

November 12, 2023

Dear members of City Council:

As you know, a tree canopy is important to the citizens of Delaware. Establishing and maintaining a tree canopy holds many community benefits. One of the main benefits relates to water. Trees work in tandem with streams and aquifers to clean our water, slow its runoff during storms, and provide many other benefits to our water table. In the past four years, the City of Delaware has experienced two extremes that relate to our dwindling tree canopy: flooding downtown in May 2020 and a water shortage in 2023. This is in addition to other community issues that could be mitigated by an improved tree canopy, including filtering pollution from the air.

The proposed Chapter 1168 offers several positives for the tree canopy and tree preservation. Among those, it establishes periodic review of the urban tree canopy coverage, sets a minimum tree planting size, excludes invasive species, and encourages planting of native trees. Thank you for this notable progress.

### I. Tree Canopy Goals

The proposed version of Chapter 1168 also codifies a tree canopy minimum. After being discussed by various parts of City government for many years, it is good to see the City take this step. However, the current goal underestimates our potential, and will leave Delaware lagging behind for many years. The proposal is for 30% tree canopy. For comparison, Columbus, Cleveland, and Cincinnati all have 40% tree canopy goals; they are obviously much larger cities than us, yet have managed a more impressive tree canopy minimum. Relatedly, Pittsburgh has set a goal of 60% by 2030 (source: [p.71+ here](#)). All of these, of course, are in our same geographic region and have similar environmental features as our city. The City of Delaware has no less need for tree canopy; **increase our tree canopy goal to at least 40%** and adjust the tree preservation requirements in the code accordingly.

### II. Tree Preservation Permanence

Additionally of concern, the current draft falls short of creating permanence for designated tree canopy areas. If a stand of trees has been set aside for tree preservation as part of a development's requirements, why should it not be designated as a Tree Preservation Zone (TPZ)? Otherwise, what would stop the development from selling off those acres of trees in the future, resetting the requirement for tree preservation? For example, if a 100 acre site sets aside a stand of 30 acres of trees as part of their tree preservation plan, then sells off that 30 acres, the tree preservation requirement for that area is now reduced to 25-35% of 30 acres (rather than out of the original 100 acres), despite the fact that *all* of that 30 acres was intended for tree preservation in order to meet the original development's tree canopy minimums. (Notably, if that 30 of 100 acres is turned into residential, it will be reduced in tree coverage to only 10.5 acres and if industrial it would now be only 7.5 acres and therefore obviously much less than intended to be set aside.) In order to reach our tree canopy goal, we need to know that stands of trees set-aside to meet tree preservation requirements will remain, so there needs to be **stronger language on the permanence of stands of trees set-aside to meet tree preservation requirements**. A requirement for a designation as a Tree Preservation Zone on public land would be sufficient; we know the city has successfully done this in the past based on TPZs that exist elsewhere in the city (including a TPZ south of Rutherford Ave, as well as perhaps in the area that is now Boulder Park, among many others).

III. Scientific Explanations for Urban Tree Canopy

To strengthen the City's position on tree preservation, we must also **add more science-backed reasoning to the 1168.01 Purposes statement for the chapter**. For your comparison, I am providing the list of community tree benefits in (a) Delaware's current draft, (b) Columbus's current draft, and (c) proposals from Delaware, Ohio, residents. (The latter was submitted to the City first in September 2022, as part of the rewrite process.)

