



CHARLOTTE
CHARLOTTE-MECKLENBURG
PLANNING

Catawba Area Plan Advisory Group

Meeting #3
Natural Environment , Part I
September 23, 2008

Welcome and Introductions

- Review Handouts
- Vision Statement
- GDP - Environment





CITY OF CHARLOTTE

Draft Vision Statement



The vision for the Catawba River Area should have a central focus on the river itself and the maximization of its enjoyment for the benefit of the community. Proper integration of all uses within the area shall create a sustainable community for all ages known for its:

Draft Vision Statement (continued)

- *High quality design reflective of the river and recreational characteristics of the area;*
- *Enhanced public facilities and services;*
- *Greenways, parks and natural areas accessible and visually adjacent to major and minor thoroughfares;*
- *Mixture of housing types and neighborhood-serving land uses;*
- *Safe and well-connected transportation network that provides options for pedestrians, cyclists, motorists and transit users;*
- *Viable employment centers integrated in appropriate locations; and*
- *Mature trees, open space and greenways integrated within neighborhoods.*

GDP – Environment

Protect the natural environment by preserving air quality, water quality and the tree canopy; retaining natural areas; providing open space; and minimizing impervious cover, as feasible.



Storm Water Protection

- Storm Water Services

- Surface Water Improvement and Management (SWIM) Buffer
- Post Construction Controls Ordinance (PCCO)
- Watershed Protection



- The SWIM Buffers protect streams by means of vegetative buffers. The width of these buffers increase as the area draining to the stream increases.
- The PCCO incorporates most SWIM Buffers and also includes requirements for the following:
 - Treat the first flush (1") of runoff for 85% Total Suspended Solids Removal and 70% Total Phosphorous Removal in Western Catawba, Yadkin, and Southeast Catawba
 - Provide extended detention for 1-Year Storm for 2-5 days
 - Control Peak runoff from site for 10-year and 25-year storms
 - Provide Natural Area
 - Have additional buffers for smaller watersheds to treat the runoff at its source

These are the general requirements and vary based on location and zoning of the site

PCCO Requirements

- **APPLICABILITY**

- **(A) Applicability**

Ordinance applies to almost all new construction, unless certain criteria have been met for prior plan approval.

- **(B) Exemptions**

- (1) Residential Development and Redevelopment that cumulatively disturbs less than one acre and cumulatively creates less than 24% built upon area based on lot size or the lot is less than 20,000 square feet (lot must have been described by metes and bounds in a recorded deed prior to the effective date of the ordinance and can not be part of a larger Development or Redevelopment);
- (2) Commercial and industrial Development and Redevelopment that cumulatively disturbs less than one acre and cumulatively creates less than 20,000 square feet of built upon area (built upon area includes gravel and other partially impervious materials);
- (3) Redevelopment that disturbs less than 20,000 square feet, does not decrease existing storm water controls and renovation and/or construction costs (excluding trade fixtures) do not exceed 100% of the tax value of the property; and
- (4) Activities exempt from permit requirements of Section 404 of the federal Clean Water Act, as specified in 40 CFR 232 (primarily, ongoing farming and forestry activities).



