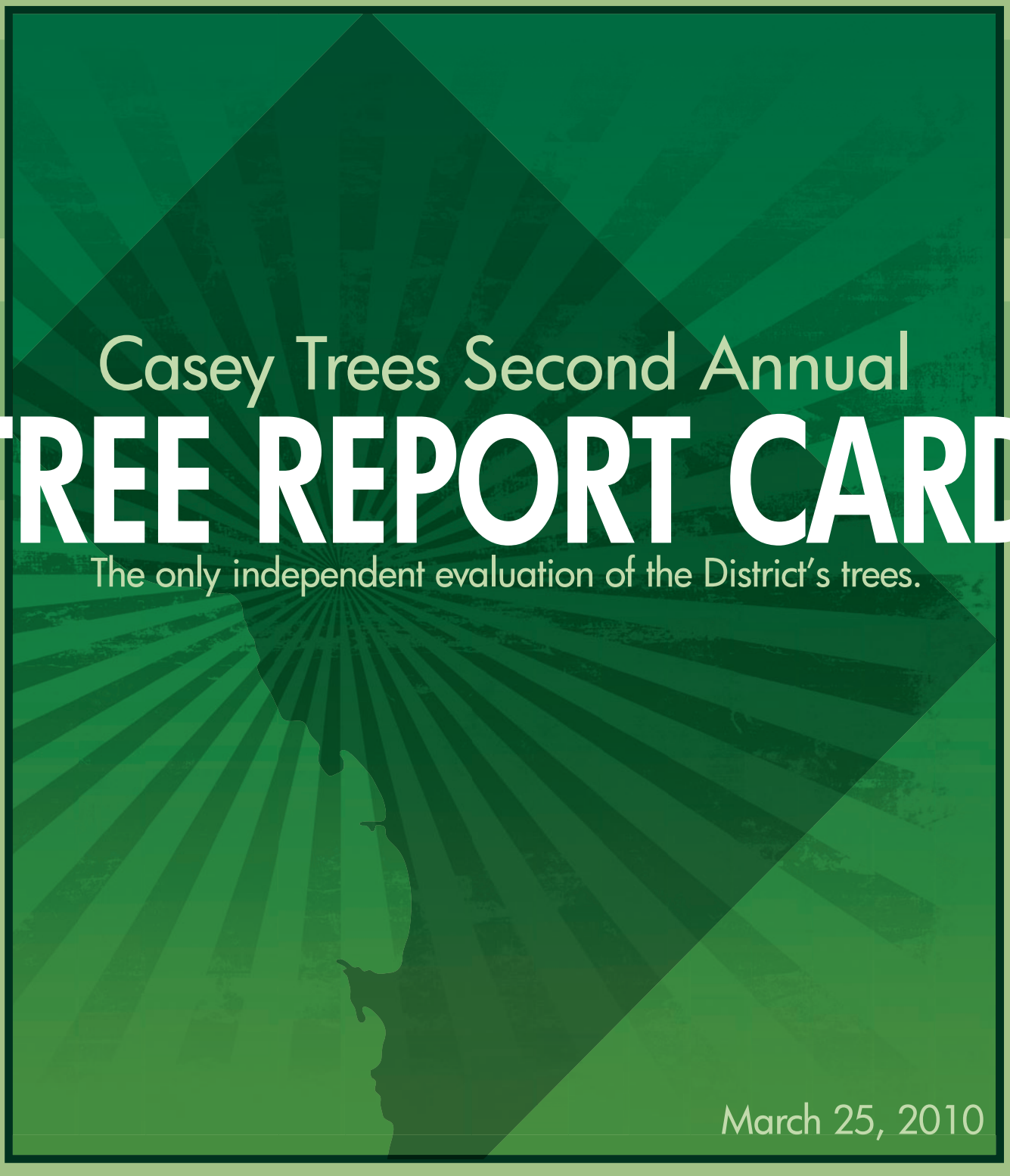

Casey Trees Second Annual
TREE REPORT CARD

The only independent evaluation of the District's trees.

March 25, 2010

Casey Trees®
WASHINGTON DC

About Casey Trees

Casey Trees is a Washington D.C. based not-for-profit established in 2001 committed to restoring, enhancing and protecting the tree canopy of the Nation's Capital.

