shade trees. In addition to the planting programs, DEP is required to implement programs to increase awareness and long-term care of trees, and provide data management and mapping tools to track plantings across the County.

Compliance with the Tree Canopy Law

The Tree Canopy Law took effect on March 1, 2014. As reported in the past, implementation is relatively straightforward and compliance is high. The review and inspection procedures followed by DPS are also straightforward and do not increase the time needed for approval of applications, interim field inspections, or closure of sediment control permits. To assist applicants with meeting the application and mitigation requirements, DPS maintains information on its website including a Tree Planting Area Guideline, Standard Tree Canopy Notes, a Tree Canopy Requirements Table, an Approved Shade Tree List, a Sediment Control Plan Review Checklist, and a Tree Planting Detail.

As shown in Figure 1, DPS approved 1,204 applications for sediment control permits applied for between March 1, 2014 when the Tree Canopy Law took effect and the end of FY16. Of these approved permits, 516 permits (43 percent) were required to meet the mitigation requirements under the Tree Canopy Law. The sediment control permits subject to the Tree Canopy Law ranged in size from small single-family lots of less than 5,000 square feet to large projects with disturbances over 25 acres.

Figure 1. Sediment Control Permits Subject to the Tree Canopy Law

	FY14*	FY15	FY16	Total
Total Approved Sediment Control Permits	178	501	525	1,204
Approved Permits Requiring Mitigation under the Tree Canopy Law	13	211	292	516

*Data for FY14 in Figure 1, and all subsequent figures, includes only the portion of the fiscal year after March 1, 2014, the effective date of the law.

Mitigation Required by the Tree Canopy Law

The Tree Canopy Law requires mitigation for the area disturbed during development activity. Mitigation is required in the form of shade trees planted on the same property where the disturbance occurred. Alternatively, applicants for sediment control permits can choose, for any reason, to pay a fee into the Tree Canopy Conservation Account. The Tree Canopy Law sets the fee equivalent to the bond required by DPS for street trees on permits issued for work in

Montgomery County rights-of-way. The rate has remained at \$250 per tree since the law was enacted.

County law requires the mitigation fees to be paid before a sediment control permit is issued. Any shade tree proposed to be planted on site must be installed prior to the closure of the permit. Typically, installation of required shade trees occurs at the end of the permitted activity. Applicants are allowed to revise plans to accommodate unanticipated plantings or pay fees rather than install proposed shade trees at any time prior to closure of the permit.

DEP and DPS continue to have discussions with the development and building community about the minimum planting requirements for trees planted to meet the mitigation requirements of the law. Further, the departments are working with the development and building community to streamline and prioritize applications for Tree Montgomery trees at sites where new development has resulted in fees being paid into the Tree Canopy Account. All parties share the goal of increasing the number of trees planted on the property where development subject to the law has occurred.

Figure 2 shows the amount of mitigation required, the number of trees proposed to be planted, and dollars paid by applicants. From the enactment of the Law, through the end of FY16, the 516 sediment control permits that were subject to mitigation under the Tree Canopy Law required the installation of, or equivalent fees paid, for 5,780 shade trees. Of this total number of trees required as mitigation, applicants proposed to install 727 shade trees, or 13 percent. Fees were paid to meet the mitigation requirement for the 5,053 shade trees that were not planted. This resulted in a total payment of \$1,263,250 into the Tree Canopy Conservation Account through the end of FY16.

Figure 2. Mitigation Required, Trees Planted, and Fee Payments

	FY14	FY15	FY16	Total
Approved Permits Subject to Mitigation	13	211	292	516
Total Shade Trees Required as Mitigation	106	2,291	3,383	5,780
Trees Planted as Mitigation	44	196	487	727
Trees for Which Fees Were Paid as Mitigation	62	2,095	2,896	5,053
Value of Fees Paid as Mitigation	\$15,500	\$523,750	\$724,000	\$1,263,250

Figures 3 – 7 provide additional information on the distribution of trees proposed to be planted by applicants and fees paid based on geographical location.

Figure 3 shows the geographic distribution by zip code of the trees proposed to be planted by applicants from the March 1, 2014 effective date of the law through the end of FY16. Figure 4 provides the same information for fees paid by applicants. Figure 5 provides a breakdown of

this data in an alternate format. Figure 6 provides the data on the geographic distribution by zip code of the trees proposed to be planted and fee payments in tabular format. Based on the approved permits subject to mitigation, development activity in the zip codes encompassing Bethesda, Chevy Chase and Silver Spring resulted in nearly three-quarters of the mitigation fees paid through FY16.

Figure 7 provides information on the distribution of trees proposed to be planted by applicants and fee payments based on the area of disturbance on the properties. Through the end of FY16, sediment control permits approved for disturbances up to 12,000 square feet made up 61 percent of all permits required to comply with the Tree Canopy Law and contributed 40 percent of all mitigation required. Approved permits for disturbances over 12,000 square feet made up 39 percent of those required to comply and contributed 60 percent of the required mitigation.

