CHARLOTTE

Charlotte City Council

Environment Committee

Meeting Summary for January 24, 2011

COMMITTEE AGENDA TOPICS

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

II. **Subject:** **FY 2012-2013 Focus Area Plan for the Environment - Update**
Action: None

III. **Subject:** **Next Meeting**
Monday, February 28 at 3:35 p.m. in Room 280

COMMITTEE INFORMATION

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

ATTACHMENTS

1. Agenda Package
2. Handout: Tree Canopy Goal Setting Sounding Board
3. 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 today they will hear from Engineering and Property Management staff; Gina Shell, Don McSween and Tom Johnson, about the process, key elements and the next steps of the Tree Canopy Goal and Investment Strategy. She reminded the Committee that the Council was briefed at the December Workshop and the Council then referred this to the Committee for further review. The Tree Ordinance went into effect a few weeks ago and now the Committee should focus on what the City of Charlotte's goal for the tree canopy should be.

Mr. Tom Johnson, Ms. Shell and Ms. McSween reviewed the "Tree Canopy Goal and Tree Canopy Investment Strategy" presentation (copy attached).

[Council member's Carter and Howard arrive]

Staff discussed the definitions related to the tree canopy goal and investment strategy, the current status of the tree canopy, the background of the Urban Ecosystem analysis, as well as the background of the City's tree programs. They talked about the Tree Ordinance revisions that went into effect this year and how the ordinance aligns with other City policies like the Centers, Corridors, and Wedges Growth Framework, General Development Policies, and Urban Street Design Guidelines.

Ms. Shell talked about the Sounding Board process they used. They had two meetings last week, one evening meeting and one morning meeting, and reviewed a presentation with the group. She read through and discussed the different comments they received. She also talked about the path forward and that staff anticipates bringing numerous recommendations to the Committee.

Carter: At the beginning of the presentation when you talk about our tree canopy, is there any way of gauging the temperature or heat initiative from uncovered spaces?

Johnson: It is not something the City of Charlotte has done, but there were studies done out of Atlanta where they did that very thing. They measured the different tree parking lots versus the un-tree parking lots.

Cater: I think that has an effect on the blocking of the air flow and how the heat and humidity in the summer cause the pressing down on our atmosphere causing a subsequent air quality challenge.

Dulin: When did we begin protecting trees on private property?

Johnson: In 1989.

Dulin: What does that say about people's trees on their private property?

McSween: The Tree Ordinance basically covers three aspects of private property. It covers commercial development, multi-family development, and single-family large scale development. It doesn't cover an individual person putting trees in their yard.

Dulin: Are we the only City in America known as Tree City USA?

McSween: No, there are others. There are many others in North Carolina that are designated as well. The National Arbor Day Foundation set up the criteria for that and you have to have a certain per capita spending and a street tree management program.

Dulin: Where are we buying our trees?

McSween: The major contracts are being bought in North Carolina and South Carolina. There are some trees that have been bought from local nurseries.

Howard: Where are you planting them; City roads or State roads?

McSween: City maintained streets for right now. We have other capital projects where we plant them on State maintained streets. A good example is on Providence Road, which we did a couple of years ago.

Howard: There were some trees planted on Hwy 49 in the Steele Creek area. Is that part of this?

McSween: That's a different funding source. That's the Capital Improvement Program.

Carter: Are we pushing the State to comply with our Tree Ordinance?

McSween: As much as we can.

Howard: On the Centers, Corridors, & Wedges slide, is downtown included in that?

Shell: It's included in the Centers average. Separately, it's about16% tree canopy.

Howard: On slide 31, what does a "fully built out" model look like? Are you talking about what's allowed per zoning?

Johnson: That would be a GIS exercise where we would look at the current zonings and assume that the development was maxed out to the allowed amount under the Tree Ordinance. There would be some assumptions that would have to be made based on buffers. Some other things we have talked about doing is looking at what the Tree Ordinance has done for us past to present.

Howard: Something like that could scare people. The likelihood of us doing total build out everywhere is years from now. You have to be careful whenever you come up with that one.

Carter: Partnership within our own walls is very important. I'm thinking about CMUD and Storm Water. We just had an example where Storm Water went out and took down trees that were not supposed to be taken down. I'm very concerned that we look at an analysis of what the tree roots do versus restoration of a creek or a stream. Also, annexed territories will be an extreme situation. We need to preserve those trees to the best of our capacity. Is there any new technology about less invasive machinery? Smaller vehicles will have less impact on the environment and you wouldn't have to clear as much land. The last issue is when people are planting trees in mitigation, is there a separation element?

Johnson: There is separation and it's based off the acreage that is being mitigated for tree save requirements. When you plant back the tree save, it's at a rate of 36 trees to the acre.

Burgess: Do the high resolution photos distinguish between a tree canopy and just a green field?

Johnson: Yes.

Burgess: Regarding slide 10, are there any cities in North Carolina that you can compare us to?

McSween: None of them have had the high resolution study that we know of. It wouldn't be a good comparison with the numbers we used.

Burgess: Does anyone recall being told our tree canopy should be 50%?

Johnson: That may have come from the American Forest analysis where they said it

should be a range of 45-50%. They make a recommendation for every city that they do a study for, but they also make some generalizations for every city east of the Mississippi.

Burgess: I think that should be mentioned in here somewhere.

Dulin: How much did the high resolution cost?

Johnson: The photo came from an airplane and I think it was about $45,000 to have the survey done.

Dulin: Other than having a picture, do we have data that came with it?

Johnson: Yes, they take the photo and then they use computer technology to analyze the land cover types.

Dulin: Which staff holds people accountable for the 15% tree save we have been talking about?

Johnson: The Tree Ordinance is a development regulation and it's orchestrated by my staff in Urban Forestry that works under Land Development.

Dulin: Did we clear the land at the Police station on Wendover Road before they had to save any trees? I'm still upset about that.

Johnson: That site did come through the review and approval prior to January 1. It is zoned and urban zoning, so typically, there is very little tree preservation on it. However, they did do above and beyond what they are required to do for tree protection on that site.

Dulin: That site was clear-cut from corner to corner. We need to lead by example. Who pays for the trees that we put on County property at the parks and the streams?

McSween: We don't put any trees in parks. The County does all that planting. The Charlotte Tree Fund has bought seedlings and put them along stream banks. Now, if there is a Storm Water project going through County property, we would pay for that.

Dulin: I don't mind partnering with the County to plant trees, but I just want to make sure they pay their share. The $700,000 a year we voted for last year was in the total budget, right?

Johnson: Yes.

Dulin: Are we physically able to spend $700,000 in a calendar year?

McSween: We are working as fast as we can to get that done.

Dulin: What's the market for a big tree now? Have the prices gone up?

McSween: With the economy the way it is now and the lack of commercial and residential building, we are getting excellent prices and excellent contractors. We are able to search and find nurseries that have good products. The only drawback right now is that because nurseries are not getting income, they are starting to plant less. We will see a diminishing cycle as time goes on.

Howard: Can we find out what the issue was with the Wendover Police Department? I believe they were just following the policy per the zoning. Mr. Johnson said we did above what we were required to do.

Johnson: There was a Council-Manager Memo that was put together about that a few weeks ago. It had a picture of the approved site plan and I had circled the trees that were protected along the street frontage. We were doing what the zoning called for.

Peacock: How much did we contribute to the American Forest report?

Johnson: I don't recall at this time, but I can get you the exact number.

Peacock: Can you get them to provide us with a list of the cities that are most effectively implementing tree canopy goals? What are the American Forest's recommendations on this? Do we have any way to know what will be the costs associated with maintaining, monitoring, and measuring these goals? Maybe the American Forest can give us some insight in to that also. On the partnership front, I can see there is clearly a lot of emphasis on tree planting and getting the citizens involved in tree planting. A private-partnership can be very effective.

Johnson: We can look into your questions and get back with you.

Dulin: One last thing, I saw online that the County is going to clear-cut 100 acres of land at Latta Plantation. It's a mature loblolly pine forest that isn't serving the purpose of what it can do. They will burn it and let it sit for a year and then replant. It's a good example that trees grow back. You are in the renewable resource business.

McSween: It is all based on what your management plan is and what your management's goals are. It sounds like they have a forest management plan for that area.

Peacock: Great, well thank you everyone for the information. Let's move on to the next agenda item.

II. FY2012-2013 Focus Area Plan for the Environment - Update

Ms. Burch passed out a cleaner version of the draft Focus Area Plan (FAP) (copy attached). She asked to work off this version and said this would be in the Retreat notebook when it goes out at the end of the week. This FAP has already been printed and put into the notebooks. She pointed out that they have changed it to an outline form for ease of reference.

Peacock: Can staff produce a report that talks about the 2010 measures and achievements? I don't know if the same goal has been monitored since the beginning of this focus plan?

Burch: The same goal has not been monitored since the beginning. This is about the fourth iteration of this Plan since it started in 2007. In the Retreat materials, there will be a mid-year status report for all the Focus Area Plans so you will see where you stand for 2010.

Peacock: Can we get a report on the citizen's Environmental Advisory Council that should be discussed in Restructuring Government Committee?

Burch: It has not been scheduled to be discussed at this point, but when we get the information we can get that to you.

Peacock: Can you talk about any new edits in this document since the last time we met?

Burch: Yes, and one thing I wanted to point out is following up to the discussion from last time on local foods, it is now incorporated in Initiative 1, Target 5.

Howard: Why was this initiated?

Campbell: The fresh produce text amendment started before the Committee's Focus Area Plan discussions started. However, the idea of an increase of access to local foods is something I think Council has been talking about for years. Hospitals have also been coming to us and saying we can't do this if our property is zoned office or institutional.