Please visit www.caseytrees.org for more information.

Contents

Introduction

About

The **Tree Report Card** is the only independent evaluation of the District's tree canopy, and the only independent tree assessment of a city in the United States. It is issued annually in the spring based on data from the previous year, and is based upon the following metrics:

- **Tree Coverage** - amount of tree cover.
- **Tree Health** - condition of the trees.
- **Tree Planting** - number of trees planted.
- **Tree Awareness** - level of participation in, and knowledge of, tree-related issues.
- **Tree Protection** - regulatory and voluntary measures to protect trees.

The Tree Report Card aims to raise the level of awareness among policy makers, elected leaders and the public about the state of the District's trees and what is being done to preserve, protect and manage this precious resource. We hope this Tree Report Card will spur further interest, engagement, and coordination of public and private efforts to restore, enhance and protect the tree canopy in the Nation's Capital.

In endeavoring to create the Tree Report Card we used the best data available. However, this exercise revealed the optimal national and local data for this effort were not readily available. Our hope is the Tree Report Card will encourage our partners to share information we do not possess to help us construct a more complete picture of the District's trees.

Changes in the Tree Report Card in 2010

When the Tree Report Card for 2008 activity was being developed, the City had not yet adopted an Urban Tree Canopy Goal for the District. However, shortly before the launch of the Tree Report Card, Mayor Adrian Fenty announced the ambitious but attainable 40% by 2035 Urban Tree Canopy Goal for Washington.

Because there was no goal in place at the time the initial Tree Report Card was created, those grades were based largely on a scale relative to how other cities were doing with regards to the same activities (grading on a curve).

Now that we have an endorsed Urban Tree Canopy Goal in place, grades will be established according to how the District's tree canopy is doing relative to the goal or relative to a standard grading scale for items not specific to the goal.

Casey Trees Second Annual
TREE REPORT CARD

The only independent evaluation of the District's trees.

B-

2009 Overall Grade

Learn more at
www.caseytrees.org

Tree Metrics

Coverage ..... B+
A measure of how much tree canopy cover there is within a geographic boundary.

Health ..... B-
A measure of the overall health of the tree canopy.

Planting ..... C-
A measure of how many trees are planted each year.

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

Protection ..... C+
A measure of efforts to preserve existing trees.

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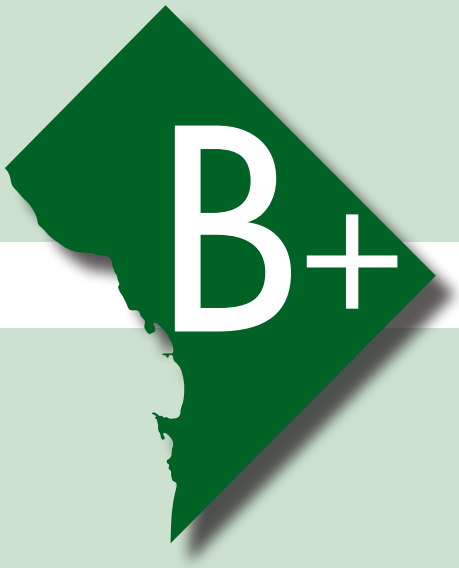
metric

Tree Coverage

Tree Coverage is the measure of how much tree canopy cover there is within a geographic boundary, in this case within the boundaries of the District of Columbia.



How did we come up with the grade?

