

To: Environmental Matters Committee  
From: Maria Broadbent, Director, DNEP  
Date: September 11, 2014

Re: Tree Canopy considerations for September 18, 2014 Environmental Matters Committee meeting

Below is a status of the City of Annapolis' tree canopy and some options to consider for increasing the canopy to 50% by 2036.

The City's tree canopy, measured using 2007 aerial data is 44.9%. In 2006, the City received a grant from the MD Dept. of Natural Resources to purchase satellite imagery of Annapolis and have it analyzed by proprietary software from the University of Vermont to identify land cover types and specifically the city's tree canopy coverage, which was determined to be 42.5%. The University of Vermont's software was developed in 2004 but was updated in 2007. The city's land cover types were analyzed again using the newer version of the University of Vermont software and 2007 imagery from the federal government. The table below reflects that newer analysis and a tree canopy area of 44.9%. The University of Vermont has explained that the earlier 2004 version of their software had 80% accuracy while the 2007 version has 90% accuracy. University of Maryland Professor Ralph Dubaya presenting this information to the Environment Commission in May, 2014.

#### Analysis of City of Annapolis Land Cover Types

<b>Land Cover Type</b>	<b>Acreage</b>	<b>Percent</b>
Bare Soil	3.3364	0.1%
Building	534.8167	11.8%
Grass/Shrub	984.0721	21.7%
Other Paved	654.3395	14.4%
Roads/ROW	314.9329	7.0%

Tree Canopy	2033.5830	44.9%
Water	6.1701	0.1%

**TOTAL 4531.2507 100.00%**

In 2006, Maryland Department of Natural Resources, DNR, funded a study that produced A report of Annapolis' present and potential Urban Tree Canopy. This study concludes that " While it is easy to think of Urban Tree Canopy, UTC, enhancement in terms of planting trees, UTC enhancement requires a combination of tree protection, tree maintenance, and tree planting to be fully realized and efficiently implemented." The study advises that "Twenty to thirty years' time will be needed to achieve a significant increase in UTC." A copy of that report can be found on line at: [http://www.fs.fed.us/nrs/utc/reports/UTC\\_Report\\_Annapolis.pdf](http://www.fs.fed.us/nrs/utc/reports/UTC_Report_Annapolis.pdf)

**Tree protection:**

DNEP staff has made recommendations to the tree protection sections of the code sent to the Office of Law for consideration by the City Council. Those changes include:

- Requiring tree permits for the removal of any trees 24" inches in diameter or larger on private property (not associated with a development project). This change to City Code 14.12 would require mitigation planting as the same rate as in other sections of the code. A tree measuring 75% or more of a state champion would only be permitted for removal if it is dead, dying or diseased. Currently, only trees adjacent to the right-of-way require tree permits and the mitigation rate is not standard across the code.
- Requiring enhanced preservation measures for trees within 15 feet of the limit of disturbance on a development project and requiring mitigation for trees expected to die within this area.
- Increasing the bonding period for trees on projects with grading permits to be bonded for five years and to include a requirement to remove invasive species.
- Require development projects to demonstrate how they will achieve a 50% tree canopy by 2036.

**Tree maintenance:**

Maintaining existing trees is important to making progress toward an urban tree canopy goal and critical to hazard prevention. Most city owned trees are either street trees or in recreation areas. Deferred maintenance of these trees leads to

decay, decline, and eventually need for replacement. Funding for tree maintenance has decreased by more than half in the last four years. The urban forestry account funding from FY11 to present shows:

FY11	\$73200.00
FY12	\$40100.00
FY13	\$38000.00
FY14	\$48000.00
FY15	\$34000.00

Prior to FY14 the Recreation and Parks Department also maintained some funding, \$25,000, for the maintenance of trees within parks. As of the FY14 budget, this maintenance is also paid out of the DNEP urban forestry account.

Consideration should be given to increasing the funding for tree maintenance in future budget years.

**Tree planting:**

Increasing funds to allow for more tree planting should also be considered during the budget process. Currently, some trees are planted on city property through the Greenscape program, some are planted using fee in lieu funds and some through grant funding. Much of the current city owned tree planting is done to replace trees street trees that have died or to replace Bradford pears, a tree determined to be a hazardous.

The 2006 DNR study determined that the land use areas with the largest potential for increasing tree canopy are residential, tax exempt properties (government, schools, churches) and commercial property.

Planting space for trees on city owned property is limited, with the planting of street trees the most available option. As funding becomes available through the budget process or through grants, education efforts should be extended to neighborhoods with the most open planting areas to encourage the acceptance of new street trees or to subsidize the planting of trees on private property. Often offers of trees to property owners are rejected as residents are concerned about raking leaves and maintaining trees.

DNEP will continue tree give away efforts as funding is available and will try to host these events in neighborhoods where the tree canopy has the most potential for increase. A tree give-away held in the spring of 2014 was funded through a donation from BGE.

Efforts to promote tree sales to private property owners have shown mild success but have great potential, if they can be subsidized. Planting trees on private property trees, within 20 feet of a residential front property line, can add

significantly to the urban tree canopy, without adding to the city's long term maintenance costs. It is recommended that tree planting funds should subsidize these plantings as the funds become available.

There should be further discussion as to whether the city should collect the 5 cent per foot tree maintenance charge in City Code 14.12 adopted in the 1980's or change the code to eliminate the language.