Howard: This is something that would be worth hearing next month when we have to make a decision.

Peacock: Carolinas Healthcare System owns that little plot on their property where they sell produce in the facility, so it's not an outdoor scenario. Are they

the one's requesting this?

Campbell: They are trying to do it in a number of their other facilities and the way the Zoning Ordinance is currently written, it does not allow them to do it.

Burch: Another change from the last meeting is on page 2, Initiative 1, Measure C, Target 2; we changed the wording around from last time and we think it reads a little clearer in terms of our intent.

Peacock: It says to meet 100% mitigation requirements and that doesn't really sound like a target. It sounds like we are going to do what we do every day. Should we say we are going to do a certain number of streams or large or small streams?

Hammock: We are going to make sure that anytime a City project goes through and needs mitigation measures, we will mitigate those locally, rather than through the State program. So, we are making a commitment that we are going to build enough projects to make sure that happens all the time. The number of projects that come through the process vary from year to year.

Peacock: So, we couldn't put out a metric saying, "we would like to attack 10 more banks and 10 more streams by 2013"?

Hammock: Our goal is constrained by available funding. We will do as many stream miles as we can with available funding and we will apply that to mitigation requirements. Typically, that's about one mile of stream restoration every year.

Blackwell: In contrast, how many other jurisdictions operate their bank?

Hammock: There is no single other jurisdiction in North Carolina that has their own bank. We are one of the first, if not the first, that had a local Stream and Wetland Mitigation Bank. The only other bank in the state that is a non-private bank is the State of North Carolina.

Blackwell: So, what you typically do is try to minimize the impacts, but when you do have to put in a road or do something that impacts the streams, most people pay into a State bank and they do the repairs with your local money. One of the things that we had set for a goal locally is we wanted that reparation money to be done locally. We wanted to solve them locally.

Peacock: That needs to be reflected in a better worded sentence. We want to keep 100% of the money and not send it to the eastern part of the State. That's your goal. Reading this from a consumer or citizen standpoint, it's pretty confusing.

Burch: Okay, we will take a look at that. Those are the only changes at this time.

Peacock: I got forwarded a note that a long-term energy savings performance contract company is helping the City of Greenville, SC. This Committee has addressed performance contracting and made a decision not to pursue it any further. The thought I have on it is simply this, we pay in our Human Resources Department a lot of money to Towers Watson and Towers Perrin to provide comparables to how we pay people. I see that industry, and I understand it's a financing mechanism, but what I hear from these scenarios is they do an analysis and tell you what they could do. We do our own analysis to tell us what we can do. The way I look at it is it could not hurt to put a target under Initiative 2, Measure C. It could say something like "provide building energy audit of 3 City owned facilities benchmarked energy audit comparison to a private sector energy savings performance contract company."

Blackwell: Today, we hire at least 4 outside energy auditors to perform audits for us. What we don't do is the performance contracting part of it. We feel we are able to finance more effectively.

Peacock: I suspect that the performance contracting industry is also in the auditing business, beyond just the financing component.

Blackwell: Absolutely, and we invite those firms to submit proposals along with the other firms.

Peacock: I'm providing for the Committee some suggested language here. You are saying that an audit is already being done, there is a benchmark, and we are meeting it. I'm selecting 3 facilities because we have everything to gain and nothing to lose. I know this would take up City staff time on this, but I'd like to put this issue to bed once and for all. The only way to put it to bed is to say their deal is not compared to what we can do. I don't feel like this Committee has sufficiently answered that question from last time because you all gave us a presentation of what you thought they did. We didn't have a specific representative from any of these companies. I'm not advocating for them, but I just like what I'm reading about groups that are using these efforts to audit their buildings and provide savings and show you how to pay for it. What's the difference in doing an audit with one of these groups that doesn't do performance contracting?

Blackwell: They come in and say we believe that if you change out these lights that there would be a certain payback on that. A performance contractor doesn't just finance it, they do those studies. They typically require an investment grade audit because if they are going to do the deal they have to do the work, they have to then pay capital costs, staff costs, taxes, and

anything else they have. You pay at a higher rate than your energy bill after they made the improvements. There are a lot of overhead costs that occur when you are working through them. It can also be a number of years for payback so; the relationship is generally a few years. We have a fairly large report on it and can certainly get it to you.

Burch: Why don't we come back with some more information? I think it's been a while since we've discussed this.

Peacock: Okay. For Initiative 2, Measure C, I think the first target should be something about 100% of our facilities have all been cross-tested and we know that we are on track and hitting the goals that we need to. It doesn't just come from us examining ourselves; it comes from someone else also examining us. Can we put a target on that that we can follow?

Blackwell: Let us take a look at it.

Peacock: I guess what I'm missing is why a City like Greenville, SC and Knoxville, TN would use this.

Blackwell: In some cases there are limits on their availability to do capital. For example, I think CMS has done a few of these recently. Another circumstance is the margin that helps fund it is how inefficient your buildings are today. Our buildings are in pretty good shape.

Burch: When we come back with the FAP after the Retreat we will bring back some additional information related to this. We can decide then if you want to add a specific measure related to that or not.

III. <u>Next Meeting</u>

Monday, February 28, 2011 at 3:45 p.m. in Room 280.

Meeting Adjourned

Environment Committee

Monday, January 24, 2011 at 3:45 p.m.
Charlotte-Mecklenburg Government Center
Room 280

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

At the December 6 workshop, the City Council referred the development of a tree canopy goal and investment strategy recommendations to the Environment Committee. Staff will update the Committee on the process, key elements and next steps.

II. <u>FY 2012-2013 Focus Area Plan for the Environment - Update</u>
Staff Resource: Julie Burch, City Manager's Office

For information: <u>Attached</u> is the draft Focus Area Plan reflecting Committee discussion to date.

III. <u>Next Meeting</u>

Monday, February 28 at 3:45 p.m. in Room 280

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

FY2011 Strategic Focus Area Plan - **Draft**

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

The City of Charlotte recognizes that environmental stewardship ~~both now and in the future~~ is fundamentally important to ~~our~~ quality of life and essential to maintaining a vibrant economy. Protecting our natural resources, promoting conservation ~~on all levels~~, and improving the environment all enhance ~~our~~ the City's mission to preserve the quality of life ~~for our~~ of its citizens.

Charlotte will become a national leader in environmental sustainability by:

- Promoting and participating in the development of an environmentally sustainable community;
- Leading by example by practicing environmental stewardship in City operations and facilities;
- Seeking and supporting collaborative and regional solutions to environmental problems;
- Facilitating the growth of the clean energy industry, including the alternative energy sector.

~~Charlotte's economic vitality presents challenges to maintaining a healthy environment. The City is committed to:~~

- ~~*promoting environmental best practices and protecting our natural resources: the air we breathe, the water we drink, and the natural ecosystems we cherish, including the tree canopy;*~~
- ~~*recognizing important interrelationships among air quality, water resources, land preservation, and energy and resource conservation;*~~
- ~~*making sound land use decisions regarding our future growth and development supporting sustainability so as not to jeopardize our future generation of citizens;*~~
- ~~*achieving our goals of becoming a national leader in the successful stewardship of our environment by maintaining a cooperative and open agenda with Mecklenburg County, our regional neighbors, and the business community; and*~~
- ~~*leading by example and promoting sound, cost effective environmental and energy conservation practices in City operations.*~~

~~The City of Charlotte will take a proactive leadership role in modeling best practices for its citizens. The City recognizes that conscientious environmental stewardship and concern for the public interest requires more than meeting mandates and minimum standards. The City will evaluate environmental conditions and opportunities in order to determine what approach is best for our community's optimal environmental sustainability. By always being conscious of the need to meet regulatory compliance standards and the needs of future generations, the City will avoid costly remedial action.~~

~~The actions associated with the other City Council Focus Areas – Community Safety, Housing and Neighborhood Development, Economic Development, and Transportation - are supported and enhanced by stewardship of our natural resources and the environment. In addition, specific initiatives in Economic Development and Transportation Focus Area Plans relate directly to Charlotte's environmental goals including initiatives for renewable energy and green industry, and land-use planning and transportation choices.~~

As illustrated in the graphic below, the Environmental Focus Area is interrelated to all of City Council's other focus areas.

Specific initiatives in Economic Development and Transportation Focus Area Plan relate directly to Charlotte's environmental goals. These FAPs include initiatives for growing jobs in the energy sector, land-use planning, and increased use of transit and other transportation choices.

Environment

Safeguard the Environment

I. ENV Focus Area Initiative: ~~**Support environmental sustainability by making wise decisions regarding growth and development, recognizing the interrelationships between air quality, water resources, land preservation, and energy and resource conservation**~~

PROMOTE AND PARTICIPATE IN THE DEVELOPMENT OF A SUSTAINABLE COMMUNITY

- ~~FY11 Measure: Percent of residential and office developments located within centers and corridors to continue implementing Centers, Corridors, and Wedges Growth Framework~~

~~FY11 Target: Minimum of 40% of new housing unit permits and 70% of new multi-family unit permits in the city located within the centers and corridors~~
~~FY09 Target: 40% and 70% respectively~~
~~FY09 Actual: 55.8% and 71.9% respectively~~

~~FY11 Target: Minimum of 75% of new office development square footage and 75% of new employment occurring in the centers and corridors~~
~~FY09 Target: 75% and 75% respectively~~
~~FY09 Actual: 97.6% and 91.4% respectively~~

- ~~FY11 Measure: Percent of rezoning decisions consistent with adopted plans and/or staff recommendation~~
  - ~~FY11 Target: 95% of rezoning decisions consistent with adopted plans and/or staff recommendation~~
  - ~~FY09 Target: 95% of rezoning decisions consistent with adopted plans~~
  - ~~FY09 Actual: 93.4% rezoning decisions consistent with adopted plans~~
- ~~FY11 Measure: Percent of rezoning decisions consistent with adopted environmentally sensitive site design policies~~
  - ~~FY11 Target: 80% of approved re-zonings incorporate environmentally sensitive site design components as per the General Development Policies-Environment~~
  - ~~FY09 Target: N/A – new measure for FY10~~
- ~~FY11 Measure: Implement the General Development Policies Phase II - Environment~~
  - ~~FY11 Target: Initiate strategies to address four two additional General Development Policies—Environment and continue implementation of the strategies initiated in FY2008 to focus on policies dealt with by previous Focus Area Plan targets~~
  - ~~FY09 Target: Initiated strategies to address five of the 15 GDP-E by June 2009~~
  - ~~FY09 Actual: Initiated strategies to address six additional GDP-E~~
  - ~~Target: Implement Environmental Inventory Strategy to include internal use of existing map and determine process, stakeholders, and potential implications of designating environmentally sensitive areas by June 2010~~

A. FY12 Measure: Increase awareness of the environment as a priority for the community

1. FY12 Target: Explore hosting a sustainability expo/conference and other educational opportunities in conjunction with and funded by other partners.

