

## **2016 Annual Report – Montgomery County Tree Canopy Law**

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. The 2016 report reflects activities and data from the effective date of the law on March 1, 2014 through the end of calendar year 2015, the first full year the Tree Canopy Law was in effect.

### **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, each municipality may decide whether to make the Chapter 55 (Tree Canopy) of the County Code applicable within that municipality. To date, four municipalities have opted to have the law apply to properties within their jurisdiction and have enacted legislation for that purpose. These are the Town of Barnesville, the Town of Brookeville, Chevy Chase Section 5, and the Town of Glen Echo.

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. However, applicants can choose not to plant the required shade trees and, instead, pay fees into the Tree Canopy Conservation Account. This account is a dedicated fund that can only be used by the County to plant and establish shade trees. It should be emphasized that a significant portion of these funds come from the building and development community and has allowed the County to plant over 500 trees since spring 2015.

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. Implementation, for the applicants as well as for DPS, is relatively straightforward. Compliance on plans submitted with sediment control permit applications is high. The review and inspection procedures required as part of the

implementation of the Tree Canopy Law do not increase the period of 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 maintained information on its website during 2015. This information, which did not significantly change since it was developed in 2014, includes 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.

DPS approved 744 applications for sediment control permits that were submitted between March 1, 2014 when the Tree Canopy Law took effect and the end of 2015. Of these approved permits, 375 permits 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 shows the number of sediment control permits filed after March 1, 2014 that were approved in 2014 and 2015. Note that data for 2014 in Figure 1 and all subsequent figures is as of the March 1, 2014 effective date of the law.

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

	<b>2014</b>	<b>2015</b>	<b>Total</b>
Total Approved Sediment Control Permits Subject to the Tree Canopy Law	243	495	738
Approved Permits Requiring Mitigation	101	274	375

#### 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.

DPS requires 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. DPS allows applicants to pay the fee rather than install proposed shade trees at any time prior to closure of the permit.

Through the end of 2015, the 375 sediment control permits that were subject to mitigation under the Tree Canopy Law required the installation of, or equivalent fees paid for, 4,117 shade

trees. Figure 2 shows the amount of mitigation required, the number of trees proposed to be planted and dollars paid by applicants. Of the 4,117 trees required as mitigation, applicants proposed to install 488 shade trees, or 12 percent of the required mitigation. Fees were paid to meet the mitigation requirement for 3,629 shade trees, or 88 percent of the required mitigation. This resulted in a total payment of \$907,250 into the Tree Canopy Conservation Account.

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

	<b>2014</b>	<b>2015</b>	<b>Total</b>
Approved Permits Subject to Mitigation	101	274	375
Total Shade Trees Required as Mitigation	1,113	3,004	4,117
Trees Planted as Mitigation	126	362	488
Trees for Which Fees Were Paid as Mitigation	987	2,642	3,629
Value of Fees Paid	\$246,750	\$660,500	\$907,250

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 2015. Figure 4 provides the same information for fees paid by applicants.

Figure 5 provides a breakdown of this data in an alternate format. Based on the approved permits subject to mitigation, the zip codes encompassing Bethesda, Potomac, and Silver Spring comprised nearly three-quarters of the fee payments.

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.

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 2015, sediment control permits approved for disturbances up to 12,000 square feet made up 62 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 38 percent of those required to comply and contributed 60 percent of the required mitigation. Of the 375 approved permits, 44 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 44 permit holders proposed installation of 488 trees, with 92 percent planted on sites larger than 12,000 square feet. Fee payments were made by 357 permit holders, totaling \$907,250.

Figure 3. Number of Trees Planted by Applicants by Zip Code  
March 2014 through December 2015

