CASEY TREES' THIRD ANNUAL

TREE REPORT CARD

THE ONLY INDEPENDENT EVALUATION OF THE DISTRICT'S TREES.

APRIL 29, 2011

CaseyTrees®
WASHINGTON DC

★ ABOUT CASEY TREES

Casey Trees is a Washington D.C.-based nonprofit established in 2002
committed to restoring, enhancing and protecting the tree canopy of the nation's capital.

CASEYTREES.ORG

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FROM THE EXECUTIVE DIRECTOR

THE TREE REPORT CARD, NOW IN ITS THIRD YEAR, IS THE ONLY INDEPENDENT TREE AND TREE CANOPY ASSESSMENT OF A MAJOR U.S. CITY. IT MEASURES THE QUANTITY AND QUALITY OF WASHINGTON D.C.'S TREES AND TREE CANOPY, AND PUBLIC AND PRIVATE EFFORTS TO EXPAND AND SUSTAIN IT.

The main purpose of the Tree Report Card, however, is not simply to provide data about D.C.'s urban forest but to raise awareness and to encourage others to become involved in helping expand and sustain the District's trees. Why? Because while Casey Trees' mission is to restore, enhance and protect the tree canopy of the nation's capital, our motto is "connect people to trees." It speaks to the fact that people and trees are inextricably linked; to achieve our mission we embrace our motto – and the Tree Report Card is one of the ways Casey Trees does that.

We invite you to get involved with Casey Trees by becoming a Citizen Forester, enrolling in one of our free continuing education classes, joining a Tree Walk, volunteering at a tree planting, planting a tree on your own property using our Tree Rebate program or suggesting new programmatic content. Connecting people to trees is what we do, and we would like to do it with you as well.

Sincerely,

Mark Buscaino
Executive Director

INTRODUCTION

ABOUT

The Tree Report Card grades D.C.'s trees and tree canopy on five metrics:

- **TREE COVERAGE** - amount of tree cover.

- **TREE HEALTH** - condition of the trees.

- **TREE PLANTING** - number of trees planted.

- **TREE AWARENESS** - general level of awareness of tree-related issues in the District.

- **TREE PROTECTION** - effectiveness of the Urban Forest Preservation Act of 2002.
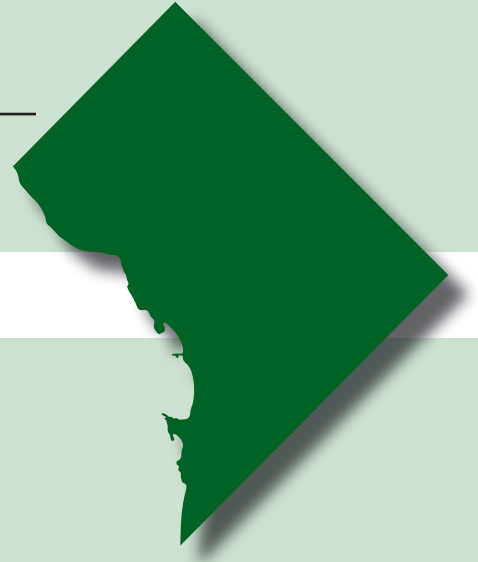
CHANGES IN THE TREE REPORT CARD

First, the Tree Protection grade is now derived from two metrics critical to the protection and replacement of large canopy trees in accordance with Urban Forest Preservation Act (UFPA) of 2002:

- Accounting for Special Tree removals, replacement plantings and money received into the Tree Fund
- Locations and survival rates of trees planted as replacements.

Tree Protection is an area with wide-ranging impacts, and it could be measured in several ways. To eliminate as much ambiguity as possible we chose two clear measures directly linked to requirements in the UFPA.

Second, the Awareness grade is now derived from an index created from three metrics:

- The percentage of 311 requests for service related to trees in comparison to the total population of 311 requests
- The number of volunteer hours performed for Casey Trees in comparison to local and national benchmarks for similar organizations
- The performance of Casey Trees' website compared to benchmarks provided by Google Analytics for websites of similar size.

This new index will allow the Awareness grade to be more quantitative and less subjective.

Casey Trees' Third Annual
TREE REPORT CARD
The only independent evaluation of the District's trees.

C

OVERALL GRADE FOR 2010

TREE METRICS

AWARENESS .... A+
A measure of the general level of participation in, and knowledge of, tree-related issues.

COVERAGE .... B+
A measure of how much tree canopy cover there is within the 69 miles of land that make up D.C.