2. FY12 Target: Increase the exposure of the Power2Charlotte, CurbIt recycling campaign, and other educational/outreach efforts in coordination with other partners.

3. FY12 Target: Implement the nine (9) Energy Efficiency and Conservation Block Grant projects that are catalyst projects or promote energy investments in revitalization areas, and the Neighborhood Energy Challenge.

4. FY12 Target: Collect baseline data on environmental variables in preparation for adding those variables to the biennial Quality of Life study.

5. FY12 Target: Increase access to local foods by: initiating a fresh foods text amendment; encouraging the development of community gardens through Neighborhood Matching Grants program, and collaboration with other partners.

B. FY12 Measure: Make wise decisions regarding growth and development that are consistent with adopted plans and policies (including the GDP-Environment) and minimize negative environmental impacts of land use and development.

1. FY12 Target: Ninety-five percent (95%) of rezoning decisions consistent with adopted area plans and/or staff recommendations.

2. FY12 Target: Eighty percent (80%) of approved rezonings incorporate environmentally sensitive site design components (Implementation of GDP-Environment)

C. FY12 Measure: Responsibly manage Charlotte's natural resources including the tree canopy, streams, ponds, and wetlands.

1. FY12 Target: Implement the City's Tree Canopy Investment Strategy and measure the effectiveness of the Tree Ordinance and the Tree Planting Programs in meeting the tree canopy goal.

2. FY12 Target: Meet 100% of mitigation requirements through the City's local mitigation bank when streams are negatively impacted by City projects.

D. FY12 Measure: In support of State of North Carolina and City recycling goals, increase single family and multi-family recycling participation.

1. FY12 Target: Achieve a 30% increase in tonnage of recycled materials over FY10 baseline data.

Environment

II. ENV Focus Area Initiative: ~~**Lead and support efforts to improve Charlotte and regional air quality**~~
LEAD BY EXAMPLE BY PRACTICING ENVIRONMENTAL STEWARDSHIP IN CITY OPERATIONS AND FACILITIES

- ~~FY11 Measure: Promote long-term reduction in ozone-causing emissions~~
  - ~~FY11 Target: Establish Implement projects in partnerships with business/management organizations to encourage increases in travel by alternative modes to/from/within two mixed-use activity centers by June 2010 2011~~
  - ~~FY09 Target: N/A – new measure for FY10~~

  - ~~FY11 Target: Adopt and implement a revised Tree Ordinance that will help improve air quality through the preservation and growth of Charlotte's tree canopy~~
  - ~~FY09 Target: Adopt revised Tree Ordinance by June 2008~~
  - ~~FY09 Actual: Revised Tree Ordinance pending adoption~~

  - ~~FY11 Target: Continue collaboration and participation with COG's CONNECT Regional Air Quality Work Team, the Regional Air Quality Board and Clean Air Works, Mecklenburg County Division of Air Quality and the State of North Carolina Division of Air Quality to develop and implement strategies to improve air quality~~
  - ~~FY09 Target: N/A – new measure for FY10~~

  - ~~FY11 Target: Implement the City's Energy Efficiency and Conservation Block Grant air quality projects~~

A. FY12 Measure: Reduce greenhouse gas emissions from City facilities and operations.

1. FY12 Target: Adopt a greenhouse gas action plan by June 2011 and begin implementation in FY2012

2. FY12 Target: Complete seven (7) of the Energy Efficiency and Conservation Block Grant projects designed to improve efficiency of City facilities.

B. FY12 Measure: Demonstrate environmental sustainability in the management of the City's vehicle fleet.

FY12 Target: Achieve 4.3 mpg across CATS Bus Operations fleet vehicles, by continuing acquisition of and maximizing the use of fuel efficient and hybrid vehicles, maintaining and monitoring idling practices, continuing to control vehicle speed through governor settings, use of battery power for vehicle maintenance when feasible, and continued use of ultra low sulfur diesel fuel

FY12 Target: Improve the efficiency of the overall City fleet from 2011 levels by purchasing alternative fuel vehicles as funding allows in accordance with the fleet management policy, purchasing smaller vehicles that meet operational requirements, and by

seeking grant funding to outfit current vehicles with emissions reducing technology.

C. FY12 Measure: Demonstrate environmental sustainability in the design, construction, and operation of City facilities.

1. FY12 Target: Prepare annual report on the implementation of the Policy for Sustainable Facilities, reporting project decisions, common facility metrics, and recommended policy adjustments.

2. FY12 Target: Per Clean Water Act requirements, develop and begin implementing plans for stormwater best practices for priority field operations by June 2012.

3. FY12 Target: One-hundred percent (100%) compliance with National Pollutant Discharge Elimination System permit requirement for all five wastewater plants.

4. FY12 Target: Divert 70% of materials from Charlotte Douglas Airport's waste stream via a new airport recycling center.

D. FY12 Measure: Implement environmentally-conscious practices in the acquisition and disposition of City resources.

1. FY12 Target: Conduct first year review of the effectiveness of Environmentally Preferable Purchasing Policy by December 2012 and collect baseline info so that specific improvement target may be set in the future.

E. FY12 Measure: Identify and advance renewable energy projects leveraging City resources.

1. FY12 Target: Implement the initial construction of a Combined Heat and Power project at McAlpine Wastewater Management Facility by June 2012.

2. FY12 Target: Develop and implement a solar energy pilot project on CATS-owned bus canopies by June 2012.

F. FY12 Measure: Develop and implement plan to communicate City's environmental successes and other instance of the City of Charlotte "leading by example" (for discussion only)

1. FY12 Target: TBD

III. ENV Focus Area Initiative: ~~**Protect natural ecosystems and habitats, including the tree canopy**~~
SEEK AND SUPPOT COLLABORATIVE AND REGIONAL SOLUTIONS TO ENVIRONMENTAL PROBLEMS

- ~~FY11 Measure: Maintain a significant and healthy tree canopy~~
  ~~FY11 Target: Develop a program recognizing Select and recognize local developers or businesses annually on Arbor Day for excellent tree preservation efforts by December 2009~~
  ~~FY09 Target: N/A – new measure for FY10~~
- ~~FY11 Measure: Protect stream corridors, ponds, and wetlands through public acquisition of additional conservation easements and enhancing existing buffers~~
  ~~FY11 Target: Meet mitigation requirements through local rather than state-level restoration efforts 100% of the time when streams are negatively impacted by City projects~~
  ~~FY09 Target: N/A – new measure for FY10~~

~~➢ FY11 Measure: Maintain permit compliance with treated wastewater~~
~~FY11 Target: 100% compliance with National Pollutant Discharge Elimination System permit requirements for all five wastewater plants~~
~~FY09 Target: 100% compliance~~
~~FY09 Actual: 5 violations - 99.9% compliance~~

A. FY12 Measure: Collaborate and participate in public and private sector partnership's environment and visioning initiatives.

1. FY12 Target: Collaborate with City's Energy Partners and other agencies to leverage resources and enhance the impact of cooperative projects.

2. FY12 Target: Identify opportunities to participate in/pursue the development of a coordinated sustainability plan for the community with Charlotte Center City Partners and other partners

B. FY12 Measure: Lead and support efforts to improve Charlotte and regional air quality by promoting long-term reduction in ozone causing emissions.

1. FY12 Target: Implement projects and partnerships with business/management organizations to increase travel by alternative modes to/from/within two mixed-use activity centers by June 2012.

2. FY12 Target: Continue collaboration and participation with COG's CONNECT Regional Air Quality Work Team, the Regional Air Quality Board and Clean Air Works, the Mecklenburg County Division of Air Quality and the State of NC Division of Air Quality to implement strategies to improve air quality.

C. FY12 Measure: Continue a leadership role in regional water resources planning

1. FY12 Target: Utilities staff to continue participation in regional Water Management Group and be actively involved with committee work.