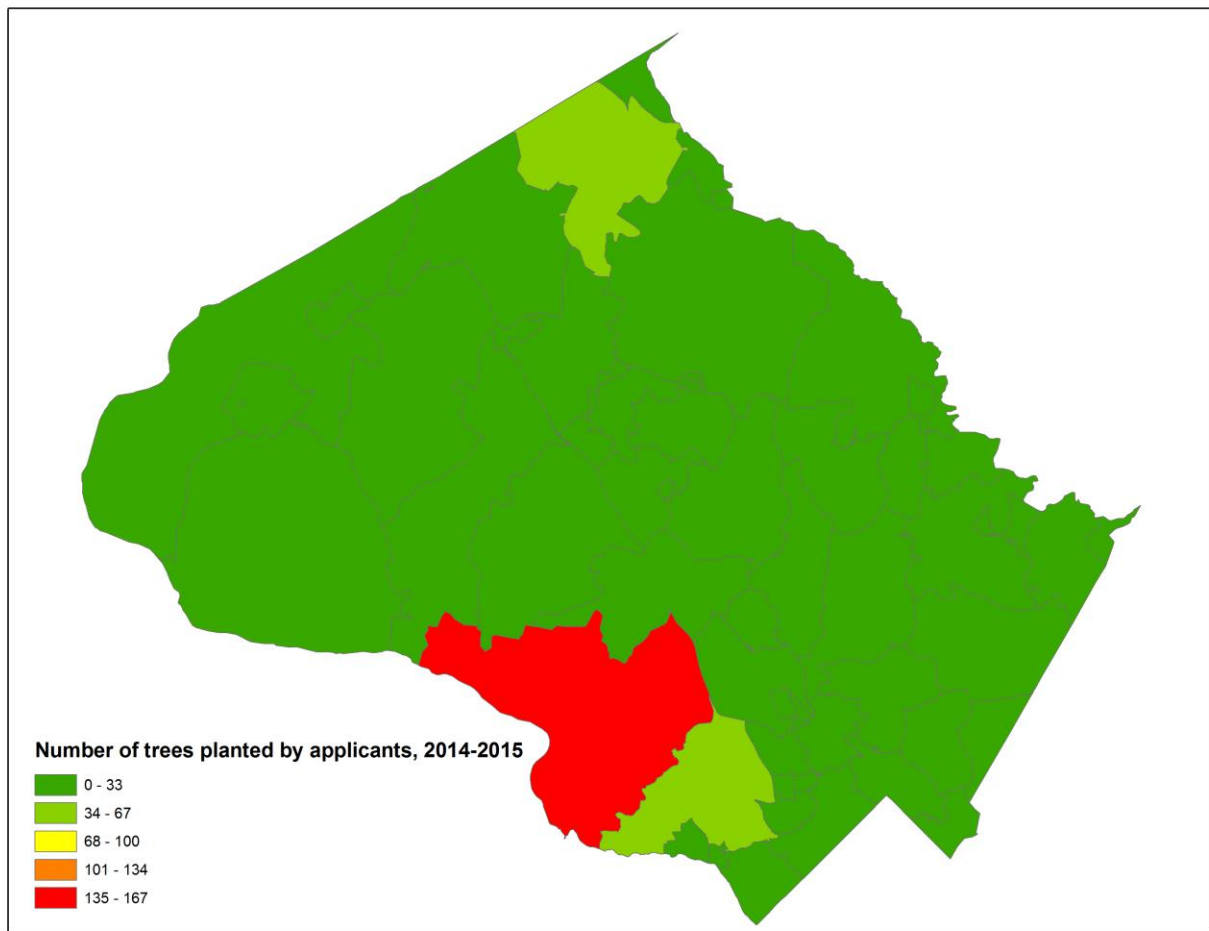


Figure 4. Number of Trees for Which Fees Were Paid by Applicants by Zip Code  
March 2014 through December 2015