Of the 516 approved permits, 62 applicants, or 12 percent, proposed to install at least one shade tree on site. The remainder paid fees to meet the requirements for at least one tree. These 62 permit holders proposed installation of 727 trees, with 93 percent planted on sites larger than 12,000 square feet. Fee payments were made by 486 permit holders, totaling \$1,263,250.

Figure 3. Number of Trees Planted by Applicants by Zip Code
FY14 – FY16

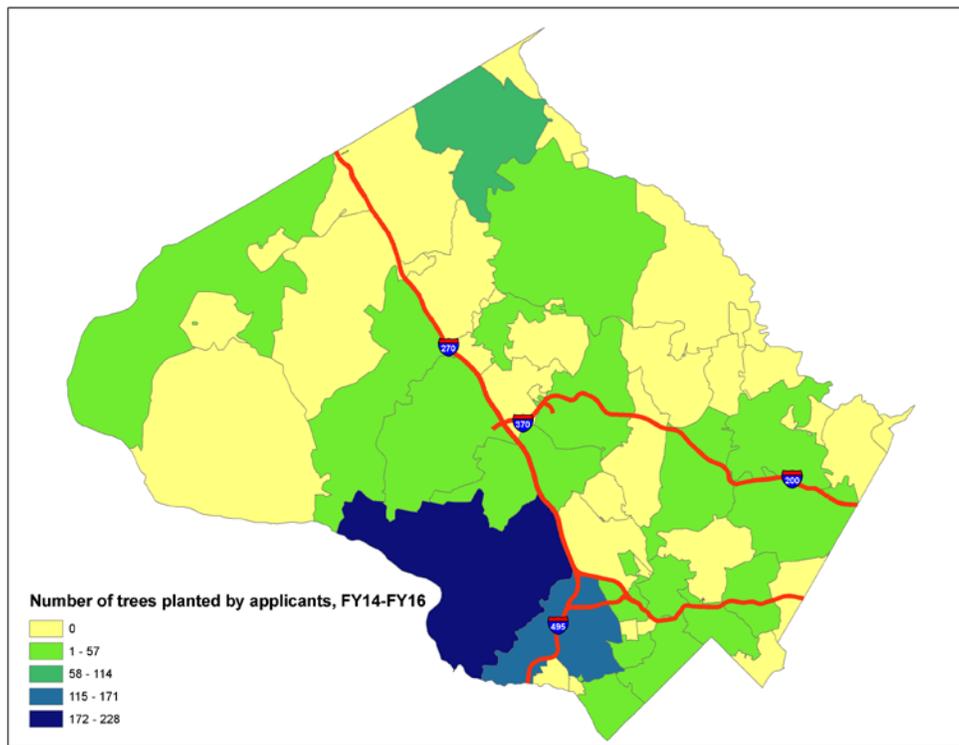


Figure 4. Number of Trees for Which Fees Were Paid by Applicants by Zip Code
FY14 – FY16