HEALTH .... B-
A measure of the percentage of the total population of trees in Excellent or Good condition.

PLANTING .... A+
A measure of how many trees are planted each year.

PROTECTION .... F
A measure of the effectiveness of the Urban Forest Preservation Act of 2002.

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METRIC TREE AWARENESS

TREE AWARENESS refers to the general level of knowledge of, and participation in, tree-related issues in the District.

HOW DID WE COME UP WITH THE GRADE?

We created an index made up of three metrics: The percentage of District 311 requests for service related to trees in comparison to the total population of street trees, the number of volunteer hours donated to Casey Trees in comparison to local and national benchmarks for similar organizations and traffic on Casey Trees' website compared to benchmarks provided by Google Analytics for websites of similar size.

311 SERVICE CALLS

In 2010, the District's 311 call-in line received 430,000 service requests. Of that total, residents requested urban forestry services 11,900 times. 1,261 of these (10%) were for tree planting; the remaining 90% were for tree removal, tree care or tree inspection.

There are 140,000 street tree spaces in the District. Given this number, one would anticipate approximately 3% of these trees would die in any given year, generating about 4,200 calls for tree removal and planting. In addition, assuming the trees are on a seven-year maintenance cycle, one might expect about half of the residents to be aware of impending maintenance needs, thereby generating approximately 10,000 calls (140,000 trees/ seven-year maintenance cycle x 50% of the people). Taking all these items together we would expect 140,000 street trees would generate approximately 14,200 calls to 311 each year (4,200 planting + 10,000 maintenance).

VOLUNTEER PARTICIPATION

National statistics show volunteers nationwide contributed 62,790,000 hours of service in 2010. Of these hours, 2.4% were attributed to organizations that work with the environment and animals (no data is available for tree planting groups alone). The total number of volunteer hours contributed in the District in 2010 was 157,000. Using the 2.4% national rate noted above, this translates to 3,768 volunteer hours for environment-related tasks (157,000 x 2.4%). In 2010, Casey Trees' volunteers contributed 4,564 hours, or 796 hours above the national rate. These figures do not include volunteer hours contributed for the many other organizations engaged in tree-related activities in D.C., so our numbers, while higher than the national average, represent a very conservative estimate.

A+
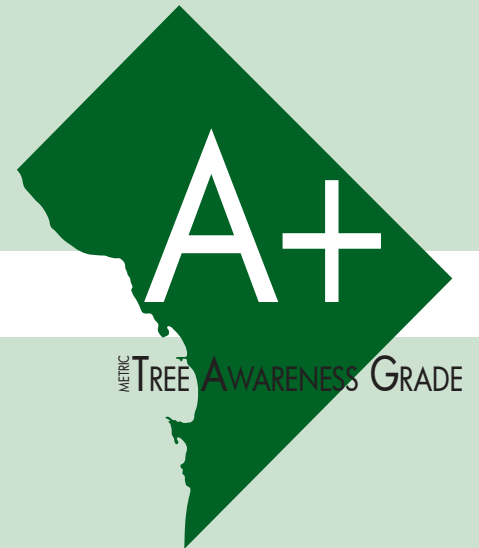
METRIC TREE AWARENESS GRADE

WEBSITE TRAFFIC

Using Google Analytics, we created an index based on the six primary metrics Google provides for website traffic and compared that to Google's benchmarks for all websites of similar size around the world. The index was 20%, meaning Casey Trees' site was five times more active than sites of similar size, giving us a final rating of 500%.

Percentage of 311 calls – 11,900 / 14,200 = 84%; Volunteer Hours – 4,564 / 3,768 = 121%; Website Traffic = 500%. The average of 84% + 121% + 500% = 705% (capped at 100%) = A+.

METRIC TREE COVERAGE

TREE COVERAGE is a measure of how much tree canopy cover there is within the 69 square miles of land that make up the city of Washington, D.C.

HOW DID WE COME UP WITH THE GRADE?

The amount of existing tree canopy within D.C. – 35% – was determined by the U.S. Forest Service's Northern Research Station and the University of Vermont's Spatial Analysis Lab. The full report was published in a Report on Washington D.C.'s Existing and Possible Urban Tree Canopy.

We compared this 35% to the District's Urban Tree Canopy (UTC) Goal of 40%. 35% / 40% = 87.5%, meaning the District is at 87.5% of its desired canopy cover level of 40%. The resulting grade is therefore a B+.

The current tree canopy assessment was performed using 2006 data. In 2012, a new assessment will be conducted, and the Tree Report Card grade for Coverage will be updated.

