

Friends of Guild Park has received numerous comments this spring from park visitors about the state of the forest, woodlands and trees at Guild Park. Specifically, about the number of fallen trees throughout the site. This comes after two recent events:

1. The opening of the two new raised wooden walkways in Guild Park's western forest area, which allow more people view this wooded area that previously wasn't easily accessible; and
2. The recent extreme weather conditions – the ice storm in mid-April, followed by the high winds in early May.

Other events have also been devastating. Thousands of ash trees in Guild Park have been killed or weakened by the Emerald Ash Borer infestation. Then, the 2013 ice storm compounded this damage to ash trees and the other types of trees throughout the park.

Friends of Guild Park asked Guild Park officials for an update about current forest condition in the park and specific questions about what is being done.

Below is the information and responses received on May 17, 2018 from members of the City of Toronto's urban forestry division. This is the group responsible for forest areas across the city, including those at Guild Park.

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Urban Forestry staff from our Forest Management and Natural Resource Management units went out to the [Guild Park] site last week [week of May 7, 2018]. They reviewed the site with respect to the damage caused by the recent ice and wind storms.

**Question 1: Provide an explanation about the natural growth cycle of urban forests, and that wind damage is an infrequent, but ongoing part of how forests change over time**

This forest is in an urban setting but is functioning in many ways the same as any forest would. Wind disturbance is a relatively common disturbance type. The likelihood of this kind of disturbance happening and its severity increases in forested areas that are:

- old,
- in poor health,

- on wet, or shallow soils and
- exposed to wind - such as at the edge of a lake, or top of a hill.

Species composition and time of year play a role in wind susceptibility as well.

The Guild [Park] forest has components where there are older trees in relatively open areas, growing in wet soils and some trees (ash) may have been weakened by the Emerald Ash Borer (EAB). This combination of factors can make trees susceptible to “wind throw.”

This disturbance created openings in the canopy which have allowed for more light to reach the forest floor and subsequently the regeneration of new forest at this level is evident. Cedar, silver maple, and ash, to name a few, are growing back in response to this change – not to mention the choke cherry and other shrubs and herbaceous plants.

The white pine currently have a decent density of conelets, signaling a potentially good seed crop next year. The bases of uprooted trees will provide a perfect exposed and moist mineral soil bed for the white pine and other seed to establish in. This is part of the natural cycle – and it holds true in this urban forest.

**Question 2: Address concerns that the recent number is downed trees is a direct result of cutting down and removing so many dead/dying ash trees (and other damaged trees) from Guild Park beginning in 2014.**

Trees can fail for any number of reasons and it is difficult to say that the removal of ash enhanced conditions that led to the recent number of downed trees in the woodlot. What is probable is that if Forestry staff had not removed trees by controlled methods, then many more trees would be on the ground or hung up in standing trees at the Guild today.

When a tree falls, but is suspended by another, it is called a "widow maker". This is one of the leading cause of serious injury to forestry workers and is a hazard to all forest users. Urban Forestry's proactive removal of trees at risk of wind throw has been successful in reducing, if not eliminating this scenario. The risk to the public and forestry workers who respond to these situations is too great not to be proactive in removals.

**Question 3: Explain that the program to replant native trees continues throughout Guild Park (providing details, numbers and timing would be helpful)**

While efforts to replant in this site continue, there is also a significant amount of natural regeneration occurring. This is part of the natural cycle of forests renewal after disturbance – an example of this forest working naturally in an urban setting.

The density of trees and shrubs regenerating naturally is appropriate, but will be patchy at first and will take time to fill in. Supplemental planting will enhance biodiversity and enhance renewal in areas where natural regeneration is not as dense or quick to establish. Staff will visit the site throughout the summer to develop a planting plan that will be implemented this fall.

**Question 4: Describe how keeping fallen tree trunks in Guild Park's environmentally significant areas is important to maintain biomass in the ecosystem, provide habitat and shelter for insects/wildlife. Also, how removing such large trunks risks damaging the forest's existing trees and forest floor through compaction and rutting (especially under current wet soil conditions).**

It is important to leave woody debris on-site to decompose in order to keep the ecosystem intact, balanced and functioning as it would naturally. Continual removal of biomass will deplete the resource overtime.

Seed often germinates on, or under decomposing wood. Insects and microorganisms will help to recycle the nutrients back into the system and provide a source of food for birds and other wildlife. Salamanders are known to bury underneath woody debris where it is moist and cool. Turtles like to absorb sunlight on top of them, squirrels like to hide food in and around them, and partridge use them to beat their wings in an attempt to attract mates. Woody debris is the main source of biomass that adds structure to the soil.

Extracting this material from the forest floor would inevitably cause damage to newly regenerating trees, shrubs and plants and to the trunks of mature trees that have survived the EAB and wind storms. In addition, many plants and mosses would be disturbed as a result of this unnecessary removal. Maintaining these pieces will only benefit the forest and the wildlife that depends on it.

Wet soils are especially susceptible to rutting. Moving larger machinery to remove this wood would further setback the renewal process that is underway on the forest floor.

**Question 5. Explain the specific actions and timetable that Guild Park visitors can expect to see.**

The regenerating forest is dominated by silver maple, cedar and ash trees. The crowns of these trees will be dense at head height [about 2 metres or six feet from the ground] in about 5 years and continue in that space for up to 15 years.

Some of the existing mid-canopy trees should have new opportunities to fill recent crown openings and may someday become "super canopy trees".

The existing overstory should look much the same as it does today, but expect some more to fall out naturally, or be removed if deemed hazardous. Some crown expansion of existing overstory will occur. The existing white pine look to be about 65 years old and the same is true of many of the hardwoods. The best positioned of each should continue to grow and form a few "super canopy trees" remaining in place for 50+ years. Others will decline, as trees do.

It will be 15-30 years before the newly regenerating cohort of trees starts to resemble a mature forest condition where the crowns are overhead and you can peer easily for long distances through a limb free understory. Although they will still be of relatively small diameters and [the tree] height about half of what is tallest today.

Regeneration [at Guild Park] will be patchy for the next few years but will eventually encompass the entire area – where disturbances have created crown openings.