<i>Delaware, Ohio (current draft)</i>	<u><i>Columbus, Ohio (current draft)</i></u>	<i>Proposal from Delaware, Ohio, residents</i>
<ol style="list-style-type: none"> <li>1. (a) Conservation of energy;</li> <li>2. (b) Improved air quality;</li> <li>3. (c) Reduction of noise pollution and light glare;</li> <li>4. (d) Enhancement of habitat for birds and other desirable wildlife;</li> <li>5. (e) Improvement of soil stability and erosion control;</li> <li>6. (f) Increase of stormwater retention and runoff control;</li> <li>7. (g) Increase of property values;</li> <li>8. (h) Mitigation of heat island effects;</li> </ol>	<ol style="list-style-type: none"> <li>1. filtering pollution from the air.</li> <li>2. sequestering carbon dioxide.</li> <li>3. absorbing and filtering pollution from stormwater run-off.</li> <li>4. producing oxygen.</li> <li>5. reducing flooding.</li> <li>6. stabilizing soils and reducing erosion.</li> <li>7. cooling the environment and helping reduce urban heat island impacts.</li> <li>8. reducing energy consumption by shielding structures from harsh winds and sun.</li> <li>9. providing a buffer and screen against noise, light, and pollution.</li> <li>10. improving property values.</li> <li>11. improving commercial district buyer traffic.</li> <li>12. lowering crime rates.</li> <li>13. improving community interaction.</li> <li>14. providing habitat for birds and other wildlife.</li> <li>15. protecting and enhancing quality of life.</li> </ol>	<ol style="list-style-type: none"> <li>1. Improve air quality;</li> <li>2. Provide oxygen;</li> <li>3. Clean drinking water;</li> <li>4. Counteract climate change by absorbing carbon dioxide;</li> <li>5. Reduce noise pollution</li> <li>6. Reduce light glare;</li> <li>7. Provide critical habitat for wildlife;</li> <li>8. Help maintain healthy soil and prevent erosion;</li> <li>9. Reduce and moderate stormwater runoff;</li> <li>10. Enhance visual and aesthetic qualities;</li> <li>11. Increase property values;</li> <li>12. Save energy;</li> <li>13. Contribute to public health, both physical and mental</li> <li>14. Reduce stormwater load on the Olentangy and its tributaries (including Delaware Run);</li> <li>15. Capture groundwater at the source;</li> <li>16. Mitigate flooding;</li> <li>17. Stabilize streambanks;</li> <li>18. Filter particulates, including pollutants targeted for reduction in the Olentangy Watershed such as nitrogen, phosphorous, and lowering sediment loads;</li> <li>19. Mitigate non-point source pollution, including runoff from fields and roads;</li> <li>20. Have traffic calming impacts that make roadways safer, including calming driver attitudes and promoting slower speeds;</li> <li>21. Sequester carbon;</li> <li>22. Provide privacy;</li> <li>23. Protect biodiversity through providing habitat;</li> </ol>

<i>Delaware, Ohio (current draft)</i>	<a href="#"><u>Columbus, Ohio (current draft)</u></a>	<i>Proposal from Delaware, Ohio, residents</i>
		24. Provide windbreaks; 25. Mitigate heat islands and reduce surface temperatures; 26. Have a cooling effect on the Earth through the evaporation and transpiration of water via leaves; and 27. Absorb other air pollutants, in addition to carbon dioxide, that would otherwise contribute to climate change.

As a Tree City USA and a forward-thinking community, we want to make sure we aptly support our tree canopy. Please consider the edits in bold below to our section 1168.01. More specificity can only make it more defensible and environmentally sound, the two main goals of this ordinance's rewrite.

- (a) Conservation of energy, including:
  - (i) **reducing energy consumption by shielding structures from harsh winds and sun.**
  - (ii) **having a cooling effect on the Earth through the evaporation and transpiration of water via leaves.**
- (b) Improved air quality, including:
  - (i) **filtering pollution from the air.**
  - (ii) **absorbing carbon dioxide.**
  - (iii) **producing oxygen**
- (c) ~~Reduction of noise pollution and light glare;~~ **Provide a buffer and screen against noise, light, and pollution;**
- (d) Enhancement of habitat for birds and other desirable wildlife, and **protection of biodiversity through providing habitat;**
- (e) **Improvement and maintenance** of soil, including:
  - (i) stability and erosion control.
  - (ii) **enhancement of soil nutrients and health.**
- (f) Increase of stormwater retention, **filtration**, and runoff control, including:
  - (i) reducing flooding.
  - (ii) **cleaning drinking water.**
  - (iii) **reducing stormwater load on the Olentangy and its tributaries (including Delaware Run).**
  - (iv) **filtering particulates, including pollutants targeted for reduction in the Olentangy Watershed such as nitrogen, phosphorous, and lowering sediment loads.**
  - (v) **mitigating non-point source pollution, including runoff from fields and roads.**
  - (vi) **capturing groundwater at the source;**
  - (vii) **stabilizing streambanks;**
- (g) Increase of property values;
- (h) Mitigation of heat island effects;
- (i) **Sequestration of carbon;**
- (j) **Improvement in commercial district buyer traffic;**
- (k) **Contributions to public health, both physical and mental, including:**
  - (i) **improving community interaction.**
  - (ii) **providing natural, park-like experiences in an urban setting.**

- (iii) lowering crime rates.
- (iv) having traffic calming impacts that make roadways safer, including calming driver attitudes and promoting slower speeds.
- (v) protecting and enhancing quality of life.