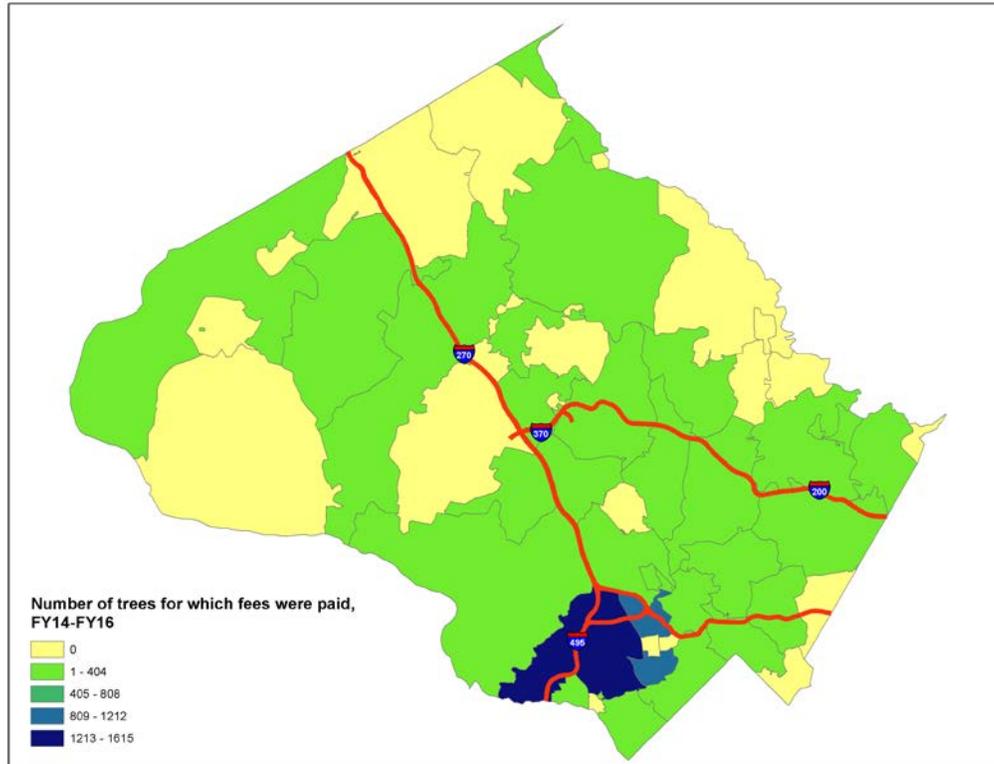


Figure 5. Fees Paid by Zip Code and Geographic Area
FY14 – FY16

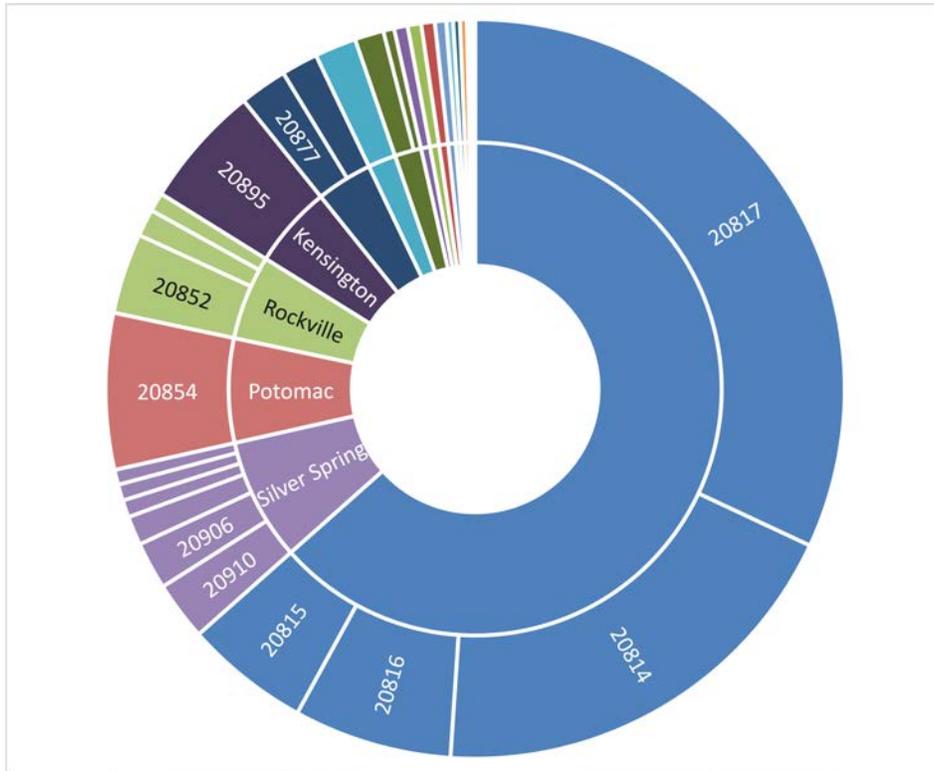


Figure 6. Trees Planted and Trees for Which Fees Were Paid by Zip Code and Geographic Area
FY14 – FY16

Zip Code	Geographic Area	Trees Planted				Trees for Which Fees Were Paid			
		FY14	FY15	FY16	Total	FY14	FY15	FY16	Total
20814	Bethesda	-	-	6	6	24	285	656	965
20815	Chevy Chase	-	11	12	23	-	141	135	276
20816	Bethesda	3	22	-	25	9	134	207	350
20817	Bethesda	1	33	89	123	29	754	832	1,615
20818	Cabin John	-	-	-	-	-	9	21	30
20832	Olney	-	-	-	-	-	-	25	25
20841	Boyd's	-	-	-	-	-	30	-	30
20842	Dickerson*	-	-	50	50	-	-	15	15
20850	Rockville	-	-	15	15	-	21	39	60
20852	Rockville	-	-	-	-	-	63	115	178
20853	Rockville	-	-	-	-	-	27	15	42
20854	Potomac	40	48	140	228	-	200	145	345
20855	Derwood	-	-	16	16	-	9	83	92
20866	Burtonsville	-	-	-	-	-	-	30	30
20868	Spencerville	-	-	-	-	-	-	15	15
20871	Clarksburg*	-	-	-	-	-	-	-	-
20872	Damascus*	-	30	30	60	-	-	-	-
20874	Germantown	-	27	4	31	-	-	64	64
20876	Germantown	-	-	-	-	-	-	24	24
20877	Gaithersburg	-	-	-	-	-	81	24	105
20878	Gaithersburg	-	-	30	30	-	-	-	-
20882	Gaithersburg	-	-	15	15	-	78	3	81
20886	Mont. Village	-	-	19	19	-	15	-	15
20895	Kensington	-	3	-	3	-	120	152	272
20896	Garrett Park	-	-	-	-	-	-	9	9
20901	Silver Spring	-	-	21	21	-	18	46	64
20902	Silver Spring	-	-	-	-	-	15	18	33
20904	Silver Spring	-	-	15	15	-	-	38	38
20905	Silver Spring	-	19	10	29	-	15	21	36
20906	Silver Spring	-	-	15	15	-	26	79	105
20910	Silver Spring	-	3	-	3	-	45	85	130
21771	Mt. Airy*	-	-	-	-	-	9	-	9
Total		44	196	487	727	62	2,095	2,896	5,053