IV. ENV Focus Area Initiative: ~~**Lead by example, adopting sound environmental practices in City facilities and operations**~~ **FACILITATE THE GROWTH OF THE CLEAN ENERGY INDUSTRY, INCLUDING THE ALTERNATIVE ENERGY SECTOR**

~~➢ FY11 Measure: Implement strategies to reduce City fleet emissions to improve air quality~~
~~FY11 Target: Reduce the amount of harmful emissions from the CATS bus fleet by reducing idling by 5% maintaining the 5% idling reduction from previous FY's FY10 baseline data in CATS' fixed bus fleet, including emissions reduction equipment on the engines of all new fixed route buses, and procuring hybrid buses as funding allows~~
~~FY09 Target: Reduce idling by 5% from FY07 baseline data in Charlotte Area Transit System's fixed route bus fleet~~
~~FY09 Actual: Reduced idling from 35.15% to 30.30%~~

~~FY11 Target:~~ ~~Improve the efficiency of the overall City fleet by purchasing alternative fuel vehicles as funding allows and by seeking grant funding to outfit current vehicles with emissions reducing technology~~

~~FY09 Target:~~ ~~Increase percentages of City fleet using alternative fuel or emission efficient technologies~~

~~FY09 Actual:~~ ~~37 hybrids; 337 flex fuel vehicles (excludes CATS)~~

➢ ~~FY11 Measure:~~ ~~Incorporate environmentally responsible elements actions in the design, construction, and operations of City facilities and in other operating practices~~

~~Target:~~ ~~Maintain energy use practices so that City facilities' compare favorably with available benchmark information in the South Atlantic region (measured in thousands of BTUs per square foot)~~

~~FY11 Target:~~ ~~Implement adopted Policy for Sustainable City Facilities and conduct first year review of effectiveness~~

➢ ~~FY11 Measure:~~ ~~Reduce greenhouse gas emissions from City facilities and operations~~

~~FY11 Target:~~ ~~Establish the City's targets to reduce Greenhouse Gas Emissions for City facilities and operations~~

~~Target:~~ ~~Approve the City's Greenhouse Gas Emissions Inventory Action Plan by December 2009, pending funding~~

~~FY11 Target:~~ ~~Implement the City's Energy Efficiency and Conservation Block Grant projects for City facilities~~

~~FY09 Target:~~ ~~Develop Greenhouse Gas Emissions Inventory Action Plan by December 2008~~

~~FY09 Actual:~~ ~~Developed Greenhouse Gas Emissions Inventory Action Plan, as part of Energy Strategy~~

~~FY11 Target:~~ ~~Develop a pilot program to perform costs/benefits analysis on and implement a City-wide environmentally preferable products and develop a methodology for reporting and rating green product performance and usability by July 2009 purchasing policy by July 2010~~

~~FY09 Target:~~ ~~Develop pilot~~

~~FY09 Actual:~~ ~~Pilot program with Wake Forest and UNCC completed; assessing software and methodologies for cost/benefits analysis~~

~~FY11 Target:~~ ~~Increase recycling within City facilities through employee awareness~~

~~FY09 Target:~~ ~~N/A – new measure for FY10~~

~~Target:~~ ~~Adopt a Policy on Sustainable City Facilities by October 2009~~

➢ ~~FY11 Measure:~~ ~~Operate a best-in-class bio-solids program that safely recycles and manages bio-solids while mitigating environmental and health impacts wastewater treatment facilities that continually seek efficiencies and minimize environmental risk~~

~~FY11 Target:~~ ~~Receive Achieve ISO 14001:2004 ISO certification for~~

~~the Utilities Residuals Management Program (Bio-solids) Environmental Management System for the McDowell Creek Wastewater Treatment Plant by December 2009 2010~~

~~FY09 Target: Receive certification~~

~~FY09 Actual: Received Bio-solids ISO 14001:2004 certification~~

~~➢ FY11 Measure: Advance renewable energy projects, including biodiesel, methane and solar initiatives~~

~~FY11 Target: Complete a master plan of Utilities' properties viable technologies, including financing models and implementation steps, by December 2010~~

~~➢ Measure: Develop and implement pilot project(s) for renewable energy~~

~~Target: Develop and implement a solar energy pilot project on airport-owned property by June 2010~~

~~Target: Develop and implement a bio-fuel and/or methane-to-energy pilot project at a wastewater treatment plant by June 2010~~

A. FY12 Measure: Work with partners through the Charlotte Regional Partnership's Energy Capital Project to attract and grow the clean energy industry sectors in Charlotte

1. FY12 Target: Develop a clean energy strategy by January, 2012 with a particular focus on assisting small businesses.

B. FY12 Measure: Improve the regulatory environment by clarifying and enhancing City ordinances that facilitate environmentally and energy sustainable practices.

1. FY12 Target: Initiate alternative energy text amendments to better define and provide guidance for environmental land uses by June 2012.

C. FY12 Measure: Take a leadership role in changes to policy at the state and federal level

1. FY12 Target: Support energy related legislation that would enhance and solidify Charlotte's emergence as an energy center in the United States.

~~Develop Collaborative Solutions~~

~~ENV.5 Focus Area Initiative: Collaborate with local and regional public and private partners and neighborhoods to enhance environmental quality and long-term sustainability~~

~~➢ FY11 Measure: Continue collaboration and actively participate in public and private sector partnership's environmental and visioning initiatives~~

~~FY11 Target: Continue collaboration and participation with Centralina Council of Governments, Duke Energy, UNC-Charlotte, CPCC, CRVA Green Team, and other partners' current initiatives~~

~~FY09 Target: Continue collaboration and participation with SEQL, Centralina Council of Governments, Regional Visioning Council and other partners' current initiatives~~

~~FY09 Actual:~~ ~~Active in COG-sponsored Regional Growth and Regional Environment Cabinets; participated in CRVA Green Team, Coca-Cola "Recycle and Win," CPCC, Duke Energy and other partners' current initiatives.~~

~~FY11 Target:~~ ~~Implement the City's Energy Efficiency and Conservation Block Grant projects for energy investments in revitalization areas, the neighborhood energy challenge, and catalyst projects~~

- ~~FY11 Measure:~~ ~~Increase awareness of the environment as a priority for the community and the organization~~

~~FY11 Target:~~ ~~Continue implementing the internal and external communication plans, including the Pledge to Improve Our Environment and the Energy Efficiency and Conservation Block Grant public outreach and education campaign for City employees~~

~~FY09 Target:~~ ~~Continue implementing the internal communication strategy for the environment focus area~~

~~FY09 Actual:~~ ~~Developed and distributed pledge cards to improve our environment, dedicated employee CNet page to the Environmental Focus Area, featured environmental data in FYI and FYIcast, and Earth Day activities partne~~

~~Target:~~ ~~Implement the external communication plan for Charlotte-Mecklenburg citizens by the first quarter of the fiscal year~~

- ~~FY11 Measure:~~ ~~Continue a leadership role in regional water resources planning~~

~~Target:~~ ~~Lead the group with Utilities' staff as chair of the Water Management Group and be actively involved in committee work in 2009~~

~~FY11 Target:~~ ~~Actively support North Carolina's defense of the North Carolina versus South Carolina water rights lawsuit to protect the interest of Utilities' customers~~

~~FY09 Target:~~ ~~Lead the group with Utilities' staff as chair of the Water Management Group and be actively involved in committee work in 2008~~

~~FY09 Actual:~~ ~~Utilities' staff led the Water Management Group~~

- ~~FY11 Measure:~~ ~~In support of State recycling goals, increase single family recycling participation to achieve a 20% increase in annual tonnage of recycled materials~~

~~FY11 Target:~~ ~~Implement single-stream recycling collection program by July 2010~~

~~FY09 Target:~~ ~~Implement single-stream recycling program by July 2010~~

~~FY09 Actual:~~ ~~N/A – (target is for single-stream - not yet implemented)~~

- ~~FY11 Measure:~~ ~~Continue implementing the multi-family recycling education program~~

~~FY11 Target:~~ ~~Educate 20 non-participating multi-family property managers on the benefits of recycling by July 2010~~

~~FY09 Target:~~ ~~Educate 20 non-participating multi-family property managers on the benefits of recycling by July~~

	~~2009~~
~~FY09 Actual:~~	~~46 managers trained (230% of target)~~

FY2012 Strategic Focus Area Plan - **Draft**

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

The City of Charlotte recognizes that environmental stewardship is fundamentally important to quality of life and essential to maintaining a vibrant economy. Protecting our natural resources, promoting conservation, and improving the environment all enhance the City's mission to preserve the quality of life of its citizens.

Charlotte will become a national leader in environmental sustainability by:

- Promoting and participating in the development of an environmentally sustainable community;
- Leading by example by practicing environmental stewardship in City operations and facilities;
- Seeking and supporting collaborative and regional solutions to environmental problems;
- Facilitating the growth of the clean energy industry, including the alternative energy sector.

As illustrated in the graphic below, the Environmental Focus Area is interrelated to all of City Council's other focus areas.

Specific initiatives in Economic Development and Transportation Focus Area Plan relate directly to Charlotte's environmental goals. These FAPs include initiatives for growing jobs in the energy sector, land-use planning, and increased use of transit and other transportation choices.

Environment

Safeguard the Environment

I. ENV. Focus Area Initiative: PROMOTE AND PARTICIPATE IN THE DEVELOPMENT OF A SUSTAINABLE COMMUNITY

A. FY12 Measure: Increase awareness of the environment as a priority for the community

1. FY12 Target: Explore hosting a sustainability expo/conference and other educational opportunities in conjunction with and funded by other partners.

2. FY12 Target: Increase the exposure of the Power2Charlotte, CurbIt recycling campaign, and other educational/outreach efforts in coordination with other partners.

3. FY12 Target: Implement the nine (9) Energy Efficiency and Conservation Block Grant projects that are catalyst projects or promote energy investments in revitalization areas, and the Neighborhood Energy Challenge.

4. FY12 Target: Collect baseline data on environmental variables in preparation for adding those variables to the biennial Quality of Life study.

5. FY12 Target: Increase access to local foods by: initiating a fresh foods text amendment; encouraging the development of community gardens through Neighborhood Matching Grants program, and collaboration with other partners.

B. FY12 Measure: Make wise decisions regarding growth and development that are consistent with adopted plans and policies (including the GDP-Environment) and minimize negative environmental impacts of land use and development.

