CHARLOTTE

Charlotte City Council

Environment Committee

Meeting Summary for April 25, 2011

COMMITTEE AGENDA TOPICS

I. **Subject:** **Tree Canopy Goal and Investment Strategy**
Action: None

II. **Subject:** **Next Meeting**
Monday, May 23 at 2:30 p.m. in Room 280
(Please note change in meeting time.)

COMMITTEE INFORMATION

Present: Edwin Peacock, Nancy Carter, Jason Burgess, and Andy Dulin
Absent: David Howard
Time: 3:45 p.m. to 5:00 p.m.

ATTACHMENTS

1. Agenda Package
2. Handout: Tree Canopy Goal and Investment Strategy Presentation

DISCUSSION HIGHLIGHTS

Committee Discussion:

Committee Chair Edwin Peacock welcomed everyone to the meeting and asked those around the table to introduce themselves. He then turned the meeting over to Assistant City Manager Julie Burch.

I. Tree Canopy Goal and Investment Strategy

Ms. Burch stated that the only item on today's agenda is continuing the development of the Tree Investment Strategy and our Tree Canopy goals. Gina Shell and Tom Johnson will give you an update on that. We anticipate that we may be ready to ask you to at least consider preliminary recommendations at your next meeting in May. We are anxious to get some feedback from you about what staff has done to this point and also talk about the next steps. Now I will turn it over to Gina Shell.

Gina Shell: We have quite a few slides to work through, but we will be fine if you stop us to ask questions when you need to. Ms. Shell read through and reviewed the "Tree Canopy Goal and Tree canopy Investment Strategy" presentation (copy attached).

Peacock: Regarding Seattle's approach, do we not break down the categories like they did?

Shell: For this analysis, we've looked at in terms of Centers, Corridors and Wedges.

Peacock: You are using our categories and not their categories?

Shell: Correct.

Dulin: Why aren't we factoring in the $710,000 we are spending this year on tree planting?

Peacock: What is the standard level of planting? You are saying the increased levels are not factored in right now. What is the constant?

Shell: We didn't assume any additional planting. That was one of those things we know will increase, but we didn't factor it in here.

Peacock: Why wouldn't you? We are always adding new trees. That is part of our program.

Shell: It is and we could attempt to refine the model and incorporate that in. What we would say right now is if we continue to plant at the rate that we've planted this year, it

would be about 4 to 5 years before we would plant enough to increase the canopy by 1%.

Dulin: I don't know why you would excuse that data that leaves out the work. We did the voting and you all are the ones who did the work. It is hard work and it is good work. I don't know why you would leave out the good work we are doing. If we are going to spend $710,000 per year and we are going to plant 2,200 trees per year, in five years you have 11,000 trees.

Peacock: It sounds like you are trying to show us the build-out around us. This will be the most conservative scenario if we never plant a tree again.

Shell: That is right.

Peacock: You are just showing us "Armageddon" for trees, right?

Shell: It's realistic because you will see we are also not factoring in if some of our currently developed parcels might change to a zoning in which they would lose trees. There are a number of things that we have not shown.

Peacock: Can we factor in the private tree planting efforts?

Shell: I looked that up and that was about 2,500 to 3,000 per year. We could start to incorporate that in and talk about how many of that sort of planting it would take to change the canopy by a percentage. We can factor anything into this, it just depends on how precise we feel we need to get before we feel comfortable setting a goal.

Carter: I appreciate what Mr. Dulin is saying. If we do a maximum as your baseline then you probably are always going to fail in the future.

Dulin: I'll let them finish, but I want the City to get some credit for trying to put these trees back. My back is full of arrows from people who don't think I like trees.

Peacock: Regarding slide 18, you are showing a difference between "T" (University Research Park) and "Q" (South Park). Is it that you have more capacity of trees developed and a lot more square footage there?

Shell: Yes, the reason that something like SouthPark doesn't change much is there is not a lot of undeveloped or vacant property.

[Council member Burgess arrived at 4:10 p.m.]

Carter: Do we target the development potential areas, do we look at the infill or do we concentrate on the wedges? There are several recommendations going around in my head and I'm not sure what it is going to affect.

Shell: We talked about some of that and some of the strategies we will get to and it is

really a mixture, I think. We've talked about looking at particular neighborhoods for example, but we've also talked about taking a special look at what Corridor or Center might be a bit below average or below goal.

Peacock: On the different scenario slides, you are showing us different scenarios and I'm trying to understand them. You get two different strings here; one is the far right with Centers at 20%, which sounds like a bad scenario. Were you just showing this to us because we can achieve the 50% in different ways? I think Council and the Committee would suggest we need to figure out which one is balanced. If I live in one of the Centers and you are constantly dragging my number down with the Wedges, that's frustrating. If I'm a resident, I don't care whether I live in a Corridor, Wedge or Center. I just want there to be adequate tree canopy around me. We talk about affordable housing projects and affordable housing subsidized projects, they deserve tree canopy as well. Is that what you are trying to get us to decide here, which of the three is the better option?

Shell: Yes, this is the kind of discussion that will help us.

Burgess: I think there are two different issues. The one at the top is the same as the bottom, right? The bottom one why don't we decide as a City that we've got to look at the one on the right. Instead of a resident deciding how much tree canopy you want to have, I think anything above that would satisfy them. I'm just saying for the general make up of the bottom chart, whether we are going to choose the Wedges goal between 55 and 60%, what does that mean if our wedges is 65%? It is still serving and they would be happy with that even though it's above the mark. Why don't we just shoot for the graph on the right hand side and use that as a general layout of what we are trying to achieve, not to say that it has to be 50%, 20%, 20%, but certainly ideally you would have these more closer together. However, if it is Centers and there are a lot of buildings there is not as much opportunity for tree canopy. Are you looking for direction as far as where to go next? Is that one of the things we are doing here?

Shell: Yes.

Peacock: You've got 50%, 45% and 50% on the next three slides here so we can have that understanding of what you are trying to show us there.

Shell: We just wanted to show you another overall option of a 45% goal.

Peacock: We're at 46% right now, right?

Shell: The City is at 46%.

Peacock: Do you want to set a goal for lower than where we are?

Shell: Our build out showed 45%. We were not coming here making recommendations or presuming one way of the other. We wanted to hear where you all wanted us to go.

Peacock: A 50% goal is what American Forest wants a city of our size east of the Mississippi to be, right?

Shell: On their website, that general guidance that they give is 40% east of the Mississippi. In their analysis specific to Charlotte/Mecklenburg County they said 50% to 55% for the County. They didn't give a specific number just to the City. We were trying to find a balance there. This was just to show you another example, but no matter what goal we set they would play out the same way in terms of our Wedges, Centers and Corridors.

Dulin: Regarding the slide titled "Costs of 1% Tree Canopy", those numbers to the right are massive. Since smaller trees keep the numbers up, what is the growth rate of this seedling that you all brought in here? Is that a 50-year tree?

City Engineer Jeb Blackwell: It takes 40 years to mature. By the way, none of this includes the land value.

Dulin: Maintenance is included in the budget.

Shell: As we think about these smaller options we were thinking more about the partnering with the community and partnering with the non-profits.

Dulin: The Chairman and I had a conversation with a guy who was here in the building recently. He was curious as to who was paying the cost of the green bags we have at the base of some of these trees and I think we got the answer from Jeb that it is in the contract of the folks we are buying the trees from and they are going to feed them for us. That was interesting for us to know.