*Within this zip code, only properties within Montgomery County are subject to the Tree Canopy Law.

Figure 7. Trees Planted by Applicants and Fee Payments by Area of Disturbance
FY14 – FY16

Limit of Disturbance (sq. ft.) ¹	Permits Subject to Mitigation	Mitigation Required (Total Trees)	Applicants Who Planted Trees	Number of Trees Planted by Applicants ²	Applicants Paying Fees	Trees for Which Fees Were Paid	Fee Payments
0-6,000	40	120	2	4	39	116	\$29,000
6,001-8,000	100	600	6	13	100	587	\$146,750
8,001-12,000	175	1,575	9	35	174	1,540	\$385,000
12,001-14,000	34	408	5	32	32	376	\$94,000
14,001-40,000	124	1,860	19	226	112	1,634	\$408,500
>40,000	43	1,217	21	417	29	800	\$200,000
Total	516	5,780	62	727	486	5,053	\$1,263,250

1. Limit of disturbance data is from approved Sediment Control Permits. Categories of area of limit of disturbance correspond with those outlined in the Tree Canopy Law.
2. The number of applicants planting trees plus the number of applicants paying fees may exceed the number of applicants subject to the law because some applicants satisfy their mitigation requirement through a combination of planting and paying the fee.

Planting Programs

Tree Montgomery is a shade tree planting and awareness program. This planting program meets the requirements of Section 55-10 of the County Code to utilize the funds in the Tree Canopy Conservation Account. The code specifies that the funds shall be used “only to plant and maintain shade trees.” Therefore, funds in the Account are used to purchase, install, and provide aftercare for shade trees. *Tree Montgomery* works with property owners to find appropriate locations to plant shade trees and provides owners with information about the benefits and long-term care of trees.

Between the launch of *Tree Montgomery* in April 2015, and the end of December 2016, 1,573 applications for shade trees were received. As in past years, the applications were concentrated in the highly urban areas of Montgomery County. Initially, while *Tree Montgomery* was under development, applications for shade trees plantings were largely processed in the order they were received. Starting in early 2016, priority was given to applications received from several zip codes where high numbers of sediment control permits were issued and fees were paid to meet the requirements of the Law. Throughout the remainder of 2016 and into 2017, the two highest priority zip codes for *Tree Montgomery* were Bethesda’s 20814 and 20817.