B+

METRIC TREE COVERAGE GRADE

TREE CANOPY COVER

■ Present cover   ■ Target cover

13%

87%
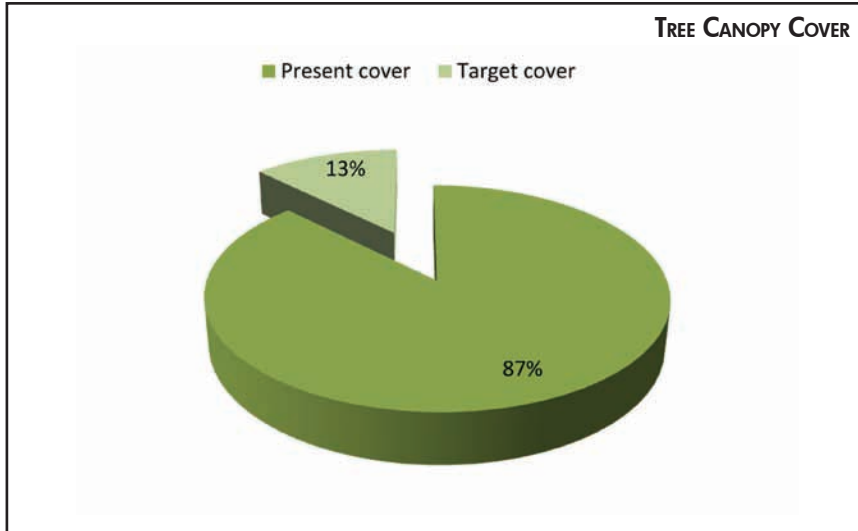
METRIC TREE HEALTH

TREE HEALTH is the measure of the percentage of the total population of trees in the District in Excellent or Good condition.

HOW DID WE COME UP WITH THE GRADE?

The U.S. Forest Service, in partnership with Davey Resource Group, the Arbor Day Foundation, the Society of Municipal Arborists, the International Society of Arboriculture and Casey Trees, has developed i-Tree, a state-of-the-art, peer-reviewed software suite that provides urban forestry analysis and benefits assessment.

In 2009, Casey Trees revisited the i-Tree Eco plots we established in 2004 (results of the 2004 data collection were published in Assessing Urban Forest Effects and Values: Washington, D.C.'s Urban Forest) and collected new data. We found 66.4% of the trees in D.C. to be in Excellent condition and 16% of trees to be in Good condition. 66.4% + 16% = 82.4% of trees in healthy condition, resulting in a grade of B-.

The present i-Tree Eco Heath assessment was performed using 2009 data. In 2015, a new assessment will be conducted, and the Tree Report Card grade for Health will be updated.

