

## Narrative for Proposed Model Urban Forestry Ordinance

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### I. Introduction—The Model Urban Forestry Ordinance

As municipalities across the United States have recognized the growing impact of climate change and the need for sustainable development, many have decided to act. Current energy production and consumption continuously adds carbon dioxide and other greenhouse gas emissions into the atmosphere and thereby alters the global climate.<sup>1</sup> There are various methods municipalities can employ to tackle the issues of climate change and sustainable development, and the regulation of the urban forest is one such method. Municipalities can and are approaching these issues by requiring and/or incentivizing residents to maintain their urban forests.<sup>2</sup> By regulating and conserving urban forests, municipalities are implementing carbon sequestration practices that will help absorb excess carbon trapped in the atmosphere.<sup>3</sup>

A major reason that current urban forestry ordinances are not enough is because not all urban forestry ordinances address issues such as expert guidance, tree regulation on private property, and tree protection during land development. Municipalities must take a comprehensive approach along with public and private entities to ensure the health and stability of all trees in the community, regardless of location. By requiring and/or incentivizing the entire local community to maintain the urban forest, municipalities can address various tree-related issues such as climate change, deforestation, invasive species, and the preservation of water and soil quality.

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<sup>1</sup> Ellis Raskin, *Urban Forests as Weapons Against Climate Change: Lessons from California's Global Warming Solutions Act*, 47 *The Urban Lawyer* 387 (2015).

<sup>2</sup> *Id.*

<sup>3</sup> David Freudenthal, *Carbon Sequestration: A Lawyer's Cornucopia or Pandora's Box?*, 31 *Wyo. Law.* 16 (2008).

A. Brief Explanation of the Ordinance—Providing Municipalities with a Comprehensive Structure for Maintaining and Protecting the Urban Forest from Natural and Man-Made Threats

The proposed Model Urban Forestry Ordinance (“MUFO”) will help establish an administrative structure to assist municipalities in regulating their urban forests, encourage landowners and developers in residential, commercial, and retail zones to protect and conserve their urban forests, and ensure that municipalities utilize their urban forests to maximize native ecological health, soil and water quality, and carbon sequestration. While the MUFO does not explicitly regulate timber cutting and harvesting, similar regulatory standards apply. Like other timber cutting and harvesting ordinances, the MUFO will require the replanting and maintenance of trees, ensure tree species diversity and health, and promote sustainable forestry practices.<sup>4</sup>

B. How the Model Urban Forestry Ordinance Will Address the Problem—Tree Maintenance and Protection to Create a Sustainable Urban Forest

The MUFO will address climate change and sustainable development by protecting and conserving trees and bolstering carbon sequestration effectiveness. While the MUFO addresses these issues, it will also provide ancillary benefits for an adopting municipality. The urban forest will increase the aesthetic beauty of the municipality and strengthen community pride. Studies have shown that properties with trees are worth more than properties without trees.<sup>5</sup> Trees also provide natural cooling and shading, which translates into energy cost savings for facilities.<sup>6</sup> The primary purpose of the MUFO is the conservation of the urban forest and the sequestering of

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<sup>4</sup> Sustainable Forestry Initiative, *SFI 2015-2019 Standards and Rules (2015)*, [https://www.sfiprogram.org/wp-content/uploads/2015\\_2019StandardsandRules\\_FINAL\\_web\\_Section9-July2018-1.pdf](https://www.sfiprogram.org/wp-content/uploads/2015_2019StandardsandRules_FINAL_web_Section9-July2018-1.pdf).

<sup>5</sup> *Goals and Benefits of Urban Forest Management*, Natural Resources Spatial Analysis Lab, <http://narsal.uga.edu/projects/green-infrastructure-planning/goals/> (last visited Oct. 15, 2019).

<sup>6</sup> *Id.*

carbon.<sup>7</sup> However, the MUFO will also “regulate temperatures, limit pollution, block wind, provide shade, and offer habitat opportunities for urban wildlife.”<sup>8</sup>

### C. Outline of the Narrative of the Model Urban Forestry Ordinance

Section II will address the issue of climate change and why local governments need to proactively address the issue. Section III will explain why the MUFO would help a municipality mitigate the effects of climate change and benefit the community. Section IV will discuss the approaches that other municipalities have taken and the strengths and weaknesses of these approaches. Section V will address various recommendations that a municipality should consider when implementing an urban forestry ordinance. Finally, Section VI will conclude and summarize the key components of the MUFO.

## **II. The Problem—Lack of Comprehensive Regulation at the Local Level Promoting the Maintenance and Protection of the Urban Forest for a More Sustainable Future in the Presence of Climate Change and Other Issues**

Many municipalities throughout the U.S. do not have ordinances that substantially regulate trees on both public and private property. Municipalities need to be able to regulate all trees within their jurisdiction due to (1) increasing concerns with climate change,<sup>9</sup> (2) the overabundance of greenhouse gases in the atmosphere, particularly carbon dioxide,<sup>10</sup> (3) the man-made destruction of trees through deforestation,<sup>11</sup> (4) threats posed by invasive species,<sup>12</sup>

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<sup>7</sup> Raskin, *supra* note 1.

<sup>8</sup> *Id.*

<sup>9</sup> Marc Lallanila, What is the Greenhouse Effect?, Live Science (Mar. 8, 2018), <https://www.livescience.com/37743-greenhouse-effect.html>.

<sup>10</sup> Carbon Sequestration, USDA Forest Service, <https://www.fs.fed.us/ecosystemservices/carbon.shtml>, (last updated Oct. 7, 2016).

<sup>11</sup> Christina Nunez, Climate 101: Deforestation, National Geographic (Feb. 7, 2019), <https://www.nationalgeographic.com/environment/global-warming/deforestation/>.

and (5) hazards to water and soil quality.<sup>13</sup> Through the regulation of trees regardless of their location, municipalities will be better equipped to address these issues.

#### A. The Lack of Comprehensive Regulations Under Current Tree Ordinances

Although tree ordinances have become common in municipalities across the country, many of these ordinances lack comprehensive regulations of trees on public and private property. First, not all municipalities have tree protection systems in place during land development and urban expansion.<sup>14</sup> If an ordinance were to proactively regulate tree protection during land development, then tree damage and loss would be mitigated during the development process.<sup>15</sup> Second, most tree ordinances regulate public trees, but fail to adequately regulate trees on private property. Private landowners must be encouraged to maintain their trees in a way that is beneficial to the environment.<sup>16</sup> An ordinance that allows the municipality to regulate trees on private property would provide even greater environmental protection.

#### B. Growing Concerns About Climate Change and the Issue with Carbon Emissions

Climate change is a global issue that is at the forefront of economic, political, and social concerns around the world. The phenomenon of climate change has occurred as a result of exponential amounts of greenhouse gases being emitted into the earth's atmosphere, trapping the sun's ultraviolet rays within the atmosphere, thus causing global temperatures to increase.<sup>17</sup>

Current research indicates that the possibility of the warming climate being man-made is over

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<sup>12</sup> Jacob Hill, Invasive Species: How They Affect the Environment, Environmental Science, <https://www.environmentalscience.org/invasive-species> (last visited Sept. 28, 2019).

<sup>13</sup> Shelby E. Chunko and Wilbur E. Wolf, Best Management Practices for Pennsylvania Forests, [http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr\\_20029743.pdf](http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20029743.pdf).

<sup>14</sup> Teresa Byokawsk, Public Property: Provide Definition for Development Activity; Protect Trees; Provide for Landscaping Plans, 18 GASTULR 322 (2001).

<sup>15</sup> *Id.*

<sup>16</sup> Raskin, *supra* note 1.

<sup>17</sup> Lallanila, *supra* note 9.

95%.<sup>18</sup> Humanity is contributing to the changing climate by emitting large quantities of greenhouse gases, particularly carbon dioxide, into the atmosphere through the burning of fossil fuels such as oil, coal, and gasoline.<sup>19</sup> The human impact on climate change makes it necessary for not only the U.S. as a whole but local municipalities as well to implement policies that promote the use of clean energy and lessen our influence on the atmosphere.

Municipalities can address carbon dioxide pollution at the local level in a direct manner because trees can be used to trap excess carbon dioxide in the atmosphere through a process known as carbon sequestration.<sup>20</sup> By incentivizing and encouraging the maintenance and protection of trees, municipalities will be able to sustain a healthy urban forest capable of absorbing excess carbon dioxide in the earth's atmosphere.

### C. Deforestation and the Man-Made Loss of Trees

Trees provide many benefits in the effort to mitigate the effects of climate change, but if human action is destroying trees, then more carbon is being released into the atmosphere than is being absorbed.<sup>21</sup> A 2009 study showed that behind the production of fossil fuels, deforestation was the second largest contributor of carbon dioxide into the atmosphere.<sup>22</sup> According to National Geographic, the world lost 502,000 square miles of forest land between 1990 and 2016.<sup>23</sup> These statistics are troubling because trees can capture a lot of the carbon emissions created through human activities.<sup>24</sup> Causes of deforestation include farming, grazing, drilling,

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<sup>18</sup> *Climate Change: How Do We Know?*, NASA, <https://climate.nasa.gov/evidence/> (last updated Oct. 9, 2019).

<sup>19</sup> Lallanila, *supra* note 9.

<sup>20</sup> *Carbon Sequestration*, *supra* note 10.

<sup>21</sup> Nunez, *supra* note 11.

<sup>22</sup> Lallanila, *supra* note 9.

<sup>23</sup> Nunez, *supra* note 11.

<sup>24</sup> *Id.*

and urbanization.<sup>25</sup> The deforestation cause that is most relevant to municipalities is urban expansion and land development.<sup>26</sup>

#### D. The Destruction of Trees by Invasive Species

Aside from deforestation, the issue of invasive species has also affected the health of trees throughout the country.<sup>27</sup> An invasive species is an exotic species introduced to a foreign land where that species has no natural predators to keep the species under control.<sup>28</sup> The problem with invasive species is that they can thrive in non-native areas and cause harm to all organisms in that environment.<sup>29</sup>

One invasive species that is affecting trees across the U.S. and Pennsylvania in particular is the emerald ash borer beetle, which is native to Asia.<sup>30</sup> The emerald ash borer threatens all species of ash trees within the state of Pennsylvania by exclusively eating these trees within their larval stage.<sup>31</sup> Another invasive species that is currently affecting Pennsylvania trees and increasingly becoming a more substantial threat is the spotted lanternfly.<sup>32</sup> Discovered in Pennsylvania in 2014, the spotted lanternfly is threatening the fruit trees of Pennsylvania.<sup>33</sup> Municipalities need to address issues like invasive species to protect and conserve native tree populations.

