



**SEATTLE URBAN FORESTRY COMMISSION**

**Julia Michalak** (Position #1 – Wildlife Biologist), Co-chair  
**Joshua Morris** (Position #7 – NGO), Co-Chair  
**Joe Sisneros** (Position #2 – Urban Ecologist - ISA) • **Falisha Kurji** (Position #3 – Natural Resource Agency)  
**Becca Neumann** (Position #4 – Hydrologist) • **Stuart Niven** (Position #5 – Arborist – ISA)  
**Hao Liang** (Position #6 – Landscape Architect – ISA) • **David Moehring** (Position # 8 – Development)  
**Blake Voorhees** (Position # 9 – Realtor) • **Laura Keil** (Position #10 – Get Engaged)  
**Jessica Hernandez** (Position #11 – Environmental Justice) • **Jessica Jones** (Position # 12 – Public Health)  
**Lia Hall** (Position #13 – Community/Neighborhood)

*The Urban Forestry Commission was established to advise the Mayor and City Council concerning the establishment of policy and regulations governing the protection, management, and conservation of trees and vegetation in the City of Seattle*

**Draft meeting notes**

August 24, 2022, 3:00 p.m. – 5:00 p.m.  
Via Webex call and in-person at the  
Seattle Municipal Tower, Room 1872 (18<sup>th</sup> floor)  
700 5<sup>th</sup> Avenue, Seattle

(206) 207-1700

Meeting number: 2483 197 7273

Meeting password: 1234

**Attending**

Commissioners

Josh Morris – Co-Chair  
Julia Michalak  
Falisha Kurji  
Stuart Niven  
Hao Liang  
David Moehring  
Laura Keil

Staff

Patti Bakker – OSE

Guests

Toby Thaler

Absent- Excused

Becca Neumann – Co-Chair  
Joe Sisneros  
Blake Voorhees  
Jessica Hernandez  
Jessica Jones  
Lia Hall

Public

Michael Oxman  
Steve Zemke

**NOTE: Meeting notes are not exhaustive. For more details, listen to the digital recording of the meeting at:**  
<http://www.seattle.gov/urbanforestrycommission/meetingdocs.htm>

**Call to order:** Josh called the meeting to order and offered a land acknowledgement.

**Public comment:**

Michael Oxman noted the similarities in the letter the UFC sent on the Comp Plan process with letter submitted by the Seattle Green Spaces Coalition. They included a statement that the Comp Plan include a baseline tree count showing location size and condition and comparing the LiDAR results with on the ground observations. The Natural Resources Assessment was canceled at the start of the pandemic and never funded. SDOT is doing a good job of counting their trees, but there have been varying counts included in that.

**Chair, Committees, and Coordinator report:**

None

**Seattle canopy cover assessment preliminary results – Patti Bakker, OSE**

Patti provided some background on the canopy cover assessment process and an overview of the preliminary assessment results.

The process used for canopy cover assessment utilizes LiDAR as the main data set. LiDAR data is combined with aerial imagery to give an accurate map of the city that the consultant team can then analyze to tell us a lot of information about our tree canopy.

This round of assessment is our first opportunity for trend analysis, since the baseline was completed in 2016 and this is the first replication of that methodology.

The preliminary data we have includes canopy citywide and by land use type (management unit), and the change in canopy since 2016.

Through this process, we're able to see where canopy grew and where it was lost. The preliminary findings to share today are about the net change in canopy.

Patti noted some of the reasons why trees are important to the community. Trees are critical infrastructure in the city and they are critical to our climate resilience, community health and equity goals. Trees cool down the air during heat events, and if we care for our UF and it's healthy, it will have biodiversity and be more resistant to pests, which in turn helps the city be more climate resilient. Trees improve air quality and physical and mental well-being. And our racial equity goals drive us to increase equitable distribution of urban canopy. There are many more benefits – trees provide habitat, connectivity, access to nature, etc. - this is just a snapshot framing of the importance of trees as part of the city's infrastructure.

Patti also noted that there are many, increasing challenges to our urban forest that are unique to our urban setting and different from what forests in more natural forest settings face. It is hard to be a tree in an urban setting. They are seeing increased impacts from climate change, with hotter, drier summers and increased pests. That increases maintenance costs since the need for watering is greater, and our budgets have seen cuts rather than increases necessary to meet that increased need. Our primarily second-growth urban forest is aging, and trees near the end of their lifespan are more susceptible to pests and disease. And in this urban setting, trees sometimes need to be removed for infrastructure projects and development, and allow for competing uses in right of way and private property. Our trees are more vulnerable, and we need to invest more to help them withstand the challenges.

The first data point learned in the results is that our tree canopy decreased citywide. There was a net loss of 255 acres of canopy.