Peacock: People are watching and this is where I think our conversation earlier of what are we currently planting right now and how much we are spending is important. The cost of 1% in the tree canopy is the current amount we are spending on our tree canopy and how many trees is it buying us in the same format? What you are leading to is we need to increase it to get it to some goal, but there is a cost associated with that and here you have a range of different type trees and I would imagine you have to pick from each one of these depending on the situation.

Shell: As we talk through the strategy that we would like to start considering, this year nearly all of the $700,000 went to the 3-inch calipers in the street right-of-way. We might start using a small part of that to do some things with some of these smaller trees. Also, you see how community groups can easily start to get involved now and make a big difference. The public tree fund already does make a big difference. Again, if there were a goal and they were motivated toward that and they were able to see it they could do something in a very feasible way with this sort of approach. This is public, private and the community.

Carter: If we look at the dying trees, some that reached their maturity, refurbishing the

Corridor is important. Are we also investing in the ETJs?

Shell: We are not currently planting in the ETJ.

Carter: Maybe this is partnership that we could propose for the County and reach out to the towns to see if we could be intentional about what we do to be unified. Also, regarding the difficulty we are having in neighborhood streets along sidewalks, if we could pair the trees there might be some real benefit with the ability to promote safety and good transportation policies in our neighborhoods.

Shell: We thought that we could do a better job while we are in the CIP area, reaching out to the neighborhoods and the commercial property owners to encourage planting and providing education to them. We could partner with the neighborhood and perhaps the non-profit if we could find one and have our Saturday planting event and bring a truck full of those and give them to the citizens and have them plant trees in their yards, in addition to the planting we would be doing along the right-of-way.

Carter: Even thought there are challenges you should look for the trending neighborhoods too. You can have more impact on those.

Dulin: Can you explain again the percentages on the "Centers, Corridors, and Wedges to Review for FY2012-13 Planting Opportunities" slide?

Shell: These were just the ones that were slightly lower than the rest in that category. For example, these are the seven Centers that are below the 25%. The rest of them right now are above. These are the two Corridors that are below 40%, the rest are above. These are the ones that we would, over the next couple of years, begin to look at for any sort of planting opportunities, whether it would be something we could find or community groups that might be interested in.

Dulin: The lowest canopy was District 3. District 3 has got Steele Creek, Whitehall and the Airport. Those are major hits and remember we did the rezoning across I-485 on the inside of I-485 for Whitehall several years ago and that is all woods over there.

Peacock: How much is in the fee-in-lieu escrow account, if you will? When do we have an annual number on that regarding how many developers have chosen that?

Burch: The Tree Ordinance became effective in January and with the down economy there is not a lot of development going on. I don't know if Tom can shed any light on that.

Tom Johnson: There are no funds in that account at this point in time.

Carter: Are you going to use a predictor calendar in the future to keep the age of the street trees? Is that the purpose?

Shell: Yes, they use it to keep track of condition and develop their pruning and maintenance list. It also could be used to know, especially along a street or certain area that it's reaching that age in which they may need to be removed or have special care.

Carter: Are we interacting with NCDOT as well?

Shell: We probably could do that more.

Carter: That would be great.

Peacock: Who is being invited to the Sounding Board Meetings?

Johnson: It is a list that is compiled from everyone who we have worked with in the past; prior stakeholders for the Tree Ordinance revisions, concerned citizens, the whole gamut really.

Peacock: One group that I would like to have engaged in this is Keep Charlotte Beautiful and Keep Mecklenburg Beautiful, as well as citizen advisory groups that want to get involved or are already involved and specific neighborhoods around the City and the surrounding six towns.

Shell: We can put them on the list. Our invitation has not gone out yet so we will do that.

Peacock: Could you brief me on where we are with combining the two groups? Julie, I know those two talk with one another, but if we are not speaking to them and letting them know we are looking closely at tree canopy as an overall goal, which means your neighborhoods, your City, your County, and we want them to be a part of this because ultimately it is going to lead to them getting involved.

Burch: The key focus, particularly to Keep Mecklenburg Beautiful, as I recall, is really more on recycling and waste reduction more so than tree canopy and in similar fashion, Keep Charlotte Beautiful is more toward waste reduction, but certainly we can advise them of these other opportunities and talk about trees too.

Peacock: You got to think outside the box and hopefully they can help us on this.

Carter: What about the Storm Water Conservation Team? It would be good to send it out to the neighborhood leaders.

Shell: As Julie said, we would like to finalize our recommendations to you possibly as early as the next meeting and then hopefully get your recommendations.

Peacock: I would like to have from you all what would our tree canopy look like if every citizen planted one tree? I know every citizen can't, but I would just like to see where our tree canopy would go. The other comment I have is on the Quality of Life Study.

This whole tree canopy discussion I think is very important and talking about all these different percentages, goals and numbers in Wedges and Corridors is incredibly impersonal. I'm just saying that we've got to be more specific I think on the types of trees we are talking about. While this is a wonderful tree here, I think people identify with the types of trees that have a flowering element to them. They have a lot more appeal to people. I would like to see a breakdown of costs that may be involved in flowering trees, whether it is a Dogwood or Crape Myrtle or just another tree like that. When we talk about quality of life, we are talking about challenged neighborhoods and taking it from challenged to transitioning to stable. I think we can get caught so much into these statistics and numbers and aerial photos that we forget that what people want is a neighborhood that really looks good and has an enormous amount of curb appeal. I think trees, and we have already proven by the Tree Ordinance process, definitely adds to the value of homes and adds to the character and charm of a particular area. Nancy has just proven here that her district has the most tree canopy in the whole city. If we can try to get more specific and tie it to specific neighborhoods and let this Council and future Councils know about which neighborhoods we see the most opportunity in. That is going to get us so much further than saying our goal is 70% or our goal is 50%, but if I say the goal in your neighborhood or someone else neighborhood, I just think it helps people along the way. We know that certain neighborhoods, particularly Dilworth, are very active in this subject. Where can we tie the best use of the dollars? A small tree is not going to be great, but if you know in 20 years you are going to have this identifiable area is going to have a lot of trees that are really going to have some value.

Shell: We agree with that and we think this is sort of the first step toward being able to really talk about this in the communities and talk about it in ways that people are going to want to envision their neighborhood. We wanted to get past this and set the big goal, the biggest citywide number, I don't mean big in terms of number, but let's set the citywide number and then let's start to study those neighborhoods and figure out how to get this done.

Peacock: I think the way to get the neighborhood involved is you show the vision of what their neighborhood would look like with more trees and specifically, what type of trees and how will those trees make the neighborhood look better. For example, in District 3, what would an industrial park look like if you put Dogwoods around it? Trees have to have shelf life, they have to have durability, and they have to meet certain criteria. I think those trees that I mentioned do, maybe not all and I'm not an Arborist by any means, but I would just like to see us be more specific if we are going to start talking very broadly about tree canopy and numbers. Like I said, I'd like to know if every citizen planted a tree with tax dollars, what it would be for our overall tree canopy. Secondly, I guess staff could make a stab at some of the bigger opportunities if you have some communities that are challenged in the Quality of Life Study. That may help us understand how much we need to begin contributing to the plan, but I think more importantly it is going to engage citizen groups to want to contribute a lot more.

Dulin: Along those lines, the real estate community is down these days and if every realtor gives to the purchaser of a home some sort of gift, a closing gift and they are

always looking for something interesting and new to give. It would be cool for them to give a tree as a gift.

