

# Urban Forest Overlay Districts

## PURPOSE

**To mitigate climate change, reduce greenhouse gas, and absorb carbon dioxide through the use of zoning bylaws dedicated to creating a healthy tree canopy within an urban area.**

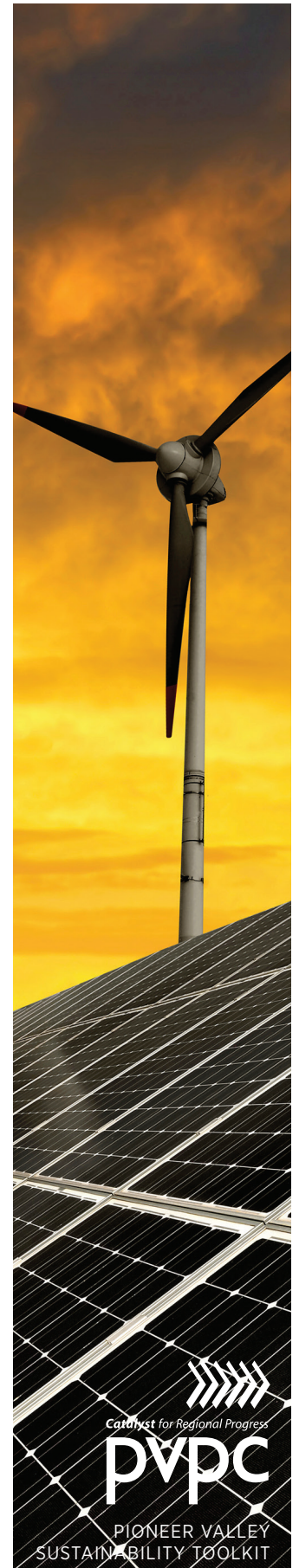
Healthy urban forests have positive impacts on both the natural environment and human health. Trees absorb carbon dioxide and other pollutants, remove greenhouse gas, and improve air quality for nearby residents. Tree cover and the resulting shade limit the rise in temperature associated with urban heat island effect. Importantly, tree branches, leaves and root systems absorb rain water and thus limit the intensity and volume of stormwater runoff. This can have major watershed benefits, including reductions in particulate matter, nonpoint source pollution, and the temperature of water bodies. Full, healthy tree canopies also reduce noise and improve the natural beauty of an area.

In a variety of ways, the more trees there are in a community, the more beneficial those trees become. The root systems of multiple trees are able to more effectively stabilize soil from stormwater inundation. Wildlife is provided with a better habitat in which to live by having a continuous tree canopy. The aesthetics of a tree-lined road are more desirable than individual, spread-out trees. Finally, because greenhouse gas is being emitted at a high rate, the planting of many trees allows for much more effective mitigation.

Municipalities can protect and increase the number of trees to create urban forests through the use of zoning overlay districts. Overlays are incorporated into a zoning ordinance and place special land use regulations on top of existing zoning districts, such as requiring new development to include a certain number of trees. The requirements also often regulate permitted tree species, maintenance procedures, and the planting of other vegetation.

## HOW IT WORKS

The first step in implementing an urban forest overlay district is to conduct a community tree inventory. The inventory will provide information about the number, type, and location of trees that already exist, as well as help inform the discussion about where the overlay district should be located. When conducted with the help of volunteers, the inventory can also be a way of facilitating community involvement.



After the inventory is complete, the results can be reviewed at a public meeting. This meeting can include a discussion and determination of specific areas in the community where more trees are needed. After these areas have been identified, the specific requirements of the overlay district can be discussed, which will help develop the language amended to the zoning code. The specific language for the zoning overlay district should include the following:

- » Purpose and intent of the overlay district
- » Defined boundaries of the district with identification of specific streets and lots
- » List of size and species of trees recommended or required as part of new development
- » Minimum number of trees required per specific lot area
- » Maximum and minimum spacing distances between trees
- » Amount or percentage of lot area that must be under tree canopy

The specific requirements for each of these items will depend on the particular context of the community. The resources and examples listed below can provide more information.

Important decision-makers to include in the discussion include the general public, the zoning board of appeals, planning board, planning department, and public works department. Once the specific requirements have been agreed upon and the language for the ordinance developed, it can be passed as an amendment to the zoning code, following the municipality's established procedures.

As an alternative to an urban forest overlay district, tree preservation and planting requirements can also be adopted in general ordinances and bylaws or in subdivision regulations. The Town of Granby, MA is an example of a community in which tree standards were incorporated into the subdivision regulations.