We don't yet have data to quantify the extent of the ecosystem services lost with the loss of those acres of canopy, but we can consider the scale of what those trees would have provided:

- Hundreds of thousands of pounds of CO<sup>2</sup>/year not sequestered
- Millions of gallons of stormwater runoff not avoided
- Hundreds of acres of shade lost, and millions of gallons of water not transpired to help cool neighborhoods, and
- Hundreds of thousands of pounds of pollutants not absorbed to help clean the air.

So we lost canopy and there's an impact. However, it happened during a time of large growth in the city. That 255 acres of loss equates to a net loss of 1.7% during the 5-year period between 2016-2021. During this time, population grew 8.5%, adding ~58,000 people and ~47,000 housing units. Again, the losses are due to many factors, driven in large part by climate change exacerbated by lack of investment, aging trees, and competing uses.

The city has been doing a lot in the last five years to maintain and grow our urban forest. We stemmed further loss with our actions; just not enough to overcome all the loss. In the final report we'll have a better understanding of how what we've been doing fits in. The conclusion is that we need much bigger investments.

Patti then shared more detail on where we're seeing the greatest canopy losses, and explained a graph showing the total number of acres of tree canopy in each land use type and the number of acres lost and percent loss in each land use type. There were net losses in trees across all the land use types, but the areas with the most impact on our overall canopy losses were Neighborhood Residential and Parks Natural Areas.

Parks Natural Areas comprise over 2,000 acres of our canopy. We lost roughly 122 acres of canopy here, mostly due to aging trees that are more susceptible to drought conditions and pests, and are more likely to come down during weather events. These public lands are important to focus on because natural areas offer substantial environmental benefits, and they need our active management to replant the next generation forest and ensure resilience of these forested areas.

The area that had the next most loss was in Neighborhood Residential. This area makes up roughly 56% of the land in Seattle, so is a critical focus area. Neighborhood Residential also makes up the largest portion of Seattle's tree canopy, by area (over 9,000 acres of our canopy is in Neighborhood Residential). It's also where residents spend much of their time, so canopy here plays an important role in improving air quality and mitigating extreme heat. We lost 77 acres of canopy in this area, but this was less than 1% of the canopy in this zone. The reasons for loss are complex, and include:

- The same climate and tree age pressures that affect our parks natural areas. Aging trees here – especially aging deciduous trees nearing the ends of their lifespans - are also more susceptible to drought conditions and pests, and are more likely to come down during weather events
- Large construction projects for utilities, transportation and other infrastructure, that need to remove trees,
- And the fact that housing grew substantially during this period.

Moving forward with this data then, the areas to focus for the future are:

- Developed parks and natural areas – we have the greatest flexibility and options for increasing canopy in these areas.
- Neighborhood residential – again, this is such a large proportion of the city that protection of trees on these lands will be key to our canopy goals.
- ROW – This is an important, accessible area to work across departments and with residents and businesses to implement innovative methods and creative solutions for accommodating multiple uses.

- And generally across all land use types, protecting and maintaining our existing trees, since mature trees contribute substantial ongoing canopy growth and we would have seen a lot more loss without this growth. Newer trees are important for our long-term forest generation and succession, and for mitigating canopy inequities. But they take years to establish and contribute to our canopy. This all points to the need to invest in protecting and maintaining existing trees.

Patti shared information related to equity in our tree canopy. Many of the priority neighborhoods with low canopy are burdened by other health, economic and social inequities. Patti showed a map of current tree canopy across the City, along with the Office of Planning and Community Development's equity map showing areas of disadvantage in the city, a map based on air quality data, and a map from the 2020 heat study. There is a correlation between areas of low canopy cover and areas of racial and social inequities, lower air quality and higher heat indexes, including parts of Beacon Hill, Georgetown and South Park.

City departments have been focusing efforts in these neighborhoods. For example, SDOT and OSE are increasing planting in Georgetown and South Park, and the Green Seattle Partnership has been prioritizing forest restoration in areas such as Westcrest and the East Duwamish Greenbelt.

The data so far reinforces that our Parks Natural Areas and our Neighborhood Residential areas need help, and that BIPOC and low-income neighborhoods have lower canopy. We are still waiting on additional analyses and data from the consultant, but the city is thinking now about what need to do to build on work the city is already doing and to expand with strategies that will allow us to grow canopy rather than see declines. To reverse the backward slide in canopy, our urban forest strategy needs to include actions across a spectrum, including in maintenance, planting, innovation and engagement.