#### IV. Incentivize Preservation & Planting

Also, I ask you to **carefully scrutinize the payment-in-lieu (PIL) amount** proposed by this draft in section 1168.05. The current proposed rate is \$1.20 per a square foot PIL of tree planting or preservation. This is based on tree ordinances outside of the Midwest as well as outside the Sixth Circuit Court region, according to Attorney Boggs. Other tree ordinances within our region, including Columbus's most recent draft, include a PIL based on the measurement of a tree trunk's diameter at breast height (dbh). Columbus has proposed increasing their \$200 per inch dbh fee to \$260 per dbh. As a point of comparison:

- Under the two proposed PIL fee structures, a red maple sapling with 1.75" trunk diameter and 35 square feet of canopy (3' radius), is **\$520 in Columbus and \$42 in Delaware**.
- Similarly, an American Sycamore with 4" dbh and 79 square foot canopy (5' radius) is **\$1040 in Columbus and \$95 in Delaware**.<sup>1</sup>

In these examples, Delaware's fee is 8% and 9% of Columbus's PIL amount, respectively. Based on these metrics, Delaware might concern itself that it's not charging enough and that it's certainly incentivizing use of the PIL instead of actual tree planting, ultimately making it harder to reach our tree canopy goals. A science-backed tree replacement cost estimator can be found via the work of Nowak & Aevermann, "Tree compensation rates," in *Urban Forestry and Urban Greening* (2019) freely available at [https://www.fs.usda.gov/nrs/pubs/jrnl/2019/nrs\\_2019\\_nowak\\_002.pdf](https://www.fs.usda.gov/nrs/pubs/jrnl/2019/nrs_2019_nowak_002.pdf); it includes a tree value calculator based on carefully-considered science and metrics. There is no scientific backing for the \$1.20 per a square foot rate.

Please also keep in mind that **an insufficient amount of funding for the tree canopy that does not come from development will need to come from your taxpayers**. Your neighbors and constituents may not look kindly on having to make up the difference between development costs and our community's preservation given that the taxpayers do not profit from development.

And so, in evaluating whether this PIL amount is sufficient, you might ask the following questions:

- Does the PIL amount sufficiently cover the City's cost of planting replacement trees?
- Does the PIL amount sufficiently cover the City's cost of maintaining replacement trees? If so, for how long? (Until maturity of the trees, the metric needed for full tree canopy development?)
- Does the PIL amount cover the cost of land acquisition for the planting of trees that would help achieve the City's tree canopy goal?
- Relevant to tree canopy loss, how does the PIL amount incentivize preservation of existing trees?
- Is the proposed PIL amount both (a) backed by science and (b) legally defensible? Would using a science-backed method make it more legally defensible?
- Will taxpayers willingly make up the difference between funding deficits created by development?
- What amount would be sufficient to meet our City's tree canopy goals and related community needs?

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<sup>1</sup> Both are common Ohio trees, based on measurements of sample trees. Related metrics can be found at <https://ir.library.oregonstate.edu/downloads/7s75dd675> (sycamore) and <https://treenet.org/resource/specific-and-achievable-canopy-targets-how-to-model-your-capacity-for-tree-canopy/> (10 year old red maple, as well as others; notably the dbh and canopy in this table are from different points of tree maturity and cannot be used to do calculations without adjustments for tree age).

## V. Apply Equitably to all Parts of our Community

This new code also completely removes any need for developer objections to expanding the coverage of Chapter 1168 to all types of development zones. Unless developers and the City staff specifically ask, the Planning Commission and City Council will no longer need to create exceptions for tree removal in Planned Mixed Use developments or other zones. However, to guarantee this, **please codify related language so that you can make sure all areas of our city have equal opportunities for urban forests by including all zones in the tree code.**

Finally, a note regarding this statement on page 94: “If this Chapter is not adopted, Staff would recommend eliminating Chapter 1168 as it is written today until such time as a revised Chapter is approved.” Removing a tree ordinance from the City’s Codified Ordinances would invalidate the City’s status as a Tree City USA. As one of the oldest municipalities with this running designation, now in place for 42 years, it would not serve us to abandon this now. It would be especially insensitive to the community in light of the public’s interest and commitment to tree preservation, as seen in the petitions received by our City Council. (For more context, see the *Petition to Improve Tree Preservation Practices in the City of Delaware*, which can be provided by the clerk, and Tree City USA requirements at <https://www.arboday.org/>.)

**In summary, please address the following concerns:**

- 1. Increase our tree canopy goal to at least 40%;**
- 2. Establish set-aside stands of trees as Tree Preservation Zones or other permanent designations on public land;**
- 3. Expand the list of tree benefits to capture the latest in the science that supports community benefits of trees;**
- 4. Establish a more accurate payment-in-lieu charge that covers the true financial cost to the community and incentivizes tree preservation and replanting; and**
- 5. Codify language that applies Chapter 1168 to all zones, including any planned mixed use or similar zones, establishing trees as just as important and valuable in those pockets of our community.**

Thank you for your time and consideration.

Sincerely,  
Stacy Chaney-Blankenship,  
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