Burch: Those comments are very helpful. We will move toward the May 11th Sounding Board Meeting and then be back here for the May meeting. I did want to point out that we do need a different time of day for your May meeting. It is set for 3:45 on May 23rd but you will recall the Council meeting that day starts at 4:00 so the Budget Hearing can be at 5:00. Your regular time is 3:45, so I don't know if you might want to move the time to 2:30 with the Council's Business Meeting starting at 4:00 if that works for you.

Peacock: Right now our only item to be on the agenda would be the follow-up from this and then possibly a discussion on the Environmental Advisory Committee.

Burch: We would have time to continue that yes.

Peacock: Is 4:00 the Budget presentation that day?

Burch: No, 4:00 is when the Business Meeting starts, then the Public Hearing on the Budget is at 5:00. Is 2:30 that day okay?

Peacock: Yes, 2:30 is fine.

II. <u>Next Meeting</u>

Monday, May 23, 2011 at 2:30 p.m. in Room 280.

Meeting Adjourned at 5:00 p.m.

Environment Committee

Monday, April 25, 2011 at 3:45 p.m.
Charlotte-Mecklenburg Government Center
Room CH-14

Committee Members:	Edwin Peacock, Chair Nancy Carter, Vice Chair Jason Burgess Andy Dulin David Howard
Staff Resources:	Julie Burch

AGENDA

I. <u>Tree Canopy Goal and Investment Strategy</u>

Staff Resources: Gina Shell and Tom Johnson, Engineering and Property Management

Staff will present draft recommendations for the tree canopy goal and additional information about elements of the tree investment strategy. The Committee is asked to provide feedback and comments. Staff will also discuss next steps in the citizen input process, including the May meeting of the Tree Advisory Committee.

II. <u>Next Meeting</u>

Monday, May 23 at 3:45 p.m. in Room 280

<u>Attachment</u>: Storm Water Advisory Committee Annual Report – Information Only

Distribution:	Mayor/City Council Mac McCarley	Curt Walton, City Manager Stephanie Kelly	Leadership Team Environmental Cabinet

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M E M O R A N D U M
FROM THE
OFFICE OF THE CITY CLERK

DATE: April 15, 2011
TO: Environment Council Committee Members
FROM: Stephanie C. Kelly, CMC, City Clerk
SUBJECT: **Attached Annual Report: Storm Water Advisory Committee**

The attached report of the Storm Water Advisory Committee is being sent to you pursuant to the Resolution related to Boards and Commissions adopted by City Council at the November 23, 2009 meeting. This resolution requires annual reports from City Council Boards and Commissions to be distributed by the City Clerk to both City Council and to the appropriate Committee for review.

If you have questions or comments for the board, please convey those to staff support for a response and/or follow-up.

Section 6. **REPORTS OF BOARDS, COMMITTEES, AND COMMISSIONS**

The City Council finds it appropriate to periodically review each standing board, committee, and commission to which they make appointments for the purpose of assessing whether said board, committee, or commission should be renewed, dismantled, expanded or its charge redefined. To this end, each board, committee, and commission that is part of the City, or that was established by the City Council, whether acting alone or in conjunction with one or more other local governments, is required to submit annual written reports that must contain in depth reviews of the body's activities, including goals, objectives, successes, problems, and/or the need for City Council assistance. These reports shall be submitted to the City Clerk and will be staggered through the year according to a schedule established by the City Clerk. The City Clerk shall then provide the Mayor and City Council with copies of the reports and refer the reports to the appropriate Council Committee for the Committee's information.

Boards, committees, and commissions that are not part of the City shall submit reports in accordance with the reporting requirements set forth in their contract, if any, with the City.

In addition to required written reports, the City Council may request on a case-by-case basis that an oral report be made to the Council.

Charlotte-Mecklenburg STORM WATER Services

700 North Tryon Street
Charlotte, NC 28202
Fax: 704-336-4391

MEMORANDUM

OFFICE OF THE CITY CLERK

DATE: March 28, 2011

TO: Charlotte City Mayor and City Council Members

FROM: Timothy D. Mead, Ph.D., Chairman
Charlotte-Mecklenburg Storm Water Advisory Committee

SUBJECT: 2010 Annual Report

In accordance with the November 23, 2009 City Council Resolution, the following 2010 Annual Report is required by "...each standing board, committee, and commission to which they make appointments for the purpose of assessing whether said board, committee, or commission should be renewed, dismantled, expanded or its charge redefined...."

The Charlotte-Mecklenburg Storm Water Advisory Committee (SWAC) was established by Interlocal Agreements to:

- Review policies;
- Hear appeals, requests for variances, and decide on violations, fee credits, service charges and adjustments;
- Evaluate capital and operational programs and budgets; and
- Make recommendations or comment to elected officials regarding the storm water programs of the City of Charlotte and Mecklenburg County.

SWAC membership is by nomination and subsequent appointment by the Mecklenburg Board of County Commissioners (BOCC), Charlotte City Council (Council), Charlotte City Mayor, the six surrounding Town Boards, and by the SWAC members themselves. The SWAC members represent the following seven categories: Institutions (schools, colleges, hospitals, churches); Industry (manufacturing or commercial); Environmental Organizations; Financial, Accounting or Legal Professional; Developer or Land Development Design Professional; General Contractor; and Residential Neighborhoods (3 appointments).

There are nine SWAC members, including two officers. They are:

Timothy D. Mead, Ph.D., Chair
Dan Latta, PE, Vice Chair
James R. Baysinger II, PE
Attorney John Buric
Paula G. Martin, Ph.D.
Jim Patterson, retired
Gravely Reid, retired
Amy Ringwood, Ph.D.
Matthew Roper, PE

The members serve without compensation and for up to 2 consecutive 3-year terms, for up to 6 years. The SWAC members are informed of the BOCC and Council attendance policies. Any absences by the members either were due to work, illness or unforeseen emergencies. In addition, Member Gravely Reid should be recognized for never missing a regular meeting in 2010.

Regularly scheduled meetings begin at 4:30 PM and are held in Auditoriums 1 & 2 at the Hal Marshall Services Center, 700 North Tryon ST, Charlotte, NC 28202. The SWAC members receive agenda packages, as well as email messages and phone calls as needed, to prepare for each scheduled meeting.

During 2010, the SWAC members met 7 out of the 12 regular schedule meeting calendar. Also, during calendar year 2010, an unprecedented 5 regular meetings were cancelled due to there being no items on the agenda that required immediate action by the SWAC members. However, staff continued to provide updates to items to the SWAC by email messages for informational purposes only. The 7 regular SWAC meetings that were held during 2010 addressed such agenda items including, but not limited to, the following:

- Update on the Executive Summary Report on the Charlotte-Mecklenburg Storm Water Services Fee & Credit Study;
- Overview and Update on the Revisions to the Multi-jurisdictional Hazard Mitigation Plan;
- Staff Update and Request for Support/Approval of the Proposed Process for Updating the Charlotte-Mecklenburg Storm Water Services BMP Design Manual;
- City Storm Water Services Budget Presentation for the SWAC to be Received as Information;
- Charlotte-Mecklenburg Storm Water Services All Hazards Mitigation Plan Update;
- City of Charlotte Storm Water Services FY11 Budget Presentation;

- Mecklenburg County Storm Water Services FY11 Budget Presentation;
- Charlotte-Mecklenburg Storm Water Services BMP Design Manual Update Review;
- Charlotte-Mecklenburg Storm Water Services Mitigation Plan Progress Update;
- Advisory Board Nominations & Appointments by the SWAC Members;
- Charlotte-Mecklenburg Storm Water Services Floodplain Mapping Guidance Document Staff Requested SWAC Support;
- SWAC Appeal Hearing Process Review Presented by Attorney;
- Charlotte-Mecklenburg Storm Water Services Flood Mitigation Program – Upcoming Floodplain Mapping Meetings;
- Charlotte-Mecklenburg Storm Water Services Outreach/Education/Communication Annual Summary PowerPoint Slide Presentation;
- City Storm Water Services Water Quality Regulatory & Budget Drivers – SWAC to Receive as Information;
- City Storm Water Services Maintenance Program – SWAC to Receive as Information; and
- Approval of the Meeting Minutes at each of the SWAC Regularly Scheduled Meetings held during 2010.