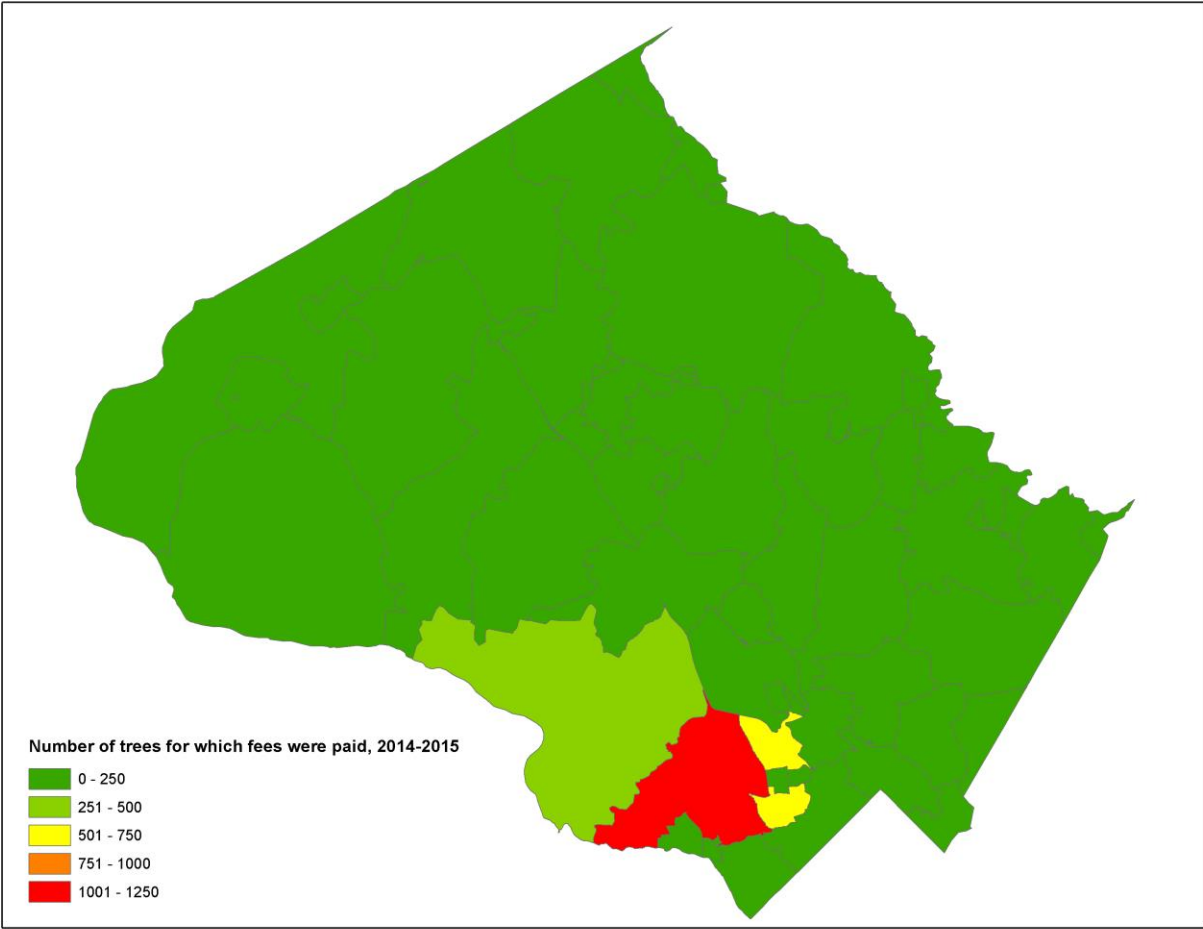


Figure 5. Fees Paid by Zip Code and Geographic Area  
March 2014 through December 2015

