

Branching Out: Trees and Urban Ecosystems

The following questions were submitted by attendees at a Community Conversation on March 18, 2025.

Native Plants and Landscaping

1. Is more information about native plants available on Raleigh's website?

Staff response: Yes, The City's sustainability pages have resources on native plants. For example, the "Living Sustainably: Plant Native Plants" article lists Raleigh-friendly native species (e.g. bee balm, oakleaf hydrangea, black-eyed Susan, Carolina phlox) and links to the NC Native Plant Society for more options. Raleigh encourages using mostly native species in new plantings. For developer guidance, the NC State Extension and NC Native Plant Society websites are also useful references.

2. The City should provide a list of specific trees, shrubs, perennials and groundwater plants that developers/builders can/should plant. The plant list should be mostly native plants and specifically for invasive plants. Make it easy for developers by providing a specific list like Cary and Apex.

Staff response: Urban Forestry maintains a Possible Street Tree list. It identifies native and nonnative trees, do not plant list (invasive trees and others) and those trees that are restricted based on location or type of tree. It is specific to trees being planted in the rights of way.

3. Are the native plant greenhouses are also growing the trees, or do you source them from somewhere else?

Staff response: The Parks Greenhouse grows more than ten thousand native perennials, trees, and shrubs each year. Trees are a much larger investment of resources given the time it takes to reach a plant-able size, so if we aren't able to produce a certain species fast enough, we'll reach out to one of our many, fantastic local nurseries. The Raleigh area is home to dozens of excellent vendors offering native species of trees, shrubs, and perennials.

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Preservation Metrics and Goals

1. What is our target metric for natural preservation? For example, is there a target for tree canopy? Areas of green space? Number of trees? Number of species? Ecosystem function?

Staff response: The City currently has no single numeric target (e.g. canopy percentage) in the development code. Instead, Raleigh is gathering data to set future goals. The new <u>Leaf Out</u> initiative will analyze tree coverage and habitat connectivity on City lands, and use public input to recommend long-term canopy goals.

2. What are the pros and cons of the metrics? What are we missing in planning for one metric over another?

Staff response: Different metrics (e.g. percentage of canopy cover, total number of trees, species diversity, or ecological function) each tell a part of the story. Canopy percent is easy to measure from aerial data but doesn't capture tree health or biodiversity. Species count highlights diversity but not the trees' size or coverage. No single metric covers everything, which is why Raleigh is planning a data-driven approach through **Leaf Out** to consider canopy, habitat, and equity together.

3. How many trees have we lost since the last comprehensive plan? Was that expected?

Staff response: The current 2030 Comprehensive Plan was adopted 16 years ago in 2009. The tree canopy study was based on a 10-year period and was based on acreage, rather than count of trees.

4. How does staff feel how we are doing related to tree conservation?

Staff response: Staff are committed to environmental stewardship, and the park system is the backbone of the local ecosystem. The lands and waters Raleigh Parks manages are crucial in limiting flood risk, reducing temperatures, cleaning the air, and protecting wildlife. Parks and greenways are vital to the city's resilience in the face of climate change and the biodiversity crisis, and Raleigh Parks is committed to preserving these natural spaces for future generations.

5. What changes would staff recommend improving tree conservation and tree planting?

Staff response: Putting the right tree in the right place is hugely important. A tree is an asset and piece of infrastructure that's going to be in place for a long time. We want to make sure that it is in a place where it can grow and maintain itself over time. In a tree conservation context, we want to also make sure the right trees are planted in a place where the can do a lot of good for the ecosystem. For example, in riparian buffer areas, we want trees that can provide systemic benefit as well as aesthetic benefit.

6. Are timber farms included in Raleigh's canopy?

Staff response: The **2023 Wake County Tree Canopy Assessment** did not distinguish between working land or timber and preserved forests.

Conservation Regulations and Incentives

1. How can existing townhomes protect the green barrier between their homes and future development?

Staff response: Preserving green buffers between existing townhomes and new development is an important concern that we often hear from residents. While individual homeowners may not have direct control over adjacent land use decisions, there are several avenues through which existing communities can advocate for and help protect these natural barriers:

- Engage in the Development Review Process: When a rezoning or development application is submitted near your community, the City notifies nearby property owners and holds public meetings. This is your opportunity to review site plans, express concerns, and advocate for tree preservation, landscaping, or buffer zones.
- Work with Your Homeowners Association (HOA): If your community has an HOA, it can act collectively on behalf of residents, submitting formal comments, participating in public hearings, or negotiating with developers to include or enhance vegetative buffers.
- Understand Existing Zoning and Buffer Requirements: Raleigh's <u>Unified</u>
 <u>Development Ordinance (UDO)</u> outlines buffer yard standards depending on the zoning of adjacent parcels (see <u>UDO Sec. 7.2.4</u> for Protective Yard standards).
 Our planning staff can help you interpret how these rules apply to your specific situation.
- 2. When trees are torn down for development are they replaced with the same types of trees or ornamental-type trees that do not add to the canopy?