On behalf of the SWAC, I would like to thank you again for the opportunity to serve and provide guidance on Storm Water matters in Mecklenburg County.

Respectfully submitted.

c: Charlotte-Mecklenburg Storm Water Advisory Committee Members
Jennifer G. Smith, Manager, City of Charlotte Storm Water Services
Dave Canaan, Director, Mecklenburg County Water & Land Resources

CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT

Tree Canopy Goal and Tree Canopy Investment Strategy

Presentation to
Council Environment Committee

April 25, 2011

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Environment Focus Area Plan

Measure: Maintain a significant and healthy tree canopy.

FY11 Target: Adopt an overall tree canopy goal for Charlotte -

- and measure the effectiveness of the newly revised tree ordinance in meeting the goal.

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Goal of Presentation

- Discuss preliminary options for tree canopy goal(s) and review staff strategies.
- Receive Committee questions and comments.

Status of Work:

- Completed analysis estimating what the tree canopy will be if all parcels develop ("Build Out" Analysis)
- Preliminary list of strategies complete
- Meetings with various City staff continue
- Citizen "Sounding Board" meetings in May

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Presentation Outline

I. Brief Review of Staff Research Findings

II. Build-Out Analysis

III. Options for Setting Tree Canopy Goals & Sub-Goals

IV. Tree Canopy Investment Strategies

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Definitions

Tree Canopy Goal

Total tree canopy coverage which the City aspires to retain, expressed as a percentage of land within the City limits.

- May include sub-goals by geographic area or category.

Tree Canopy Investment Strategy

A strategy to guide public investment decisions aimed at preserving Charlotte's tree canopy.

- Aligned with Council interests and policies
- Offering guidance regarding locations for tree planting
- Available to partner organizations and citizens as information

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Policy Linkages: Summary

- Tree Canopy as Element of Charlotte's Identity
  - Charlotte can continue to be a **leader** in this area
- Tree Canopy as Key Natural Asset
  - Indicator of a Sustainable Quality of Life; "livability"
  - Calls for good planning, fiscal attention
  - Wedges as priority area for large maturing tree canopy
  - Tree preservation and planting can support multiple urban goals
- Tree Canopy as Urban Design Feature
  - Sense of place
  - Aesthetic implications
  - Functional implications
  - Social implications (value to neighborhood, pedestrians, etc.)

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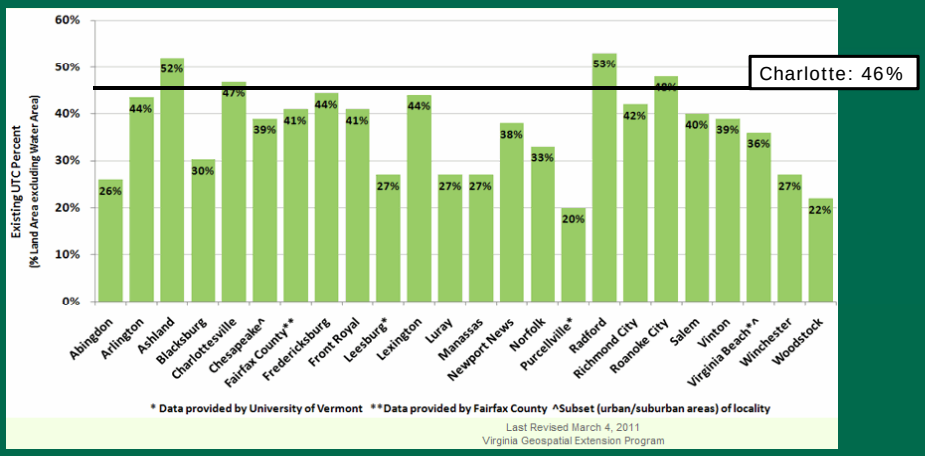
Canopy Data Comparisons: Tree Canopy Reported by Others

Charlotte's Tree Canopy, 46%, compared to Virginia cities



- Also see chart provided listing other cities, not included in PowerPoint

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Possible Approaches to Goal-Setting

Seattle's Approach

- Considered American Forest's recommendations and benchmarked with other cities
- Considered land-use mix in Seattle and other City land-use goals (desired density, freight mobility, etc.)
- Considered canopy cover and planting opportunities
- Defined goals for each land-use type (see excerpt below) and factor % of total land base for city-wide goal
- Consulted with partners, public

Land Use Category	Current Cover	30-Year Cover Goal
Single-Family	18%	31%
Multi-Family	13%	20%
Downtown Seattle	9%	12%
Industrial	8%	10%
Commercial/Mixed Use	8%	15%
Citywide	18%	30%

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Possible Approach to Goal-Setting for Charlotte

- Consider American Forest's recommendations and benchmark with other cities
  - Charlotte has an above-average tree canopy for an urban area
  - Citizens desired a "realistic" goal that maintains the canopy
- Consider City land-use goals for land use and growth
  - Centers, Corridors & Wedges Growth Framework
- Consider canopy cover and planting/preservation opportunities
- Draft goals for each category and factor % of total land base for city-wide goal
- Consult with partners, public

Geographic Category	Current Cover City Only	Current Cover City + ETJ	??-Year Cover Goal
Centers	31%	34%	TBD
Corridors	39%	42%	TBD
Wedges	51%	55%	TBD
Center City	16%	16%	TBD
Total	**46%**	**49%**	**TBD**

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"Build Out" Scenario

- An approach to understanding the future of the tree canopy in an urbanizing environment
- Holds many variables constant
- May be considered a "realistic to optimistic" analysis of tree canopy built out City
- Definition of "built out" Charlotte +ETJ: all currently undeveloped parcels have developed and retain a tree canopy similar to those around them

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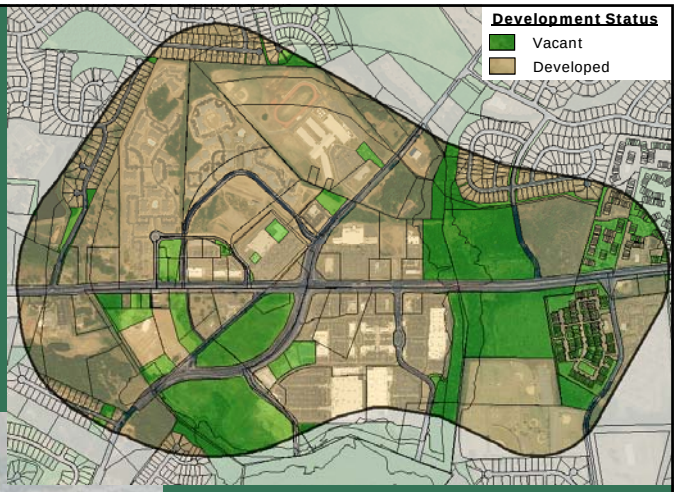
Current Canopy Coverage