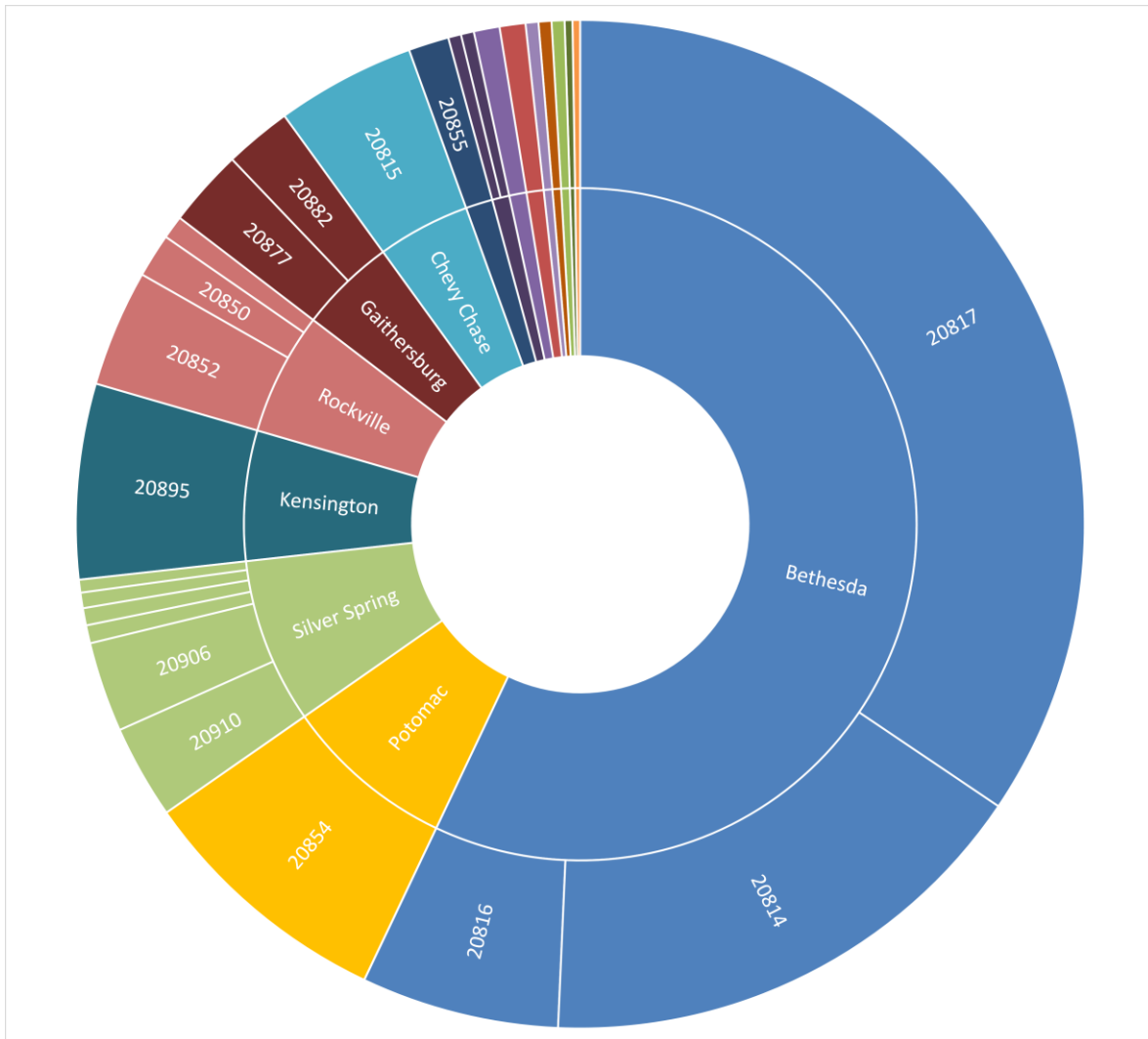


Figure 6. Trees Planted and Trees for Which Fees Were Paid by Zip Code and Geographic Area  
March 2014 through December 2015

Zip Code	Geographic Area	Trees Planted			Trees for Which Fees Were Paid		
		2014	2015	Total	2014	2015	Total
20814	Bethesda	0	1	1	135	455	590
20815	Chevy Chase	2	9	11	73	89	162
20816	Bethesda	10	15	25	41	189	230
20817	Bethesda	3	62	65	393	857	1,250
20818	Cabin John	0	0	0	0	30	30
20841	Boyds	0	0	0	15	15	30
20842	Dickerson	0	33	33	0	0	0
20850	Rockville	0	0	0	21	30	51
20852	Rockville	0	0	0	15	121	136
20853	Rockville	0	0	0	0	27	27
20854	Potomac	56	111	167	51	249	300
20855	Derwood	0	0	0	0	47	47
20866	Burtonsville	0	0	0	0	15	15
20868	Spencerville	0	0	0	0	15	15
20872	Damascus	30	30	60	0	0	0
20874	Germantown	0	27	27	0	15	15
20876	Germantown	0	0	0	0	15	15
20877	Gaithersburg	0	0	0	72	18	90
20878	Gaithersburg	0	15	15	0	0	0
20882	Gaithersburg	0	0	0	33	45	78
20886	Mont. Village	0	19	19	15	0	15
20895	Kensington	3	0	3	90	137	227
20896	Garrett Park	0	0	0	0	9	9
20901	Silver Spring	0	0	0	0	18	18
20902	Silver Spring	0	0	0	0	21	21
20904	Silver Spring	0	15	15	0	15	15
20905	Silver Spring	19	10	29	15	5	20
20906	Silver Spring	0	15	15	0	105	105
20910	Silver Spring	3	0	3	9	100	109
21771	Mt. Airy*	0	0	0	9	0	9
<b>Total</b>		<b>126</b>	<b>362</b>	<b>488</b>	<b>987</b>	<b>2,642</b>	<b>3,629</b>

\*The Mt. Airy zip code includes some properties in Montgomery County.

Figure 7. Trees Planted by Applicants and Fee Payments by Size of Area of Disturbance  
March 2014 through December 2015

Limit of Disturbance (sq. ft.)	Permits Subject to Mitigation	Mitigation Required (Total Trees)	Applicants Planting Trees	Trees Planted by Applicants	Applicants Paying Fees	Trees for Which Fees Were Paid	Fee Payments
0-6,000	33	99	2	4	32	95	\$23,750
6,001-8,000	73	438	6	13	73	425	\$106,250
8,001-12,000	125	1,125	6	23	124	1,102	\$275,500
12,001-14,000	22	264	4	20	21	244	\$61,000
14,001-40,000	93	1,395	14	151	86	1,244	\$311,000
>40,000	29	796	12	277	21	519	\$129,750
<b>Total</b>	<b>375</b>	<b>4,117</b>	<b>44</b>	<b>488</b>	<b>357</b>	<b>3,629</b>	<b>\$907,250</b>

Notes:

1. Limit of disturbance data is from approved Sediment Control Permits.
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.
3. Categories of area of limit of disturbance correspond with those outlined in the Tree Canopy Law.