#### E. The Preservation of Soil and Water Quality

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<sup>25</sup> Nunez, *supra* note 11.

<sup>26</sup> *Id.*

<sup>27</sup> Hill, *supra* note 12.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> Emerald Ash Borer Beetle, USDA Animal and Plant Health Inspection Service, <https://www.aphis.usda.gov/aphis/resources/pests-diseases/hungry-pests/the-threat/emerald-ash-borer/emerald-ash-borer-beetle> (last visited Sept. 29, 2019).

<sup>31</sup> Emerald Ash Borer, Pennsylvania DCNR, <https://www.dcnr.pa.gov/Conservation/ForestsAndTrees/InsectsAndDiseases/EmeraldAshBorer/Pages/default.aspx> (last visited Sept. 26, 2019).

<sup>32</sup> Spotted Lanternfly, Penn State Extension, <https://extension.psu.edu/spotted-lanternfly> (last visited Sept. 30, 2019).

<sup>33</sup> *Id.*

Trees can also help municipalities address issues such as soil erosion and the spread of pollutants into the water supply.<sup>34</sup> When developing land for urban use, impervious surfaces such as asphalt and concrete cause water to flow along them and collect pollutants along the way.<sup>35</sup> Additionally, the presence of trees along waterways is beneficial for their general health.<sup>36</sup> Similar to how trees prevent the flow of pollutants and soil into waterways, trees can also prevent a majority of stormwater runoff. When trees are planted and maintained, they can absorb large quantities of rainfall, thus reducing the water flow into streams and absorbing pollutants.<sup>37</sup> A lack of trees will lead to an increase in water flow into streams and a drop in water evaporation.<sup>38</sup> The absorption abilities of trees are helpful, particularly in areas such as parking lots and roads, because trees will prevent a large portion of rainfall from hitting impervious surfaces and making its way to a watershed.<sup>39</sup>

### **III. Why the Ordinance is Needed—The Model Urban Forestry Ordinance Provides Municipalities with the Procedures and Standards Needed to Maintain and Protect Trees in a Manner that Promotes a Healthy Urban Forest**

The MUFO covers a diverse array of issues and would thus be more effective than a typical tree ordinance. The MUFO defines the term “urban forest” similarly to Robert Miller’s definition in Urban Forestry, meaning “the sum of all woody and associated vegetation in and around dense human settlements, ranging from small communities in rural settings to

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<sup>34</sup> Chunko & Wolf, *supra* note 13.

<sup>35</sup> The Role of Trees and Forests in Healthy Watersheds, Penn State Extension, <https://extension.psu.edu/the-role-of-trees-and-forests-in-healthy-watersheds> (last updated Aug. 17, 2015).

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

metropolitan regions.”<sup>40</sup> In most municipalities, publicly-owned trees only account for a small percentage of trees within a municipality’s urban forest, and thus an urban forestry ordinance should regulate trees on private property as well.<sup>41</sup> This comprehensive approach would be more beneficial than a standard tree ordinance that only offers a standardized level of care for a fraction of trees within the municipality.

A typical street tree ordinance addresses the maintenance and protection of trees in public areas, but many do not address the issue tree protection on private land or during land development. For example, the Borough of Carlisle’s ordinance specifically uses the phrase “streets and highways”<sup>42</sup> when identifying the trees regulated under the ordinance. The only mention of a regulation on a private residence is found in a section addressing trees inflicted with insects or disease.<sup>43</sup> In an ordinance like Carlisle’s, most of the regulations require permits to remove trees or require the replanting of trees only if they are along a street or highway. An ordinance like Carlisle’s does not encompass a broad enough scope of regulation to adequately protect the trees within a municipality.

Current tree ordinances rarely address concepts such as what happens when a tree is removed, legally or illegally, by a private landowner.<sup>44</sup> An essential goal of the MUFO is to address what happens when a private landowner commits an act that is considered harmful to a tree. When it comes to maintaining urban forests and addressing climate change in general, the state of Washington is at the forefront of developing successful urban forestry ordinances.<sup>45</sup>

While many of Washington’s urban forestry ordinances are progressive, they are not perfect. The

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<sup>40</sup> Robert W. Miller, *Urban Forestry: Planning and Managing Urban Greenspaces* at 27 (2nd ed. 2007).

<sup>41</sup> *Id.*

<sup>42</sup> Carlisle, Pa., Code Part II ch. 239, §§ 239-1 to 239-9 (2005).

<sup>43</sup> § 239-5(A)(1)(b)-(c).

<sup>44</sup> *Recommendations for Updating Seattle’s Tree Ordinance*, Friends of Urban Forests (Apr. 10, 2018), <http://friends.urbanforests.org/2018/04/10/recommendations-for-updating-seattles-tree-ordinance/>.

<sup>45</sup> Keith H. Hirokawa, *Sustainability and the Urban Forest*, 51 *Nat. Resources J.* 233 (2011).

City of Seattle’s tree ordinance does not address how to achieve the replacement of trees when development occurs or what happens when private landowners remove their trees.<sup>46</sup> The MUFO has provisions that address what a person can and cannot do in terms of tree work. Through landowner regulation, the MUFO will better protect trees on private property.

Another issue that the MUFO attempts to remedy is the lack of proper personnel and expertise in the implementation of an urban forestry ordinance. Some ordinances like the City of Lancaster’s, employ an arborist and a Shade Tree Commission (“STC”) to enforce its provisions.<sup>47</sup> Other ordinances establish only a Shade Tree Commission.<sup>48</sup> The MUFO utilizes a municipal arborist, a Shade Tree Commission, and an Environmental Advisory Council (“EAC”) as found under Pennsylvania law.<sup>49</sup> By creating three separate bodies, the MUFO ensures that each body serves its distinct function and implements a more efficient administration of the ordinance.

#### **IV. How Other Municipalities Approach the Regulation of The Urban Forest**

Municipalities across the U.S. have adopted tree ordinances or regulate their urban forests in some capacity. Municipalities in Pennsylvania are no exception, with several including the Town of Bloomsburg’s ordinance establishing an STC to regulate trees on residential property,<sup>50</sup> the City of Lancaster’s ordinance that addresses various issues from tree planting and permitting to penalties for certain tree-related activities,<sup>51</sup> the Borough of Mechanicsburg’s ordinance

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<sup>46</sup> Friends of Urban Forests, *supra* note 44.

<sup>47</sup> Lancaster, Pa., Code Part II ch. 273, §§ 273-1 to 273-17 (2014).

<sup>48</sup> Carlisle § 239-2.

<sup>49</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>50</sup> Bloomsburg, Pa., Code ch. 25, §§ 25-101 to 25-203 (2019).

<sup>51</sup> §§ 273-1 to 273-17.

dealing with tree replacement and ordinance violations,<sup>52</sup> and the Township of Radnor’s ordinance addressing the appointment and duties of a municipal arborist.<sup>53</sup>

A. The General Goals of an Urban Forestry Ordinance

Urban forestry ordinances share common goals. The Lancaster ordinance states seven purposes behind its inception.<sup>54</sup> The first purpose addressed by Lancaster is overseeing the “planting, removal, maintenance, and protection of trees.”<sup>55</sup> Lancaster achieves this primary goal by establishing an administrative structure, a city arborist and a Street Tree Commission, that operates a regulatory system that requires permitting to perform particular tree work. The next goal is protecting and strengthening neighborhoods.<sup>56</sup> Neighborhoods are safer when landowners maintain their trees in a manner that is non-hazardous. The third goal is to strengthen the value of all property.<sup>57</sup> A healthy urban forest will raise the value of property in Lancaster and reduce energy usage within the city as trees can be used to promote energy efficiency.

Another goal is enhancing the visual character and beauty of the city.<sup>58</sup> Aesthetic beauty will be the natural result of requiring landowners to plant and maintain trees. The ordinance also sets a goal of restoring a tree canopy that “contributes to improved water quality, reduced stormwater runoff, reduced air pollution, and increased biodiversity and wildlife habitat.”<sup>59</sup> The final two goals of the ordinance are promoting a healthy, managed urban forest and furthering the city’s other environmental goals.<sup>60</sup> These goals show that Lancaster wanted a comprehensive,

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<sup>52</sup> Mechanicsburg, Pa., Ordinance 1071, §§ 25-101 to 25-110 (July 5, 2005).

<sup>53</sup> Radnor, Pa., Code Part II ch. 263, §§ 263-1 to 263-13 (2013).

<sup>54</sup> Lancaster § 273-1(A)-(G).

<sup>55</sup> *Id.*

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> *Id.*

<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

hands-on approach towards the regulation of its urban forest, and other ordinances share similar goals.<sup>61</sup>

## B. The Current State of the Law Under Urban Forestry Ordinances

Although the various ordinances tackle the issue in different ways, each of them addresses urban forestry regulation through a combination of the following key points.

### 1. The creation or delegation of authority to implement the ordinance

Some ordinances create an administrative body, typically a Shade Tree Commission or municipal arborist, to oversee its implementation.<sup>62</sup> For example, the Bloomsburg ordinance expressly authorizes the creation of a Shade Tree Commission.<sup>63</sup> Under this approach, the STC is given specific powers to ensure the regulation and maintenance of the municipality's urban forest. In Bloomsburg, the ordinance allows the local government to appoint five citizens that will sit on the commission and help administer the goals and objectives of the STC.<sup>64</sup> The Bloomsburg ordinance states that the commission shall "have custody and control of the shade trees on the public streets and highways of the Town of Bloomsburg, . . . and shall have authority to plant, remove, maintain, and protect such trees."<sup>65</sup> The Bloomsburg ordinance requires notice to be made in a newspaper before any tree is planted or removed.<sup>66</sup> While there are ordinances like Bloomsburg's that directly create an administrative body to implement the ordinance, other

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<sup>61</sup> Radnor Township states that the purpose of its ordinance is to "provide a mechanism for the establishment of a commission which shall encourage proper selection, planting, replanting and care and establish protective regulations for trees within Radnor Township in order to control problems of air and noise pollution, soil erosion, aesthetic depreciation, and to make Radnor Township a healthier and safer place to live." Radnor, Pa., Code Part II, ch. 263, § 263-1 (2013). Susquehanna Township has a similar purpose to "establish a desirable amount of tree cover on public lands within the township; maintain township trees in a healthy and non-hazardous condition through good arboricultural practices; establish and maintain appropriate diversity in tree species and age classes to provide a stable and sustainable suburban forest; promote conservation of tree resources; and select, situate and maintain street trees appropriately to minimize hazard, nuisance, landscape damage and maintenance costs." Susquehanna, Pa., Code ch. 25 Part 1, § 25-101 (2008).