Developed Parcels:	18%
Vacant Parcels:	38%
RoW:	4%
Entire Center:	**22%**

"Built Out" Canopy Estimate

All Parcels Developed:	18%
RoW:	4%
Entire Center:	**17%**



"Build Out" Scenario for: Steele Creek / Hwy 49 Mixed Use Activity Center

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"Build Out" Scenario Assumptions

Assumption:	Canopy coverage on currently developed parcels remains constant
Reality:	Canopy coverage on developed parcels may increase due to tree growth or planting or may decrease due to removal
Assumption:	Undeveloped parcels will develop in a way that maintains or grows canopy equivalent to similar developed parcels over the long run
Reality:	Undeveloped parcels may remain undeveloped or may maintain or grow more or less canopy than similar parcels over the long run
Assumption:	Canopy coverage over streets & sidewalks remains constant
Reality:	Canopy coverage extending over streets & sidewalks may increase due to public or private planting or may decrease due to public or private removal

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"Build Out" Scenario Assumptions

Accounts for:

- Application of City growth framework goals and zoning authority in the ETJ
- Expectation that ETJ will become part of the City through annexation

Does not account for:

- Increased levels of City planting
- Timing of development in various parts of Charlotte and the impact of the creation and subsequent amendments to the tree ordinance, including 2010 amendments
- Potential for devastating tree disease or natural disaster

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"Built Out" Scenario Results City + ETJ

	% Total Land	Current Canopy Coverage	"Built Out" Canopy Coverage
Centers	13%	34%	<27%
Corridors	20%	42%	<35%
Wedges	67%	55%	<51%
City/ETJ	**100%**	**49%**	**<45%**

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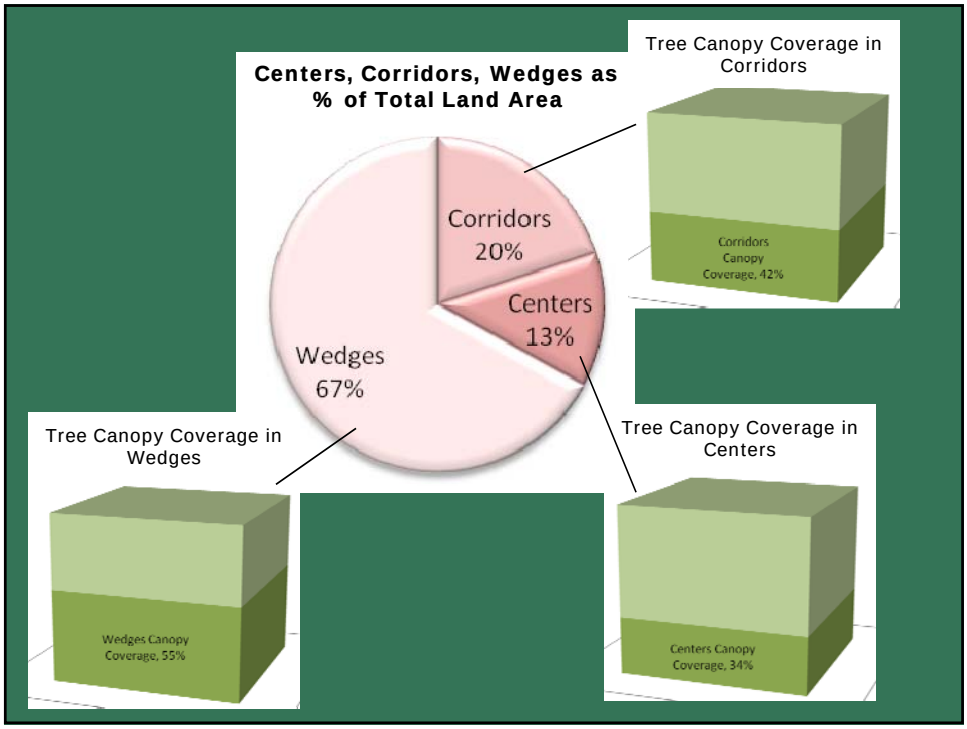
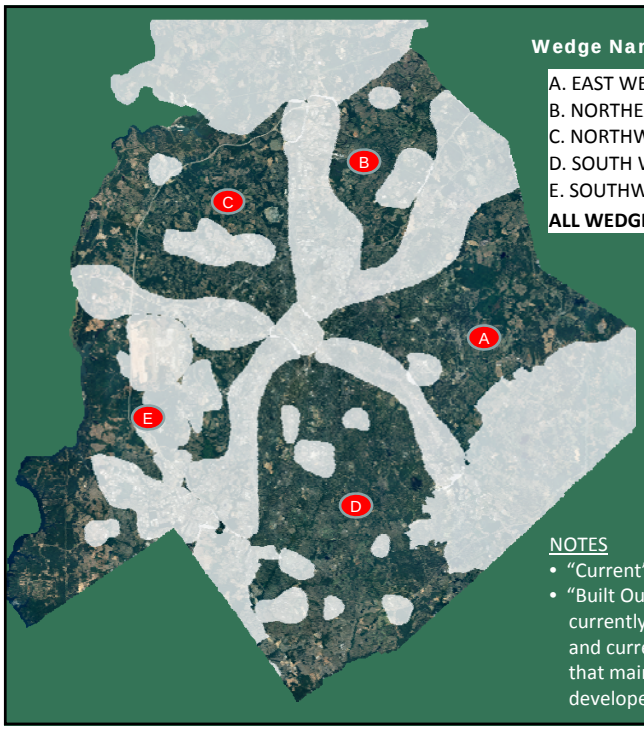
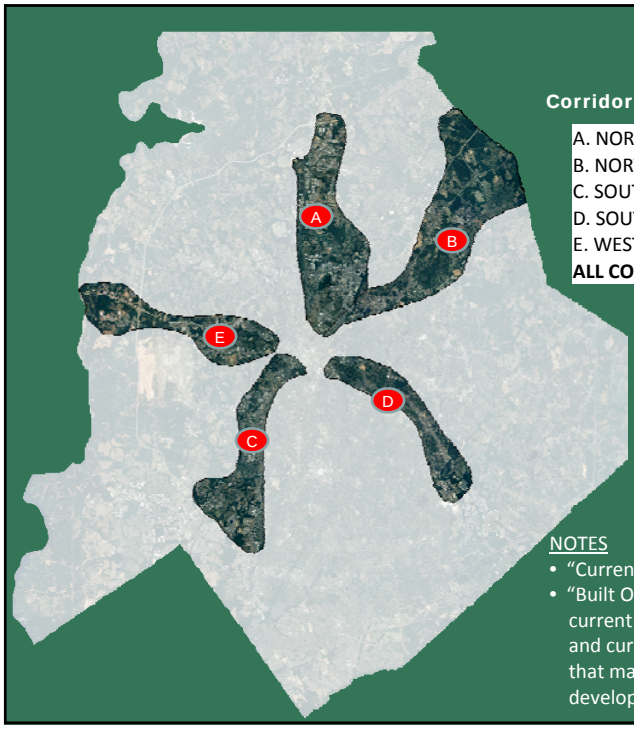




Wedge Name	Canopy: Current	"Built Out"
A. EAST WEDGE	57%	<54%
B. NORTHEAST WEDGE	47%	<43%
C. NORTHWEST WEDGE	57%	<53%
D. SOUTH WEDGE	52%	<50%
E. SOUTHWEST WEDGE	58%	<57%
ALL WEDGES	**55%**	**<51%**