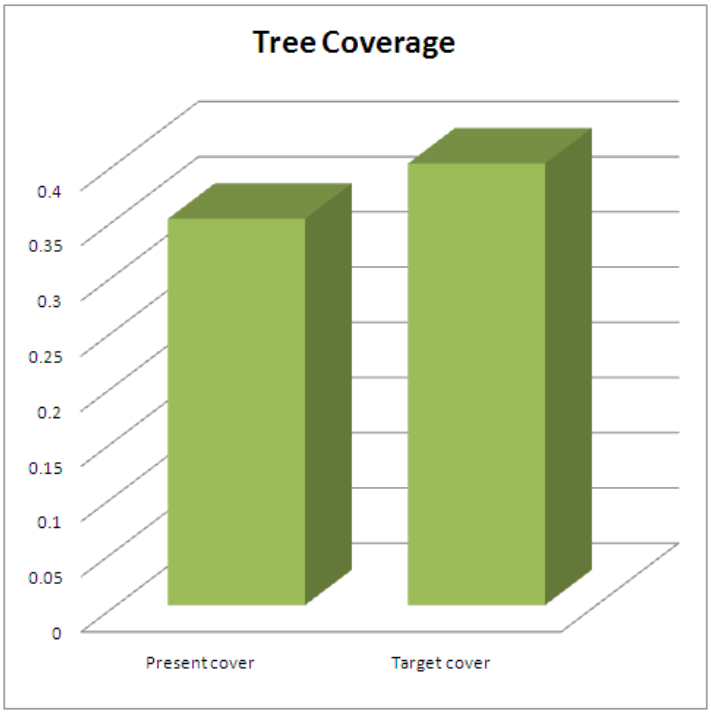
The District's tree canopy extent layer was created by the U.S. Forest Service Northern Research Station and the University of Vermont Spatial Analysis Lab by interpreting high-resolution satellite data for tree canopy, grass and built surfaces.

The resulting Geographic Information System (GIS) layers were then used in combination with property boundary, building and other GIS layers supplied by DC OCTO to perform the analysis. The results were published in *A Report on Washington, D.C.'s Existing and Possible Urban Tree Canopy*.

The resulting tree canopy cover of 35% was then compared to the District's tree canopy cover goal of 40%. 35% / 40% = 87.5%.

We are presently at 87.5% of our desired canopy cover level of 40%, which results in a grade of B+.

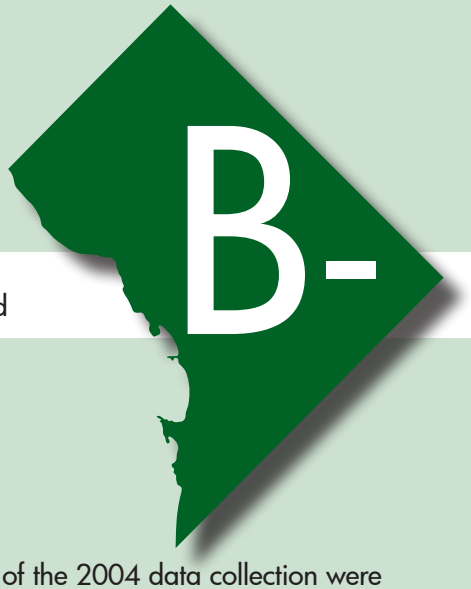
Urban tree canopy analyses will be performed at five-year intervals.



metric

Tree Health

Tree Health is the measure of the percentage of the total population of trees in the District that are 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 and the International Society of Arboriculture, has developed i-Tree, a state-of-the-art, peer-reviewed software suite that provides urban forestry analyses and benefit assessment.

One of these tools, i-Tree Eco, uses field data from randomly located plots throughout a community along with local hourly air pollution and meteorological data to quantify urban forest structure, environmental effects and value to communities.

In 2009, Casey Trees revisited i-Tree Eco plots established in 2004 (the 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 with the assistance of Casey Trees volunteers and interns and the National Park Service staff. The U.S. Forest Service Research Station processed the data and supplied the results.

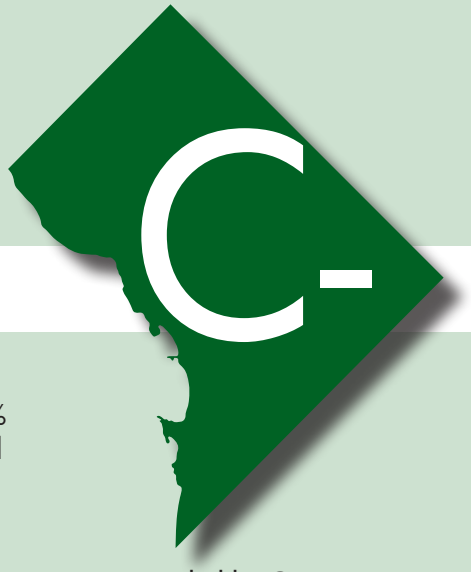
Data from that 2009 sample found 82.4% of the trees in good to excellent condition, resulting in a grade of B-.