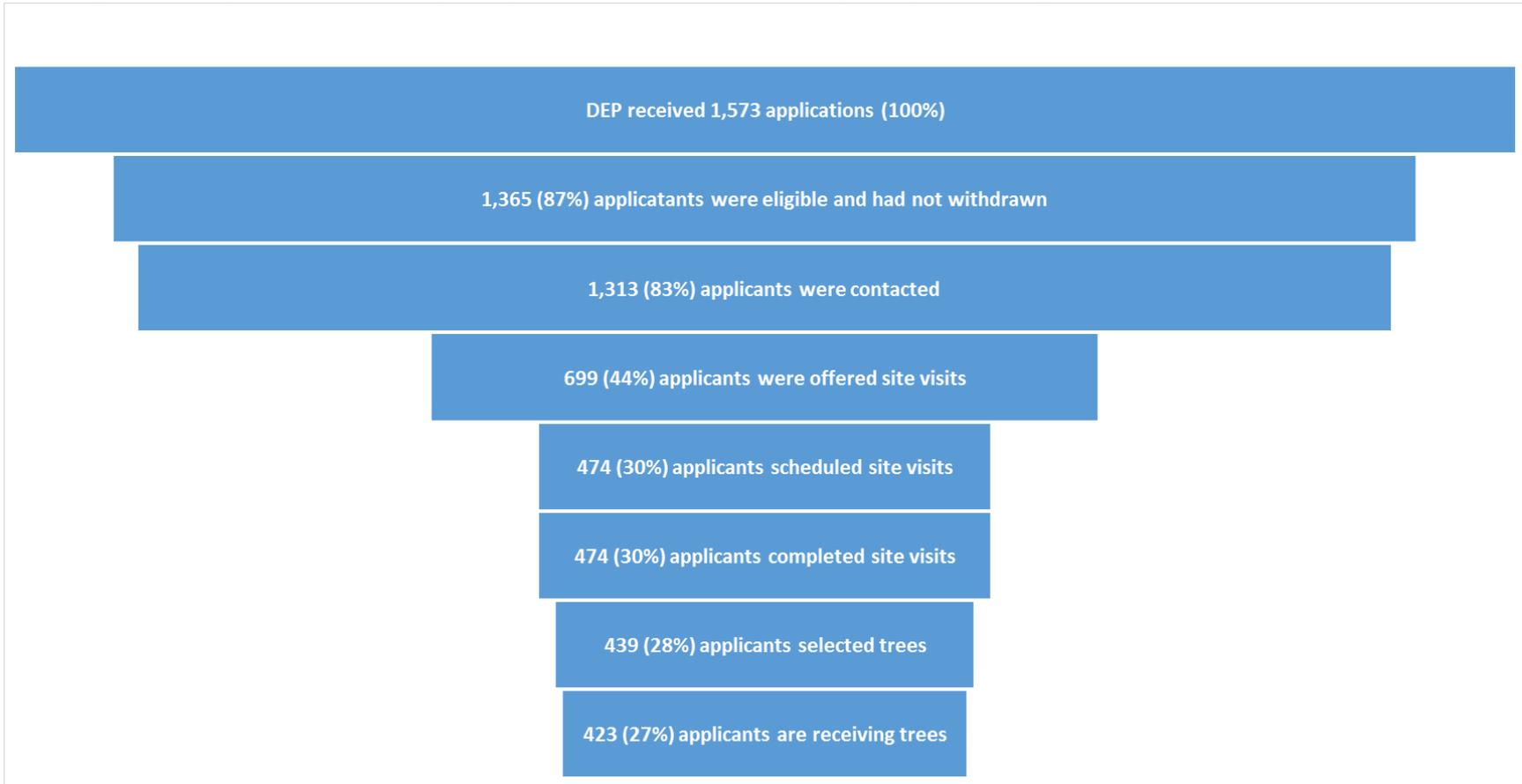
The applications for *Tree Montgomery* were tracked through the process from application to installation of shade trees. Currently, the process includes the following steps:

1. Applicant completes a simple on-line form to apply and receives an automated email to confirm receipt of application.
2. Applicant receives by email an invitation to schedule a site visit; DEP and applicant agree on date and time; applicant receives an email confirming site visit.
3. Site visit occurs; DEP meets with each applicant to jointly select appropriate planting locations and species, answer questions, and provide advice about long-term care.
4. Applicant receives a customized and detailed email following the site visit.
5. Applicant and DEP finalize selection of species and locations.
6. Applicant completes the access agreement, typically electronically; this agreement is necessary to allow access to the property for planting and aftercare activities.
7. DEP orders, installs, and inspects the shade tree(s).
8. The applicant receives a follow up email congratulating them on their new shade tree(s) and providing watering instructions.

Throughout this process, staff is available to assist applicants with any questions or concerns. DEP reached out at least three times to applicants who did not respond to emails requesting site visits to help ensure that everyone who applied had an opportunity to complete the process.

Figure 8 shows the progress of applications as they moved through the steps outlined above between the time the program was launched and the end of 2016. Of the 1,573 applications, 1,365 did not drop out of the process. Reasons for dropping out include wanting street trees rather than trees on the applicant's property, wanting ornamental trees, or a desire to move forward with planting at a faster pace. To date, nearly 700 applicants were offered site visits and each applicant who remained interested, or 474, participated in a site visit. Following the site visit, 439 applicants finalized their selections for locations and species, and 423 completed the access agreement and will have received at least one free shade tree by the end of this planting season (April 2017).

Figure 8. Progress of *Tree Montgomery* Applicants between the beginning of the program and the end of December 2016



The Tree Canopy Law specifies that the mitigation funds must be used to plant and establish shade trees, and that priority should be given to subwatersheds where the disturbance is occurring and to areas that have relatively low tree canopy coverage. DEP continues to work towards identifying the number of permits approved and the amount of disturbance in each subwatershed. In the interim, DEP is using zip codes to track where disturbance occurred to identify areas to target for planting shade trees. While neighborhoods were not targeted during 2015, *Tree Montgomery* began targeting neighborhoods on the east and west sides of Bethesda in early 2016.

The Tree Canopy Law stipulates that shade trees can only be installed through the fall, winter, and early spring, between October 15th and April 30th. During the first planting season of *Tree Montgomery*, 47 shade trees were installed, approved, and invoiced in the spring of 2015 (FY15). In the second planting season, the fall and winter of 2015-2016 (FY16), 456 shade trees were installed, approved, and invoiced. In the current planting season, the fall and winter of 2016-2017 (FY17 through March 1), 582 shade trees were installed, approved, and invoiced before March 1st with additional plantings planned for March and April, 2017.