1. FY12 Target: Ninety-five percent (95%) of rezoning decisions consistent with adopted area plans and/or staff recommendations.

2. FY12 Target: Eighty percent (80%) of approved rezonings incorporate environmentally sensitive site design components (Implementation of GDP-Environment)

C. FY12 Measure: Responsibly manage Charlotte's natural resources including the tree canopy, streams, ponds, and wetlands.

1. FY12 Target: Implement the City's Tree Canopy Investment Strategy and measure the effectiveness of the Tree Ordinance and the Tree Planting Programs in meeting the tree canopy goal.

2. FY12 Target: Meet 100% of mitigation requirements through the City's local mitigation bank when streams are negatively impacted by City projects.

D. FY12 Measure: In support of State of North Carolina and City recycling goals, increase single family and multi-family recycling participation.

1. FY12 Target: Achieve a 30% increase in tonnage of recycled materials over FY10 baseline data.

II. ENV Focus Area Initiative: LEAD BY EXAMPLE BY PRACTICING ENVIRONMENTAL STEWARDSHIP IN CITY OPERATIONS AND FACILITIES

A. FY12 Measure: Reduce greenhouse gas emissions from City facilities and operations.

1. FY12 Target: Adopt a greenhouse gas action plan by June 2011 and begin implementation in FY2012
2. FY12 Target: Complete seven (7) of the Energy Efficiency and Conservation Block Grant projects designed to improve efficiency of City facilities.

B. FY12 Measure: Demonstrate environmental sustainability in the management of the City's vehicle fleet.

1. FY12 Target: Achieve 4.3 mpg across CATS Bus Operations fleet vehicles, by continuing acquisition of and maximizing the use of fuel efficient and hybrid vehicles, maintaining and monitoring idling practices, continuing to control vehicle speed through governor settings, use of battery power for vehicle maintenance when feasible, and continued use of ultra low sulfur diesel fuel
2. FY12 Target: Improve the efficiency of the overall City fleet from 2011 levels by purchasing alternative fuel vehicles as funding allows in accordance with the fleet management policy, purchasing smaller vehicles that meet operational requirements, and by seeking grant funding to outfit current vehicles with emissions reducing technology.

C. FY12 Measure: Demonstrate environmental sustainability in the design, construction, and operation of City facilities.

1. FY12 Target: Prepare annual report on the implementation of the Policy for Sustainable Facilities, reporting project decisions, common facility metrics, and recommended policy adjustments.
2. FY12 Target: Per Clean Water Act requirements, develop and begin implementing plans for storm water best practices for priority field operations by June 2012.
3. FY12 Target: One-hundred percent (100%) compliance with National Pollutant Discharge Elimination System permit requirement for all five wastewater plants.
4. FY12 Target: Divert 70% of materials from Charlotte Douglas Airport's waste stream via a new airport recycling center.

D. FY12 Measure: Implement environmentally-conscious practices in the acquisition and disposition of City resources.

1. FY12 Target: Conduct first year review of the effectiveness of Environmentally Preferable Purchasing Policy by December 2012 and collect baseline info so that specific improvement target may be set in the future.

E. FY12 Measure: Identify and advance renewable energy projects leveraging City resources.

1. FY12 Target: Implement the initial construction of a Combined Heat and Power project at McAlpine Wastewater Management Facility by June 2012.

2. FY12 Target: Develop and implement a solar energy pilot project on CATS-owned bus canopies by June 2012.

F. FY12 Measure: Develop and implement plan to communicate City's environmental successes and other instance of the City of Charlotte "leading by example" (placeholder)

1. FY12 Target: TBD

III. ENV Focus Area Initiative: SEEK AND SUPPORT COLLABORATIVE AND REGIONAL SOLUTIONS TO ENVIRONMENTAL PROBLEMS

A. FY12 Measure: Collaborate and participate in public and private sector partnership's environment and visioning initiatives.

1. FY12 Target: Collaborate with City's Energy Partners and other agencies to leverage resources and enhance the impact of cooperative projects.

2. FY12 Target: Identify opportunities to participate in/pursue the development of a coordinated sustainability plan for the community with Charlotte Center City Partners and other partners

B. FY12 Measure: Lead and support efforts to improve Charlotte and regional air quality by promoting long-term reduction in ozone causing emissions.

1. FY12 Target: Implement projects and partnerships with business/management organizations to increase travel by alternative modes to/from/within two mixed-use activity centers by June 2012.

2. FY12 Target: Continue collaboration and participation with COG's CONNECT Regional Air Quality Work Team, the Regional Air Quality Board and Clean Air Works, the Mecklenburg County Division of Air Quality and the State of NC Division of Air Quality to implement strategies to improve air quality.

C. FY12 Measure: Continue a leadership role in regional water resources planning

1. FY12 Target: Utilities staff to continue participation in regional Water Management Group and be actively involved with committee work.

IV. ENV Focus Area Initiative: FACILITATE THE GROWTH OF THE CLEAN ENERGY INDUSTRY, INCLUDING THE ALTERNATIVE ENERGY SECTOR

A. FY12 Measure: Work with partners through the Charlotte Regional Partnership's Energy Capital Project to attract and grow the clean energy industry sectors in Charlotte

1. FY12 Target: Develop a clean energy strategy by January, 2012 with a particular focus on assisting small businesses.

B. FY12 Measure:	Improve the regulatory environment by clarifying and enhancing City ordinances that facilitate environmentally and energy sustainable practices.
1. FY12 Target:	Initiate alternative energy text amendments to better define and provide guidance for environmental land uses by June 2012.
C. FY12 Measure:	Take a leadership role in changes to policy at the state and federal level
1. FY12 Target:	Support energy related legislation that would enhance and solidify Charlotte's emergence as an energy center in the United States.

FY2011 Strategic Focus Area Plan

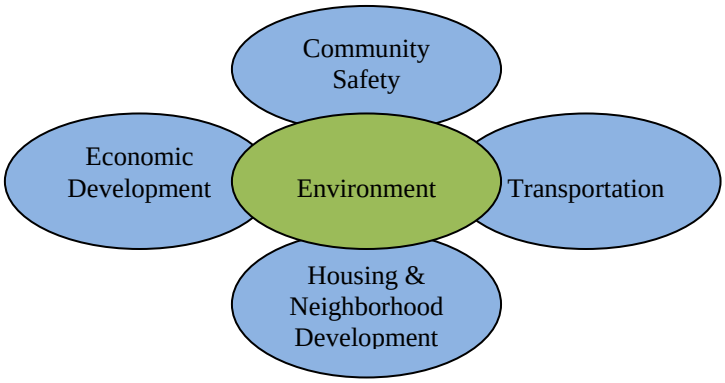
~~"Charlotte will become a national leader in environmental initiatives to preserve our natural resources while balancing growth with sound fiscal policy."~~

~~The City of Charlotte recognizes that environmental stewardship is fundamentally important to our quality of life and essential to maintaining a vibrant economy. Protecting our natural resources, promoting conservation, and improving the environment enhance our City's mission to preserve the quality of life for our citizens.~~

~~Charlotte's economic vitality presents challenges to maintaining a healthy environment. The City recognizes that conscientious environmental stewardship and concern for the public interest requires more than meeting mandates and minimum standards. By always being conscious of the need to meet regulatory compliance standards and the needs of future generations, the City will avoid costly remedial action. The City is committed to:~~

- ~~*promoting environmental best practices and protecting our natural resources: the air we breathe, the water we drink, and the natural ecosystems we cherish, including the tree canopy;*~~
- ~~*recognizing important interrelationships among air quality, water resources, land preservation, and energy and resource conservation;*~~
- ~~*making sound land use decisions regarding our future growth and development supporting sustainability so as not to jeopardize our future generation of citizens;*~~
- ~~*achieving our goals of becoming a national leader in the successful stewardship of our environment by maintaining a cooperative and open agenda with Mecklenburg County, our regional neighbors, and the business community; and*~~
- ~~*leading by example and promoting sound, cost effective environmental and energy conservation practices in City operations.*~~

~~**As illustrated in the graphic below, the Environmental Focus Area is interrelated to all of City Council's other focus areas.**~~



~~**Specific initiatives in Economic Development and Transportation Focus Area Plans relate directly to Charlotte's environmental goals including initiatives for renewable energy and green industry, and land-use planning and transportation choices.**~~

~~**Safeguard the Environment**~~

~~**ENV.1 Focus Area Initiative: Support environmental sustainability by making wise decisions regarding growth and development, recognizing the interrelationships between air quality, water resources, land preservation, and energy and resource conservation**~~

- ~~FY11 Measure: Percent of residential and office developments located within centers and corridors to continue implementing Centers, Corridors, and Wedges Growth Framework~~

~~FY11 Target: Minimum of 40% of new housing unit permits and 70% of new multi-family unit permits in the city located within the centers and corridors~~
~~FY09 Target: 40% and 70% respectively~~
~~FY09 Actual: 55.8% and 71.9% respectively~~

~~FY11 Target: Minimum of 75% of new office development square footage and 75% of new employment occurring in the centers and corridors~~
~~FY09 Target: 75% and 75% respectively~~
~~FY09 Actual: 97.6% and 91.4% respectively~~

- ~~FY11 Measure: Percent of rezoning decisions consistent with adopted plans and/or staff recommendation~~

~~FY11 Target: 95% of rezoning decisions consistent with adopted plans and/or staff recommendation~~
~~FY09 Target: 95% of rezoning decisions consistent with adopted plans~~
~~FY09 Actual: 93.4% rezoning decisions consistent with adopted plans~~

- ~~FY11 Measure: Percent of rezoning decisions consistent with adopted environmentally sensitive site design policies~~