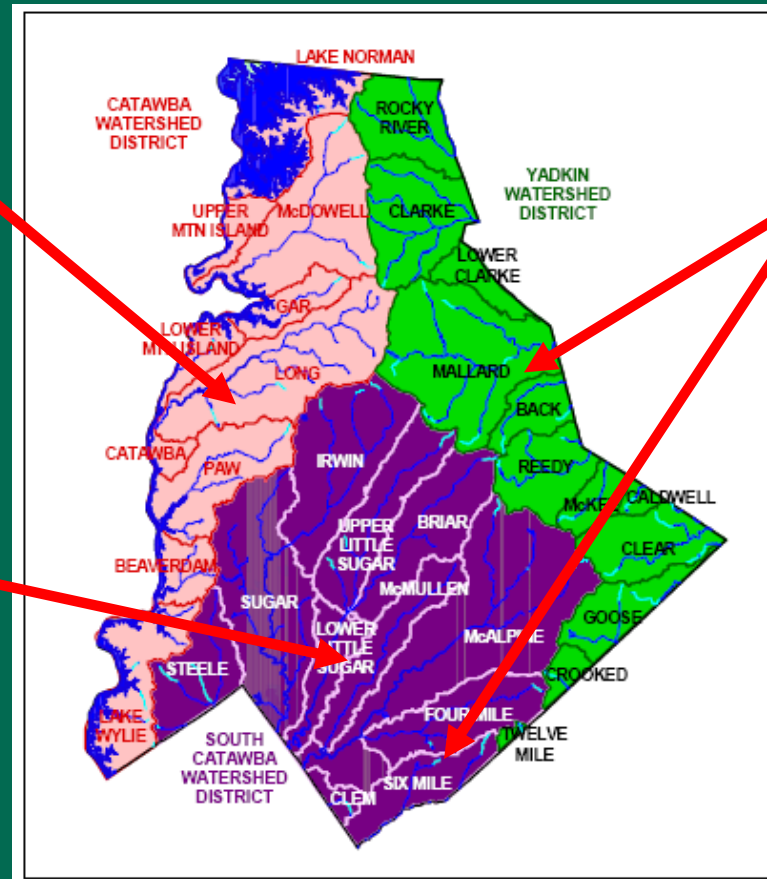
CITY OF CHARLOTTE

PCCO Requirements

Western Catawba

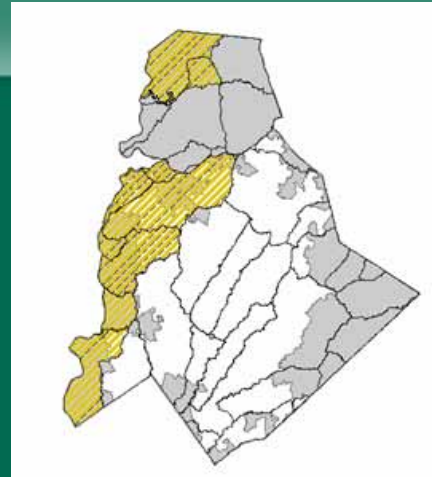
Yadkin-Southeast
Catawba

Central Catawba



Standards For Low Density Projects

- Less than or equal to 12% built upon area
- Storm water runoff shall be transported by vegetated conveyances to the maximum extent practicable.
- Stream Buffers
 - Same buffers as required by SWIM (Zoning Chapter 12) plus the following
 - All perennial and intermittent streams draining less than 50 acres shall have a minimum 30-foot vegetated buffer
 - All perennial and intermittent streams draining greater than or equal to 50 acres and less than 300 acres shall have a 35-foot buffer
 - Streams draining greater than or equal to 300 acres and less than 640 acres shall have a 50-foot
 - Streams draining greater than or equal to 640 acres shall have a 100-foot buffer, plus 50% of the area of the flood fringe beyond 100 feet.



Standards For High Density Projects

(Greater than or equal to 12% built upon area)

- Storm water quality treatment systems shall treat the runoff generated from the first inch of rainfall.
- All structural storm water treatment systems used to meet these requirements shall be designed to have a minimum of 85% average annual removal for Total Suspended Solids and 70% average annual removal for Total Phosphorus except I-1 and I-2 zoned developments which are exempt from the Total Phosphorus removal requirement. I-1 and I-2 zoned developments shall implement a management plan for the proper handling and application of pesticides and fertilizers to reduce negative water quality impacts.
- Stream Buffers
 - Same buffers as required by SWIM (Zoning Chapter 12) plus the following
 - All perennial and intermittent streams draining less than 50 acres shall have a minimum 30-foot vegetated buffer
 - All perennial and intermittent streams draining greater than or equal to 50 acres and less than 300 acres shall have a 35-foot buffer
 - Streams draining greater than or equal to 300 acres and less than 640 acres shall have a 50-foot
 - Streams draining greater than or equal to 640 acres shall have a 100-foot buffer, plus 50% of the area of the flood fringe beyond 100 feet.