The complete results of the 2009 data collection are published in i-Tree Ecosystem Analysis *Washington: Urban Forest Effects and Values January 2010*. i-Tree Eco analyses will be performed at five-year intervals.

metric

Tree Planting

Tree Planting is the measure of how many trees were planted in the District of Columbia.



How did we come up with the grade?

In April of 2009, the City set a Urban Tree Canopy Goal of 40% by 2035. Tree canopy cover in the District is presently 35%. To keep the tree cover we presently have and reach the goal, we will need to gain 2,041 new acres of tree canopy cover.

Accounting for an anticipated mortality rate of six percent (we will plant 106% of our goal) and using the rate of 100 trees = 1 acre, 216,300 trees will need to be planted over the next 25 years, an average of 8,600 trees a year.

Tree planting data is compiled annually and supplied by participating organizations. For the 2009 Tree Report Card, data on their tree planting activities was provided by Casey Trees, District Department of the Environment (DDOE), District Department of Transportation (DDOT), US General Services Administration and U.S. National Park Service.

The total number of trees planted (6,002) was compared with the number of trees we estimated needed to be planted last year in order to reach the goal (8,600). 6,002/8,600 = 69.7%.

We are presently at 70% of our desired tree planting level of 8,600 trees a year, which results in a grade of C-.

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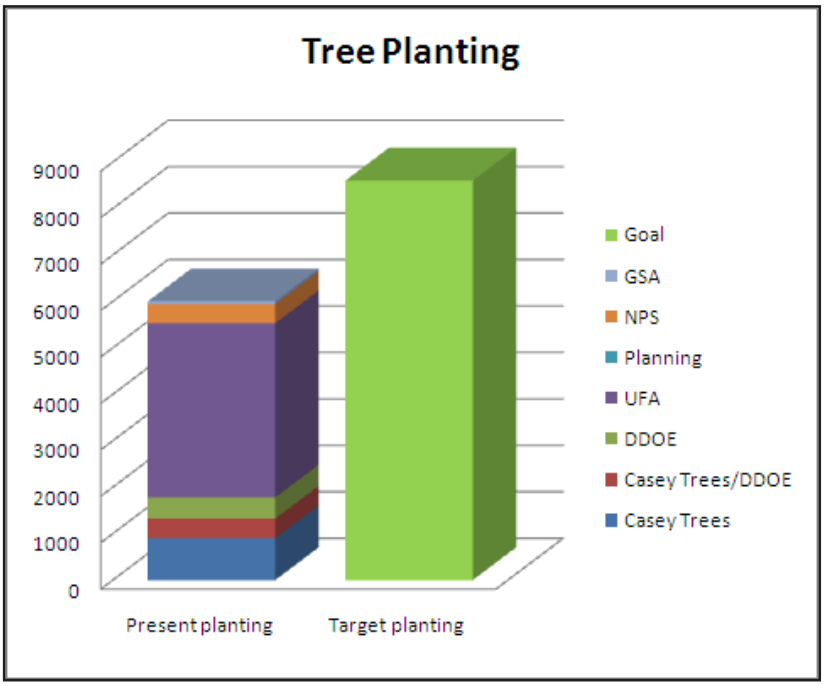


metric

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 used the U.S. Forest Service's criteria - Volunteer Activity, Management Plans, Professional Staff, Ordinances/Policies and Advocacy Organizations - for assessing the performance of state urban forestry programs. **We then assigned a grade to each of these areas as noted and derived the overall grade of B from the average.**

Volunteer Activity B

There are many organizations in the District that offer tree-related volunteer opportunities such as tree planting, tree watering and tree pruning. These groups include Restore Mass Avenue, Casey Trees, Urban Forestry Administration, Potomac Conservancy, GroundWorks DC, Washington Parks and People, the various Business Improvement Districts and Trees for Georgetown. While we have some statistics on the activities of these and other groups, it is not a comprehensive accounting. We hope to have this information for next year's assessment.

Management Plans C

The District has a Comprehensive Plan that includes many provisions for trees. The Urban Forest Master Plan required by the Urban Forest Preservation Act has been developed but is not published or publicly available. There is no feedback loop in either plan for advising the public on progress related to the provisions as many of the metrics referred to differ from those in CapStat. The National Park Service follows the national guidelines and the General Service Administration is beginning to utilize the new Sustainable Sites Initiative, but neither has plans specific to their District properties.