The 456 trees reported as planted in the FY16 planting season is less than the 485 trees reported as planted during this period in last year's annual report. The difference results from a refinement to the data management process for the program (see discussion that follows in the section entitled *Database & Mapping Tools*). In this and all future reports regarding *Tree Montgomery*, the number of trees planted will be based on trees installed, approved, and invoiced as noted above. The figure reported last year included some trees ordered or installed but not acceptable and therefore, not invoiced as anticipated due to a variety of reasons (e.g., incorrect species, poor quality trees, etc.). Reporting only trees that are invoiced will allow for consistent reporting and a closer relationship between the number of trees planted and the actual costs for planting and aftercare.

Figure 9 shows the distribution of trees planted by *Tree Montgomery* by zip code since the start of tree planting activity in FY15 through the end of FY16, while Figure 10 shows the distribution when the trees planted through March 1 (part of the FY17 planting season) are included. The concentration of shade tree plantings during FY17 in the priority zip codes is evident when comparing these two figures.

Figures 11 and 12 show this same data in an alternative format. As shown in Figure 11, through FY16, approximately 33 percent of the *Tree Montgomery* shade trees were planted in Silver Spring, while 26 percent were in Bethesda and Chevy Chase. Figure 12 illustrates that by March 1, 2017, the percentage of trees planted in Bethesda and Chevy Chase was greater than in Silver Spring (28 percent and 27 percent, respectively), highlighting the focus on the Bethesda and Chevy Chase areas subject to extensive redevelopment.

Figure 13 shows the trees planted by applicants, trees for which fees were paid, and trees planted by *Tree Montgomery* by zip code and geographic area in tabular form.

Figure 9. Distribution of Trees planted by *Tree Montgomery* by Zip Code FY15 – FY16

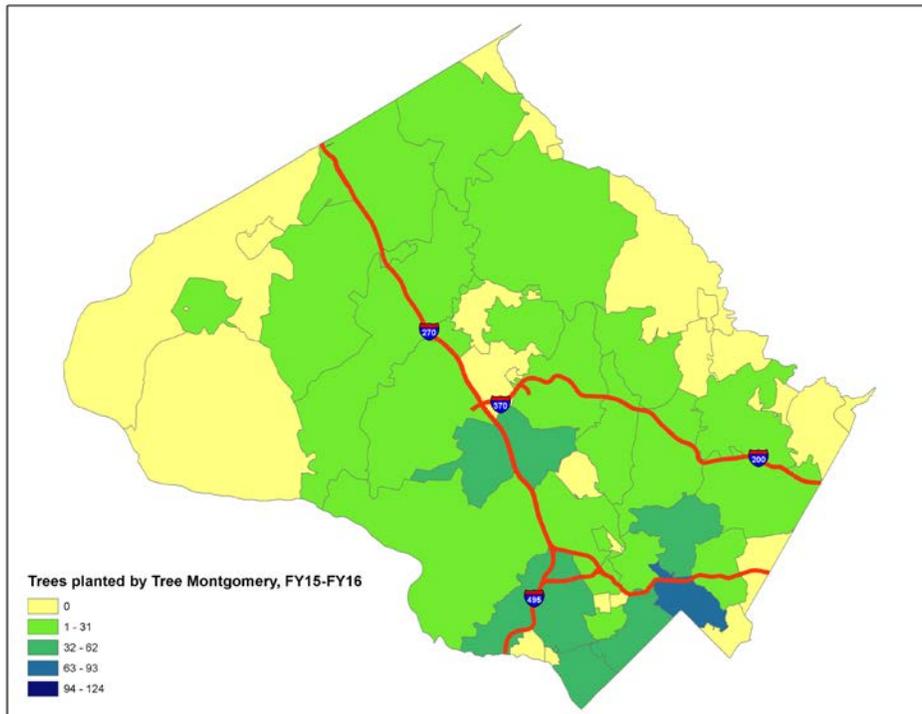


Figure 10. Distribution of Trees planted by *Tree Montgomery* by Zip Code FY15 – FY17 (through March 1)