Standards For High Density Projects (continued)

- Storm water treatment systems shall be installed to control the volume leaving the project site at post-development for the 1-year, 24-hour storm except I-1 and I-2 zoned developments which are exempt from this requirement. Runoff volume drawdown time shall be a minimum of 48 hours, but not more than 120 hours.
- For residential land disturbing activities exceeding 12% built-upon area, peak control shall be installed for the appropriate storm frequency (i.e., 10, 25, 50 or 100-yr, 6-hr) as determined by the Storm Water Administrator based on a downstream flood analysis provided by the owner or designee using the criteria specified in the Design Manual or if a downstream analysis is not performed the peak shall be controlled for the 10-yr and 25-yr, 6-hr storms.
- For commercial land disturbing activities exceeding 12% built-upon area, peak control shall be installed for the 10-yr, 6-hr storm and additional peak control provided for the appropriate storm frequency (i.e., 25, 50 or 100-yr, 6-hr) as determined by the Storm Water Administrator based on a downstream flood analysis provided by the owner or designee using the criteria specified in the Design Manual or if a downstream analysis is not performed the peak shall be controlled for the 10-yr and 25-yr, 6-hr storms. Controlling the 1-year, 24-hour volume achieves peak control for the 2-year, 6-hour storm.

Lots Less than One Acre

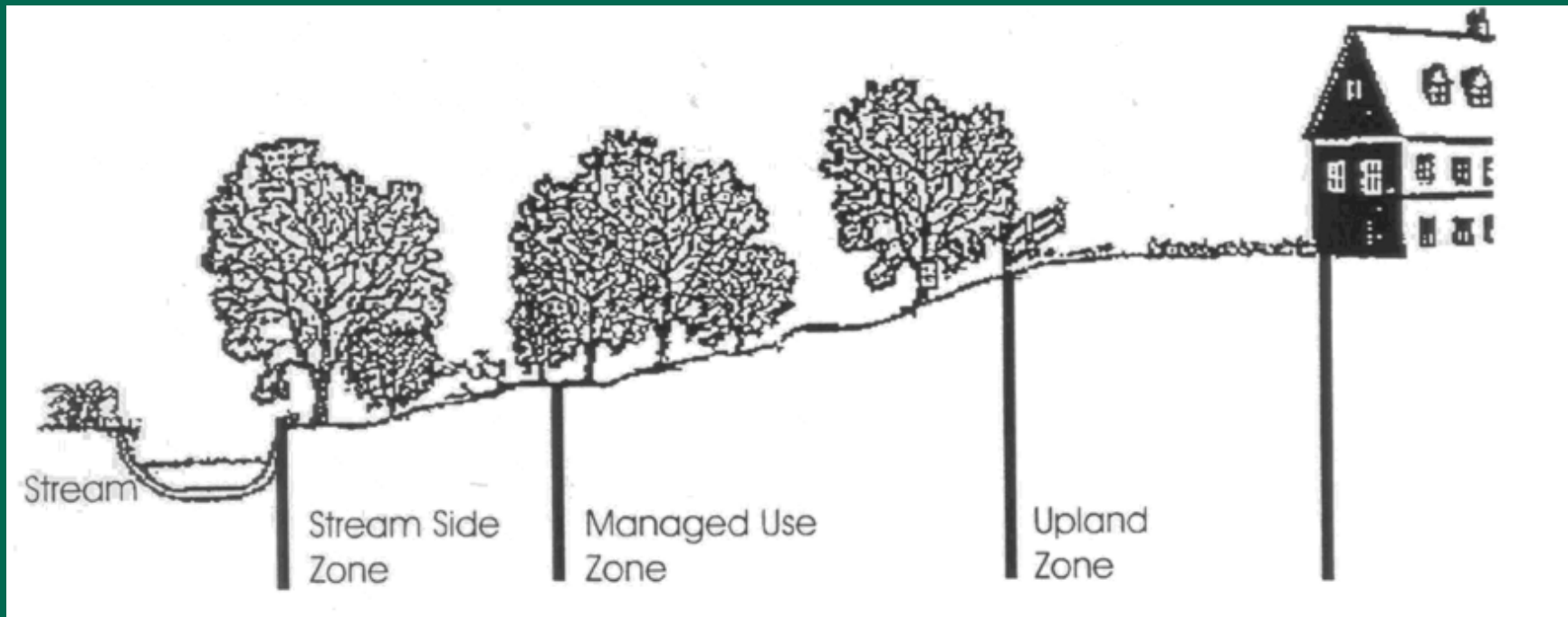
Development and Redevelopment on a lot less than one (1) acre in size measured in accordance with Section 106(H) is allowed by right to forego meeting the requirements of this ordinance provided the City is paid a mitigation fee according to rates set forth in the Administrative Manual and provided such Development and Redevelopment are not part of a larger common plan of development or sale, even though multiple, separate or distinct activities take place at different times on different schedules.