Professional Staff A

There are many certified arborists, landscape architects, landscape designers, horticulturalists and related professionals working for DDOT/Urban Forestry Administration, the National Park Service, the Government Services Administration and Casey Trees. The quality and quantity of professionally trained and certified staff are notable.

Ordinances/Policies C

There are many positive elements in local ordinances and policies. However, there is little publicly available information on accomplishments and effectiveness.

Advocacy Organizations B

The District has a wonderful array of advocacy organizations, from city wide groups such as Casey Trees, DC Environmental Network, DC Greenworks, Friends of the Earth, to community groups such as Trees for Georgetown, Greater Brookland Garden Club, Hillcrest Community Civic Association, Trees for Capitol Hill, Restore Mass Ave., Groundwork Anacostia River DC, etc.

metric

Tree Protection

Tree Protection is the measure of efforts to preserve existing trees.

How did we come up with the grade?

We broke the Tree Protection metric into two areas: **Regulatory** and **Voluntary Efforts,** where the former is weighted at 75% and the latter at 25% of the grade**.**

For **Regulatory Efforts**, although there are several mechanisms, "Special Trees" (trees 55 inches in circumference and greater) are protected primarily through the Urban Forest Preservation Act of 2002 which contains several key metrics. A list of those metrics and their status in the 2009 reporting year is as follows:

- **Preparation and annual update of a 5-year urban forest report and master plan**
  The 5-year master plan exists but is not publicly available on the web at this time.

- **Development of standards and regulations governing administration of the Urban Forest Preservation Act**
  These standards and regulations are available on the D.C. Municipal Regulations and D.C. Register web page. Information governing income-contingent subsidies to assist DC residents with hazardous tree removal may be found on the Urban Forestry Administration, DDOT webpage.

- **Inspection of "Special Trees" and issuance or denial of permits**
  In 2009, 381 Special Trees were inspected. Of those, 289 permits were issued for trees that were hazardous or an exempt species not requiring replacement; 46 permits were issued for healthy trees where replacements or payment into the Tree Fund was required, and 45 applications were denied for reasons noted in the standards listed above.

- **Enforcement**
  Ten violations were issued in 2009. As mitigation, 71 trees were planted and $2,500 was collected in fines.

- **Trees Planted and Tree Fund Receipts**
  With the exception of trees planted for violations noted above, no trees were planted as replacements in 2009. $217,000 was collected in fees in lieu of planting.

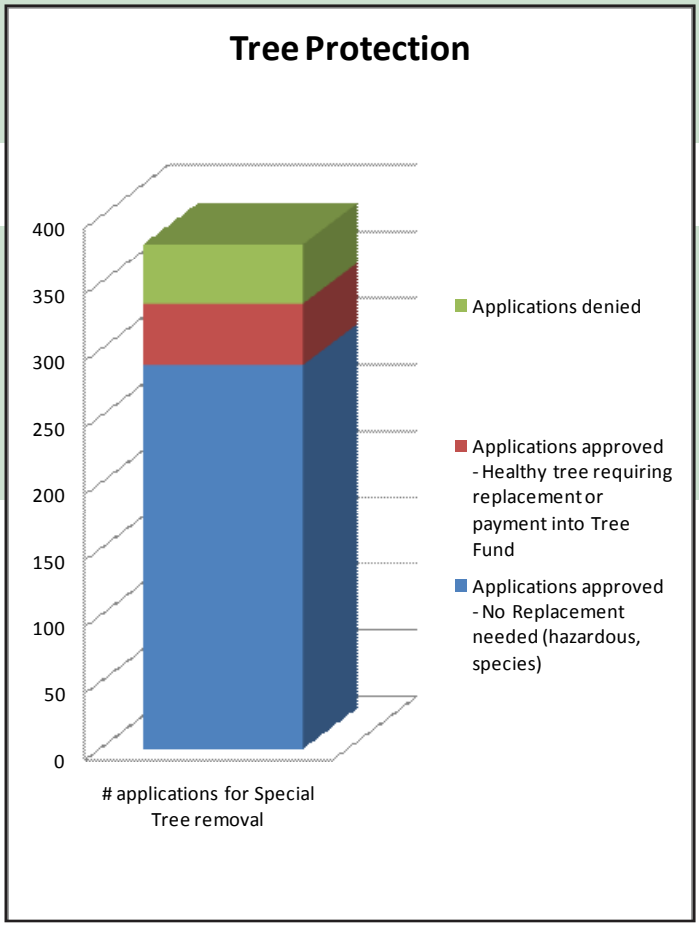
- **Tree Fund Receipts and Replacement Trees Planted Since 2002**
  The current sum of money in the Tree Fund is $392,500. Available data shows 71,604 circumference inches of trees have been planted (since 2005), but the actual number of trees that equates to is not available at this time. However, assuming these replacement trees are 2.5" in circumference, this equates to 9,120 trees.