## Planting Programs

*Tree Montgomery* is a new shade tree planting and awareness program. It was launched, in part, to meet the requirements of Section 55-10 of the County Code in order 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 only used to purchase, install, and provide aftercare for shade trees. Due to the need to put in place the infrastructure for a shade tree planting program and ensure the availability of funds, the FY15 appropriation for planting was \$50,000 and the FY16 appropriation was \$250,000. Both of these appropriations were exhausted by the end of calendar year 2015. A supplemental appropriation of \$350,000 was requested in January 2016, and approved in March 2016.

Between the launch of *Tree Montgomery* in April 2015, and the end of the calendar year, 981 applications for shade trees were received. Without efforts to target neighborhoods, the requests were concentrated in the highly urban areas of Montgomery County due to demand from residents seeking plantings.

During 2015 as *Tree Montgomery* was under development, applications for shade trees plantings were largely processed in the order they were received. A sample of applications was reviewed for progress through the process from application to installation of shade trees.

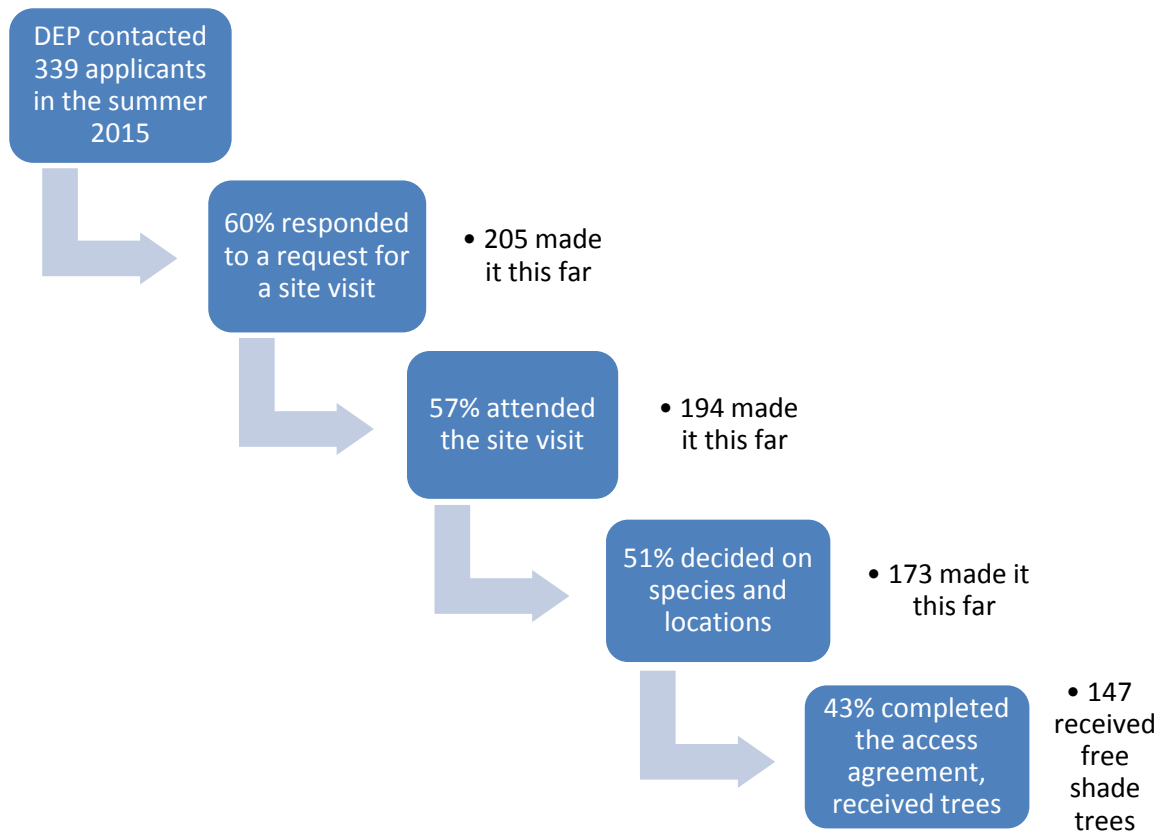
Currently, the process includes the following steps:

1. Applicant completes a simple on-line form to apply and receives an automated email to confirm receipt of application
2. Applicant receives an email 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 received a customized and detailed email following the site visit
5. Applicant and DEP finalize selection of species and locations
6. Applicant completes access agreement necessary to allow access to the property for planting and aftercare activities
7. DEP orders and installs the shade tree(s)

Throughout this process, staff was available to assist applicants with any questions or concerns. Additionally, DEP reached out multiple times to applicants who didn't respond to help ensure that everyone who applied had an opportunity to complete the process.