NATURAL AREA REQUIREMENTS:

- Less Than 24% Built-Upon Area
 - A project with less than 24% built-upon area shall include as Natural Area within the boundaries of the project a minimum of 25% of the project area.
- Greater Than or Equal to 24% and Less Than 50% Built-Upon Area
 - A project with greater than or equal to 24% and less than 50% built-upon area shall include as Natural Area within the boundaries of the project a minimum of 17.5% of the project area.
- Greater Than or Equal to 50% Built-Upon Area
 - A project with greater than or equal to 50% built-upon area shall include as Natural Area Space within the boundaries of the project a minimum of 10% of the project area.
- I-1 and I-2 Development and Redevelopment Projects
 - I-1 and I-2 zoned developments are exempt from the Natural Area requirement in the Central and Western Catawba Districts.

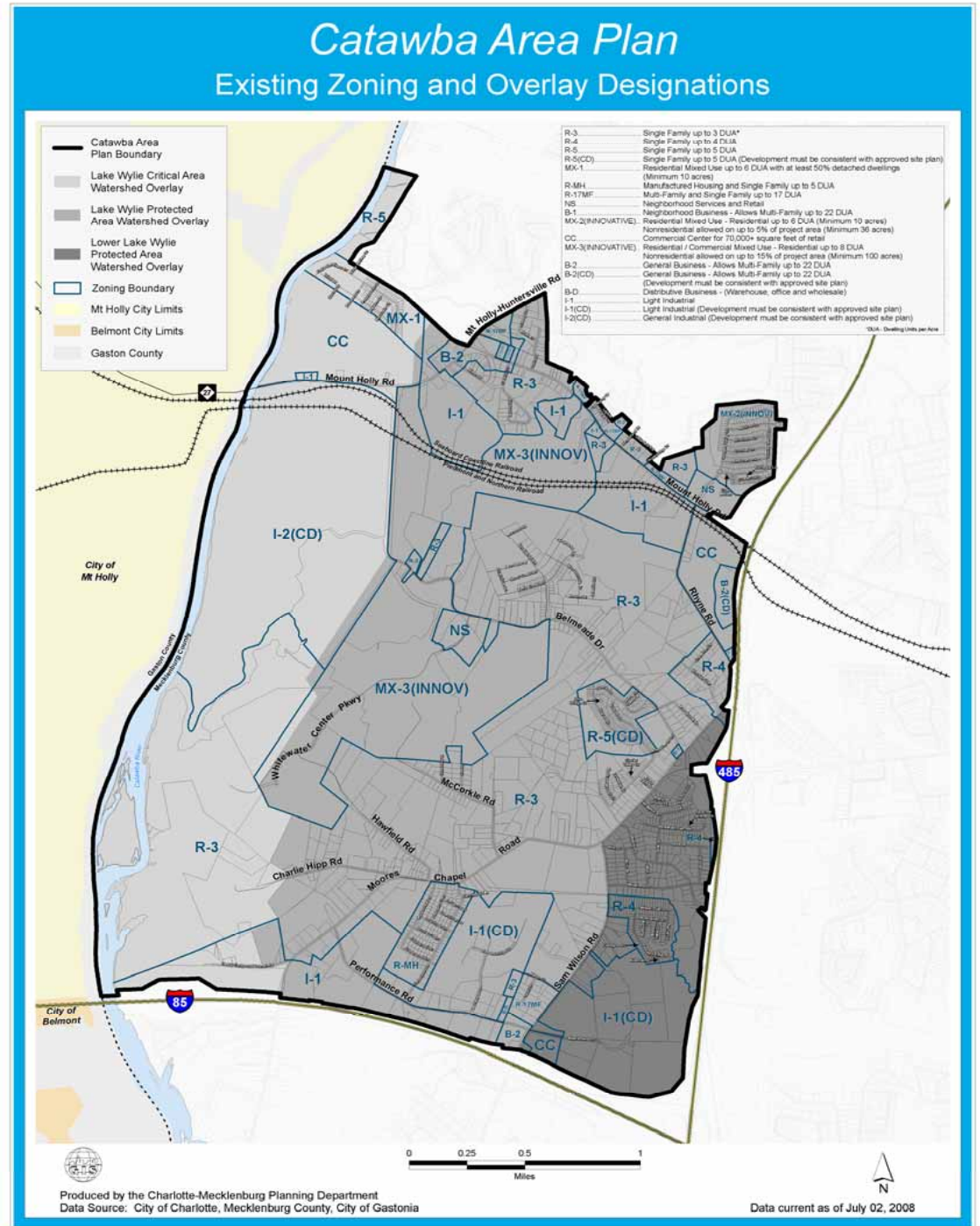


- Buffer Zones





Watershed Overlay Regulations



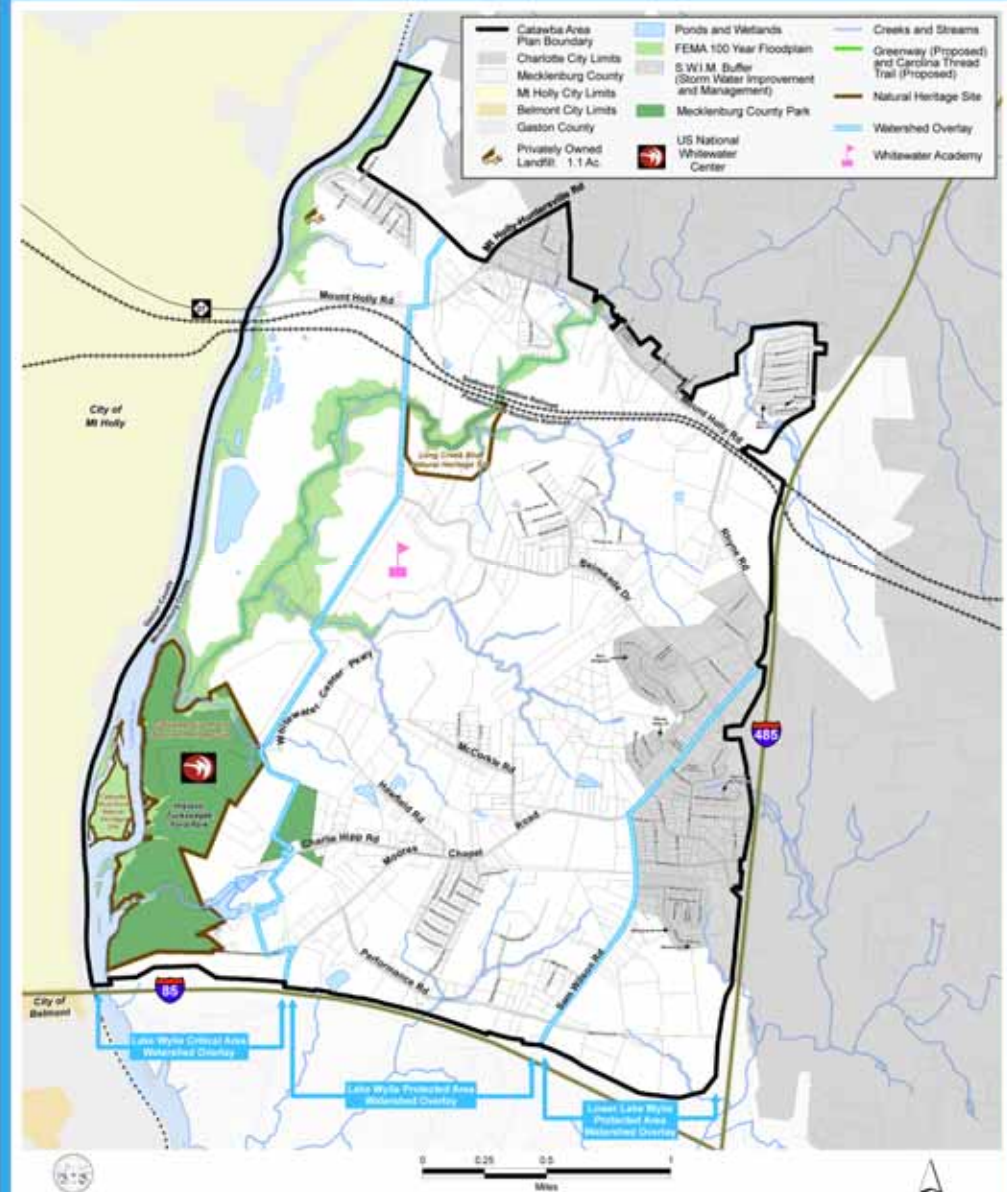
Upper Lake Wylie Watershed

Zone	Built Upon Area	Lake/Stream Buffer
• Protected Area (PA)	< 24% - Low Density	40 Feet
	< 70% - High Density	100 Feet
• Critical Area (CA)	< 24% - Low Density	100 Feet
	< 50% - High Density	100 Feet



CITY OF CHARLOTTE

Catawba Area Plan Natural Environment



