

Unofficial notes from Natural Areas Planning Sessions held by the Town of Chapel Hill Planning Commission

In our ongoing series of creating space to discuss important policy issues in more depth, the Planning Commission met over two meetings to address issues related to natural areas planning in Chapel Hill. We invited three subject matter experts to provide a review of the state of the field of natural areas planning, an overview of what we know about natural areas mapping in Chapel Hill, and a review of current and potential planning instruments that are being used in by peer communities. The recordings of the two Planning Commission session can be found on the Town website:

- February 4, 2024 with Sara Childs and Julie Tuttle: [link to recording](#) (beginning at minute 0:12:30)
- March 4, 2024 with Brooke Massa: [link to recording](#) (beginning at minute 1:09:00)

Below we provide an unofficial summary of the main topics presented in the two discussions, ending with the series of planning policy recommendations set forward by the subject matter experts. At our upcoming Planning Commission meeting on April 15, we will review this information and discuss potential natural areas planning reforms that could be valuable to land use planning in Chapel Hill.

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How can the LUMO promote both development and the conservation of natural areas and recreational assets?

In the first meeting we highlighted sections of town plans that point to a need to grow densely and also protect high value natural areas for passive recreation, environmental protection, climate action, and wildlife habitat. The Comprehensive Plan, Parks Master Plan, and Climate Action Plan each contain goals of preserving natural areas for these benefits. The Complete Community was adopted as a part of the Comprehensive Plan, in part, to further clarify the strategy to achieve a balance to these goals. The Future Land Use Map (FLUM) provides us a good map to where dense growth is targeted in priority areas along transit corridors. Town staff had been working on a natural areas map that would identify priority natural areas that can compliment the FLUM map. Staff recently released a draft copy of this Natural Areas Planning Tool and have not yet presented the draft to the Planning Commission [at the time of the Planning Commission meetings]. The information below is intended to help Council and staff develop processes and policies for using the Tool and other methods to prioritize areas that should be considered for conservation or conservation-oriented development.

We received a presentation from Sara Childs from Duke Forest and the Triangle Connectivity Collaborative (TCC) to provide more information on the role natural areas within Chapel Hill contribute to and connecting with regional wildlife habitats. These areas and corridors are essential for maintaining healthy and functioning ecosystems. Sara showed a map with data compiled by the Triangle Connectivity Collaborative (formerly Eno/New Hope Landscape Conservation data) that clearly shows the Town has high value natural assets within our borders that provide important habitat connectivity within and across Town to connect to important natural areas outside the Town's borders. These assets are in large part due to the Resource Conservation District, which has provided buffers around streams that have limited development in these areas. Town staff incorporated many of the same data sources as those

used by the TCC - data from Eno/New Hope Landscape Conservation model, the NC Natural Heritage Program, ESRI habitat data, plus Town hydrology and land use datasets to develop a draft Natural Area Mapping Tool which can aid the Town in efforts to prioritize zones where conservation or 'conservation-oriented' development are most critical. worth preserving and protecting.

In a second meeting, we heard from Brook Massa from the NC Wildlife Commission (WRC). She started her presentation with a description of the Green Growth Toolbox, which is "a technical assistance tool designed to help communities conserve and restore high quality habitats as communities and developers continue to build new homes, workplaces, and shopping centers". Brooke and other WRC staff provide technical assistance to municipalities to identify important areas and implement policies, ordinances, and non-regulatory tools the Town can use to help achieve the goals for planned growth balanced by environmental and habitat protection. Planning staff have consulted with Brooke in the past to help draft language in current LUMO to protect habitat in RCDs and in developing the Town's new Natural Areas Map. When asking developers to go out and find habitats, there was a vast spectrum on how this is done. Worked with staff to develop draft guidance on how a developer can see where priorities are and how to assess plans.

Ms. Massa then shared:

- Three main strategies to protecting natural areas
- How to implement open area standards to most efficiently select/identify the highest value percentage of the natural area in a given parcel

Three main strategies to protecting natural areas

1. Acquire land and establish conservation easements.

In the past, the Town has worked with partners such as the Triangle Land Conservancy, Orange County, the North Carolina Botanical Garden and others to acquire and protect important natural areas. This remains a critical strategy for natural areas protection,

2. Include demarcation of natural areas in a official planning maps and documents

Identify priority conservation areas as a part of the Future Land Use Map (FLUM) and other planning maps and documents. Before a developer comes to the town with an opportunity, they can reference the map to see if it is in a high value natural area targeted for conservation.