B-
METRIC TREE HEALTH GRADE

CONDITION OF TREES IN i-TREE ECO PLOTS

- 70% Excellent
- 17% Good
- 9% Fair
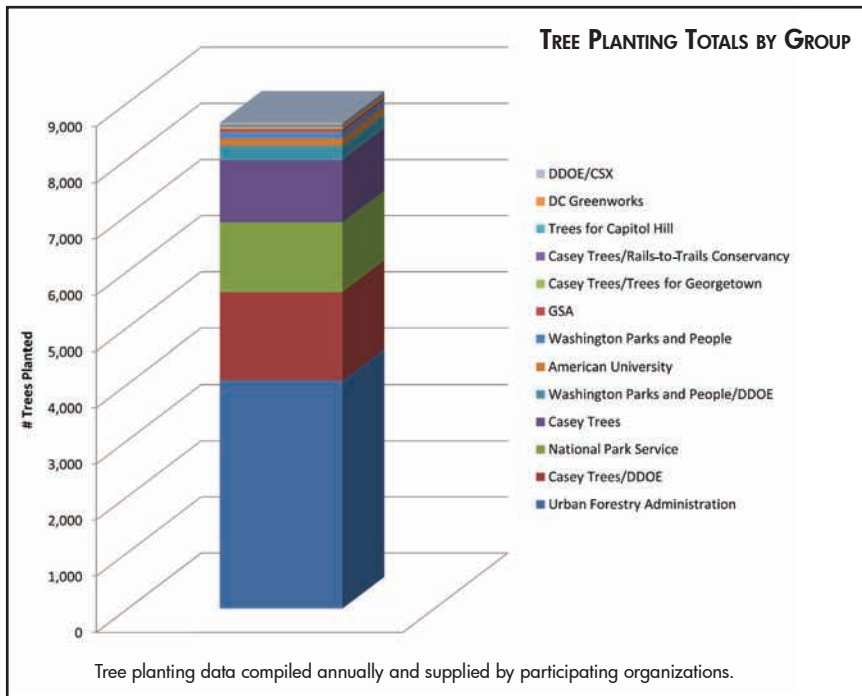- 4% Poor
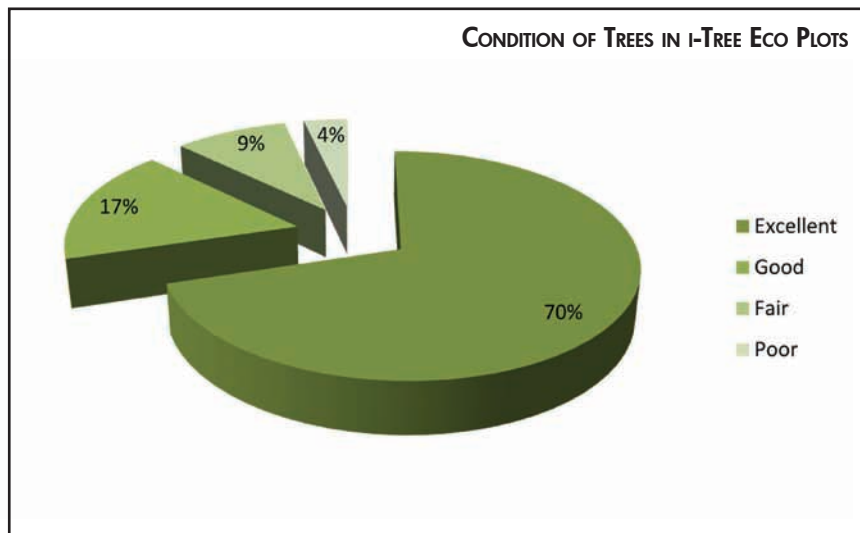
METRIC TREE PLANTING

TREE PLANTING is the measure of how many trees were planted in the District.

HOW DID WE COME UP WITH THE GRADE?

To achieve the District's UTC Goal of 40% by 2035, existing trees must be preserved and 2,041 additional acres of trees must be planted. Accounting for an anticipated loss rate of 6% (we will plant 106% of our goal) and using the rate of 100 trees = 1 acre, 216,300 trees must be planted over the next two decades, or 8,600 trees a year.

To determine how many trees were planted in D.C. we consulted our partners. Entities reporting tree planting activities included: The American University; Casey Trees; CSX Corporation; District Department of the Environment (DDOE), District Department of Transportation Urban Forestry Administration (DDOT-UFA); DC Greenworks; Rails-to-Trails Conservancy; Trees for Capitol Hill; Trees for Georgetown; U.S. General Services Administration; U.S. National Park Service; and Washington Parks and People Foundation.

The total number of trees planted (8,632) was compared with the number of trees we estimate must be planted each year in order to reach the goal (8,600). For the first time since the District announced its UTC Goal, we have exceeded our desired annual tree planting level by 32 trees, resulting in a grade of A+.

A+

METRIC TREE PLANTING GRADE

TREE PLANTING TOTALS BY GROUP

- DDOE/CSX
- DC Greenworks
- Trees for Capitol Hill
- Casey Trees/Rails-to-Trails Conservancy
- Casey Trees/Trees for Georgetown
- GSA
- Washington Parks and People
- American University
- Washington Parks and People/DDOE
- Casey Trees
- National Park Service
- Casey Trees/DDOE
- Urban Forestry Administration

Tree planting data compiled annually and supplied by participating organizations.

TREE PLANTING

It should be noted that replacement trees planted to make up for removals of Special Trees covered by the UFPA (2,068 trees) are not included in this tally. Why? The intent of these plantings is to maintain existing tree cover by replacing large canopy trees that have been cut down, not to increase the canopy. Additional information on the performance of the UFPA may be found in the Tree Protection section of this report on the following page.

TREE PROTECTION

TREE PROTECTION is a measure of the effectiveness of the Urban Forest Preservation Act (UFPA) of 2002.

HOW DID WE COME UP WITH THE GRADE?

The main purpose of the UFPA is to ensure removals of healthy Special Trees measuring 55 inches in circumference or greater will be replaced through replanting. The permittee (person receiving the permit to remove a Special Tree/s) can plant replacement trees directly or pay into a Tree Fund so the City can plant the replacement trees at a later date. To measure the effectiveness of the UFPA, we looked at two key measures:

- Accounting of Special Tree removals, replacement plantings and money received into the Tree Fund
- Locations and survival rates of trees planted as replacements.