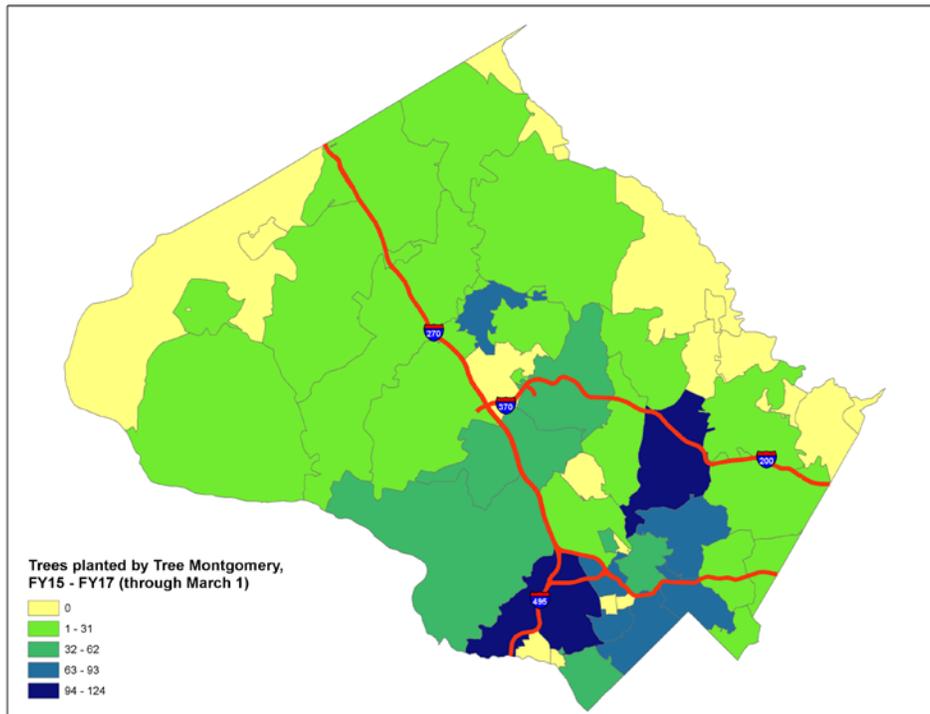


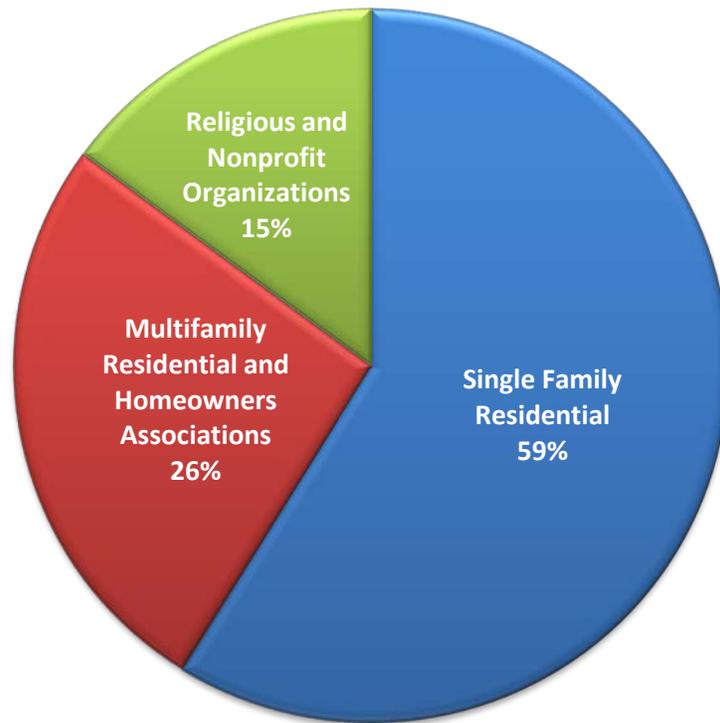
Figure 13. Trees Planted by Applicants, Trees for Which Fee Were Paid, and Trees Planted by *Tree Montgomery* by Zip Code and Geographic Area

Zip Code	Geographic Area	Trees Planted by Applicants, FY14 – FY16	Trees for Which Fee Payments Were Made, FY14 – FY16	Trees Planted by <i>Tree Montgomery</i> , FY15 - FY16	Trees Planted by <i>Tree Montgomery</i> , FY17 (through March 1)
20814	Bethesda	6	965	18	51
20815	Chevy Chase	23	276	44	25
20816	Bethesda	25	350	32	13
20817	Bethesda	123	1,615	37	87
20818	Cabin John	-	30	-	-
20832	Olney	-	25	11	-
20837	Poolesville	-	-	-	16
20839	Beallsville	-	-	2	3
20841	Boyds	-	30	13	4
20842	Dickerson*	50	15	-	-
20850	Rockville	15	60	41	14
20852	Rockville	-	178	1	3
20853	Rockville	-	42	9	-
20854	Potomac	228	345	21	40
20855	Derwood	16	92	29	3
20860	Sandy Spring	-	-	-	-
20861	Ashton	-	-	-	-
20866	Burtonsville	-	30	-	-
20868	Spencerville	-	15	-	-
20871	Clarksburg*	-	-	2	7
20872	Damascus*	60	-	7	7
20874	Germantown	31	64	11	3
20876	Germantown	-	24	22	1
20877	Gaithersburg	-	105	-	-
20878	Gaithersburg	30	-	13	-
20879	Gaithersburg	-	-	4	8
20880	Washington Grove	-	-	-	4
20882	Gaithersburg	15	81	14	8
20886	Mont. Village	19	15	-	83
20895	Kensington	3	272	7	32
20896	Garrett Park	-	9	-	-
20901	Silver Spring	21	64	16	13
20902	Silver Spring	-	33	38	37
20903	Silver Spring	-	-	-	1
20904	Silver Spring	15	38	3	5
20905	Silver Spring	29	36	20	5
20906	Silver Spring	15	105	10	84
20910	Silver Spring	3	130	78	12
20912	Takoma Park	-	-	-	13
21771	Mt. Airy*	-	9	-	-
Total		727	5,053	503	582