NOTES

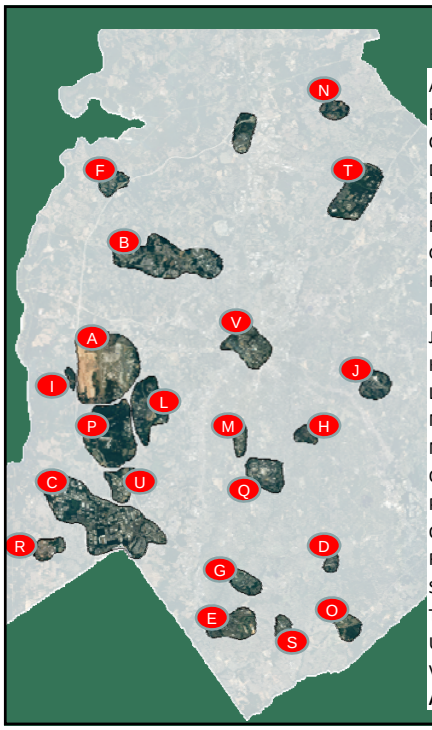
- "Current" Canopy: actual coverage in 2008
- "Built Out" Canopy: estimated coverage if currently developed parcels maintain canopy and currently vacant parcels develop in a way that maintains canopy equivalent to similar developed parcels



Corridor Name	Canopy: Current	"Built Out"
A. NORTH CORRIDOR	39%	<35%
B. NORTHEAST CORRIDOR	49%	<40%
C. SOUTH CORRIDOR	31%	<26%
D. SOUTHEAST CORRIDOR	41%	<38%
E. WEST CORRIDOR	43%	<36%
ALL CORRIDORS	**42%**	**35%**

NOTES

- "Current" Canopy: actual coverage in 2008
- "Built Out" Canopy: estimated coverage if currently developed parcels maintain canopy and currently vacant parcels develop in a way that maintains canopy equivalent to similar developed parcels



Center Name	Canopy: Current	"Built Out"
A. AIRPORT Industrial Activity Center	20%	<16%
B. MT HOLLY/HWY 16 Industrial Activity Center	34%	<28%
C. WESTINGHOUSE BLVD Industrial Activity Center	31%	<24%
D. ARBORETUM Mixed Use Activity Center	30%	<30%
E. BALLANTYNE Mixed Use Activity Center	15%	<13%
F. BROOKSHIRE/I485 Mixed Use Activity Center	40%	<33%
G. CARMEL/HWY 51 Mixed Use Activity Center	28%	<25%
H. COTSWOLD Mixed Use Activity Center	34%	<34%
I. DIXIE BERRYHILL Mixed Use Activity Center	74%	<54%
J. EASTLAND Mixed Use Activity Center	33%	<32%
K. NORTHLAKE Mixed Use Activity Center	46%	<30%
L. OLD COLISEUM Mixed Use Activity Center	46%	<34%
M. PARK RD/W00DLAWN Mixed Use Activity Centr	13%	<13%
N. PROSPERITY CH RD Mixed Use Activity Center	44%	<40%
O. PROVIDENCE/I-485 Mixed Use Activity Center	48%	<34%
P. SHOPTON Mixed Use Activity Center	65%	<53%
Q. SOUTHPARK Mixed Use Activity Center	17%	<17%
R. STEELE CREEK /HWY 49 Mixed Use Activity Centr	22%	<17%
S. STONECREST Mixed Use Activity Center	20%	<19%
T. UNIVERSITY RSCH PK Mixed Use Activity Center	51%	<40%
U. WHITEHALL Mixed Use Activity Center	21%	<15%
V. CENTER CITY Activity Center	16%	<15%
ALL CENTERS ALL TYPES	**34%**	**<27%**

CITY OF CHARLOTTE

Tree Canopy by Council District

District	2008 Tree Canopy Coverage
1	48%
2	47%
3	39%
4	49%
5	54%
6	51%
7	45%

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Setting a Tree Canopy Coverage Goal

- Measures health and value of the urban forest
- Reflects and expresses the value the community places on the canopy
- Enables the community to chart success in enhancing and/or preserving tree canopy
- Sets a threshold or a bar for common commitment about the canopy
- Communicates shared target(s) for public, private, non-profit organizations and citizens to rally around
- Establishment of a long-term canopy goal creates a legacy statement about sustainability and community quality of life

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Usefulness of a Tree Canopy Coverage Goal

- Provides context to interpret the results of current and future canopy studies
- Provides basis for measurement of City and community efforts to preserve canopy
- Provides guidance for pacing of publicly-funded planting and preservation
- Encourages the community to rally toward a shared goal
- Provides a platform for community group action toward a shared civic goal

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Usefulness of Tree Canopy Sub-Goals by Centers, Corridors, Wedges

- Supports the vision of the City's Centers, Corridors, Wedges growth framework by recognizing that different parts of a City have different opportunities and needs related to tree canopy
- Appropriately aligns expectations for tree canopy with expectations for land use
- Helps staff, community groups, and citizens direct their tree planting and preservation efforts to areas with greatest gap between current canopy and goal

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Policy Linkages: Environment Focus Area Plan

"Charlotte will become a **national leader** in environmental and energy sustainability, preserving our **natural resources** while balancing **growth** with sound **fiscal policy**."

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"50% Goal": Various Calculations

CITY + ETJ	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Wedges	55%	56%	57%	58%	59%	60%	61%	62%	63%	64%	65%
Corridors	40%	40%	35%	35%	35%	30%	30%	25%	25%	25%	20%
Centers	40%	35%	35%	30%	30%	30%	25%	25%	20%	20%	20%

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"50% Goal": Options for Sub-Goals for Purposes of Discussion

CITY + ETJ	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Wedges	55%	56%	57%	58%	59%	60%	61%	62%	63%	64%	65%
Corridors	40%	40%	35%	35%	35%	30%	30%	25%	25%	25%	20%
Centers	40%	35%	35%	30%	30%	30%	25%	25%	20%	20%	20%

Tree Canopy Goal: 50%
Wedges Goal: 55%-60%
Corridors Goal: 35%-40%
Centers Goal: 30%-40%

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"50% Goal": Options for Sub-Goals for Purposes of Discussion

CITY + ETJ	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Wedges	55%	56%	57%	58%	59%	60%	61%	62%	63%	64%	65%
Corridors	40%	40%	35%	35%	35%	30%	30%	25%	25%	25%	20%
Centers	40%	35%	35%	30%	30%	30%	25%	25%	20%	20%	20%

Tree Canopy Goal: 50%
Wedges Goal: 55%-60%
Corridors Goal: 35%-40%
Centers Goal: 30%-40%

Tree Canopy Goal: 50%
Wedges Goal: 60%-65%
Corridors Goal: 25%-30%
Centers Goal: 20%-30%

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"50% Goal": Options for Sub-Goals for Purposes of Discussion

CITY + ETJ	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Wedges	55%	56%	57%	58%	59%	60%	61%	62%	63%	64%	65%
Corridors	40%	40%	35%	35%	35%	30%	30%	25%	25%	25%	20%
Centers	40%	35%	35%	30%	30%	30%	25%	25%	20%	20%	20%

Tree Canopy Goal: 50%
Wedges Goal: 55%-60%
Corridors Goal: 35%-40%
Centers Goal: 30%-40%

Tree Canopy Goal: 50%
Wedges Goal: 60%-65%
Corridors Goal: 25%-30%
Centers Goal: 20%-30%

