THE GLEN RIDGE SHADE TREE COMMISSION YEAR-END REPORT FOR 2022

Respectfully submitted to the Mayor and Council by:
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Climatologists confirm that planting trees is a crucial antidote to climate change. In our case, directly so. However, a study done by Rutgers confirms what the Shade Tree Commission has come to realize: that climate change in the Mid-Atlantic region is already taking a heavy toll, making the planning, planting, and nurturing of trees far more challenging.

Since 1900, the average annual temperature in NJ has increased 4 degrees F (as opposed to a global average of 2 degrees F), while precipitation has increased 7%, much of it coming in extreme weather events. But worst of all is the unpredictability and wild swings in the weather – not only year to year, but month to month. While other years have proved challenging, 2022 was arguably the most difficult year – weather-wise – the Commission has faced. But the lessons it taught have been learned.

The Shade Tree Commission Year in Review

Management Cost

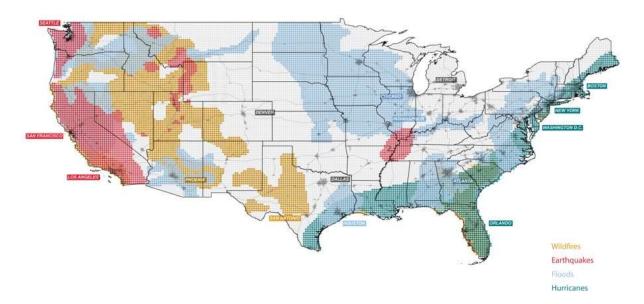
The total tree management cost for 2022 was \$27,500.00.

Planting:

The total cost of planting was \$19,071.00.

- \$11,942.00 for trees
- \$6,909.00 for planting
- \$220.00 for miscellaneous

This year, a total of 130 trees were planted, as opposed to 187 trees last year. The difference was due largely to the county's unexpected gift to the borough of 49 trees in November 2021. However, the cost of the tree plantings in 2022 was \$9,706 less than in 2021. Largely, this was due to the county's giving us a total of 99 trees in 2022, 49 in the spring and 50 in the fall. In addition, the DPW planted 77 trees in 2022, as opposed to 21 in 2021. Sadly, 18 of those planted in fall 2021 and spring 2022 did not survive due mainly to the extraordinary swings in the weather throughout the spring and summer.



In April, for example, there were a few days with temperatures over 80 degrees F, only to be followed by a hard freeze. Similarly, the first day of May saw freezing temperatures, whereas 12 of the last 17 days of that month were over 80 degrees F.

Meanwhile, there were 5.98 inches of rain last spring, 1.98 inches above normal. Although trees need water, this was too much of a good thing. Chronically "wet feet" makes trees susceptible to poor root development, root rot, and fungal infections.

Then, of course, there was the terrible heat and drought of the summer. Newark recorded 35 days over 90 degrees F in July and August and only 13 days on which there was any measurable rain.

It should be noted, however, that the number of saplings lost would have been much higher had it not been for the conscientious work of the DPW in installing gator bags and filling them on a regular basis during the relentless drought.

Tree Removals:

The total cost of contractor removals was \$52,778.94.

The weather extremes not only affected our newly planted trees, but also accelerated the deaths of many of our declining mature trees – particularly our maples. Consequently, a total of 87 trees had to be removed: 31 by an outside contractor and 56 by the DPW. Over three-quarters of these were maples.

Pruning

The total cost of contractor pruning was \$51,300.00.

- The cost of emergency contractor pruning was \$7,435.00.
- The cost of zone maintenance pruning was \$43,865.00.

Because of a designated allocation in the municipal budget, maintenance zone pruning was resumed in 2022. In 2018, we began what we hoped would be a five-year cyclical maintenance pruning of the entire town. Unfortunately, budget-busting Ida precluded any maintenance pruning last year. That proved quite a setback. There is no question that such pruning prolongs the lives of trees, demonstrably reduces risk, and ultimately saves money. Therefore, we are extremely grateful to the mayor and council for insuring the necessary annual funding for this essential initiative.

An additional 38 trees required pruning: 23 by an outside contractor and 15 by the DPW. It is our hope and expectation that zone pruning, will eventually eliminate most of these emergency



pruning situations. Zone pruning also accounted for additional 540 trims.

Proactive Treatments:

The total cost of needed supplies was \$459.23.

A total of 22 ash trees were systemically treated against the potential ravages and death from the emerald ash borer. Additioanally, 4 mature elm trees were treated to ward off Dutch Elm Disease.

Equipment and Software Upgrades

- The total cost of new equipment was \$1,448.14.
- The total cost of support software was \$5,000.00.

Again, this year, our DPW staff has assumed more responsibility for and oversight of our

trees. We see this as an essential process. After all, our arborist is a contract employee, only in town one day a week, whereas the DPW is throughout the town, 6 days a week. Therefore, a lithium-ion, battery-powered, telescoping pole pruner was purchased for their use.

The new pole pruner extends up to 13 feet, minimizing operator fatigue, as opposed to a manually operated pole pruner. This allows for significantly more worker productivity. And, because it is battery operated rather than gas powered, it makes less noise with zero exhaust emissions.



Community Outreach

A few years ago, Borough Administrator Mike Zichelli set up a Tree Service Request form on the town's website that generates an email to the STC and the forester. Especially since the pandemic, these emails have become an increasingly important tool for community outreach. In 2022, more than 100 online Tree Service Request forms were submitted to the STC for processing.

Trees are imposing, and are often a concern to residents, legitimately so or not. Therefore, the commission takes pains to respond to each email quickly and professionally, reassuring residents that their concern is being taken seriously and will be addressed. Many of these required multiple responses, troubleshooting, record updates,

and follow ups by the arborist and/or the DPW. The majority were handled expeditiously by the STC, to the satisfaction of the residents. By the same token, these exchanges frequently provided the opportunity to correct residents' misapprehensions. Unquestionably, this formalized communication has garnered a lot of positive feedback and goodwill from homeowners, not only toward the commission, but also its efforts on behalf of the borough's trees.

Another increasingly important outreach tool is the commission's e-newsletter, GReen



Flash. Our goal in each issue is to create an appreciation of our trees and their ecological benefits, as well as to educate about the serious threats affecting them, such as the invasion of the spotted lanternfly. Presumably,

we're meeting our mark. The opening rate for each issue averages 60%, putting *GReen Flash* in the Constant Contact "superstar" category. More to the point, we hear many enthusiastic comments from residents, frequently on social media.

It should perhaps also be noted that other towns are taking notice of the work of the Glen Ridge STC. Recently, we were asked by a neighboring community for permission to use our materials in its community outreach endeavors.

Looking Forward:

Unquestionably, 2022 was a wakeup call to reconsider what, when and how we plant. After all, the climate trends noted this past year are projected to accelerate exponentially into the future. By the end of this century, temperatures in NJ are expected to increase another 4 to 10 degrees F, and precipitation by another 5 to 8%, much of it coming in severe weather events.

Consequently, the STC is endeavoring to collect and act upon the best research available to make sure that the trees planted today survive to grace our streets 50 years hence.