Staff response: Only in case of right of way requirements. Trees are replaced with species that are appropriate for the planting space. The City classifies right of way trees into 3 different categories based on mature height and size. It's most important to get the right tree in the right place. All trees provide varying levels of ecosystem services and provide benefit to the community.

3. Is there a historic tree preservation regulated effort, similar to historic home district preservation regulations?

Staff response: When trees are located in a locally designated historic area (either Local Landmark or Historic Overlay District), tree removal is subject to certificate of appropriateness (COA) review when the tree is 8" DBH or larger. Outside of designated historic areas, there are no provisions for historic regulation of trees.

4. What incentives encourage planting of trees in headwaters, outside of riparian buffers and FEMA floodplains?

Staff response: The City recognizes the importance of trees and vegetation in headwaters and encourages best management practices (BMPs) to improve soil health and tree survivability during and after development. Raleigh's stormwater and climate programs indirectly incentivize tree planting. **The Rainwater Rewards (R3) program** offers cost-share funding (75–100% reimbursement) for green stormwater projects on private property, including rain gardens, cisterns and bioretention areas.

While it doesn't explicitly pay per tree, these projects often include new trees or wooded buffers. Raleigh does not currently offer a direct planting rebate for trees in headwaters, but homeowners can join R3 with a wooded rain garden or riparian buffer planting.

5. May we have Eco districts? Please divide the city into Eco districts, based on watershed, for the practical purpose of a voluntary steward understanding all parks, City eco projects or stormwater projects and development/ site plans within the distinct.

Staff response: Raleigh does not formally use "eco-districts" by watershed. However, the City does manage projects by watershed (e.g. Walnut Creek, Crabtree Creek). The idea aligns with existing efforts: Raleigh's stormwater and park planning often focus on specific basins. For example, neighborhoods can use the "Watershed Management Plans" that Wake County publishes for each creek. The new Leaf Out initiative is gathering tree-canopy data across all city watersheds to ensure equitable coverage. Citizens interested in this concept can get involved through Raleigh's watershed groups or the Reflecting Raleigh plan process, which might consider sub-area strategies in the future.

6. I thought that the TCA was changes from 2 acres to 1 acre, was it? If not, why not?

Staff response: The Tree Conservation requirements are triggered prior to the approval of any subdivision of any tract 2 acres or greater in size <u>or</u> Tier 2 or Tier 3 site plan for a parcel 2 acres or greater. Tree conservation requirements do not apply to sites in the -Transit Overlay District (-TOD) less than 4 acres in size.

7. How can we promote taller buildings with smaller footprints to preserve higher percentage of canopy/ pervious spaces?

Staff response: Raleigh's existing growth framework encourages density in designated areas: downtown, mixed-use growth centers, and along frequent transit corridors. Height bonuses for denser development in these areas and for affordable housing also incentivize growth in these areas (see the Frequent Transit Development Option and the Transit Overlay District in Raleigh's UDO for more information). Focusing density in areas of the city that are already developed, can help preserve open space, tree canopy, and allow for more gentle density elsewhere in the city.

8. Can we adopt a hobbit-like infrastructure with partially underground buildings and prairies/meadows above to maximize green space and stormwater capture?

Staff response: A very creative idea! Integrating partially underground buildings with prairie or meadow landscapes above could theoretically help maximize green space and stormwater capture. However, from a practical standpoint, underground or earth-sheltered buildings present challenges in terms of building code compliance, structural feasibility, ventilation, and long-term maintenance, making them difficult to implement widely under current conditions.

That said, this idea aligns with the City's Conservation Development Option (see <u>UDO Sec. 2.4</u>)— this is a development option that allows for more compact development footprints in exchange for permanent preservation of open space and natural features. This approach encourages clustering homes to protect larger areas of undisturbed

land, which can support stormwater management, habitat preservation, and passive recreation. While "hobbit-like" infrastructure isn't currently in our regulatory framework, the spirit of your proposal reflects the kind of innovation we support through green infrastructure and conservation planning.