Tree Canopy Goal: 50%
Wedges Goal: Above 65%
Corridors Goal: Above 20%
Centers Goal: Above 20%

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"45% Goal": Options for Sub-Goals for Purposes of Discussion

CITY + ETJ	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
Wedges	50%	51%	52%	53%	54%	55%	56%	57%	58%	59%	60%
Corridors	35%	35%	30%	30%	30%	25%	25%	20%	20%	20%	15%
Centers	35%	30%	30%	25%	25%	25%	20%	20%	15%	15%	15%

Tree Canopy Goal: 45%
Wedges Goal: 50%-55%
Corridors Goal: 30%-35%
Centers Goal: 25%-35%

Tree Canopy Goal: 45%
Wedges Goal: 55%-60%
Corridors Goal: 25%-30%
Centers Goal: 15%-25%

Tree Canopy Goal: 45%
Wedges Goal: Above 60%
Corridors Goal: Above 15%
Centers Goal: Above 15%

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Costs of 1% Tree Canopy

	#Trees to Create 1% Change in Canopy (Medium to Large Maturing)	Cost for Bare-Root or Tubelings Planted by Citizens/Volunteers (40 Years to Mature)	Cost for 1" Caliper Trees Planted by Citizens/Volunteers (40 Years to Mature)	Cost for 3" Caliper Trees Planted by City Contract (35 Years to Mature)
Centers	10,000 - 15,000	$15,000 - $30,000	$400,000 - $750,000	$3,000,000 - $6,000,000
Corridors	20,000 - 25,000	$30,000 - $50,000	$800,000 – $1,250,000	$6,000,000 - $10,000,000
Wedges	60,000 - 80,000	$90,000 - $160,000	$2,400,000 - $4,000,000	$18,000,000 - $32,000,000
City + ETJ	90,000 - 120,000	$135,000 - $240,000	$3,600,000 - $6,000,000	$27,000,000 - $48,000,000

Tubelings

Bare Root Tree

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Definitions: Tree Canopy Investment Strategy

Strategy will be used to guide:

- City Tree Planting Program
- Tree Management & Planting During City Projects
- Tree Management & Planting at City Facilities
- Use of Tree Ordinance Fee-in-Lieu Revenue
- City partnerships for tree canopy preservation (Mecklenburg Park & Rec, Catawba Lands Conservancy, CMS, non-profits, etc.)

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Planting Strategies

- Emphasize provision and maintenance street trees with public funds
  - Every street with >4 foot planting strip is a *candidate* for tree-planting
  - Tree size will be guided by Urban Street Design Guidelines, utility conflicts, arborist expertise
  - Large maturing trees planted in >6 foot planting strips wherever feasible
  - Appropriate diversity of street tree species will be maintained
- Incorporate tree-planting along streets and in open space within the project boundaries of City-funded Capital Improvement Projects
  - Use tree-planting program funds to extend the area of planting into rights-of-way, open space areas, and stream buffer areas adjacent to or near the project area
  - Extend planting in the vicinity of light rail projects
  - Incorporate outreach to residential neighborhoods and commercial property owners in the vicinity of each CIP to encourage planting and provide tree care education
  - Partner with the neighborhood and non-profits to extend planting to private properties in or near the CIP area, with the City providing small trees and education - A Saturday planting event, for example

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Planting Strategies

- Review neighborhoods listed by Neighborhood and Business Services for planting opportunities – targeting, for example -
  - Foreclosure-plagued Neighborhoods
  - Past Neighborhood Improvement Project Areas
  - Challenged and Transitioning Neighborhoods
  - Document findings and incorporate into strategy for future City and/or community group planting
- Review each Center, Corridor, or Wedge where the canopy coverage is significantly less than similar areas (or less than goal, when established) for planting opportunities
  - Document findings and incorporate into strategy for future City and/or community group planting
- Plant at City facilities where there is room for large maturing trees
- Consider expansion of the Business Investment Grant Program to assist eligible business meet parking lot planting requirements as they grow their business

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Centers, Corridors, Wedges to Review for FY2012 - 13 Planting Opportunities

Centers < 25%

Airport
Southpark
Stonecrest
Center City
Park Road/Woodlawn
Steele Creek/Hwy 49
Whitehall

Corridors < 40%

North Corridor
South Corridor

Wedges <50%

Northeast Wedge

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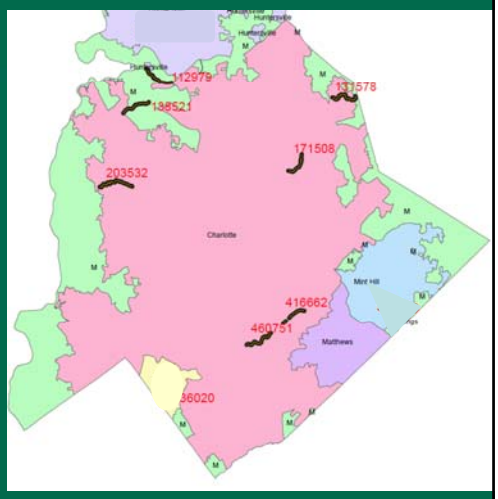
Preservation Strategies

- Use Tree Ordinance fee-in-lieu revenue to purchase treed land and place it under the care of the Catawba Lands Conservancy or Mecklenburg Parks & Recreation
- Track locations of development that generates fee-in-lieu and purchase land as near to that location as practicable
- Analyze available lands and choose land to meet multiple goals:
  - Proposed Carolina Thread Trail geographies
  - Stream buffer/wetland
  - Wildlife Habitat, etc.



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Community Partnership Strategies

- Provide Tree Canopy Investment Strategy including information about planting needs and opportunities to community groups interested in support of the canopy
- Support community efforts aimed at tree planting or preservation related to schools, parks, greenways
  - Support by supplying trees or whips
  - Support with expertise and education
- Convene coordinating meetings (bi-annual or quarterly) with governmental, non-profit, community groups and private interests working to preserve Charlotte's Tree Canopy
  - Combined or coordinated with meetings of Charlotte Tree Advisory Committee
  - Share information and insight
  - Partner to optimize resources and impact
  - Avoid duplication of effort

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Management Strategies

- Ensure street tree inventory is current by 2016. Continue to capture data on all planting, maintenance, and removals. Continually enhance inventory with additional condition and maintenance notes
- Conduct a tree canopy/urban ecosystem analysis every 5 years beginning in 2013 to measure changes in overall canopy coverage (expected cost $25,000 - $50,000; no additional budget request anticipated for 2013)
  - Use the data to include more detailed and prescriptive outlooks for tree planting and management in Area Plans
  - Use the data as part of the City Quality of Life Study as an element of the environmental health of the neighborhood
  - Refine ability to analyze future scenarios
- Compile City practices into an "Urban Forest Management Plan" document by 2013

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Education and Awareness Strategies

- Educate City staff working and/or overseeing work near trees about proper tree protection procedures. Ensure that City staff contact the City arborist to advise their work
- Utilize existing tools to provide information and education about the City's canopy and the planning, care, and maintenance of trees
  - City website
  - Gov Channel
  - Arbor Day events
  - Charlotte's Crown Tree Canopy Awards
- Partner with educational and community organizations who can expand on the educational effort

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Path Forward

May: Feedback from Citizens via Sounding Board Meetings
Tentative Dates:
-Wednesday, May 11 10:00 – 11:30 a.m.
-Wednesday, May 11 5:00 – 6:30 p.m.