~~FY11 Target: 80% of approved re-zonings incorporate environmentally sensitive site design components as per the General Development Policies-Environment~~
~~FY09 Target: N/A – new measure for FY10~~

- ~~FY11 Measure: Implement the General Development Policies Phase II – Environment~~

~~FY11 Target: Initiate strategies to address two additional General Development Policies—Environment and continue to focus on policies dealt with by previous Focus Area Plan targets~~
~~FY09 Target: Initiated strategies to address five of the 15 GDP-E by June 2009~~
~~FY09 Actual: Initiated strategies to address six additional GDP-E~~

~~**ENV.2 Focus Area Initiative: Lead and support efforts to improve Charlotte and regional air quality**~~

- ~~FY11 Measure: Promote long-term reduction in ozone-causing emissions~~

~~FY11 Target: Implement projects in partnerships with business/management organizations to encourage~~

~~increases in travel by alternative modes to/from/within two mixed-use activity centers by June 2011~~

~~FY09 Target~~: ~~N/A – new measure for FY10~~

~~FY11 Target~~: ~~Adopt and implement a revised Tree Ordinance that will help improve air quality through the preservation and growth of Charlotte's tree canopy~~

~~FY09 Target~~: ~~Adopt revised Tree Ordinance by June 2008~~

~~FY09 Actual~~: ~~Revised Tree Ordinance pending adoption~~

~~FY11 Target~~: ~~Continue collaboration and participation with COG's CONNECT Regional Air Quality Work Team, the Regional Air Quality Board and Clean Air Works, Mecklenburg County Division of Air Quality and the State of North Carolina Division of Air Quality to develop and implement strategies to improve air quality~~

~~FY09 Target~~: ~~N/A – new measure for FY10~~

~~FY11 Target~~: ~~Implement the City's Energy Efficiency and Conservation Block Grant air quality projects~~

~~**ENV.3**~~ ~~**Focus Area Initiative**~~: ~~**Protect natural ecosystems and habitats, including the tree canopy**~~

- ~~FY11 Measure~~: ~~Maintain a significant and healthy tree canopy~~

~~**FY11 Target**~~: ~~**Present Tree Appreciation Awards in June to developers and persons for exceptional tree preservation, tree planting, citizen contributions and other outstanding achievements that enhance Charlotte's tree canopy**~~

~~**FY11 Target**~~: ~~**Adopt an overall tree canopy goal for Charlotte and measure the effectiveness of the newly revised tree ordinance meeting the goal**~~

- ~~FY11 Measure~~: ~~Protect stream corridors, ponds, and wetlands through public acquisition of additional conservation easements and enhancing existing buffers~~

~~FY11 Target~~: ~~Meet mitigation requirements through local rather than state-level restoration efforts 100% of the time when streams are negatively impacted by City projects~~

~~FY09 Target~~: ~~N/A – new measure for FY10~~

- ~~FY11 Measure~~: ~~Maintain permit compliance with treated wastewater~~

~~FY11 Target~~: ~~100% compliance with National Pollutant Discharge Elimination System permit requirements for all five wastewater plants~~

~~FY09 Target~~: ~~100% compliance~~

~~FY09 Actual~~: ~~5 violations - 99.9% compliance~~

~~**ENV.4**~~ ~~**Focus Area Initiative**~~: ~~**Lead by example, adopting sound environmental practices in City facilities and operations**~~

- ~~FY11 Measure~~: ~~Implement strategies to reduce City fleet emissions to improve air quality~~

~~FY11 Target~~: ~~Reduce the amount of harmful emissions from the CATS bus fleet by maintaining the 5% idling reduction from FY10 baseline data in CATS' fixed bus fleet, including~~

	~~emissions reduction equipment on the engines of all new fixed-route buses, and procuring hybrid buses as funding allows~~
~~FY09 Target:~~	~~Reduce idling by 5% from FY07 baseline data in Charlotte Area Transit System's fixed-route bus fleet~~
~~FY09 Actual:~~	~~Reduced idling from 35.15% to 30.30%~~
~~FY11 Target~~:	~~Improve the efficiency of the overall City fleet by purchasing alternative fuel vehicles as funding allows and by seeking grant funding to outfit current vehicles with emissions reducing technology~~
~~FY09 Target~~:	~~Increase percentages of City fleet using alternative fuel or emission efficient technologies~~
~~FY09 Actual~~:	~~37 hybrids; 337 flex fuel vehicles (excludes CATS)~~
➢ ~~FY11 Measure~~:	~~Incorporate environmentally responsible actions in the design, construction, and operations of City facilities and in other operating practices~~
~~FY11 Target~~:	~~Implement adopted Policy for Sustainable City Facilities and conduct first year review of effectiveness~~
➢ ~~FY11 Measure~~:	~~Reduce greenhouse gas emissions from City facilities and operations~~
~~FY11 Target~~:	~~Establish the City's targets to reduce Greenhouse Gas Emissions for City facilities and operations~~
~~FY11 Target~~:	~~Implement the City's Energy Efficiency and Conservation Block Grant projects for City facilities~~
~~FY09 Target~~:	~~Develop Greenhouse Gas Emissions Inventory Action Plan by December 2008~~
~~FY09 Actual~~:	~~Developed Greenhouse Gas Emissions Inventory Action Plan, as part of Energy Strategy~~
~~FY11 Target~~:	~~Develop and implement a City-wide environmentally preferable purchasing policy by July 2010~~
~~FY09 Target~~:	~~Develop pilot~~
~~FY09 Actual~~:	~~Pilot program with Wake Forest and UNCC completed; assessing software and methodologies for cost/benefits analysis~~
~~FY11 Target~~:	~~Increase recycling within City facilities~~
~~FY09 Target~~:	~~N/A – new measure for FY10~~
➢ ~~FY11 Measure~~:	~~Operate a best-in-class wastewater treatment facilities that continually seek efficiencies and minimize environmental risk~~
~~FY11 Target~~:	~~Achieve ISO 14001:2004 certification for the for the McDowell Creek Wastewater Treatment Plant by December 2010~~

~~FY09 Target~~: ~~Receive certification~~
~~FY09 Actual~~: ~~Received Bio-solids ISO 14001:2004 certification~~

- ~~**FY11 Measure**~~: ~~Advance renewable energy projects, including biodiesel, methane~~~~**,**~~ ~~solar and~~ ~~**geothermal**~~ ~~initiatives~~

~~FY11 Target~~: ~~Complete a master plan of Utilities' properties viable technologies, including financing models and implementation steps, by December 2010~~

- ~~**FY11 Measure**~~: ~~**Develop and implement pilot project(s) for renewable energy**~~

~~**FY11 Target**~~: ~~**Develop and implement a solar energy pilot project on airport-owned property by December 2010**~~

~~**Develop Collaborative Solutions**~~

~~**ENV.5**~~ ~~**Focus Area Initiative**~~: ~~**Collaborate with local and regional public and private partners and neighborhoods to enhance environmental quality and long-term sustainability**~~

- ~~FY11 Measure~~: ~~Continue collaboration and actively participate in public and private sector partnership's environmental and visioning initiatives~~

~~FY11 Target~~: ~~Continue collaboration and participation with Centralina Council of Governments, Duke Energy, UNC-Charlotte, CPCC, CRVA Green Team, and other partners' current initiatives~~
~~FY09 Target~~: ~~Continue collaboration and participation with SEQL, Centralina Council of Governments, Regional Visioning Council and other partners' current initiatives~~
~~FY09 Actual~~: ~~Active in COG-sponsored Regional Growth and Regional Environment Cabinets; participated in CRVA Green Team, Coca-Cola "Recycle and Win," CPCC, Duke Energy and other partners' current initiatives.~~

~~FY11 Target~~: ~~Implement the City's Energy Efficiency and Conservation Block Grant projects for energy investments in revitalization areas, the neighborhood energy challenge, and catalyst projects~~

- ~~FY11 Measure~~: ~~Increase awareness of the environment as a priority for the community and the organization~~

~~FY11 Target~~: ~~Continue implementing the internal and external communication plans, including the Pledge to Improve Our Environment and the Energy Efficiency and Conservation Block Grant public outreach and education campaign~~
~~FY09 Target~~: ~~Continue implementing the internal communication strategy for the environment focus area~~
~~FY09 Actual~~: ~~Developed and distributed pledge cards to improve our~~

~~environment, dedicated employee CNet page to the Environmental Focus Area, featured environmental data in FYI and FYIcast, and Earth Day activities partner~~

- ~~FY11 Measure~~: ~~Continue a leadership role in regional water resources planning~~

~~FY11 Target~~: ~~Actively support North Carolina's defense of the North Carolina versus South Carolina water rights lawsuit to protect the interest of Utilities' customers~~

~~FY09 Target~~: ~~Lead the group with Utilities' staff as chair of the Water Management Group and be actively involved in committee work in 2008~~

~~FY09 Actual~~: ~~Utilities' staff led the Water Management Group~~

- ~~FY11 Measure~~: ~~In support of State recycling goals, increase single family recycling participation to achieve a 20% increase in annual tonnage of recycled materials~~

~~**FY11 Target:**~~ ~~Implement single-stream recycling collection **and public education** program**s** by July 2010~~

~~FY09 Target~~: ~~Implement single-stream recycling program by July 2010~~

~~FY09 Actual~~: ~~N/A – (target is for single-stream - not yet implemented)~~

- ~~FY11 Measure~~: ~~Continue implementing the multi-family recycling education program~~

~~FY11 Target~~: ~~Educate 20 non-participating multi-family property managers on the benefits of recycling by July 2010~~

~~FY09 Target~~: ~~Educate 20 non-participating multi-family property managers on the benefits of recycling by July 2009~~

~~FY09 Actual~~: ~~46 managers trained (230% of target)~~

CHARLOTTE
ENGINEERING & PROPERTY MANAGEMENT

Tree Canopy Goal and Tree Canopy Investment Strategy

Introductory Issue Presentation to
Council Environment Committee

January 24, 2011

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CITY OF CHARLOTTE

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.