*Within these zip codes, only properties within Montgomery County are subject to the Tree Canopy Law and eligible for *Tree Montgomery*.

Figure 14 shows the distribution of *Tree Montgomery* plantings by property type. From the program start until June 30, 2016 (the end of FY16), 59 percent of the shade trees were planted on single family properties and 26 percent at multi-family communities and open space in HOAs. If the additional plantings installed thus far in 2017 (July through March 1st) are included, this same distribution is followed with approximately 60 percent of the shade trees planted on single family residences.

Figure 14. Trees Planted by *Tree Montgomery* by Property Type
FY15 – FY16



DEP staff worked closely with applicants and provided information about a wide array of species including the shape, color, and growth habits, as well as which would or would not thrive given the site conditions. The applicants then chose the species for their own plantings. This process resulted in 34 different species of shade trees planted of which 90 percent were native to the Piedmont region of Montgomery County through FY16 (see Figure 15). Including the additional plantings installed thus far in 2017 (July through March 1st), a similar distribution was followed.

Figure 15. Trees Planted by *Tree Montgomery* by Species
FY15 – FY16



The shade trees planted by *Tree Montgomery* were located in at least 400 square feet of open surface area consistent with the requirements governing planting by sediment control permit applicants that plant to meet their mitigation requirement. All trees were protected from damage by deer. Nearly all (97 percent) of these newly planted trees will receive two years of aftercare including watering, structural pruning, mulching, and weeding at no cost to the property owners. Nearly all of those not receiving aftercare through *Tree Montgomery* were in communities with landscaping staff committed to caring for the new trees themselves. The aftercare not only increases long-term survival rates but serves as additional opportunities for DEP to provide information and tree care tips to property owners.

The cumulative appropriations from the Tree Canopy Account amount to \$1,150,000. For all trees installed by March 1, 2017, \$596,000 has been paid for shade trees, installation, and aftercare. The total average cost per shade tree installed through *Tree Montgomery* was \$549. This average includes the cost of the shade tree, installation, a 2-year warranty and aftercare package, and deer protection. While the cost varied for each tree by species, the cost of the warranty and aftercare package (\$210) and deer protection (\$4) remained constant.

Education and Outreach

In addition to providing free shade trees, *Tree Montgomery* includes outreach and education aspects to help increase the awareness of the benefits of trees, and provide information about long-term care for trees. *Tree Montgomery's* outreach efforts also provide information about other programs and incentives for tree planting activities (e.g., programs available to residents of Rockville and Gaithersburg).

A robust outreach and education campaign has been developed and continues to be expanded and refined. The *Tree Montgomery* logo is gaining recognition for the program. In conjunction with communications consultants, DEP developed a detailed framework for a new website covering information such as the benefits of shade trees, other planting programs available in Montgomery County, and an interactive map that will show tree plantings through the Tree Canopy Law and other planting activity. The new website is targeted to launch in the summer of 2017.

Develop Database & Mapping Tools

To streamline the *Tree Montgomery* program, automated processes for many aspects of the program were developed, implemented, and revised during in the past year. These processes include improving the on-line application and signature process for the access agreements needed to conduct planting and maintenance activities on private property. Additionally, progress was made towards automating and streamlining data management and communications tasks across the program. These tasks include mapping locations for plantings; managing applications, invoices, and budgets; informing applicants of their progress; placing orders; coordinating with the planting contractor; and conducting post-planting inspections. For example, staff approves applications for trees, converts them to orders and invoices, maps

planting locations, and adds inspection results within one database. Further, the tree planting contractor receives orders, tasks, and corrections; as well as provides dates of installation and corrections through the automated data management system. This database is accessible to staff and the contractor from any electronic device with Internet access.

A public-facing map has been developed to show all newly planted trees through *Tree Montgomery* and those planted to meet the requirements of the Tree Canopy Law. Currently, this map is available through Data Montgomery and will be included on the *Tree Montgomery* website. This will allow any interested party to follow the progress of plantings in the County.

Finally, DEP and DPS continue to work together to obtain information about the location and species of the trees planted, as well as potential planting sites identified, during development and building activity subject to the Tree Canopy Law.