May – June: Finalize Staff Recommendations to Committee

June – July: Present Committee Recommendations to Council

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Back pocket slides follow

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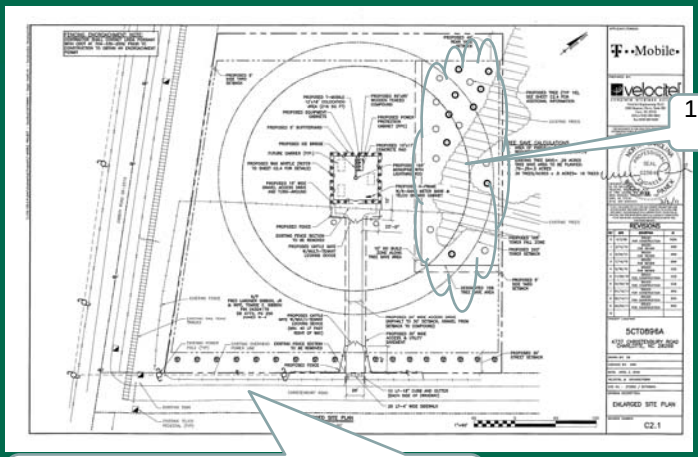
Commercial Tree Save 2011



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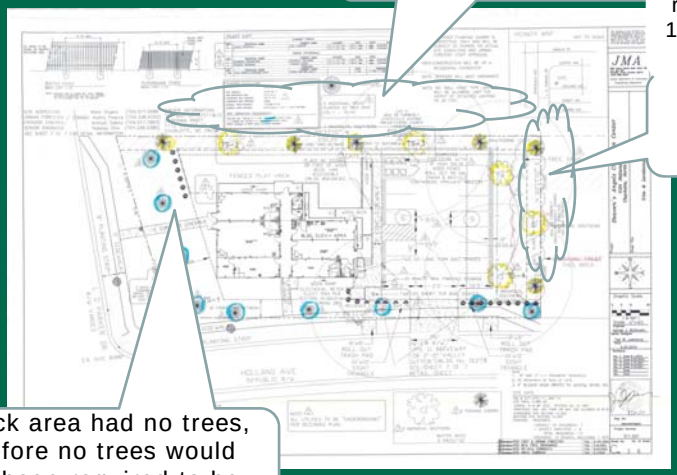
Commercial Tree Save 2011



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"Built Out" Scenario Results City Only

	% Total Land	Current Canopy Coverage	"Built Out" Canopy Coverage
Centers	14%	31%	<26%
Corridors	22%	39%	<34%
Wedges	64%	51%	<48%
City Only	**100%**	**46%**	**<42%**

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2008 Tree Canopy Data by Zoning Classification (Largest Categories & Urban)

Zoning Classification	% Tree Canopy City Only	% Tree Canopy ETJ Only	% Tree Canopy City + ETJ
BUSINESS	26%	43%	27%
COMMERCIAL CENTER	19%	71%	30%
HEAVY INDUSTRIAL	28%	39%	29%
LIGHT INDUSTRIAL	37%	48%	39%
INSTITUTIONAL	50%	63%	51%
Interstate ROW	26%	25%	25%
MIXED USE RESIDENTIAL	38%	63%	47%
MULTI-FAMILY	41%	56%	42%
SINGLE FAMILY	55%	70%	58%
TRANSIT ORIENTED	19%	N/A	19%
UPTOWN MIXED USE	9%	N/A	9%
URBAN RESIDENTIAL	33%	N/A	33%
TOTAL	46%	63%	50%

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Other Cities: The Big 4 U.S. Cities

- **New York City**: MillionTreesNYC Initiative (part of PlaNYC)
  - Public/private effort to plant and maintain 1 million trees
  - View urban forest as a most valuable environmental asset and critical to making NYC a 21st Century city
- **Los Angeles**: Million Trees LA Initiative
  - Public/private effort to plant 1 million trees
  - View urban forest as natural utility and critical to making LA a sustainable and livable city in the 21st Century
- **Chicago**
  - Largest employer of arborists in U.S.
  - Chicago Trees Initiative (part of Chicago's Climate Action Plan) is public/private effort to significantly expand canopy over 30 years
- **Houston**: Million Trees + Houston (part of framework for creating a sustainable city)
  - 5-year public/private initiative
  - Achieved 120,000 trees in one year

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American Forests Recommendations for Setting Canopy Goals

For Metropolitan Areas East of the Mississippi

Average tree cover counting all zones	40%
Suburban residential zones	50%
Urban residential zones	25%
Central business districts	15%

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Tree Program: Importance of Good Tree Lifecycle Decisions

- **Planting**: Right Tree, Right Place
  - Select right tree for size of planting area
  - Proximity of utilities, signs, corners, larger shade trees etc.
  - Optimal benefits of shade, energy reduction potential, etc.
  - Adhere to standards to increase likelihood of survival (Tree Care Industry Association, American National Standards Institute)
  - City cost to purchase and plant a tree by contract: $300 - $500
- **New Tree Establishment Phase**
  - Pruned at least twice in the first 5 – 8 years
  - Match type of care to site challenges
  - Good care in the establishment phase reduces later costs and promotes long tree life
  - City cost to prune a tree by contract: $225 - $275
- **Training for those working near trees and tree roots**
  - City Street Maintenance, Utilities, Storm Water staff
- **Inventory** and Regular **Inspections**
  - 148,000 currently inventoried; adding 9000/year, at contract cost of $40,000
- **Removals**
  - 300 – 400/year at contract cost of $2000 - $2500 each for large tree

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Cost of 2008 Canopy Study

- Total cost of 2008 Study by American Forests: **$172,500**
  - Cost to City: **$50,000**
  - Raw data: Funded by Mecklenburg County **$30,000**
  - Classification of data and analysis, rights to use CityGreen software:
    - Grants and in-kind donations **$82,500**
    - City-funded portion **$50,000**

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Costs of Future Canopy Studies

- Other assessment approaches are available
- Predominant in our research is USDA Urban Tree Canopy (UTC) Assessment Approach: Cost estimate **<$50,000**
  - Raw data: **Free**, via state-gathered LIDAR
    We expect new LIDAR about every 5 years
  - Classification of data and analysis: **<$50,000**
  - Often conducted by a University/non-profit/agency in partnership with USDA

Analysis aims to help communities answer two questions:

1. How much tree canopy do I have?
2. How much tree canopy could I have?
   a) Where is tree planting possible (where is there space)?
   b) Where is the best potential (where will trees be protected and provide ecological benefit)?
   c) Where is tree planting preferable? (where do trees add aesthetic and social value)?

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Urban Ecosystem Analysis: American Forest Implementation Recommendations

- Adopt an overall tree canopy goal and sub-goals.
- Manage and preserve canopy by anticipating impacts of growth and planning appropriately.
- Identify areas for reforestation
- Budget adequately to both maintain existing canopy and to plant trees throughout Charlotte
- Increase awareness of the value of the tree canopy and engage citizens in environmental improvement efforts like tree planting (. . . through media, schools, NC Big Sweep, Charlotte Public Tree fund . . .)

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Path Forward: Analyses Will Inform Goal-Setting and Strategy

Examples

- Further study of Centers, Corridors, & Wedges
- Projection of tree canopy in “fully built out” Charlotte
- Estimation of street miles not adequately treed
- Relationship of canopy to population growth
- Leverage opportunities in upcoming CIP’s
- Opportunities to add trees to various public properties (City, County, Schools, Colleges, Universities)
- Opportunities to conserve treed lands through conservation
- Relationship of tree canopy status and needs to environmentally sensitive areas

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