9. How are the 50-, 70-, 100-, and 150-foot setbacks from stream banks determined? How are they evaluated as to whether they are having desired benefits?

Staff response: Those setback distances come from national research and <u>state</u> <u>guidelines</u> based on flood risk and stream protection goals. Raleigh follows state stormwater rules, which define riparian buffers by floodplain width, and local watershed plans. Evaluation of buffer effectiveness happens through water-quality monitoring and habitat surveys. Raleigh's Stormwater department reviews whether planted buffers along streams are filtering runoff as intended. For information on greenways easements, which vary from 50-150 feet, please see the <u>Capital Greenway Master Plan</u>, updated in 2022 and <u>UDO Section 8.6.1</u>.

10. Why can't we have tree preservation on lots less than 2 acres?

Staff response: Today, the UDO requires that Tree Conservation areas must be provided prior to approval of any subdivision of any tract 2 acres or greater in size or Tier 2 or Tier 3 site plan for a parcel 2 acres or greater. By applying this requirement only to larger lots (2+ acres), the regulation ensures that urban and suburban developments maintain green spaces while still allowing for reasonable development.

11. Who identifies champion trees? What are the criteria?

Staff response: The UDO defines champion trees as Any tree listed as the champion or co-champion of its species, either on the "National Big Tree" list as compiled by the American Forestry Association or on the "Champion Big Trees of North Carolina" list as compiled by the North Carolina Division of Forest Resources or on the "Capital Trees Program" list as complied by Wake County Keep America Beautiful.

12. Several years ago, did Raleigh City Council pass law that the developers could clear lot to make it easier for equipment to maneuver for development?

Staff response: No city ordinance grants a blanket right to clear all trees "for equipment." Tree clearing on development sites is governed by the Tree Conservation Area rules and erosion control requirements. All significant trees in the designated TCA must be preserved. Developers do often clear non-TCA areas and fence off the TCA during construction. If contractors damage trees outside the TCA (e.g. fuel drop, grade changes), the City can require mitigation. Any change to allow more clearing would have to go through a public text amendment; none was passed to broadly loosen tree protections.

Tree Health and Tree Loss

 Newly planted trees often need soil amendments to be successful and provide infiltration. Grubbing and grading for development removes topsoil and trees really struggle!

Staff response: Having quality soils and proper nutrients help trees adapt to the

planting site and can improve growth and overall health. There is a wide variety of soil types, and they can vary significantly from site to site.

2. How often are trees given a wellness check and if they are deemed "unhealthy" are they replaced?

Staff response: Wellness checks are performed periodically. Street Trees and City property trees are deemed unhealthy or hazardous are assessed for removal and replacement based on priority and available resources.

3. How is Raleigh mitigating loss of old trees? Obviously planting a new young tree does not equate to the same benefits.

Staff response: The City recognizes the value of Raleigh's mature trees and has a multifaceted approach to mitigate their loss. Like humans, trees have a lifespan and loss of trees from natural aging is inevitable. While the City has limited control of replanting trees on private property, programs like Leaf Out outline comprehensive efforts for tree planting on City-owned land to help preserve the urban canopy. Regarding tree loss due to development, The City's tree conservation ordinance (UDO Article 9.1) requires that development on sites greater than 2 acres preserve at least 15 percent of qualifying trees in areas zoned R-1 and R-2 and at least 10 percent in other zoning districts. UDO section 9.1.4.D.4 outlines additional conservation requirements for mature trees that are designated as "heritage trees." When trees are illegally removed, the City requires replacement with trees of equal caliper (UDO Sec. 9.1.8).

4. If my predecessor planted 2 loblolly pines next to my mailbox (inside 10'zone from pavement) are they yours?

Staff response: It depends on where they are in relation to the right of way line. It's often variable from street to street. You can request an inspection to determine ownership. Raleighnc.gov search tree service request.

5. Are there any limits on removing trees on private property? I see a lot (most) trees in malls/parking lots that are looking stressed. Any plans to get these malls to take better care of them?

Staff response: Outside of tree conservation area, Raleigh Urban Forestry doesn't regulate or oversee trees on private property. This is a Zoning question.