<sup>62</sup> Bloomsburg § 25-101.

<sup>63</sup> *Id.*

<sup>64</sup> *Id.* § 25-102.

<sup>65</sup> *Id.* § 25-103(1).

<sup>66</sup> *Id.* § 25-103(2)(F).

ordinances like Lancaster’s delegate an already established commission with their implementation.<sup>67</sup>

Another type of authority that has been used to implement an urban forestry ordinance is a municipal arborist.<sup>68</sup> The Lancaster ordinance states that the duty of the City Arborist is “to cause any premises to be inspected or examined, to order, in writing, the remedying of any conditions found to exist in violation of any provisions of this chapter, and to issue permits.”<sup>69</sup> Under the system employed by the Lancaster ordinance, the STC works alongside the City Arborist to promote the regulation and maintenance of trees.<sup>70</sup> The duties of the City Arborist include keeping applications for all permits, keeping records of all the issued permits, filing and keeping all submitted plans, and compiling a record of all plans.<sup>71</sup> The City Arborist must also create a report that contains all shade tree permits issued for a certain time and a report of all complaints, violations, and remedies.<sup>72</sup> The City Arborist is also required to oversee the protection and maintenance of the trees within the municipality.<sup>73</sup>

## 2. Tree removal

Ordinances like the Lancaster ordinance implement standards regulating landowners with trees on or attached to their property as to how trees should be cared for and maintained. If a landowner’s tree is deemed a “potential or imminent risk to public welfare and property because of its damaged or diseased condition or is not being maintained,” then the STC will notify the landowner to remove or prune the tree within a given amount of time.<sup>74</sup> For trees on private property, if the tree is “sufficiently damaged, disfigured or constitutes a potential risk to the

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<sup>67</sup> Lancaster § 273-4.

<sup>68</sup> *Id.* § 273-3(B).

<sup>69</sup> *Id.*

<sup>70</sup> *Id.* § 273-4.

<sup>71</sup> § 273-3(C)(1).

<sup>72</sup> § 273-3(C)(2).

<sup>73</sup> *Id.* § 273-3(B).

<sup>74</sup> Lancaster § 273-5(A).

public or other trees,”<sup>75</sup> and the issue is not taken care of within the given time, then the city will address the issue at the landowner’s expense.<sup>76</sup> For trees on public property that are considered a potential threat, existing ordinances state that the municipality will address the issue and notify the landowner adjacent to the tree.<sup>77</sup> If a tree in a public area is considered an immediate risk, then the tree will be removed or maintained without prior notice.<sup>78</sup> The Lancaster ordinance also allows the landowner to appeal the removal or maintenance of a tree.<sup>79</sup> The Lancaster ordinance requires a permit before any tree removal or maintenance.<sup>80</sup>

### 3. Tree planting and replacement

Each of the ordinances provide certain requirements and recommendations as to how and when to plant trees and what tree species are permissible. When planting new trees, the Bloomsburg ordinance requires a replacement tree after the removal of a tree, but not planted within 20 feet of a street intersection.<sup>81</sup> Some of these ordinances require that when new land development projects commence, a certain number of street trees will be placed within that new development zone.<sup>82</sup> Other ordinances require that when removing a tree for one of the reasons mentioned above or another reason, the person that removed the tree must replace the removed street tree with a tree recommended by the STC.<sup>83</sup> Also, these ordinances usually require that whenever the STC recommends the removal of a tree, replanting is required.<sup>84</sup>

### 4. Tree maintenance

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<sup>75</sup> § 273-5(B).

<sup>76</sup> § 273-5(A)(1).

<sup>77</sup> § 273-5(D).

<sup>78</sup> § 273-5(E).

<sup>79</sup> § 273-5(F).

<sup>80</sup> § 273-5(G).

<sup>81</sup> Bloomsburg § 25-203(1)(A).

<sup>82</sup> Radnor § 263-9(A)(1)-(3).

<sup>83</sup> Bloomsburg § 25-203(1)(C).

<sup>84</sup> *Id.*

These ordinances generally regulate tree maintenance so that trees do not obstruct public activities. Trees cannot obstruct driver vision of lights and signs, pedestrian walking paths, and anything else required to promote the safety of people traveling on streets.<sup>85</sup> For tree maintenance, many of these municipalities require a permit before any tree-related activities.<sup>86</sup> The Lancaster ordinance requires permits for the following tree activities: cutting, breaking, or injuring a tree in any manner, removal of a shade tree, interference with the main roots of a shade tree, treating a tree with pesticides, placing wires, cables or signs of any kind on a tree, removal of any device necessary for the protection of a shade tree, the placement of stone or any substance that would block the water flow to the trees roots, pouring saltwater or other material that would harm a tree, and driving construction vehicles over any protected tree areas.<sup>87</sup>

#### 5. How other municipalities have enforced urban forestry ordinances

Most municipalities have implemented and enforced these ordinances by penalizing for the failure to obtain a permit prior to tree work or the failure to perform or refraining from performing proscribed tree work.<sup>88</sup> Under a system such as the one used in the Borough of Mechanicsburg that uses fines as penalties, the ordinances tend to set out certain requirements for notice.<sup>89</sup> Under this system, notice is provided by mail, and if mail service cannot be done by mail, then the notice must be posted in a public place.<sup>90</sup> If the landowner fails to act after receiving notice, then the municipality will act at the landowner's expense, with some municipalities adding additional costs.<sup>91</sup> Some municipalities will also allow for the collection of attorney's fees against a landowner who is delinquent in following the rules under the

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<sup>85</sup> Lancaster § 273-7(A).

<sup>86</sup> § 273-3(A).

<sup>87</sup> § 273-7(B)(1)-(9).

<sup>88</sup> Mechanicsburg § 25-108(2)(A)-(B).

<sup>89</sup> *Id.*

<sup>90</sup> Mechanicsburg § 25-108(2)(A)-(B).

<sup>91</sup> *Id.*

ordinance.<sup>92</sup> Some ordinances give the municipality discretion to set the penalty amount while others set a range. For example, the Mechanicsburg ordinance sets a range of \$50 to \$600 for the failure to comply with the ordinance.<sup>93</sup>

### C. How the Success of Current Urban Forestry Ordinances is Measured

Throughout the country, various tree ordinances like the ones discussed above have been implemented to regulate and maintain urban forests. Municipalities enacting urban forestry ordinances like the MUFO can use a combination of other methods to measure effectiveness. One such method of measurement is through sampling, the measuring of a representative group of trees rather than the whole area.<sup>94</sup> By taking estimates from various samples, it is possible to create an aggregate representation of the whole and limit biased results such as shading or, in the case of public polling, a lack of responses.<sup>95</sup> Sampling can be used in combination with many other methods of measurement to create a more accurate representation of the whole. These methods can be used to measure the progress of the ordinance by either observing how many trees are planted versus how many trees are removed in a single year or by simply observing the canopy coverage on a year-by-year basis.

Photogrammetry and ground surveys are two common forms of measurement for a tree ordinance. Photogrammetry and remote sensing utilize photos and aerial imagery to observe the forest canopy from above.<sup>96</sup> Some benefits of photogrammetry include the creation of a permanent image, measuring large areas at low costs, and easy access to hard-to-reach forest areas.<sup>97</sup> Photogrammetry can be used to examine significant or specific areas, and because of the

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<sup>92</sup> *Id.* § 25-108(3).

<sup>93</sup> *Id.* § 25-108(6).

<sup>94</sup> Guidelines for Developing and Evaluating Tree Ordinances, Phytosphere Research Home, <http://www.phytosphere.com/treeord/ordprt3b.htm> (last visited Nov. 16, 2019).

<sup>95</sup> *Id.*

<sup>96</sup> Phytosphere Research Home, *supra* note 94.

<sup>97</sup> *Id.*

permanent nature of a photograph, documentation is provided for future reference and communication.<sup>98</sup> A ground survey consists of using maps, datasheets, and measurements to get physical measurements of the trees within the forest.<sup>99</sup> A ground survey can be used to determine the age, species, size, and health of the trees.<sup>100</sup> Tools used to conduct these surveys include taking photographs to evidence the change in tree coverage, keeping well-maintained written records of the tree canopy, or by holding public polls to assess the opinions of the citizens within the municipality.<sup>101</sup>

An example of the effectiveness of a tree ordinance can be found in the Borough of State College. Alan Sam, State College’s Environmental Coordinator/Arborist, was hired in 1989 when its tree program received regular complaints from the community. During his term, State College implemented a plan that left the tree-related decisions in the hands of local government bodies. Additionally, the new plan created a guide as to what residents could and could not do regarding tree work. Sam said that citizens now rarely complain about tree regulation, but rather speak positively about the tree program.<sup>102</sup> Sam also said that within the last thirty years, a judge has only once disagreed about the imposition of a fine for a violation.<sup>103</sup>

**V. Recommendations—How a Comprehensive Urban Forestry Ordinance that Requires and/or Incentivizes the Maintenance and Protection of Trees on both Public and Private Property will Better Benefit a Municipality**

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<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> E-mail from Alan Sam, Env’tl. Coordinator/Arborist for the Borough of State College, Pa., to Zachary Stritzinger (Nov. 27, 2019, 12:28 EST) (on file with author).