From the data received, the Urban Forest Preservation Act is being administered as written and strides have been made since last year's report card. Two areas of remaining concern are planting of replacement trees to keep up with removals and tracking of replacement trees so permit conditions are met.

metric Tree Protection

continued from Page 10

Taking into consideration all these factors, the grade for Regulatory Efforts is a C.



For **Voluntary Efforts**, we consider innovative tree space design methods as positive ways to give trees a longer, healthier life. These efforts are especially relevant in this category when a special tree is taken down and one of these methods is used before a new tree is planted. Examples of innovative methods include structural soils, silva cells and root paths. Demonstrations and tours of these sites are available and have increased in 2009. However, there is still no on-site interpretive signage and specific location data has not been actively recorded.

We graded these efforts a B.

Combining both Regulatory and Voluntary efforts, the final grade for Tree Protection is a C+.

Summary

This year's 2009 overall grade of B- represents a slight decrease from last year's grade of a flat B. The difference is largely because last year we graded ourselves against other jurisdictions; this year the grade was based upon goals set by the District of Columbia.

That the District has set goals and is monitoring its urban forest on a systematic basis, places it above almost every other jurisdiction in the country. This speaks to a new understanding about urban trees and what they provide – not simply aesthetic, but measurable environmental, social and economic benefits. And there are many efforts underway to restore, enhance and protect the District's trees.

Combined per-capita expenditures on tree planting and management by District and federal governments, local groups and non-profits are high in relation to most US cities; cutting edge technologies such as silva cells, engineered soils and expanding of tree boxes to improve street tree health and viability are beginning to proliferate; publicly funded programs to encourage private property tree planting have begun and continue to be supported, and there are many engaged citizen groups and non-profits regularly planting and caring for trees throughout DC.

There are also weaknesses, including but not limited to, gaps in baseline data collection such as mortality of planted trees; confusion among district agencies regarding who is responsible for what in terms of overall tree policy and agency direction; lags in meeting federally mandated provisions for tree protection and expansion; duplication of efforts, and others.

Of all the challenges ahead, the most difficult to bridge will be poor coordination among the many players at the table - government entities, non-profits and groups involved in planting, caring for, and monitoring the health and condition of the District's trees. This problem must be solved or our collective efforts in trying to restore, enhance and protect the District's trees for the benefit of all Washingtonians will only be partially successful, as this Tree Report Card suggests.

There are many ways this problem can be solved, but as a first step we suggest we look at what is available to us now. By law, the District Department of the Environment (DDOE) is responsible for tree policy in the District of Columbia, and this is the logical place for this function. Why? Because DDOE unlike other agencies responsible for parks, streets and other "pieces" of the district, is responsible for all district lands – public and private – for the public health benefits trees bring to all Washingtonians.

It is our hope that DDOE given its unique position as steward of all the District's trees on public and private lands, will take this leadership role and act as a convener, bringing all groups, public and private, to the table to help bridge this gap for the benefit of all the residents of the District.

Other more specific recommendations from the Tree Report Card are listed in the pages to follow.

Recommendations

To improve the District's overall Tree Report Card Grade, Casey Trees recommends the following:

Tree Coverage

- That the District, in accordance with the provision of the EPA Consent Decree related to the Municipal Separate Storm Sewer System (MS4) Best Management Practices Enhancement Package related to the District's modified National Pollutant Discharge Elimination System Permit:
    - Draft a strategy to achieve optimal tree canopy, using GIS technology to identify and prioritize planting locations, with input from Casey Trees, Friends of the Earth (FOE) and other stakeholders;
    - Provide a final detailed plan for achieving the optimal District tree canopy goal by 2009;
    - Document annually the survival rate of total trees planted along with annual estimates of storm capture rates to determine the volume of stormwater being removed from the MS4 system in a typical year of rainfall as a result of the maturing tree canopy for the life of the permit.
- The District, in accordance with the Chesapeake Bay Program 2011 Milestones for Reducing Nitrogen and Phosphorus, increase tree canopy coverage to 40% in 25 years.
- Modify the Urban Forest Preservation Act to provide better protection to our tree canopy.
- Include the current one tree per five parking spaces provision in the parking lot section of the zoning code update.