## EXAMPLES OF COMMUNITY IMPLEMENTATION

### Salem, Virginia

The purpose of the Salem Urban Forest Overlay District is to increase the quantity of trees present in new developments along seven designated corridors. New developments are required to have at least one tree per acre and at least one tree per 100 feet of street frontage. A list of specific trees is provided that are recommended for new developments. These trees are selected for their ability to grow to at least 20 feet tall, filter out particulate matter, and absorb ozone. The inclusion of these recommendations encourages the development of a healthy urban forest, with trees that are suitable to



local weather conditions and trees that will provide a large tree canopy.

### **Washington, D.C.**

The Forest Hills Tree and Slope Protection Overlay District, effective in the city since 2007, was enacted to preserve the park-like character of several of its neighborhoods. The overlay helps to preserve natural topography and mature trees by restricting the maximum ground coverage allowed for new construction. The overlay is mapped over low-density residential zoning districts and restricts maximum lot occupancy to 30 percent, minimum lot size to 9,500 square feet, and requires side yards between 8 to 24 feet. Other density controls, such as maximum building height, remain controlled by the underlying zoning district.

### **Manassass, Virginia**

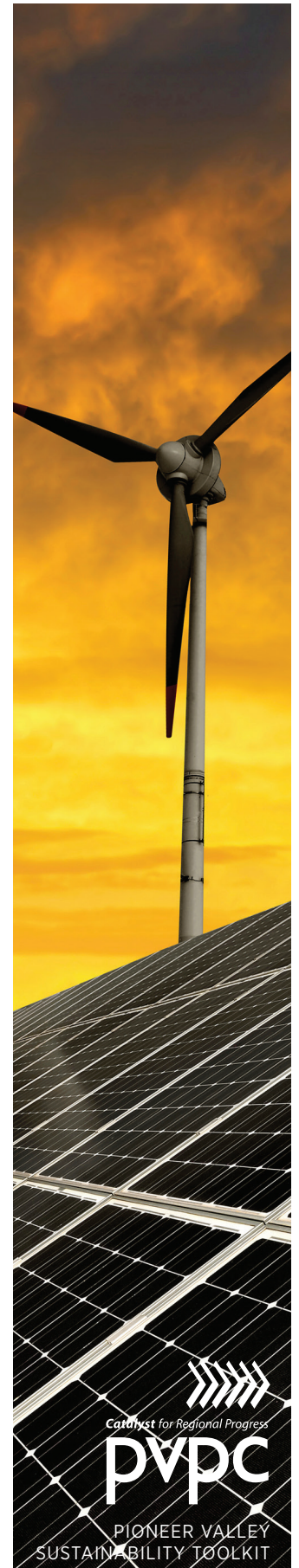
Manassass' Tree Canopy Requirements article of the City's Zoning Ordinance provides for the long term preservation and development of a mature tree canopy. The article defines "tree canopy/tree cover" as "the aggregate area of coverage by plant material exceeding five feet in height and measured at the drip line. The article requires site plans applied for in low density zones to have 20 percent of the total lot area covered by tree canopy, moderate density zones to have 15%, and higher density apartments and condos to have a minimum of 10 percent. The City's design and construction standards manual, which also includes standards for tree preservation, size, and replacement guidelines, also references the Tree Canopy Requirement.

### **Granby, Massachusetts**

An amendment to the subdivision regulations of the Town of Granby was drafted and passed in 2005. The code calls for the preservation of existing trees to the greatest extent possible, the planting of trees for new developments along the right of way at a minimum of 30 foot intervals, and that 35% of individual lots be shaded, excluding the building footprint and driveway.

### **Lawrence, Massachusetts**

A zoning amendment was passed by the Town of Lawrence and includes requirements for two shade trees or three ornamental trees for every ten spaces in new or expanded parking lots. Multi-family developments requiring Site Plan Review are also subject to the regulations. The code also outlines guidelines for tree preservation during construction, maintenance procedures, and an 8-foot minimum height for tree plantings.



## LINKS TO MODEL BYLAWS OR MORE INFORMATION

SOMERVILLE, MA TREE INVENTORY:

<http://www.somervillema.gov/departments/ospcd/parks-and-open-space/urban-forest/inventory>

MA DEPARTMENT OF CONSERVATION AND RECREATION,  
URBAN FORESTRY SECTION:

<http://www.mass.gov/dcr/stewardship/forestry/urban/urbanFAQs.htm>

SALEM:

<http://www.rvarc.org/utc/SalemUrbanForestOverlayDistrict.pdf>

GRANBY:

<http://www.mass.gov/dcr/stewardship/forestry/urban/docs/ordgran.pdf>

LAWRENCE:

<http://www.mass.gov/dcr/stewardship/forestry/urban/docs/ordlaw.pdf>

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## FOR MORE INFORMATION, PLEASE CONTACT

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