<sup>103</sup> *Id.*

The MUFO will give municipalities a tool created through the experiences of various other urban forestry ordinances. This ordinance has incorporated standards from other ordinances regulating trees on public property,<sup>104</sup> trees on private property,<sup>105</sup> and trees affected by urban and suburban land development.<sup>106</sup> By combining these various standards and creating a broader ordinance, the MUFO will better regulate a municipality's urban forest. The MUFO reflects the policy decision that an urban forestry ordinance should be comprehensive enough to include public and private property, consider urban expansion, as well as operate under a more defined administrative scheme. Some of the benefits the MUFO will provide include natural and beautiful recreational areas that are easily accessible,<sup>107</sup> increases in property values,<sup>108</sup> and promoting of a healthier environment through carbon sequestration,<sup>109</sup> among other social, economic, and environmental benefits. Finally, the MUFO will be funded through the permitting process and enforcement through violation fines.<sup>110</sup>

A. How the Experiences of other Municipalities with Urban Forestry Ordinances Influenced the Recommendations under the Model Urban Forestry Ordinance

Municipalities may often need professional guidance with the administration of an urban forestry ordinance. The MUFO would help solve this problem. The MUFO will establish an administrative structure at the local level, similar to the Lancaster and Bloomsburg ordinances, to oversee the regulation of the urban forest.<sup>111</sup> This framework, particularly the work of the municipal arborist, will ensure functionality while also proactively researching and responding to

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<sup>104</sup> Radnor § 263-5(A)-(D).

<sup>105</sup> Susquehanna § 25-114.

<sup>106</sup> Raskin, *supra* note 1.

<sup>107</sup> Randall J. Cude, Beauty and the Well-Drawn Ordinance: Avoiding Vagueness and Overbreadth Challenges to Municipal Aesthetic Regulations, 6 J. L. Pol'y 853 (1998).

<sup>108</sup> Natural Resources Spatial Analysis Lab, *supra* note 5.

<sup>109</sup> Freudenthal, *supra* note 3.

<sup>110</sup> Mechanicsburg § 25-108(1)-(9).

<sup>111</sup> Vivian D. Encarnacion, More Trees Please: Utilizing Natural Resources in the Urban Environmental Management of New York City, 26 Fordham Urb. L. J. 1571, 1588 (1999).

urban forestry issues.<sup>112</sup> One body not found in most other tree ordinances is an EAC, which advises local governments in their decision-making process regarding urban forestry policies.<sup>113</sup> The powers and duties of the EAC include (1) identifying problems and recommending plans for the protection of natural resources, (2) making recommendations to municipal corporations as to the possible use of open land, (3) promoting a community environmental program and educating the public, (4) maintaining an index of all publicly and privately owned land within the municipality to ensure proper land use, and (5) advising the local government on how to use all property received.<sup>114</sup> The EAC will help a municipality with not only urban forestry policies, but all environmentally-related policies a municipality may want to consider.

The Shade Tree Commission will work in conjunction with the municipal arborist to create policies that regulate the planting, removal, maintenance, and protection of shade trees.<sup>115</sup> The STC can also monitor and protect trees on private property.<sup>116</sup> The main duty of the municipal arborist will be the creation of the tree manual, which will compile the regulations and standards for arboriculture work within the municipality in detail and supplement the ordinance. The EAC, STC, and municipal arborist will be required to keep a record of all meetings and activities and will only receive compensation for necessary expenditures.<sup>117</sup>

The MUFO addresses tree removal through a combination of the Bloomsburg and Mechanicsburg ordinances. The MUFO allows the removal of a tree if the STC concludes that the tree is dead, dying, or damaged beyond recovery and concurrence from the municipal arborist that removal is accurate.<sup>118</sup> The STC may require the removal of a tree in an emergency after

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<sup>112</sup> Aimee Hess, *Real Estate & Construction Law*, 72 Tex. B. J. 41, 42 (2009).

<sup>113</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>114</sup> § 2324(a)(1)-(5).

<sup>115</sup> Lancaster § 273-4.

<sup>116</sup> Susquehanna § 25-114.

<sup>117</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2325 (West 1996).

<sup>118</sup> Bloomsburg § 25-107(2)(A).

providing notice.<sup>119</sup> If a landowner removes a tree under an authorized permit, then the landowner must replace the tree within one year.<sup>120</sup>

Tree planting and replacement under the MUFO operates on a permitting system derived from the Bloomsburg and Susquehanna Township ordinances. Once a landowner is permitted to remove a tree, the landowner may be required to replace the tree.<sup>121</sup> Under the MUFO, the municipality may require the landowner to remove the tree at his or her own expense.<sup>122</sup> Additionally, if a person causes harm to a tree, the STC can require that the person pay for the tree's replacement.<sup>123</sup> The encouragement of landowners to plant and replace trees will lead to a healthy and expanded tree canopy.

The MUFO will also establish standards for the maintenance of trees like the standards found in Susquehanna Township's ordinance. Under the MUFO, landowners will be required to (1) maintain the health, appearance and safety of the trees on their property within the public right-of-way, including pruning low hanging and dead branches, removing dead trees, planting appropriate replacement trees and other tree work authorized under a permit, (2) maintain trees, shrubs, bushes and other vegetation on their property within the municipality rights-of way to allow for full visibility of signs, (3) comply with notices received from the STC regarding tree care, and (4) comply with all conditions of permits issued by the STC, including priming, tree removal, stump grinding or tree replanting.<sup>124</sup> If the landowner fails to comply with any of these maintenance standards, then the STC has the authority to perform maintenance at the cost of the landowner.<sup>125</sup>

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<sup>119</sup> *Id.* § 25-107(4).

<sup>120</sup> Mechanicsburg § 25-105(4).

<sup>121</sup> Susquehanna § 25-111(1).

<sup>122</sup> *Id.*

<sup>123</sup> *Id.* § 25-112.

<sup>124</sup> Susquehanna § 25-104(1)(A)-(D).

<sup>125</sup> *Id.* § 25-104(2).

The MUFO also adapts its permitting and enforcement provisions from the Lancaster and Susquehanna Township ordinances. The STC will enforce the ordinance.<sup>126</sup> The MUFO requires a permit to perform all tree work throughout the municipality.<sup>127</sup> The permit must be completed and returned to the municipality, and the STC will decide on whether to approve or deny the permit based on factors such as the tree's health, the tree's location, and the extent of the tree work. The STC will set the permit fees, which will be collected by the municipal treasurer and allocated to fund the STC.<sup>128</sup> The STC can authorize exceptions to the permit requirement if enforcement is impractical such as tree removal if the health of a tree or surrounding trees is at risk or emergency relief of a tree is an immediate hazard to person or property.<sup>129</sup>

B. Major Policy Choices Under the Model Urban Forestry Ordinance that Resulted in More Administrative Bodies and Broader Regulation

The MUFO combines multiple elements of other ordinances and laws and major policy choices were used to determine which provisions should be implemented. The first major policy choice was that the MUFO should be administered by three administrative bodies as opposed to just one. Ordinances like the Lancaster ordinance utilize multiple bodies such as a city arborist and a Shade Tree Commission,<sup>130</sup> while the Bloomsburg ordinance utilizes only one.<sup>131</sup> The MUFO applies Lancaster's approach and employs an EAC, an STC, and a municipal arborist for administration and enforcement. The MUFO employs an arborist, landscape architect, or other forestry professional so that the EAC and STC can perform their duties more efficiently rather than rely on an outside expert each time professional tree guidance is needed. The EAC is

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<sup>126</sup> *Id.* § 25-118.

<sup>127</sup> Lancaster § 273-3(A).

<sup>128</sup> Susquehanna § 25-116.

<sup>129</sup> *Id.* § 25-120.

<sup>130</sup> Lancaster § 273-4.

<sup>131</sup> Bloomsburg § 25-101.

important because it advises the municipality not only on urban forestry matters but all matters concerning the protection, conservation, management, promotion and use of natural resources.<sup>132</sup> The MUFO allows a municipality to choose from three administrative bodies for a more effective administration.

Another major policy choice was the decision to regulate broadly by regulating both public and private property. Most tree ordinances such as Lancaster's and Bloomsburg's regulate trees on the "streets and highways" of the municipality.<sup>133</sup> Ordinances like Carlisle's have limited application to private property.<sup>134</sup> The Susquehanna Township ordinance extends regulation to trees on private property that overhang and endanger public rights-of-way.<sup>135</sup> The Lancaster ordinance extends the management of trees on private property by protecting trees during construction and land development,<sup>136</sup> granting easements that allow the planting of trees on private property where there is not enough room in the public right-of-way,<sup>137</sup> and requiring permits for tree activities on private property.<sup>138</sup> The MUFO chooses a more broad, comprehensive regulation similarly to the Lancaster ordinance. The MUFO offers greater regulation on private property to allow for the greater protection of all trees in the municipality.

C. How the Model Urban Forestry Ordinance Solves the Under-utilization of the Urban Forest by Establishing a Better Administrative Scheme, Regulating Trees on Public and Private Property, and Addressing Tree Conservation at Development Sites

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<sup>132</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>133</sup> Bloomsburg § 25-103(1).

<sup>134</sup> Radnor § 239-5(A)(1)(b)-(c).

<sup>135</sup> Susquehanna § 25-114.

<sup>136</sup> Lancaster § 273-10(A)-(E).

<sup>137</sup> § 273-13.

<sup>138</sup> Lancaster § 273-3(A).

By adopting a more comprehensive urban forestry ordinance, municipalities will be able to better promote the practice of carbon sequestration.<sup>139</sup> Carbon sequestration used to be a complicated process, but now laws exist to encourage carbon sequestration in urban areas.<sup>140</sup> Municipalities have been able to use zoning ordinances to regulate and protect public and private property and the natural environment.<sup>141</sup> For example, Washington has implemented a program where it is imperative that “local governments not only designate critical areas and adopt development regulations to protect these areas in their comprehensive plans, but also to use the best available science when these regulations are adopted.”<sup>142</sup> Like the Washington program, the MUFO will allow municipalities to increase the tree canopy so that even private landowners will not be able to disturb the trees on their property.<sup>143</sup> By regulating residential land, municipalities will be able to better promote the practice of carbon sequestration within its jurisdiction.

The MUFO will better regulate the urban forest through a more efficient administrative structure.<sup>144</sup> The EAC advises the local government in its decision-making process and educates the public on the importance of urban forest conservation.<sup>145</sup> The EAC will also advise other local bodies within the municipality so that a body like a Parks and Recreations Department will conduct activities in the best interest of the urban forest. The STC will enforce the MUFO and exercise jurisdiction over all shade trees in the municipality.<sup>146</sup> The STC will also help regulate trees on private property.<sup>147</sup> The municipal arborist will help the EAC and STC perform their

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<sup>139</sup> John R. Nolon, *Managing Climate Change Through Biological Sequestration: Open Space Law Redux*, 31 *Stan. Envtl. L. J.* 195 (2012).