3. Create Zoning and Conservation Overlays

- Identify areas where natural area conservation is the highest use of that land
- Provide incentives to encourage conservation design for areas designated for natural areas (e.g., allow higher clustered densities in exchange for greater percentage of priority conservation land set aside.)
- Exclude higher priority conservation areas from By-Right development, enabling Council to negotiate for better site designs and greater habitat connectivity.
- Require open space natural area set asides (e.g., Chatham County requires that developments of a certain number of units go through the development review process. For these, there are minimum requirements for open space, a site design process and County guidelines for selection of the conservation space, which includes on-site natural areas inventory and preparation of fragmentation maps.)

- Build more densely to conserve natural areas (e.g., Carroboro has zoning districts that require 40% permanent open space; and R-2 and OR-MU districts shall have at least 20% open space.)
- Consider a conservation subdivision design in the new LUMO to provide incentives such as expedited permitting and/or density bonuses

Develop and apply standards to open space requirements

Our existing LUMO has guidelines for active recreation but does not have guidelines for natural open spaces.

- Create a tiered system of priority natural areas to share with developers through open space standards
- Provide guidance on how open space is configured on a particular site (e.g., Cabarrus County requires that at least 60% open space shall be contiguous and/or shall adjoin other open space). Carving out open space in the middle of a project does not have the same value as setting aside areas that are connected with surrounding open spaces.
- Potential updates to the LUMO the Town of Chapel Hill could consider: use existing standards (section 5.5 on recreation space percentage) and perhaps require (if property intersects with a priority area as identified on the NA map, which is confirmed through site visits) that the natural area /passive recreation be protected.
- Use open space standards to align and connect tree protection areas to meet tree canopy goals.

Non regulatory changes we could adopt

- The Town could create voluntary guidance, or conservation guide, that is provided to developers.
- The Town could add a line in the application that requires the applicant to say they have reviewed the natural features viewer and have identified the high value natural assets on their site(s).

What should the Council consider?

There is ample evidence that natural areas provide a number of ecosystem services that include healthy air and water, passive recreation, wildlife habitat preservation, tree canopy preservation, and relief from extreme heat and heat island effects. Maintaining natural areas is also a stated goal in almost all Town plans. The Complete Community was adopted to help develop a strategy to identify areas for growth and identify areas that are best left as natural assets for our community. To this end, Council should pursue options to ensure that natural areas are protected, specifically:

1. Create some form of conservation district overlay in the LUMO. This would discourage development in areas we want to protect, especially the highest value conservation areas. Adjacent areas should also receive protection through the other development regulations, incentives, and processes to maximize the size of connected habitat patches and corridors. Agencies such as the Wildlife Resource Conservation and Natural Heritage Program working with Town staff can help to identify and prioritize these areas. The NC Wildlife Commission has a model ordinance with additional documents to guide local governments. The model ordinance is available as an attachment. Here is a link to a [fact sheet on this](#)

[model ordinance](#). Consider excluding or limiting By-Right development to current levels in zones that intersect with verified higher priority conservation areas.

2. Incorporate language into the LUMO, similar to that in the current LUMO for recreation space, on natural area set asides per zoning district *when those districts intersect with verified higher priority conservation areas*. These areas would be passive recreation areas, and could be in lieu of parks and other recreation space.

Open Space: Align existing standards with conservation priorities

- [Section 5.5](#) requires a portion of most developments to be used as parks or open space.

Zoning district	Recreation space ratio
R-LD5	.040
R-LD1	.050
R-1A	.061
R-1	.071
R-2A	.095
R-2	.120
R-3	.170
R-4, 5, 6 and all other nonresidential zoning districts	.218

From Chapel Hill's current LUMO, Massa presentation to PC 3/4/2025

Similarly, the set asides can align with tree canopy preservation goals for each development zone type.

Align existing standards with conservation priorities

Land Use	Minimum Canopy Coverage
Two-family Residential, attached or detached	40%
Multi-family Residential, up to four (4) units	40%
Multifamily Residential of five (5) or more units	30%
Commercial (Use Group C and: Business, Office; Clinic; Funeral Home, and Hotel/Motel)	30%
Institutional (Use Group B)	40%
Mixed Use, Other	40%
All Uses in Innovative, Light Industrial Conditional Zoning District (LI-CZD)	20%

From Massa presentation to PC, 3/4/2025

3. Develop open space standards and a process to work with developers to prioritize which open space to preserve on a development tract.