F

METRIC TREE PROTECTION GRADE

We looked at this cycle's data, provided by the District, showing how many healthy Special Trees were removed, how many replacements were planted and how much money was deposited into the Tree Fund when replacements were not planted. Taken together, these factors should add up to a reasonably even balance sheet. We also examined data provided on locations and survival rates of planted trees to determine if replacement trees were alive.

ACCOUNT OF SPECIAL TREE REMOVALS
A chart of summary statistics shows 626 requests for Special Tree removals were made in 2010. Of that total, 430 were hazardous, exempt or did not require a permit; 65 were denied, and 131 permits were granted for a total of 272 Special Trees removed (some permits contained more than one tree). Finally, three trees were removed illegally, but information on replacement trees and fines was not available when our Freedom of Information Act request was made.

For the 272 Special Trees removed, the number of replacement trees required is based upon their circumference inches (CI), the measurement around the trunk of the tree; in this case 22,355 CIs. We then subtracted the total CIs of replacement trees planted (2,068 trees x 7.85" per tree) equaling 16,234. Subtracting the total CIs from that of the replacements (22,355 - 16,234) leaves 6,121 CIs. Since the UFPA stipulates permittees either plant replacement trees or pay into the Tree Fund at $35 per CI, this means that $214,235 (6,121 CIs x $35 per inch) should have been deposited into the Tree Fund. Our data shows $96,325 was deposited into the Tree Fund leaving $117,910 unaccounted for or the loss of 428 trees ($117,910 / $275 per tree).

TREE PROTECTION
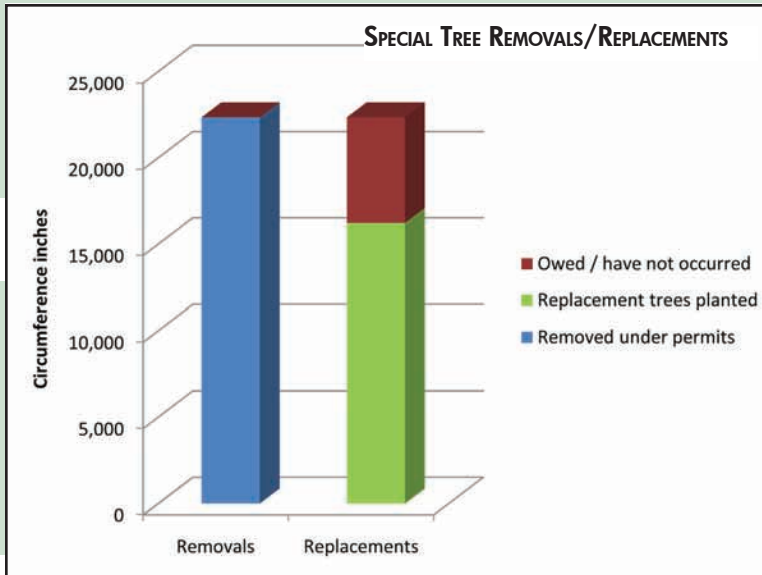
Our review further shows the Tree Fund balance sheet does not reasonably add up. At the end of FY 2009 the total in the Tree Fund was $392,500. Adding the $96,325 deposited in 2010 should make the total $488,825 because no trees were reported as being planted by the District as replacements. However, the total amount reported in the Tree Fund at the end of the year was $788,890. The dollar amount in the Tree Fund should reasonably align when accounting for payouts for income contingent subsidies that totaled $7,500, but it does not.

We acknowledge some of these inconsistencies may be due to fees and fines not collected at the time of our information request, lag times between payments into the Tree Fund and when these dollars show up on the books, etc. Discussions with DDOT-UFA staff who administer the UFPA revealed that updated numbers changed some of the data we received. However, gaps persist.

Finally, the Tree Fund, as stipulated in the UFPA, must be used specifically for replanting trees and shall not revert to the General Fund of the District of Columbia. However, the current Administration's FY 2011 budget as approved by the Council stripped $539,000 from the Tree Fund, redirecting it to the General Fund, translating into a loss of 1,960 trees ($539,000 / $275 a tree).

TREE PROTECTION

To summarize: 1,960 replacement trees were lost when the Tree Fund was raided and approximately 428 trees remain unaccounted for from this year's data. This equals a total loss of 2,388 replacement trees, or the equivalent of 24 acres of urban tree canopy.