<sup>140</sup> *Id.*

<sup>141</sup> *Id.* at 217.

<sup>142</sup> *Id.* at 218.

<sup>143</sup> *Id.*

<sup>144</sup> Vivian D. Encarnacion, *More Trees Please: Utilizing Natural Resources in the Urban Environmental Management of New York City*, 26 *Fordham Urb. L. J.* 1571, 1588 (1999).

<sup>145</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>146</sup> Lancaster § 273-4.

<sup>147</sup> Susquehanna § 25-114.

duties by providing in-house professional advice on urban forestry policy and compile a tree manual to supplement the standards of the MUFO in detail.

The MUFO will standardize the tree care and protection practices to be followed on both public and private property to encourage a more cohesive regulation of the trees within the community. The MUFO will establish tree planting, removal, and replacement requirements. A person can only plant trees in accordance with the location, species, clearance, distance, and other requirements described in the tree manual.<sup>148</sup> The MUFO prohibits a person from doing anything to damage, injure, mutilate, kill or destroy a tree or interfere with its main roots.<sup>149</sup> The MUFO also prohibits a person from excavating ditches, tunnels or trenches or laying sidewalk or driveway within a 10-foot radius of a tree without a permit.<sup>150</sup> If a tree on a landowner's property becomes damaged as a result of negligence, then penalties may apply.<sup>151</sup> The STC will also establish tree cutting, trimming, pruning, damage control, and protection standards.<sup>152</sup> By standardizing the tree care and maintenance standards within the municipality, the MUFO will limit the unnecessary destruction of trees and increase tree volume.

The MUFO will also protect trees during land development in urban areas and incentivize landowners and developers to protect and conserve trees. By addressing tree conservation at development sites, the MUFO both responds to a direct issue of urban forests and gets private landowners and developers to put tree protection at the forefront of their planning.<sup>153</sup> The MUFO will implement regulations that protect trees during urban development, but also provide incentives encouraging landowners and developers to plant and protect trees. For example,

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<sup>148</sup> § 273-6(D)(1).

<sup>149</sup> Susquehanna § 25-109(1)-(2).

<sup>150</sup> *Id.* § 25-109(3).

<sup>151</sup> *Id.*

<sup>152</sup> Bloomsburg § 25-202(A)-(C).

<sup>153</sup> R. A. Kluender et al., *The Use of Forestry Incentives by Nonindustrial Forest Landowner Groups: Is it Time for a Reassessment of Where We Spend Our Tax Dollars?*, 39 Nat. Resources J. 799 (1999).

landowners who plant or maintain trees in water runoff areas may be able to receive a credit for stormwater management fees. The municipality may also waive, discount, or defer these fees. Developers who add and maintain additional tree coverage in their land development plans may be eligible to obtain additional square footage for building or a density bonus under the municipality's existing laws.

#### D. The Social, Economic, and Environmental Benefits of the Model Urban Forestry Ordinance

The social benefits of the MUFO include enhancements to aesthetic beauty and pride within the municipality and an accessible recreational area.<sup>154</sup> The way that trees are planted and maintained in a municipality can give a resident a sense of pride in their community and a chance to appreciate the beauty of the municipality.<sup>155</sup> People like to seek outdoor recreational activities within their communities, and urban forests provide outdoor experiences for people to enjoy.<sup>156</sup> Also, because an urban forest is within a municipality, it is easily accessible for residents compared to forests outside the urban setting.<sup>157</sup>

The economic benefits of the MUFO include incentives to landowners and developers who plant and maintain trees on their property.<sup>158</sup> Historically, properties with trees have been valued higher than properties without trees.<sup>159</sup> Another economic benefit that the MUFO provides stems from an increase in shade coverage that will occur due to the regulation of the number of trees planted and the number of trees removed. Under the MUFO, the EAC may set goals to increase the contiguous tree canopy within the municipality. By increasing the tree

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<sup>154</sup> Cude, *supra* note 107.

<sup>155</sup> Louis G. Tassinary et al., *Equal Protection and Aesthetic Zoning: A Possible Crack and a Preemptive repair*, 42 *The Urban Lawyer* 375 (2010).

<sup>156</sup> Miller, *supra* note 40.

<sup>157</sup> *Id.*

<sup>158</sup> Irus Braverman, "Everybody Loves Trees:" *Policing American Cities Through Street Trees*, 19 *Duke Envtl. L. Pol'y F.* 81, 84 (2008).

<sup>159</sup> Natural Resources Spatial Analysis Lab, *supra* note 5.

canopy and the natural shade cover in the municipality, there will be an impact on the structures within the municipality as to the amount of heat that they absorb.<sup>160</sup> Additionally, trees around homes will be able to reduce the loss of heat in colder seasons by protecting the exterior of the house from strong winds.<sup>161</sup> Trees can also help with energy efficiency by storing solar energy and helping to situate solar power structures if necessary.<sup>162</sup>

The environmental benefits of the MUFO include tree protection and conservation, improvements to air and water quality, increased ecological health, greater habitat for animals, and more effective carbon sequestration.<sup>163</sup> The maintenance of the urban forest can help to reduce the water flow during rain events and thus limit soil erosion and the discharge of pollutants into the water system.<sup>164</sup> A well-regulated urban forest can also help mitigate the threat of invasive species.<sup>165</sup>

#### E. The Payment Options and Costs Associated with the Model Urban Forestry Ordinance

The administrative bodies established under the MUFO are non-compensatory, but municipalities can appropriate funds and adapt these provisions as necessary.<sup>166</sup> The MUFO will be primarily funded through permit application fees and violation penalties. The STC will set the permit application fees, which are subject to approval by the municipality. Violations occur when a person fails or neglects to plant, transplant, protect, trim, prune or remove a tree or perform or refrain from performing an act required or prohibited under the ordinance.<sup>167</sup> If a

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<sup>160</sup> Miller, *supra* note 40.

<sup>161</sup> *Id.*

<sup>162</sup> *Id.* at 63.

<sup>163</sup> Freudenthal, *supra* note 3.

<sup>164</sup> Chunko & Wolf, *supra* note 13.

<sup>165</sup> Environmental Science, *supra* note 12.

<sup>166</sup> R. Scott Wilder, Tree Preservation Methods: Zoning Regulations v. Conservation Servitude, 14 J. Nat. Resources Envtl. L. 253 (1999).

<sup>167</sup> Mechanicsburg § 25-108(2)(A).

person violates the ordinance, the municipality must give the violator notice of the violation before taking action.<sup>168</sup>

Penalties are set at a cost of no more than \$500, plus restitution for the cost of the tree replaced, plus the cost of the cure recommended by the municipal arborist.<sup>169</sup> However, a person has the right to appeal a violation to the STC within ten business days and decisions will be appealable as provided by law.<sup>170</sup> The municipal treasurer will collect all permit application fees and penalties to be credited to the STC for the purposes authorized in the ordinance.<sup>171</sup>

One of the few expenses that a municipality may incur in adopting the MUFO is the cost of trees provided by the STC. Under the MUFO, the STC may establish a tree give-away program in order to encourage landowners to plant trees without payment. The municipality may have to bear the cost of these programs, but they can be offset by the permit application fees and penalties collected.

## **VI. Conclusion**

As municipalities have recognized the growing impact of climate change and the need for sustainable development, many have and continue to seek methods to combat these issues. Through the regulation and conservation of the urban forest, the MUFO will address the problems of climate change,<sup>172</sup> deforestation,<sup>173</sup> the destruction of trees by invasive species,<sup>174</sup> and the preservation of water and soil quality.<sup>175</sup> First, the MUFO will establish an

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<sup>168</sup> Lancaster § 273-14(B).

<sup>169</sup> § 273-14(D)(1).

<sup>170</sup> § 273-16.

<sup>171</sup> § 273-14(D)(2).

<sup>172</sup> Lallanila, *supra* note 9.

<sup>173</sup> Nunez, *supra* note 11.

<sup>174</sup> Environmental Science, *supra* note 12.

<sup>175</sup> Chunko & Wolf, *supra* note 13.

Environmental Advisory Council,<sup>176</sup> Shade Tree Commission,<sup>177</sup> and employ a municipal arborist<sup>178</sup> to administer and enforce the ordinance. Second, the MUFO will ensure the maintenance and protection of trees through a permitting program as administrated under the ordinance.<sup>179</sup> Third, the MUFO will implement standards for planting, removing, replacing, maintaining, and protecting trees in both public and private areas. Fourth, the MUFO will protect trees during urban expansion and incentivize the conservation of trees during land development. Finally, the MUFO will be funded through the collection of permit and violation fees and appropriated funds as necessary.

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<sup>176</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>177</sup> Lancaster § 273-4.

<sup>178</sup> Radnor § 263-5(A)(3).

<sup>179</sup> Lancaster § 273-3(A).

**Proposed Model Urban Forestry Ordinance**

Michael Podskoch and Zachary Stritzinger

\_\_\_\_\_ MUNICIPALITY

\_\_\_\_\_ COUNTY, PENNSYLVANIA

**ORDINANCE No.** \_\_\_\_\_ - \_\_\_\_\_

**AN ORDINANCE OF THE \_\_\_\_\_ [TOWNSHIP/BOROUGH] OF  
\_\_\_\_\_ COUNTY, PENNSYLVANIA, TO PROTECT AND CONSERVE THE  
URBAN FOREST.**

**AND NOW, THEREFORE,** BE IT ENACTED AND ORDAINED by the  
\_\_\_\_\_ Municipality Board of Commissioners/Council, \_\_\_\_\_ County,  
Pennsylvania. The \_\_\_\_\_ code is amended by adding the following chapter to read:

**CHAPTER 1**

**PRELIMINARY PROVISIONS**

**Section 101. Short Title.**

This ordinance shall be known and may be cited as the Municipal Urban Forestry Ordinance (“MUFO”).