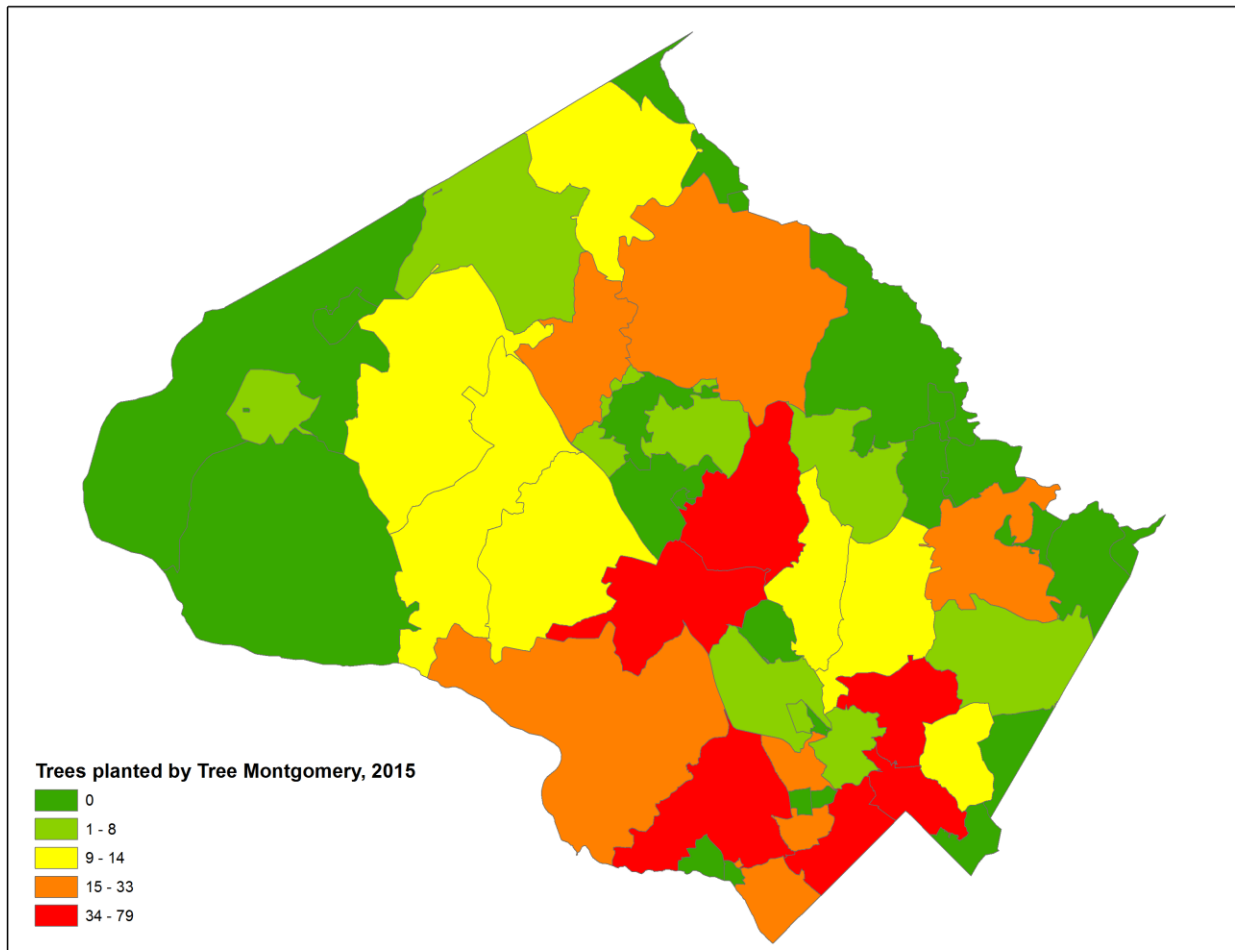
Figure 8 shows the progress of the 339 applicants contacted by DEP during the summer of 2015 as they moved through the steps outlined above. Approximately 43 percent of applicants contacted by DEP completed the process by December 31, 2015, and received at least one free shade tree. By the end of April 2016, the number of applicants in this sample who have had completed the process has increased to 170, or 50 percent. Their shade trees have been ordered and will be installed during the next planting season.

Figure 8. Progress of *Tree Montgomery* Applicants Contacted by DEP in Summer 2015



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 is working with DPS to identify the number of permits approved and the amount of disturbance in each subwatershed. In the interim, DEP used 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 in both east and west Bethesda in early 2016. Figure 9 shows the distribution of trees planted by *Tree Montgomery* by zip code since the launch in April 2015 through December 2015.