Tree Health

- Develop strategies and create and implement efforts to control the spread of invasive species.

Tree Planting

- Though the District requires that trees be planted through many permitting requirements related to construction, planning and zoning, there is no mechanism for capturing how many trees are planted as a result. Capturing this information would be very valuable as the number of trees the District requires permittees to plant could contribute significantly towards realizing the Urban Tree Canopy Goal.
- Citizens, government, and businesses report tree planting activity to Casey Trees via our Trees of Note web tool so that we can map and count them towards the Urban Tree Canopy Goal.
- In accordance with the Chesapeake Bay Program 2011 Milestones for Reducing Nitrogen and Phosphorus and the MS4 permit conditions, the City continues to plant at least 4,150 trees annually.
- That citizens, businesses, institutions, and other property owners avail themselves of tree planting resources offered across the City including:
    - DDOE Tree Rebate
    - DDOE Treescape Design Workshops
    - DDOE RiverSmart Homes
    - Casey Trees Community Tree Planting
    - UFA Canopy Keepers

Tree Awareness

- Publish the Urban Forest Master Plan for Washington DC. Set specific metrics within the plan and encourage public comment.
- More directed leadership on the State Implementation Plan provision for ozone non-attainment related to urban tree canopy.
- That the District Department of the Environment (DDOE) provide leadership and coordination among government agencies (District and Federal), non-profits and local tree groups engaged in planting, protecting and maintaining the District's trees.
- That the DDOE provide a leadership role on the provision in the State Implementation Plan provision (see the rest on the existing sheet).
- Sample and track all tree related volunteer activities by increasing collaboration between advocacy organizations.

Tree Protection

- Better record keeping to determine the Urban Forest Preservation Act's effectiveness as follows:
    - The number of replacement trees and their locations must be known to determine if they are truly replacing the void created when healthy "Special Trees" are removed as allowed under the law. Data on the location and survival of replacements will be part of next year's report card.
    - The Urban Forest Preservation Act allows Tree Fund money to be used for administration of the Act and other income contingent activities. Currently 15% of the funds are reserved for Income Contingent Subsidies; administrative expenditures for FY2010 are expected to be approximately $8,000 (< ½% of the fund total). However, to ensure that the main intent of the Urban Forest Preservation Act is met, we recommend that expenditures be limited to 20% of the total annual amount of the fund.
- The Urban Forest Preservation Act does not specify that trees removed from private lands are to be replanted on private lands. This may lead to Tree Fund monies being used to plant street and/or park trees, which is a function that should be paid for by DC's normal annual operating expenditures. The Urban Forest Preservation Act should be revised to eliminate this inconsistency.
- While "Special Trees" represent 50% of DC's tree canopy, they comprise only 12% of the total number of trees. For the Urban Forest Preservation Act to make a significant difference in curtailing tree loss and preserving canopy, we feel that the Urban Forest Preservation Act should be revised as follows:
    - The "Special Tree" designation should be given to trees 28" in circumference and greater versus the current 55" threshold. With this, 26% of the trees and 76% of the tree canopy would be covered under the Urban Forest Preservation Act.
    - Currently the Urban Forest Preservation Act allows removal of healthy trees should the landowner pay into the Tree Fund or replant according to the formula in the Urban Forest Preservation Act. We strongly feel that Urban Forest Administration arborists should be given the ability to refuse requests for healthy tree removal if the reason(s) given by the requestor are arbitrary and capricious.
- In accordance with the Chesapeake Bay Program 2011 Milestones for Reducing Nitrogen and Phosphorus, the District create new tree box standards to allow for better tree growth.
- DDOT continue to implement its Action Agenda goal of expanding 10,000 street tree boxes by 2012.

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