**Section 102. Purpose.**

The purpose of the MUFO is to:

- (1) Establish an administrative structure to assist the municipality in regulating its urban forest; and
- (2) Encourage landowners and developers in residential, commercial and retail zones to protect and conserve the urban forest; and
- (3) Ensure that the municipality utilizes its urban forest to maximize native ecological health, soil and water quality and carbon sequestration.<sup>180</sup>

### **Section 103. Legal Authority.**

This ordinance is established under the act of July 31, 1968 (P.L. 805, No. 247), known as the Pennsylvania Municipalities Planning Code, to “preserve or conserve open land, consisting of natural resources, forests and woodlands,”<sup>181</sup> and the act of June 18, 2014 (P.L. 432, No. 37), known as the Pennsylvania Borough Code, to enable the creation of a Shade Tree Commission to “exercise care, custody and control of shade trees” in the municipality.<sup>182</sup>

## **CHAPTER 2**

### **DEFINITIONS**

#### **Section 201. Definitions.**

The following words and phrases when used in this ordinance shall have the meanings given to them in this section unless the context clearly indicates otherwise:

**“Developer.”** A landowner, agent of the landowner or tenant with the landowner’s permission who makes or causes to be made a subdivision of land or a land development.<sup>183</sup>

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<sup>180</sup> David J. Nowak et al., *Sustaining America’s Urban Trees and Forests* at 5-7, [https://www.fs.fed.us/openspace/fote/reports/nrs-62\\_sustaining\\_americas\\_urban.pdf](https://www.fs.fed.us/openspace/fote/reports/nrs-62_sustaining_americas_urban.pdf).

<sup>181</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 10105 (West 2002).

<sup>182</sup> 8 Pa. Stat. and Cons. Stat. Ann. § 2721(a) (West 2014).

<sup>183</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 10107(a) (West 2013).

**“Environmental Advisory Council or “EAC”.**” The administrative body that educates and advises the municipality on policies regarding the protection, conservation and management of the municipality’s natural resources.<sup>184</sup>

**“Forestry.”** The management of forests and timberlands when practiced in accordance with accepted silvicultural principles through developing, cultivating, harvesting, transporting and selling trees for commercial purposes, which does not involve land development.<sup>185</sup>

**“Land Development.”** Any of the following activities:

- (1) The improvement of one lot or two or more contiguous lots, tracts or parcels of land for a purpose involving:
  - (i) a group of two or more residential or nonresidential buildings, whether proposed initially or cumulatively, or a single nonresidential building on a lot or lots regardless of the number of occupants or tenure; or
  - (ii) the division or allocation of land or space, whether initially or cumulatively, between or among two or more existing or prospective occupants by means of, or for the purpose of, streets, common areas, leaseholds, condominiums, building groups or other features.
- (2) A subdivision of land.
- (3) Development in accordance with Section 503(1.1) of the Pennsylvania Municipalities Planning Code.<sup>186</sup>

**“Landowner.”** The legal or beneficial owner of land, including the holder of an option or contract to purchase, a lessee if authorized under the lease to exercise the rights of the landowner or other person having a proprietary interest in the land.<sup>187</sup>

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<sup>184</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>185</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 10107(a) (West 2013).

<sup>186</sup> *Id.*

**“Municipal Arborist.”** The arborist of the municipality as appointed and supervised by the municipality.<sup>188</sup>

**“Person.”** A person, firm, association, partnership, corporation, organization or other legal entity other than the municipality.<sup>189</sup>

**“Shade Tree.”** The whole or part of a tree, shrub or other woody plant in or upon a public street, highway, avenue, public park, trail, greenway or open space in the municipality that is planted for shading, cooling or other purpose serving the municipality.<sup>190</sup>

**“Shade Tree Commission or “STC”.**” The administrative body that has jurisdiction over all shade trees in the municipality.<sup>191</sup>

**“Subdivision.”** The division or redivision of a lot, tract or parcel of land into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership or building or lot development.<sup>192</sup>

**“Transferable Development Rights.”** The attaching of development rights to specified lands that are desired by the municipality to be kept undeveloped, but permitting those rights to be transferred from those lands so that the development potential which they represent may occur on other lands where more intensive development is deemed by the municipality to be appropriate.<sup>193</sup>

**“Tree.”** The whole or part of a large, branched woody plant in or upon public or private property having one or several self-supporting stems or trunks that reaches a substantial height at

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<sup>187</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 10107(a) (West 2013).

<sup>188</sup> Lancaster, Pa., Code Part II ch. 273, § 273-2(B) (2014).

<sup>189</sup> Susquehanna, Pa., Code ch. 25 Part 1, § 25-102(1) (2008).

<sup>190</sup> § 273-2(B).

<sup>191</sup> Susquehanna § 25-102(1).

<sup>192</sup> § 10107(a).

<sup>193</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 10107(a) (West 2013).

maturity. For the purposes of this ordinance, the term tree shall also include shade trees, shrubs, bushes and other woody plants.<sup>194</sup>

**“Tree Manual.”** The regulations and standards for arboriculture work within the municipality as compiled by the municipal arborist.<sup>195</sup>

**“Tree Protection Zone or “TPZ”.”** An area of protection surrounding the tree trunk intended to protect the tree, the roots and the soil as defined by the municipal arborist.<sup>196</sup>

**“Urban Forest.”** The sum of all woody and associated vegetation within the municipality’s minimum square footage of contiguous tree canopy as defined by the EAC.<sup>197</sup>

## CHAPTER 3

### ADMINISTRATION

#### Section 301. Administration.

(a) **Administrative Structure.**--This ordinance shall be administered by the EAC, the STC and the municipal arborist.

(b) **Administration Alternatives.**--The municipality may disregard the creation of the EAC or the STC or the hiring of the municipal arborist and instead designate existing local agencies with the administration of this ordinance.

#### Section 302. Environmental Advisory Council.

(a) **Purpose.**--The EAC shall advise the following on matters dealing with protection, conservation, management, promotion and use of natural resources, including air, land and water resources, located within its or their territorial limits:

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<sup>194</sup> Lancaster § 273-2(B).

<sup>195</sup> *Id.*

<sup>196</sup> *Id.*

<sup>197</sup> Robert W. Miller, *Urban Forestry: Planning and Managing Urban Greenspaces* at 27 (2nd ed. 2007).

(1) Local agencies, including, but not limited to, the planning commission and parks and recreation boards.

(2) Elected officials.<sup>198</sup>

(b) **Composition.**--The EAC shall be composed of no less than three nor more than seven residents of the municipality establishing the EAC, who shall be appointed, and all vacancies filled by, the municipality. Where two or more municipalities jointly establish an EAC, the members of the EAC shall be appointed in the same manner by each of the respective municipalities establishing the EAC, and each constituent municipality shall have equal membership on the joint EAC.<sup>199</sup>

(c) **Term of office.**--EAC members shall serve for three years except that initial appointments shall be staggered so that the terms of approximately one-third of the membership shall expire each year. The term of a successor shall be for three years.<sup>200</sup>

(d) **Compensation and expenses.**--Members shall receive no compensation for services but shall be reimbursed for the expenses actually and necessarily incurred by the member in the performance of the member's duties.<sup>201</sup>

(e) **Chairperson.**--The municipality shall designate the chairperson of the EAC. Where two or more municipalities jointly establish an EAC, the chairperson shall be elected by the selected members. Whenever possible, one member shall also be a member of the municipal planning body.<sup>202</sup>

(f) **Powers and duties.**--The EAC shall:

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<sup>198</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2322 (West 1996).

<sup>199</sup> § 2323(a).

<sup>200</sup> § 2323(b).

<sup>201</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2323(c) (West 1996).

<sup>202</sup> § 2323(d).

- (1) Identify environmental problems and recommend plans and programs to the appropriate local agencies for the promotion and conservation of the natural resources and for the protection and improvement of the quality of the environment within its territorial limits.
- (2) Make recommendations as to the possible use of open land areas of the municipal corporations within its territorial limits.
- (3) Promote a community environmental program and educate the public on the importance of protecting and conserving the urban forest.
  - (i) The EAC may set goals for the minimum square footage of contiguous tree canopy within the municipality and periodically update these goals.
- (4) Keep an index of all open areas, publicly or privately owned, including flood-prone areas, swamps and other unique natural areas, for the purpose of obtaining information on the proper use of those areas.
- (5) Advise the appropriate local agencies, including the planning commission and recreation and park board or, if none, the elected governing body or bodies within its territorial limits, in the acquisition of both real and personal property by gift, purchase, grant, bequest, easement, devise or lease, in matters dealing with the purposes of this ordinance.<sup>203</sup>
- (6) Keep records of the EAC's meetings and activities and make an annual report which shall be printed in the annual report of the municipality or, if none, otherwise made known and publicly available.<sup>204</sup>

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<sup>203</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2324(a)(1)-(5) (West 1996).

<sup>204</sup> § 2325.

(g) **Limitation on powers.**--The EAC shall not exercise powers or perform duties which by law are conferred or imposed upon a Commonwealth agency.<sup>205</sup>

(h) **Funding.**--The municipality establishing the EAC may appropriate funds for the expenses incurred by the EAC. Appropriations may be expended for administrative, clerical, printing and legal services as may be required, which shall be within the limit of funds appropriated to the EAC.<sup>206</sup> Funds appropriated under this subsection must be remitted to the general fund within a year, which may then be allocated at the discretion of the municipality.

### **Section 303. Shade Tree Commission.**

(a) **Purpose.**--The STC, working in conjunction with the municipal arborist, shall work to maximize the ecosystem services derived from shade trees by establishing policies for the planting, removal, maintenance and protection of shade trees along public streets, sidewalks, parks and public open space.<sup>207</sup>

(b) **Composition.**--The STC shall be composed of five members who shall be residents of the municipality, who shall be appointed by the municipality.<sup>208</sup>

(c) **Term of office.**--STC terms shall be staggered so that one term expires every year. When a vacancy occurs on the STC, a successor shall be appointed by the municipality to serve the remainder of the unexpired term. On the expiration of the term of an STC member, a successor shall be appointed by the municipality to serve a term of five years.<sup>209</sup>

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<sup>205</sup> § 2324(b).

<sup>206</sup> § 2326.

<sup>207</sup> Lancaster § 273-4.

<sup>208</sup> Susquehanna § 25-103(1).