6. Are the TCAs in addition to riparian buffers?

Staff response: Zone 2 of Neuse River Riparian Buffer (as established in title 15A of the North Carolina Administrative Code Subarticle 2B Section .0233) are eligible areas for Primary Tree Conservation Areas per UDO Sec. 9.1.4.A

Partnerships and Getting Involved

1. In what ways do the city and county work together to accomplish conservation goals and increase environmental education goals?

Staff response: We work closely with them! One example is Raleigh Parks will be a key stakeholder while Wake County is launching an update to their Comprehensive Parks

and Recreation Master Plan - last plan was adopted in 2008.

2. How can we use our Raleigh membership in the network and Biophilic cities for ideas to build green skyscapes?

Staff response: In 2022, Raleigh became North Carolina's first city to join the Biophilic Cities Network. Demonstrating its commitment to innovation in environmental health and climate change adaptation, Raleigh's role in the network will allow it access to valuable resources, knowledge sharing, and emerging best practices. It also signifies - to the city, the state, and the nation - a new era of environmental design that will no doubt give shape to new experiences with Raleigh's parks and greenways.

3. Our HOA has a lot of natural land. Is there a city organization that can give us review and recommend best care to optimize the trees and underbrush?

Staff response: Currently no service is offered but we offer volunteer events if folks want to come out and learn those skills on city land and then they can probably apply to their private land.

4. What is the best way for people to petition against development that allows deforestation particularly in unnecessary areas? Thinking about the mass deforestation along Durant Road, for example.

Staff response: New development is typically reviewed and approved through one of two processes. If the proposed development is allowed under the property's existing zoning, it is reviewed administratively by staff who make sure that it meets the City's standards, as outlined in the **Unified Development Ordinance (UDO)**.

Sometimes the proposed or desired development is not allowed under the existing zoning. This is often because additional height, different uses, or additional density is desired. In these cases, the property owners must petition the City to rezone. Rezoning is a legislative process, in which City Council approves or denies the request, rather than staff. This is a public process where residents have opportunities to share their perspectives and can weigh in if they think the development will have negative impacts to the community. Rezoning applicants are required to host at least one neighborhood meeting. In addition, residents can attend and share feedback when the case is reviewed by the Planning Commission, and when the case is reviewed by the City Council. More information on the full rezoning process is available here. More information on the text change process to draft and adopt development standards is available here.

City Plans and Projects

1. How can we maximize the use of public transit to minimize asphalt use for parking?

Staff response: In 2022, the City removed minimum parking requirements for all zoning districts (<u>TC-11-22</u>). Policies such as those outlined in Equitable Development Around Transit section of the 2030 Comprehensive Plan (<u>Section 3.4</u>), and development

options and incentives, such as the height bonus offered in frequent transit areas (<u>UDO 5.5.1</u>), support transit-oriented development, encouraging a built environment that allows more people to live close to transit and more destinations to be accessible by public transit. Additional policies and goals with respect to transportation and environmental sustainability are outlined in <u>Raleigh's Community Climate Action Plan</u>.

2. I'd like trees in the waterways in Raleigh or stormwater drains.

Staff response: Raleigh Stormwater is actively adding trees as part of their new device construction and retrofit projects. Typically, waterways are protected by the state and require vegetative buffers.

3. What was the reclamation plan at St. Alban's Big Branch creek regarding tree protection?

Staff response: Plans for a new greenway trail, the Big Branch Greenway Connector are currently underway. This corridor will consist of six segments. Segment 4 will run along Big Branch, between St Albans Dr on the south and Hardimont Rd on the north. More information about the project and how to get involved is available <u>here</u>.

4. How many acres of trees are being removed from Eastgate park for the dam replacement?

Staff response: Planning and design for the Eastgate Park Dam Rehabilitation are still underway. Please visit the <u>City's website</u> for more information and for a project contact.

5. Is there an Eastgate Invasive Plan for area near the basketball court?

Staff response: Specific invasive-control plans are usually handled by Raleigh Parks or volunteer groups. Eastgate Park has had some volunteer removal days for kudzu and other invasives. The City's general Invasive Species Program works across parks, removing English ivy, kudzu, and other "aggressive" plant species to let natives thrive. If the basketball court area is overgrown with invasives, you could contact Parks staff or visit the City's **Invasive Species webpage** for guidance on volunteer efforts.

Other

1. Why do I have to pay for tree removal when a contractor cut into my Oak's critical root zone and killed the tree?

Staff response: Private property to private property tree law is based on NC Common Law and isn't overseen by the City.