December 6: Council Briefing on Goal-Setting and Investment Strategy and Referral to Committee

CHARMECK.ORG

CITY OF CHARLOTTE

Presentation Outline

- Working Definitions
- Current Status of Charlotte's Tree Canopy
- Comparison to Other Cities
- Background and Current Status of City Programs
- Related Council Interests
- Comments from Sounding Board and Staff
- Path Forward

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CITY OF CHARLOTTE

Definitions

Tree Canopy Goal

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

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 location of trees
- Available to partner organizations and citizens as information

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CITY OF CHARLOTTE

Tree Canopy Investment Strategy

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

- Aligned with Council interests and policies
- Minimizing conflicts with infrastructure
- Offering guidance regarding location of trees
- Available to partner organizations and citizens as information

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, etc.)

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CITY OF CHARLOTTE

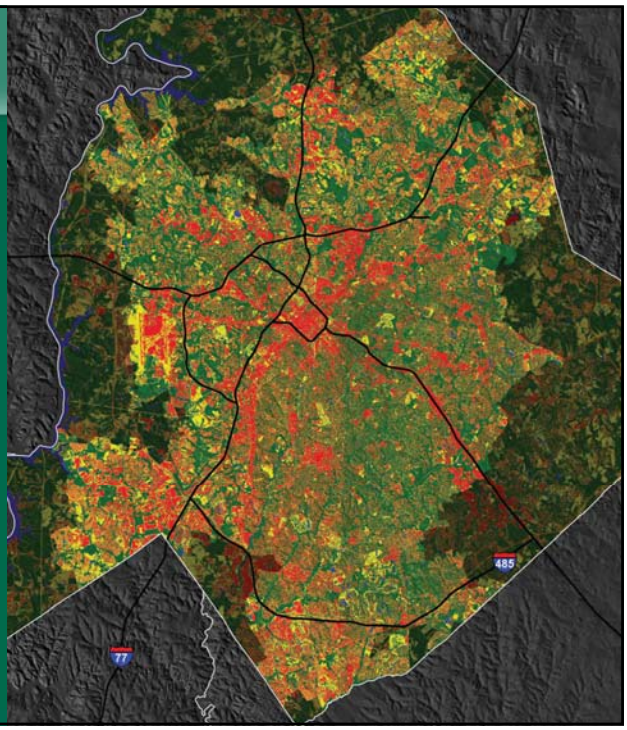
Current Status:

Urban Ecosystem Analysis

Tree Canopy 2008

From high-resolution aerial photography

LEGEND	Acres (Percent of Total)
URBAN	48,866 (27%)
TREES	84,943 (46%)
OPEN SPACE	47,625 (26%)
WATER	1,051 (<1%)
BARE	1,078 (<1%)



CITY OF CHARLOTTE

Current Status:

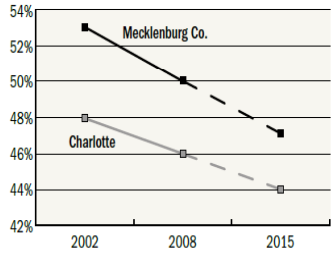
Street Tree Database

- Approximately 77% Identified (140,000 of estimated 180,000 total street trees)
- Includes data on species, size, condition
- Used in preparing contracts for systematic pruning, cankerworm banding

CITY OF CHARLOTTE

Urban Ecosystem Analysis

Figure 4. Actual and Projected Tree Canopy Decline in Charlotte Mecklenburg



2002

	Total Acres	Canopy Acres	Population
Mecklenburg County	349,000	184,000 (53%)	746,427
Charlotte	183,000	88,000 (48%)	579,684

2008

	Total Acres	Canopy Acres	Population
Mecklenburg County	349,000	175,000 (50%)	902,803
Charlotte	183,000	85,000 (46%)	695,995

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CITY OF CHARLOTTE

Background: Urban Ecosystem Analysis

Ecological benefits of tree canopy:

- Provides 1.4 billion cubic feet of storm water detention
- Removes 14.9 million lbs of air pollution annually
- Stores 7.5 million tons of carbon while removing 59,000 tons of carbon annually

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CITY OF CHARLOTTE

Eastern U.S. Cities Tree Canopy

Comparable High Resolution Analyses by American Forest

City	Total Acres	Tree Canopy Percentage
Roswell GA	25,000	**45%**
Chattanooga TN	92,543	**51.4%**
Miami (UDB) FL	309,326	**18%**
Palm Beach FL	771,048	**27%**
Detroit MI	89,215	**31%**
Jacksonville (AOI) FL	125,000	**32%**
Montgomery AL	99,967	**33.8%**
Buffalo & Lackawanna NY	32,053	**12%**

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Charlotte's Tree Canopy Legacy

- 1911: development of neighborhoods near downtown
- Landscape Architects John Nolen (Myers Park) and the Olmsted brothers (Dilworth) had a vision for a new city

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Background: City Tree Programs

- City Arborist staff since 1974
- Capital Improvement Program Landscape Team
- Urban Forestry Specialist
- Tree City USA for 31 years

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City Tree Programs

- Council increased tree planting contracts from $196,808 to $700,000 in FY11
- Planting will increase from 400 trees in prior years to 1400 trees in FY11
- 2000 additional trees will be planted within Capital Project areas
- FY11 contracts for tree maintenance, pruning, and removals are $2.3 million

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City Tree Programs: Right Tree, Right Location

- City achieves success by continually refining landscape design process and specifications
  - Plant survival rates of >90%
  - Increased plant longevity
  - Lower design costs
  - Avoidance of sight distance problems and utility conflicts
  - Quicker approvals from CDOT and NCDOT
  - Lower landscape maintenance costs
  - Excellent relationships with regional nurseries to ensure access to quality stock

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Professional Standards

- International Society of Arboriculture
- American Nurserymen Association
- American National Safety Institute
- Land Grant Universities
- Research studies and professional journals
- Over 100 years of combined professional experience

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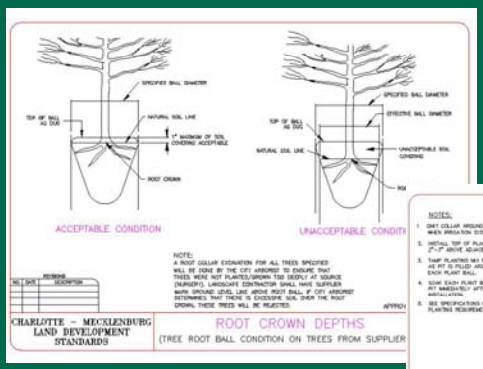
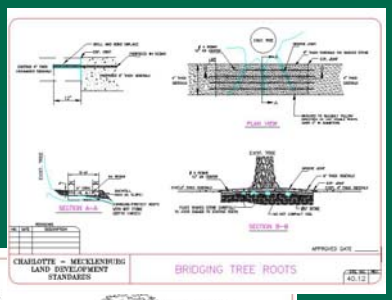
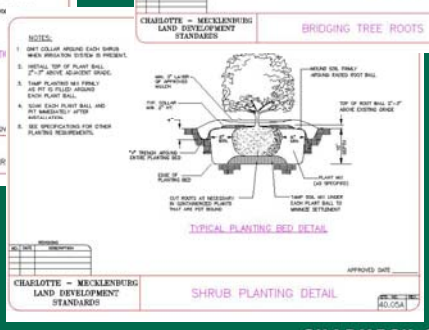
Details and Specifications







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Communication and Training

- Visit Nurseries and Send Specifications
- Meet with N.C. Cooperative Extension and Horticulture Professionals
- Meet with Landscape Architects, Project Engineers, and Project Inspectors
- Contractor's Breakfast and Regular Meetings

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Neighborhood Matching Grants

- In FY11, Natural Preservation and Energy Conservation added as an eligible project category
- Intend to fund projects that curb energy consumption and protect natural environments
- Tree planting to create and maintain the street canopy is eligible
- Trees can be planted in public right of way or in the property setback; planting is also allowed along creeks and streams

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Tree Ordinance Revisions Effective January 2011

Intent: Protect tree canopy through improved tree planting and tree protection measures.

Revisions: Require 15% tree save area on commercial development sites.

Require additional tree planting in parking lots on commercial development sites.

Intent: Provide flexibility in meeting development requirements.