Figure 9. Distribution of Trees planted by *Tree Montgomery* by Zip Code  
April 2015 through December 2015.



In spring 2015, 47 shade trees were planted at two multi-family communities and two single family homes. Following these initial plantings, 485 more shade trees were planted throughout the fall of 2015. Figure 10 shows the number of trees planted through *Tree Montgomery* by zip code. In 2015, 51 percent of the *Tree Montgomery* shade trees were planted in Silver Spring and Bethesda, with an additional 14 percent planted in the unincorporated areas of Rockville and Potomac.

Figure 11 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.

This sunburst chart illustrates the distribution of ZIP codes across various Washington, D.C. neighborhoods. The inner ring represents the neighborhoods, and the outer ring represents the specific ZIP codes. The chart is color-coded by neighborhood.

Neighborhood	ZIP Codes
Silver Spring	20910, 20902, 20905, 20901, 20906
Bethesda	20817, 20816, 20814
Rockville	20850
Chevy Chase	20815
Germantown	20876, 20874
Derwood	20855
Potomac	20854
Boyds	20841
Others	20878, 20882, 20872, 20895, 20812

Figure 11. Trees Planted by Applicants, Trees for Which Fee Were Paid, and Trees Planted by Tree Montgomery by Zip Code and Geographic Area  
March 2014 through December 2015

<b>Zip Code</b>	<b>Geographic Area</b>	<b>Trees Planted by Applicants</b>	<b>Trees for Which Fee Payments Were Made</b>	<b>Trees Planted by Tree Montgomery</b>
20814	Bethesda	1	590	20
20815	Chevy Chase	11	162	44
20816	Bethesda	25	230	33
20817	Bethesda	65	1,250	46
20818	Cabin John	0	30	0
20832	Olney	0	0	3
20839	Beallsville	0	0	4
20841	Boyd's	0	30	14
20842	Dickerson	33	0	0
20850	Rockville	0	51	43
20852	Rockville	0	136	1
20853	Rockville	0	27	9
20854	Potomac	167	300	22
20855	Derwood	0	47	37
20866	Burtonsville	0	15	0
20868	Spencerville	0	15	0
20871	Clarksburg	0	0	2
20872	Damascus	60	0	9
20874	Germantown	27	15	11
20876	Germantown	0	15	23
20877	Gaithersburg	0	90	0
20878	Gaithersburg	15	0	12
20879	Gaithersburg	0	0	4
20882	Gaithersburg	0	78	15
20886	Mont. Village	19	15	0
20895	Kensington	3	227	8
20896	Garrett Park	0	9	0
20901	Silver Spring	0	18	13
20902	Silver Spring	0	21	44
20904	Silver Spring	15	15	4
20905	Silver Spring	29	20	21
20906	Silver Spring	15	105	11
20910	Silver Spring	3	109	79
21771	Mt. Airy*	0	9	0
<b>Total</b>		<b>488</b>	<b>3,629</b>	

\*The Mt. Airy zip code includes some properties in Montgomery County.

Figure 12 shows the distribution of Tree Montgomery plantings by property type. Fifty-nine percent of the shade trees were planted on single family properties and 14 percent at multi-family communities, with the remaining planted at religious and non-profit organizations and open space in HOAs. Thirty-seven different species were planted and 86 percent of all tree planted were native species (see Figure 13). With the exception of several parking lot trees, 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 deer through the installation of deer protection. Nearly all (97%) of these newly planted trees will receive two years of aftercare including watering, structural pruning, mulching, and weeding; all at no cost to the property owners. The aftercare will not only increase the long-term survival rates but will serve as additional opportunities for DEP to provide information and tree care tips to property owners.

Figure 12. Trees Planted by Tree Montgomery by Property Type  
April 2015 through December 2015