<sup>209</sup> *Id.*

(d) **Compensation and expenses.**--Members of the STC shall receive no compensation for services but shall be reimbursed for the expenses actually and necessarily incurred by the member in the performance of the member's duties.<sup>210</sup>

(e) **Chairperson.**--The municipality shall designate the chairperson of the STC. Whenever possible, one member shall also be a member of the municipal planning body.<sup>211</sup>

(f) **Powers and duties.**--The STC shall:

(1) Exercise exclusive custody and control of shade trees and shall plant, remove, maintain and protect shade trees along public streets and highways.<sup>212</sup>

(i) The STC may establish a tree give-away program and set the application and distribution procedures.<sup>213</sup>

(2) Work in conjunction with the municipal arborist to determine the needs of the municipality regarding shade trees.<sup>214</sup>

(3) Make recommendations to the municipality and conduct regular meetings.<sup>215</sup>

(4) Perform tree inspections and notify residents when action is required.<sup>216</sup>

(5) Have the right to require the trimming or removal of a dead or diseased tree on private property if the tree constitutes a hazard to life or property or other trees within the municipality in the opinion of the STC. The STC shall notify the owners of hazardous trees in writing.<sup>217</sup>

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<sup>210</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2323(c) (West 1996).

<sup>211</sup> § 2323(d).

<sup>212</sup> Susquehanna § 25-103(2).

<sup>213</sup> Shade Tree Commission, Whitpain, Pa., <https://www.whitpaintownship.org/335/Shade-Tree-Commission> (last visited Nov. 16, 2019).

<sup>214</sup> Susquehanna § 25-103(3).

<sup>215</sup> *Id.*

<sup>216</sup> Susquehanna § 25-103(4).

<sup>217</sup> *Id.* § 25-114.

(6) Issue citations regarding violations under this ordinance.<sup>218</sup>

(7) Keep records of the STC's meetings and activities and make an annual report which shall be printed in the annual report of the municipality or, if none, otherwise made known and publicly available.<sup>219</sup>

(g) **Funding.**--The municipality establishing the STC may appropriate funds for the expenses incurred by the STC. Appropriations may be expended for administrative, clerical, printing and legal services as may be required, which shall be within the limit of funds appropriated to the STC.<sup>220</sup> Funds appropriated under this subsection must be remitted to the general fund within a year, which may then be allocated at the discretion of the municipality. Permit application and violation fees shall be allocated to the STC after collection by the municipal treasurer and utilized by the STC to carry out the provisions of this ordinance.

#### **Section 304. Municipal Arborist.**

(a) **Purpose.**--A municipal arborist shall work in conjunction with both the EAC and the STC to recommend urban forest protection and conservation policies.<sup>221</sup>

(b) **Appointment.**--The municipality shall appoint and supervise the municipal arborist. The municipal arborist must be an International Society of Arboriculture Certified Arborist, landscape architect or forestry professional.<sup>222</sup> The municipal arborist must have a college degree in forestry, horticulture or other related field and must have no less than three years of experience in tree and plant care operations.<sup>223</sup>

(c) **Term of office.**--The municipality may employ the municipal arborist as necessary.

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<sup>218</sup> Id. § 25-103(1)-(4).

<sup>219</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2325 (West 1996).

<sup>220</sup> § 2326.

<sup>221</sup> Radnor, Pa., Code Part II ch. 263, § 263-5(A)(3) (2013).

<sup>222</sup> International Society of Arboriculture, Career Paths in Arboriculture: Municipal Arborist | Forester, <https://www.isa-arbor.com/Portals/0/Assets/PDF/Career-Paths/Municipal-Arborist-Forester.pdf>.

<sup>223</sup> Id.

(d) **Compensation and expenses.**--The municipal arborist shall receive no compensation for services but shall be reimbursed for the expenses actually and necessarily incurred by the performance of duties.<sup>224</sup>

(e) **Powers and duties.**--The municipal arborist shall:

- (1) Create the tree manual and update the tree manual every five years.
- (2) Assist the EAC and the STC in the performance of the EAC and STC's duties, including, but not limited to, proposing new or revised urban forest protection and conservation policies, reviewing permit applications and land development plans, and inspecting trees.
- (3) Maintain a current baseline knowledge in the areas of forestry, ecology, hydrology, atmospheric science, energy and stormwater control.<sup>225</sup>
- (4) Keep records of activities and shall make an annual report which shall be printed in the annual report of the municipality or, if none, otherwise made known and publicly available.<sup>226</sup>

## **CHAPTER 4**

### **PROCEDURAL REQUIREMENTS**

#### **Section 401. Permitting.**

(a) **Permit requirement.**--A written permit from the STC shall be required to plant, transplant, cut, prune, treat or remove a tree. All persons shall first obtain a written permit from the STC before doing or having done work on a tree. All work required to be done under a permit issued under this ordinance shall be completed within the time period specified but shall

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<sup>224</sup> 53 Pa. Stat. and Cons. Stat. Ann. § 2323(c) (West 1996).

<sup>225</sup> International Society of Arboriculture, *supra* note 222.

<sup>226</sup> § 2325.

not exceed three months from the date issued, unless the time period has been extended by the STC. All tree work shall be done in accordance with the tree manual.<sup>227</sup>

**(b) Permitting process.**

- (1) Permit applications shall be available from the municipal publicly accessible internet website or at the municipal office.
- (2) The applicant must complete the application in full and return it to the municipal office.
  - (i) The application shall include the applicant's information, the address and location of the tree(s) and the type of work to be performed.
- (3) If the STC receives an application at least seven business days prior to the STC's meeting, the STC shall review the application at the next meeting.
- (4) The STC shall notify the applicant of the STC's decision within five business days of the meeting.
- (5) If the STC approves an application, the STC shall issue the permit to the applicant by mail or inform the applicant to pick up the permit at the municipal office.<sup>228</sup>

**(c) Permit approval or denial.**

- (1) The STC shall approve a permit application if the applicant demonstrates a need for the tree work and the activity is reasonable.
- (2) Prior to its decision, the STC may also consider:
  - (i) The health, size, number, species or location of the tree(s).

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<sup>227</sup> Lancaster § 273-3(A).

<sup>228</sup> Susquehanna § 25-106.

(ii) Whether the tree work is inconsistent with the standards of the tree manual or the provisions of this ordinance.

(iii) Whether the permit application is incomplete.

(iv) Any other relevant factor relating to the tree work.

(3) The STC shall deny a permit application if the applicant fails to demonstrate a need for the tree work or the activity is unreasonable.

(d) **Permit fees.**--The fees for all permits shall be set by the STC subject to approval by the municipality.<sup>229</sup> Permit fees shall be collected by the municipal treasurer and utilized to fund the STC for the purposes authorized under this ordinance.

## CHAPTER 5

### GENERAL TREE PLANTING, CARE AND PROTECTION STANDARDS

#### Section 501. Tree Manual.

(a) **Purpose.**--The tree manual shall serve as a compilation of the appropriate regulations and standards for tree planting, care and protection and shall supplement the MUFO.<sup>230</sup>

(b) **Creation.**--The municipal arborist shall create the tree manual in accordance with the ecology of the municipality and update the tree manual every five years.

(c) **Amendments.**--The tree manual may be amended and revised by the STC following approval from the municipal arborist. Amendments or revisions to the tree manual shall be

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<sup>229</sup> Id. § 25-116.

<sup>230</sup> Lancaster, Pa., *City of Lancaster Tree Manual: Regulations and Standards for Arboriculture Work* (2014), [https://www.cityoflancasterpa.com/wp-content/uploads/2015/01/Tree-Manual\\_Standards-for-Arboriculture-Work\\_0.pdf](https://www.cityoflancasterpa.com/wp-content/uploads/2015/01/Tree-Manual_Standards-for-Arboriculture-Work_0.pdf).

effective 30 days after promulgation by the STC, publication on the municipal website and notice has been published in one newspaper of general circulation.<sup>231</sup>

### **Section 502. Tree Planting and Removal.**

(a) **Tree specifications.**--A tree shall be planted in or upon public or private property only in accordance with location, species, clearance, distance and other requirements as described in the tree manual.<sup>232</sup> The STC shall plant, or permit to be planted, only those tree species approved in the tree manual.<sup>233</sup> A person who plants or allows to be planted a restricted tree species shall be in violation of this ordinance.<sup>234</sup>

#### **(b) Tree removal.**

- (1) A person may remove a tree after an analysis by the STC in which it concludes that the tree is diseased and dying, or damaged beyond recovery of health or poses a threat to property or safety because of dying, and concurrence from the municipal arborist that the recommendation for removal is correct.<sup>235</sup>
- (2) If obstructions are present, or if felling the tree poses a safety hazard, then removal shall be piece by piece, following prevailing standards for safety. In an emergency where a tree poses an immediate threat to health, property or safety, the STC may order the removal of a tree.<sup>236</sup>

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<sup>231</sup> Lancaster § 273-15.

<sup>232</sup> § 273-6(D)(1).

<sup>233</sup> § 273-6(D)(2).

<sup>234</sup> *Id.*

<sup>235</sup> Bloomsburg, Pa., Code ch. 25, § 25-201(A)-(B) (2019).

<sup>236</sup> *Id.* § 25-201(D).

- (3) Prior to the removal of the tree, the STC shall make written findings setting forth how the tree poses an immediate threat to health, safety in view of the above criteria.<sup>237</sup>
- (4) Prior to removal of the tree, the STC shall make a good faith effort to notify the landowner prior to the removal.<sup>238</sup>
- (5) When a tree is removed, the tree stump shall also be removed, and the roots shall be ground to a minimum of 18 inches. The remaining hole shall also be covered.<sup>239</sup>

**(c) Tree replacement.**

- (1) Whenever a tree is removed under authority of a permit issued under Section 401, the tree shall be replaced within one year with a new tree.<sup>240</sup>
- (2) As a condition to a permit to remove a tree, the municipality may require that the landowner replace the tree at the landowner's expense.<sup>241</sup>
- (3) In the event of a tree being damaged by a person, the STC may make a charge for repairs to the tree, plus the devaluation of the tree, plus the cost of removal and replacement, against the person causing the damage or destruction to the tree.<sup>242</sup>

**Section 503. Tree Care and Maintenance.**

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<sup>237</sup> Bloomsburg § 25-107(4).

<sup>238</sup> *Id.* § 25-201(F).