Given the data we conclude that the UFPA is ineffectively administered. Tree Fund dollars are difficult to track and being used for purposes not allowed by the enabling legislation and, tree canopy is not being replaced as the UFPA intended. We therefore graded this category F.

SURVIVAL RATES OF TREES PLANTED AS REPLACEMENTS
To determine if replacement trees are effectively replacing Special Trees removed, we requested information on the survival rates of trees two years post-planting and locations of replacement trees since 2002.

We received a list of locations of the 2,068 trees to be planted for this reporting cycle, but none of the locations or survival rates of previous replacement plantings that, by our calculations from last year's Tree Report Card number approximately 11,000 trees. DDOT-UFA conveyed to us in subsequent conversations they are unable by law to revisit any replacement tree planted on private property more than one year post-planting, effectively eliminating the administering agency's ability to track the law's impact.

Because we cannot determine where approximately 80% of the replacement trees are planted, or if they are alive or dead, we graded this category F.

SUMMARY

This year's grade of C is down from a B- in 2009 because of the failing grade assigned to the Tree Protection metric. This grade came about primarily because it is impossible to determine if trees planted as replacements under the UFPA since 2002 are alive or if they were planted at all. Furthermore, unclear accounting of Tree Fund receipts and disbursements, and the raiding of the Tree Fund this reporting cycle, amounted to a loss of several hundred thousand dollars and approximately 2,600 replacement trees.

The good news, however, is that the Tree Planting grade rose significantly from a C- to an A+ because of the collective efforts of many organizations planting 8,632 trees city-wide. Also, when we benchmarked the Tree Awareness grade to similar national activity we found we were doing quite well indeed. This grade moved from a B last year to an A+ this year.

Specific recommendations for how to improve the District's overall Tree Report Card grade are detailed on the following pages.

RECOMMENDATIONS

To improve D.C.'s grade and to help the District reach its 40% UTC Goal, Casey Trees recommends the following:

1. Modify the current process by which the UFPA is administered so it can be determined if it is achieving its intended purpose(s) as follows:

   • The DDOT-UFA cannot and should not be expected to administer a law that lies outside its jurisdiction. DDOT-UFA is responsible for public space street tree management, not trees on private lands. The UFPA must be administered by an agency that functions on all non-federal lands within the District.
   • Accountability for the Tree Fund must be streamlined so it can be reasonably shown that the number of replacement trees equates to those removed and fines received.
   • Data on the locations and survival rates of replacement trees must be gathered and published on a regular basis.
   • Tree Fund moneys must only be used for purposes stipulated in the UFPA.
   • Allow Tree Fund dollars to support tree planting programs that succeed in tracking the location and survival rates of the planted trees.

2. Amend the UFPA as follows:

   • Administration and enforcement of the UFPA should reside within the DDOE.
   • Modify mitigation alternatives for Special Trees removed to a largely fee-based system. Allowing permit holders to plant trees directly places a significant cost on the City because of the added burden placed on city inspectors. For trees affected by development, the replanting process can drag on for years making coherent tracking of trees, funds and projects confusing, cumbersome and costly.
   • Reduce the size threshold for Special Trees in the UFPA from 55 to 28 inches in circumference. This would encompass 26% of D.C.'s trees and 76% of its canopy, versus 12% of the trees and 50% of the canopy that it now covers.
   • Give City inspectors the ability to deny requests for Special Tree removals if the reason given by the permit seeker is arbitrary.
   • Modify language to ensure removals of Special Trees from private property are replanted on private properties.

RECOMMENDATIONS

3. Publish and implement DDOE's Urban Forest Master Plan, now two years overdue, to comply with the District's MS-4 stormwater management permit. The plan should be signed off by Mayor Vincent Gray and have funds identified to execute it.

4. Delegate responsibility for all-lands tree policy to DDOE as outlined in its enabling legislation and coordinate efforts toward achieving the District's 40% UTC Goal.

5. Bury utility wires during streetscape reconstruction projects to eliminate tree canopy conflicts and to make D.C.'s neighborhoods more vibrant and attractive places to live as recommended in D.C.'s Comprehensive Plan.

6. Adopt a Green Area Ratio requirement for all developments that accentuates the establishment of trees.

7. Mandate one tree per five parking spaces in all development projects.

8. Develop tree box size standards for rights-of-way construction that follow the guidelines recommended in Casey Trees' Tree Space Design Report.

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