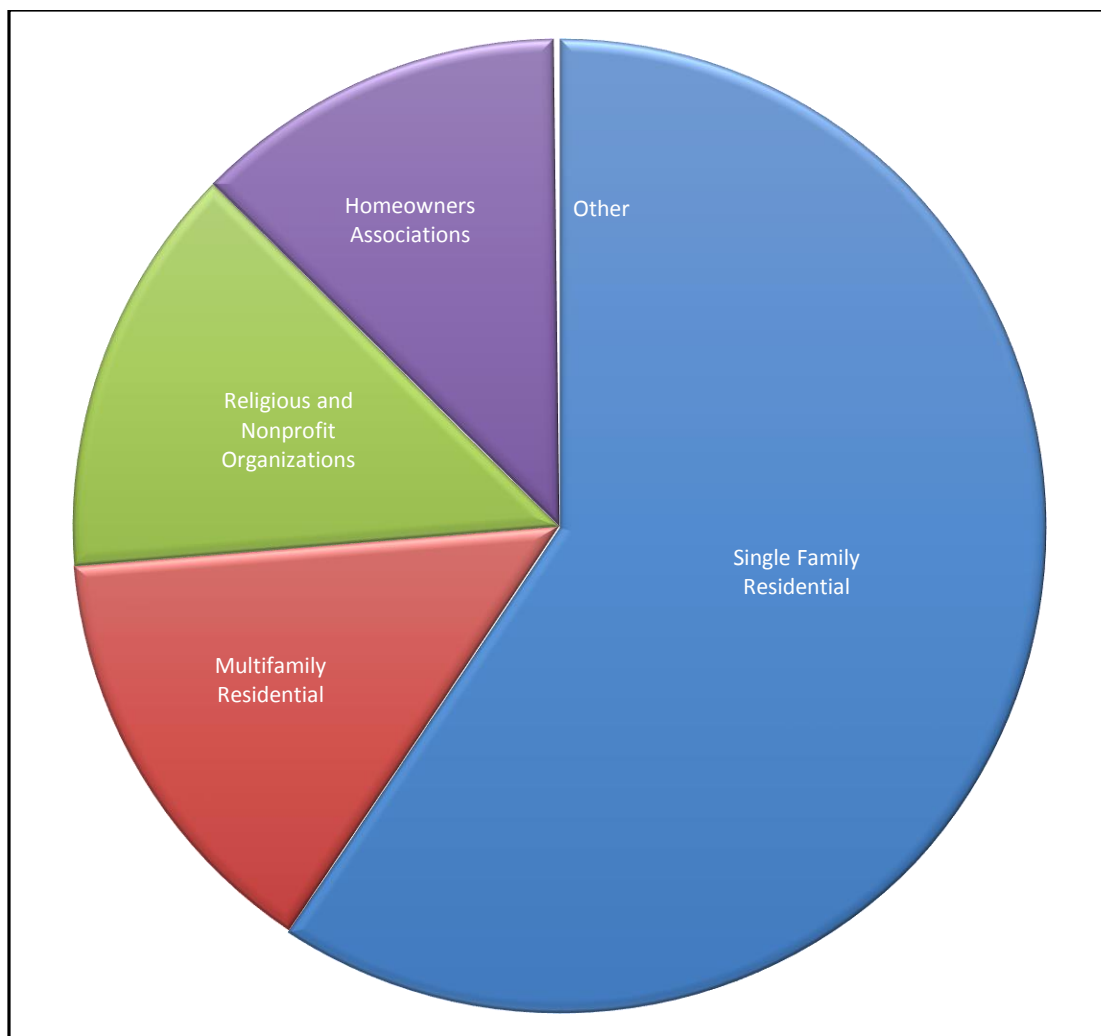


Figure 13. Trees Planted by Tree Montgomery by Species  
April 2015 through December 2015



The total average cost per shade tree installed through *Tree Montgomery* was \$553. This average cost included \$340 for the shade tree and installation, \$210 for a 2-year warranty and aftercare package, and \$4 for deer protection. While the cost varied for the tree by species, the cost of the warranty and aftercare package and deer protection remained constant. This average was based on all trees purchased to date through *Tree Montgomery*.

### 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 will also provide information about other programs that provide incentives for tree planting activities (e.g., programs available to residents of Rockville and Gaithersburg).

With this in mind, a robust outreach and education campaign is being developed, including a logo (see Figure 14) and promotional materials. 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 as a result of the Tree Canopy Law and other planting activity. The new website is targeted to launch this summer. To develop and sustain program recognition, a program logo was developed and is used on all aspects of communication regarding the program.

Figure 14. The *Tree Montgomery* logo.





### Developing Database & Mapping Tools

To streamline the *Tree Montgomery* program, automated processes for many aspects of the program were under development during 2015. These included developing and streamlining an on-line application and creating an on-line signature process for the access agreements needed to plant shade trees and provide aftercare 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 for shade trees and coordinating activity with the planting contractor; and conducting post-planting inspections. For example, staff will be able to approve applications for trees, convert them to orders and invoices, map planting locations, and add inspection results within a single field application which will be used in the office and the field on desktop, tablet, and mobile devices.

A public-facing map is being developed to show all newly planted trees through *Tree Montgomery* and those planted to meet the requirements of the Tree Canopy Law. Additionally, DEP is developing an application to allow anyone to add a newly planted tree, including developers who plant outside of the requirements of the Tree Canopy Law. This will allow any interested party to follow the progress of shade tree 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 activity subject to the Tree Canopy Law.