

Tree Protection through Local Code

While we do not always recognize them as such, trees are a critical piece of infrastructure, one that will help us adapt to our changing climate. Maintaining and improving your community's tree canopy provides a forest-full of benefits: tree coverage reduces air and noise pollution, reduces heat island effects and energy costs, improves water quality by filtering stormwater, provides wildlife habitat, and mitigates flooding and erosion. A robust tree canopy also reduces overall greenhouse gas emissions by sequestering carbon, improves property values, and amplifies a community's aesthetic.

When a community's trees are removed by new or redevelopment projects or private property owners, overall tree coverage decreases. Consequently, the benefits this coverage brings to the community are reduced.

Adopting local "tree code" (in the form of a bylaw/ordinance and/or regulations) can help your community protect the tree canopy by establishing conditions and processes for tree maintenance and removal. Some communities currently have such requirements contained within zoning, development and redevelopment review processes, local wetlands code, and/or stormwater-related regulatory requirements. Before you get started, you will want to identify where any existing code regulates tree planting or removal, and any protections it provides.

The first step is to identify your community's needs and priorities as they relate to trees. Many communities have already done this through the Municipal Vulnerability Preparedness ("MVP") planning process. More than half of the communities in the Charles River watershed have prepared vulnerability reports that recognize the important role of trees in building climate resilience. Communities that have not yet completed the MVP planning process can identify needs and priorities through sustainability committees, conservation commissions, and/or tree wardens. Specific climate resilience objectives your community might want to accomplish through a local tree ordinance or bylaw include: preserving or increasing the overall tree canopy coverage by a certain percentage or a certain number of trees; reducing the instances of flooding in a certain area or over a certain period; or alleviating specific hot spots within the community.

Benefits of Trees

source: www.wayland.ma.us/conservation/pages/tree-removal



Recommendations

- Clearly define what trees are protected. Clearly defining what trees are protected by the ordinance sets clear expectations for residents, developers, and the tree warden/tree commission. This ensures that the code will be fairly and consistently applied throughout the community and allows everyone to plan accordingly.
- Protect mature/significant trees as measured by size. Mature or significant trees provide more shade, soil stability, and carbon storage than younger trees. These functions cannot be replaced simply by planting new trees; it takes many years for young trees to provide the same level of benefits. Typically, any tree over 8-inches DBH (diameter at breast height) is considered to be mature/significant and receives a higher level of protection.
- Extend protections to trees on private land. In some communities, private tree removal has had catastrophic consequences on overall tree canopy. For example, in Cambridge, 72% of the city's tree canopy loss in the past decade came from private tree removal. A community usually cannot adequately address areas that are prone to hot spots or flooding by protecting trees on public land alone, which is why extending tree protections to private land is critical to enhancing a community's overall climate resilience.
- Preserve healthy trees through tree maintenance. Maintenance of healthy trees should be prioritized, especially in high risk areas such as near power lines, roadways, and other important municipal structures. This allows communities to retain the benefits of trees while still protecting public safety. Communities can explore establishing tree funds, where fees paid into the fund when trees are removed are used to cover the costs of maintaining healthy trees.
- Require permits for tree removal and mitigation of removed trees. A permitting process for tree removal ensures that trees are not removed without notice to the appropriate municipal authority. This is especially important for mature/significant trees. Permits can also require replacement of removed trees and/or the payment of fees for tree removal.

Trees that are removed should be replaced on at least a one-to-one basis (in terms of inches DBH, not trees). In other words, for every 1-inch DBH of tree removed, 1-inch DBH should be planted. For example, if a 10-inch DBH tree is removed, several smaller trees totaling 10-inches DBH should be planted. Some communities include provisions that incentivize the planting of large shade tree species to replace removed trees.

Fees may be assessed in addition to tree replacement, or in cases where tree replacement is not possible. These fees may be able to be paid into a tree fund to support the community's tree planning, planting, maintenance, and removal activities.

- Provide exemptions for hazardous or diseased trees. Tree ordinances should recognize that hazardous or diseased trees pose a public safety risk and may harm the overall tree

canopy. Consider exempting trees that have been determined to be hazardous or diseased from the requirements that would otherwise apply to tree removal and/or providing an exception for emergency tree removal.

- Include fines for unauthorized trimming, removal, or destruction of trees. Penalties in the form of fines are important to deter unauthorized tree removal. Some communities utilize a \$300 fine for each violation. Other communities have implemented a gradual fine increase structure: \$50 for the first offense, \$100 for the second offense, \$200 for the third offense.

References

The City of Somerville adopted a Tree Preservation Ordinance in June 2019. This is a great example of local code that regulates both public and private trees.

- Website: <https://www.somervillema.gov/departments/tree-removal-guidelines#:~:text=You%20may%20contact%20the%20Tree,safety%2C%20always%20put%20safety%20first>
- Ordinance: <https://www.somervillema.gov/sites/default/files/tree-preservation-ordinance.pdf>

The Town of Lexington has a comprehensive Tree Bylaw (Chapter 120 of the General Bylaws). This code applies to all public trees and to some private trees, and is being proposed for updates at 2021 Town Meeting. The updates will require town-owned or public shade trees proposed for removal to be appraised in value, with the value paid to the town.

- Tree Committee website: <https://www.lexingtonma.gov/tree-committee>
- Tree Management Manual: https://www.lexingtonma.gov/sites/g/files/vyhlif3351/f/uploads/4th_edition_tree_manual_for_tc_web_page.pdf
- Bylaw: <https://www.ecode360.com/10535378>

Funding

Funding to develop a tree ordinance or bylaw in your community may be obtained through an MVP action grant. More information can be found at <https://www.mass.gov/service-details/mvp-action-grant>. The Massachusetts Department of Conservation and Recreation also awards grants for tree management and planning. For example, Somerville received \$20,000 in 2018 to develop an Urban Forest Master Plan.

By protecting trees, we can make our communities more resilient to climate change. For more information or questions about developing a tree ordinance or bylaw, contact Charles River Watershed Association at (781) 788-0007 or charles@crwa.org. Also check out the resources available on CRWA's website at www.crwa.org/climate-resilience-toolkit.html.