<sup>239</sup> Susquehanna § 25-110.

<sup>240</sup> Mechanicsburg, Pa., Ordinance 1071 § 25-105(4) (July 5, 2005).

<sup>241</sup> Susquehanna § 25-111(1).

<sup>242</sup> Susquehanna § 25-112.

(a) **Tree care and maintenance standards.**--The STC and all landowners shall follow the tree cutting, trimming, pruning, damage control and prevention standards as described in the tree manual.

(b) **Duties of landowners.** It is the responsibility of landowners to:

- (1) Maintain the health, appearance and safety of the trees on their property within the public right-of-way, including pruning low hanging and dead branches, removing dead trees, planting appropriate replacement trees and other tree work authorized under a permit issued under Section 401.
- (2) Maintain trees, shrubs, and other woody vegetation on their property within the municipality rights-of way to allow for full visibility of signs.
- (3) Comply with notices received from the STC regarding tree care.
- (4) Comply with all conditions of permits issued by the STC, including priming, tree removal, stump grinding or tree replanting.<sup>243</sup>

(c) **Neglect or refusal to comply.**--If a landowner neglects or refuses to comply with trimming, removal, stump grinding, or replanting requirements, the STC may cause trimming or maintenance to be done at the expense of the landowner and the entire cost filed and collected by the municipality in the same manner that municipal claims are filed and collected.<sup>244</sup>

#### **Section 504. Unnecessary Harm.**

A person shall not damage, injure, mutilate, kill or destroy a tree or in any manner interfere with the main roots of a tree unless a permit issued under Section 401 authorizes otherwise. A person shall not excavate ditches, tunnels or trenches or lay sidewalk or driveway within a radius of ten feet of a tree without first obtaining a permit under Section 401. If a tree or

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<sup>243</sup> *Id.* § 25-104(1)(A)-(D).

<sup>244</sup> Susquehanna § 25-104(2).

a tree's roots have been damaged due to negligence or poor root pruning practices, the landowner shall be subject to penalties. Alternative methods shall be considered to prevent root cutting that may result in tree instability or decline.<sup>245</sup>

## CHAPTER 6

### TREE PROTECTION STANDARDS DURING LAND DEVELOPMENT

#### Section 601. Tree Protection During Land Development.

(a) **Application.**--The protections provided under this ordinance shall apply to all trees within the public right-of-way, parks and other open space, as well as trees on private property, including, but not limited to, trees impacted by land development, construction or reconstruction of parking lots, and the construction or demolition of buildings and structures.<sup>246</sup>

(b) **Appraisal.**--Prior to receipt of demolition, grading, land development or building permits or approvals, the applicant shall obtain a tree appraisal for all trees within the construction limits of the development site. Prior to the issuance of a permit for construction, reconstruction or repair of sidewalks or curbs, the municipal arborist shall be consulted for the application of practices in order to protect existing trees.<sup>247</sup>

#### (c) Establishment of tree protection zones.

(1) To the maximum extent possible, all trees shall be preserved and the loss or damage to trees existing on-site which are to remain shall be minimized.

(2) A tree shall be considered preserved if there is no disturbance within the tree protection zone. Disturbance includes earth disturbance, earth compaction,

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<sup>245</sup> *Id.* § 25-109(4).

<sup>246</sup> Lancaster § 273-10.

<sup>247</sup> Lancaster § 273-10(B).

vehicular and foot traffic, material stockpiling or the construction of all proposed improvements and utilities.

- (3) A permanent TPZ surrounding both preserved and planted trees shall be established to protect the critical root zone and tree canopy. The TPZ shall apply during the construction phase as well.
- (4) The TPZ shall be protected by appropriate barriers as determined by the municipal arborist.
- (5) There shall be no disturbance within the TPZ, including, but not limited to, intrusion into the soil through digging, trenching and grading, no activities that will compact the soil and no stockpiling of construction materials without prior approval by the municipal arborist.<sup>248</sup>

**(d) Tree protection practices.**--All proposed tree protection practices, including delineated TPZs, shall be provided on all development plans, as applicable, including, but not limited to, land development plans, erosion and sedimentation control plans, stormwater management plans, parking lot construction or reconstruction plans, as applicable, and in accordance with all municipal codes and ordinances.<sup>249</sup>

**(e) Review of land development plans.**

- (1) The municipality shall forward one copy of preliminary, final and minor land development or subdivision plans submitted for review to the STC for a review of the proposed land development's effect on shade trees.<sup>250</sup>

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<sup>248</sup> § 273-10(C)(1)-(3).

<sup>249</sup> Lancaster § 273-10(C)(7).

<sup>250</sup> § 273-11(D).

- (2) Within 15 business days of the receipt of the plan, the STC, after consultation with the municipal arborist, shall provide the municipality with written comments on the effect of the land development on trees.<sup>251</sup>
- (3) All land development and landscape plans shall show all existing trees, clearly labeling all trees proposed to be protected and those slated for removal.<sup>252</sup>
- (4) All shade trees abutting land development projects shall also be shown on the plans along with the required tree protection zone.<sup>253</sup>

**(f) Review of other permit applications.**

- (1) All applications for driveway permits, zoning permits or other permits for work that may impact trees shall be referred to the municipal arborist for review.<sup>254</sup>
- (2) Within five business days of the receipt of the applicable permit application, the municipal arborist shall determine the need for and location of the TPZ around all shade trees located on or adjacent to the site.<sup>255</sup>
- (3) Activity is not permitted within the TPZ unless authorized in accordance with this section.<sup>256</sup>

## **CHAPTER 7**

### **INCENTIVES FOR LANDOWNERS AND DEVELOPERS**

#### **Section 701. Incentives.**

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<sup>251</sup> *Id.*

<sup>252</sup> § 273-11(D)(1).

<sup>253</sup> *Id.*

<sup>254</sup> § 273-11(E).

<sup>255</sup> *Id.*

<sup>256</sup> Lancaster § 273-11(E).

(a) **Stormwater management fees.**--A landowner or developer who plants trees or maintains trees in water runoff areas may be eligible to receive a credit for fees associated with stormwater management as determined by the municipality. The municipality may also waive, discount or defer the landowner's fees associated with stormwater management.

(b) **Additional footage.**--A developer who agrees to add and maintain additional tree coverage in a land development plan may be eligible to receive additional building square footage up to a set maximum in accordance with applicable zoning codes and ordinances.

(c) **Density bonus.**--A developer who agrees to add and maintain additional tree coverage to a land development plan may be eligible to receive a density bonus for the lot in compliance with the maximum density permitted in the zoning district and, if applicable, in accordance with the municipality's transferable development rights program.

## CHAPTER 8

### ENFORCEMENT

#### Section 801. Enforcement.

(a) **Enforcement Generally.**--The provisions of this ordinance shall be enforced by the STC. The STC shall cause premises to be inspected or examined, order, in writing, the remedying of conditions found to exist in violation of the provisions of this ordinance and issue permits in accordance with this ordinance.<sup>257</sup>

(b) **Exceptions Authorized.**--The STC shall have the power in appropriate cases, such as when the health of a tree or surrounding trees are at risk, to authorize deviations from strict compliance with this ordinance whenever, due to special circumstances, literal enforcement of

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<sup>257</sup> Lancaster § 273-3(B).

this ordinance would be impossible, impractical, or not in the best interest of the municipality.<sup>258</sup> Exceptions include, but are not limited to, tree removal if the health of a tree or surrounding trees is at risk or emergency relief of a tree is an immediate hazard to a person or property. Emergency procedures must be reported within one business day following the emergency to the STC and plans for completion or follow-up work, such as stump removal, root grinding or clean-up, must be submitted to the STC for approval.<sup>259</sup>

### **Section 802. Violations.**

(a) **Violations.**--A person who fails or neglects to plant, transplant, protect, trim, prune or remove a tree or perform or refrain from performing an act required or prohibited under the provisions of this ordinance shall be in violation of this ordinance.<sup>260</sup>

(b) **Notice of violation.**--The STC shall serve a notice of violation to the person in violation of this ordinance. The notice shall direct the abatement of the violation.<sup>261</sup>

### **Section 803. Penalties.**

(a) **Penalties.**--A person who violates this ordinance shall be subject to a fine of no more than \$500, plus restitution in an amount no less than the appraised value of the tree involved, plus cost of cure as obtained by the municipal arborist.<sup>262</sup>

(b) **Collection of fees.**--All penalties or assessments imposed under this ordinance shall be collected by the municipal treasurer to be placed to the credit of the STC subject to be drawn upon by the STC for the purposes authorized in this ordinance.<sup>263</sup>

### **Section 804. Appeals.**

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<sup>258</sup> Susquehanna § 25-120.

<sup>259</sup> Mt. Lebanon, Pa., Resolution 21-02(IV)(A)(3) (September 23, 2002).

<sup>260</sup> Mechanicsburg § 25-108(2)(A).

<sup>261</sup> § 273-14(B).

<sup>262</sup> Lancaster § 273-14(D)(1).

<sup>263</sup> § 273-14(D)(2).

A person who received a notice to plant, prune, repair, treat or remove a tree, received a notice of violation of this ordinance or has been denied a permit under this ordinance shall have 10 business days following receipt of the notice or denial to appeal the STC's decision. The STC shall hear the appeal and decide within business 10 days of receipt of the appeal. Decisions of the STC shall be appealable as provided by law. Appeals shall be recorded, and decisions shall be written and include findings of fact. Prior to a decision, the person or the STC may request an opinion by the EAC.<sup>264</sup>

## **CHAPTER 9**

### **SEVERABILITY, REPEALS AND EFFECTIVE DATE**

#### **Section 901. Severability.**

If a provision of this ordinance or the application of this ordinance to a person or circumstances is held invalid, the invalidity shall not affect other provisions or applications of the ordinance which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared to be severable.<sup>265</sup>

#### **Section 902. Repeals.**

All other ordinances or parts of other ordinances shall be repealed insofar as they are inconsistent with the MUFO.

#### **Section 903. Effective Date.**

This ordinance shall become effective 60 days after enactment.

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<sup>264</sup> § 273-16.

<sup>265</sup> 101 Pa. Code § 15.69(b) (2019).

ENACTED AND ORDAINED THIS \_\_\_\_\_, DAY OF \_\_\_\_\_,  
20\_\_\_\_\_.