Revisions: Allow optional methods for meeting tree save requirement in certain zonings, including off-site mitigation, green roof, and payment-in-lieu

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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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City Council Policy / Priority Alignment

- **Centers, Corridors, & Wedges Growth Framework:** tree canopy as Charlotte's identity, emphasis on trees in wedges
- **General Development Policies:** benefits of trees at transit stations, public areas, in streetscape
- **Area Plans:** designates specific locations for trees
- **Urban Street Design Guidelines:** encourages and guides tree selection for various street types

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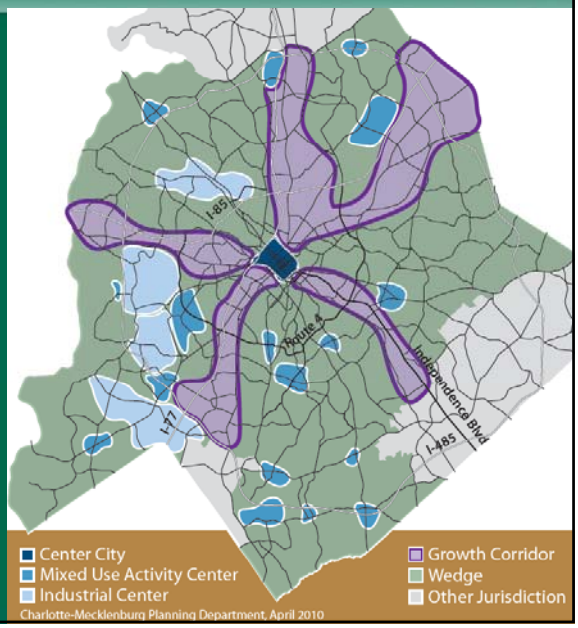
Centers, Corridors, & Wedges

Current Tree Canopy

Centers	35.16%
Corridors	42.21%
Wedges	54.23%



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Sounding Board Issues for Discussion

- Approach to setting goal and sub-goals
  - How much of a "stretch" goal is appropriate?
  - Sub-goals defined by Centers, Corridors, Wedges? Other geographies?
- Uses of City funds:
  - Planting on public property
  - Planting on private property?
  - Protection through easement or land conservation?
- Trees & Other Urban Infrastructure
- Effective Partnerships and Leveraging
  - Citizen Awareness and Education

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Sounding Board Comments

Approach to setting goal and sub-goals

- Use detail and analysis to understand the future impact of current planting
- Retain as much canopy as possible and analyze effectively so that today's planting effectively creates future canopy
- Set a realistic goal
- Consider a goal based on population rather than total geography covered
- Consider sub-goals related to specific land uses such as parks, streams, greenways
- Consider environmental and social value of trees

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Sounding Board Comments

Uses of City Funds

- Important to get more trees on public land and along streets
- Consider ways to incentivize planting on private property (matching grants, reduced fees)
- Planting on private property could have an advantage in that property owner could have maintenance responsibility
- More trees at schools; also partner with schools for education, awareness, and neighborhood involvement
- Consider more tree planting to strengthen neighborhoods
- Partner with schools, neighborhoods, Public Tree Fund, etc. to support more planting events such as Creek ReLeaf

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Sounding Board Comments

Trees & Other Urban Infrastructure

- Ordinances and USDG work against trees (i.e., developers required to install detention pond or BMP which requires removal of trees; wider planting strips and sidewalks require more tree removal)
- Can parking lot space requirements be reduced in favor of trees?
- Duke Energy allows planting small maturing trees under power lines– this is a good example
- Share utility trenching; Educate utilities to protect tree roots
- Think differently about which trees to plant near sidewalks; rather than planting smaller trees, plant the big ones and remove them when they get too large

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Sounding Board Comments

Partnerships & Leveraging

- Partner with schools; reach the children and their parents will receive the materials
- Partner with homeowners' associations
- Utilize a volunteer corps or speakers bureau to supplement staff efforts in education, awareness, and planting
- Partner with CPCC – tree workshop series, Clean & Green
- City needs to take a role in educating citizens about value of trees and tree maintenance; also to make them aware that funds are limited and majority of trees are planted by citizens and development
- Consider grant writing to expand funds available
- Sponsor an annual tree event/celebration

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Ideas Gathered from City and County Staff

- Look for opportunities where dollars can be leveraged, including in the areas where the City already has Capital Improvement Projects
- Prioritize areas for planting where benefits are greatest, such as riparian buffers, greenways, and wildlife corridors
- Survey all existing environmental features and look for overlaps
- Coordinate with future land use plans

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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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Path Forward: Anticipated Elements of Staff Recommendation

- Citywide tree canopy goal and sub-goals related to strategic geographies
- Guidance that reflects Council goals and interests (environmental goals, neighborhood goals, economic goals)
- Tactics that leverage resources including funding, public properties, partnerships, volunteers
- Decision criteria that help benefit the tree canopy, support related goals, and avoid conflicts
- Locational criteria to include environmental and neighborhood benefits and greatest likelihood of long-term protection of trees

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Path Forward

Upcoming Committee Meetings

- Build-out Scenarios
- Centers, Corridors, Wedges
- Goal: how far to stretch
- Planting Location Priorities and Risks

March / April: Recommendations Drafted for Goals and Strategy

Sounding Board Meetings for feedback on draft

April / May: **Committee Recommendations to Council**

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Tree Canopy Goal Setting
Sounding Board Meeting
January 19, 2011

Attendees
Tom Pearson, REBIC
Rick Roti, Charlotte Public Tree Fund
Chris Buchanan, Chair, Charlotte Tree Advisory Commission
Patrick George, Owner, Heartwood Tree Service

Goal-Setting

- Per Tom Pearson: Lack of tree cover in Florida related to hurricanes. Hugo has taken out more trees in Charlotte than development. Capture that information. Ordinance work against saving tree canopy (PCCO, example – placement of BMP interferes where trees are).
- Look a goal as % of population instead of % of land
- Hard to get trees in higher density areas
- Success: cluster program of trees in subdivision

Goals – Stretch Goal
Should Charlotte develop a stretch goal?
Staff definition of stretch goal: something that is attainable but can be a stretch to achieve.

- Let's retain tree canopy as much as we can
- Planting of trees has not been as aggressive as it should be
- Use additional analysis to plant to achieve canopy

What % of canopy is in ROW.
Per Don McSween…it is less than 1%

- Canopy along rail line….75 feet
- Look at tree plantings along the rail line/s
- Should it be tied into zoning and growth categories? Break it out into segments and attach from there. Then prioritize what should be "attacked" first.

Staff: Corridors may have a set % and wedges have a set% (goal). Then establish strategies per categories to maintain or increase the set % canopy goal.

- Additional geographies: have a policy with park and rec for a set % of canopy to be maintained. Also the stream networks. Also, improve water quality.
- Offer incentives to homeowners to allow us to get on their property to plant trees. Private citizens, parks, greenways, home owners associations.
- Difficult to maintain, though, if in private hands.
- Residential development – tree ordinance – tree save areas are maintained by HOA (homeowner's associations)
- If make areas of trees larger, they will self-sustain

Use of city funds
Planting on public property – currently City already does this
Planting on private property – should we look into this?

Protection through easement or land conservation – plan to work with land conservation groups in using fee-in-lieu collected by ordinance, but should this approach be expanded?

- Expand these uses. Not putting enough trees on public land. If City can help in acquiring larger quantities of land in partnership with conservation groups….continuous tracts, larger forester…more benefit. Developers can then "buy" a portion of the large tract to meet ordinance.
- Co-op program: how can we get into "fragile" and "affordable" neighborhoods to plant trees. N&BS has acquired a grant to plant trees in right-of-way and on private property, not just in common areas (Neighborhood stabilization money??)
- Use volunteers to help promote and plant trees! Public and private partnerships to leverage funding.
- Get high school interns to assist with maintenance of the trees in those neighborhoods.
- Use schools in those neighborhoods.

Effective Partnerships and Leveraging

- Charlotte tree fund….need to work with private corporate sponsors to have their employees assist in volunteering to plant trees
- Work harder to get the support from our schools/educators to use and promote this program
- City roles for these volunteers? City can train and present this material. Landscape Mgmt. assist with providing materials (in city budget). May need to increase the budget to provide this service. Apply for grants. Volunteers were going to the schools to plant.
- City needs to take a role on the value of the trees. City needs to educate citizens that trees are part of the identity of the city. Citizens do see the value of the police, fire, services and understand that the budget is restrained. Need to educate citizenry that the majority of trees, historically, were planted not by the city but by development and the public.
- Charlotte Public Tree Fund Releaf: County chooses the sites, the mixes of the trees, guidance, in kind support with staff…..volunteers do the hard labor.
- Look at the at-risk schools and where those students live….that is where trees need to be planted. Tremendous need in those neighborhoods
- CPCC. Center of Sustainability students. Classroom experience team with real world experience
- Partner with Duke Energy. Question why can't they plant trees in the urban areas (carbon offsets) as opposed to in the fields.
- Have the city sponsor an annual "tree event" …party with events.

Trees and Other Urban Infrastructure

Staff description: The challenge of building an urban environment and balancing the need for the infrastructure with desire for trees.

- Many of our ordinances work against trees. Example: silt ponds needing to be big and require the removal of many trees. Same issue with the building of the required BMP's in residential subdivisions. If you don't have to take them down…you don't have to plant!
- Trees are also taken down for roads.
- Trees are also taken down for parking lots. Can we reduce the required number of spots therefore keeping the trees that are already there?
- Not have struck a good balance between setback requirements, planting strip requirements.
- CMU takes out a lot of trees. They take out trees and do not place back
- Use Duke as an example….they are now allowing trees to be planted in areas where they did not in the past

- What would be needed for developers to keep trees? Historically, not been able to save a lot of trees in the front of homes…..easier to save in back of lot
- Planting too big of trees by the sidewalks. Old trees not causing problems with the sidewalks. Plant a more acceptable tree in planting strip (oak trees) with understanding that trees will eventually need to be replaced (every 100 years). Get statistical information to know what the total cost of that tree will be for its life and then its replacement (no tree is forever). Develop criteria based on infrastructure life and tree life and come up with a consensus to determine when a tree would need to be "recycled".
- Currently being done with NCDOT/CDOT to design sidewalk to accommodate mature trees.
- Going away from long living trees to trees that age out.
- Do survey of neighborhood to see what they would allow to be done with old trees that are causing damage to the infrastructure.
- Parking lots that do not have any trees. Figure out a way to get property owners to plant trees now …not, only wait until they developed. Set a date that all parking lots need to have the trees planted to meet the current ordinance requirements. How do we get them to do it on private property?
- We force commercial properties out because of some tree requirements (auto dealerships).
- Need to re-think our overall goal to have commercial business exist with tree canopy goals.
- Incentives for development
- Get a higher abatement in the south or west