The next steps in this work include:

- Receiving the detailed assessment analysis that builds on this high level snapshot
- Working with the consultant team to develop the full canopy assessment report
- Developing a tree strategy and investment plan, and
- Pursuing additional local, state and federal funding to scale up investment

Questions from the Commissioners and areas of discussion included:

- Were there any surprises in the data for you?
- What should the goal be for each of the management units?
- Looking more closely at the areas of low canopy, how do we tackle those areas?
- How has the canopy changed in the management units? In particular, would like to know more about why the larger loss happened in parks natural areas.
- Looking back at the 2016 data, were we really at 28% then?
- As we look at the result of recent appeal to the tree protection ordinance, we'll want to know explicitly why some protections are being proposed. The tree loss data the UFC has been asking for will be critical in this also.
- Are there trends that might suggest even greater tree loss in the next five years? Or will the trees recently planted make up for that?
- The losses in the natural areas are concerning, but in those areas there are also opportunities in that easiest land type to work in. For new parks in recent years, what has been the canopy cover included there?
- Will the results tally loss of trees in developed lots compared to loss due to other causes?
- Will the results include information on tree species as well as number?

- Will the Comp Plan incorporate this data?

The September 21 UFC meeting will incorporate the joint meeting with the city's Urban Forestry Interdepartmental Team, and that meeting will focus on canopy cover and equity. A further update with additional canopy cover information we get will be provided at that meeting.

**NOTE: Meeting notes are not exhaustive. For more details, listen to the digital recording of the meeting at: <http://www.seattle.gov/urbanforestrycommission/meetingdocs.htm>**

**Public comment:**

**Adjourn:** The meeting was adjourned at 4:59 PM.

**Meeting Chat:**

from Jim Davis to everyone: 4:20 PM

What is difference again between absolute canopy loss (around 8%) and relative canopy loss (1.7%)?

from Steve Zemke to everyone: 4:29 PM

Will final results tally loss of trees for those lots being developed in each zone compared to loss dues to other causes?

from Michael Oxman to everyone: 4:31 PM

What altitude were remote sensing data photographed from?

from Michael Oxman to everyone: 4:32 PM

How many tree stems are under this 'canopy'?

from D. Moehring Pos 8 to everyone: 4:32 PM

Next steps missing tree loss data from permits during this period (or at least from 2020.)

from Steve Zemke to everyone: 4:33 PM

Will there be a tally indicating population in each zone and neighborhood and canopy cover to see how many people are facing tree equity concerns?

from woody wheeler to everyone: 4:33 PM

Is it accurate to say that Seattle has 26.3 % tree canopy? Forgive me if you already answered this. I have no audio and can only see the slides.

from Michael Oxman to everyone: 4:33 PM

Which eye level observations on the ground were used to confirm this data ?

from woody wheeler to everyone: 4:34 PM

(I can also read the chat)

from Michael Oxman to everyone: 4:38 PM

Can we use a figure of a typical number of trees per acre, and multiply by the numbers of acres (about 277 acres) denuded?

from woody wheeler to everyone: 4:39 PM

How many acres total does Seattle have, and what percentage of this does 255 acres represent?

from Steve Zemke to everyone: 4:39 PM

Will there be an analysis of where trees can be planted to increase tree equity to guide city tree planting?

from Stuart Niven to everyone: 4:41 PM

Will the Comp Plan be using this data in its evolution?

from Toby Thaler to everyone: 4:42 PM

53753.54961 acres (more or less)

from Toby Thaler to everyone: 4:44 PM

255 acres is just under 0.5% of land in city (figure excludes water area)

from Jim Davis to everyone: 4:44 PM

Can we look forward to an update to the 2016 study on the 6,338 trees of 30 inches and greater in trunk diameter and the 3, 188 tree groves?

from D. Moehring Pos 8 to everyone: 4:48 PM

Thanks Toby

from Michael Oxman to everyone: 4:48 PM

What is the progress on hiring the consultant for the previously funded Natural Capital Assessment ?

from Steve Zemke to everyone: 4:49 PM

Trees where people live are more important figure that what's in parks as to people's health.

from D. Moehring Pos 8 to everyone: 4:52 PM

In 2016, the 2016 report indicated 16,084 canopy area / 53,127 city area = 30.3% in 2016 (rather than 28% published). need to see spreadsheet.

from Bakker, Patricia to everyone: 4:53 PM

Jim Davis, yes, the report will include the question of where the large trees and groves are.

from Michael Oxman to everyone: 4:53 PM

The first canopy survey about 10 years ago used iTree to analyze data from about 220 test plots that were 10th acre apiece.

from Sandy Shettler to everyone: 4:55 PM

Thank you Hao that was super helpful

from Steve Zemke to everyone: 5:00 PM

previous analysis was at 8 feet and above

from Hao Liang to everyone: 5:02 PM

Sorry I think I stated it wrong. The three categories of Neighborhood residential, Multi-Family, and Commerical/Mixed Use hold 61.5% CANOPY, not land.

**Public input: (see next page and posted notes):**