Produced by the Charlotte-Mecklenburg Planning Department
Data Source: City of Charlotte, Mecklenburg County, City of Gastonia

Data current as of September 16, 2008



CITY OF CHARLOTTE

Tree Cover

Tree Ordinance

Chapter 21 City Code



CHARMECK.ORG

- **Tree Protection/Save**
 - Trees in the Right of Way- City/public property
 - Trees in Commercial Development - Private property
 - Trees in Residential Subdivisions – Private property
 - How much is protected can be affected by lot shape, overhead power lines, zoning category
 - Does not apply to existing single family prior to 2002 revision

Current Ordinance Provisions

Protects Public/Right Of Way Trees

Trees 2" caliper or larger planted in the right of way
All trees 8" diameter or larger in the right of way

(Typically between sidewalk and street)



Current Ordinance Provisions

Protects Private Property Trees - Commercial
in the setback 8" diameter or larger
Smaller caliper trees can count towards planting
requirements

(Typically between sidewalk and buildings)





CITY OF CHARLOTTE

Current Ordinance Provisions

Protects single family development trees
in new subdivisions (since 2002)

Minimum 10% anywhere on site
Incentives to preserve more



- Tree Planting
 - Commercial
 - Perimeter trees
 - Internal trees
 - Single-family
 - Street trees
 - Supplemental trees (to meet required percentage)

Current Ordinance Provisions

- Tree Planting in Commercial Development:
 - Perimeter trees
 - Every 30 ft for small maturing trees, or
 - Every 40 ft for large maturing trees
 - Planted in the set-back or the right of way depending on zoning category



Current Ordinance Provisions

- Tree Planting in Commercial Development:
 - Internal trees
 - 1 tree/10,000 sq ft impervious (approx. 4 trees/acre)
 - All parking spaces within 60 ft of tree



Current Ordinance Provisions



- Tree Planting in Single-Family Development:
 - Street trees
 - Spaced every 40-50 feet along new streets
 - Within 20 ft of curb
 - Supplemental trees
 - Sites that did not meet minimum requirement

Current Ordinance Provisions



- Continuing Compliance

- 1, 2, & 5 Years after installation
- Random
- Non compliance letter
 - Missing trees
 - Dead trees



- Violations

- During development
- Upon compliance inspection
- Random
- Complaint
- Violation Letter sent
 - Fines
 - Mitigation



CITY OF CHARLOTTE

Natural Environment

- Discussion with Charlotte Mecklenburg Utilities



CHARMECK.ORG

Next Steps

Our next meeting will be **September 30, 2008**; we will continue our discussion of the Natural Environment, focusing on land and air quality.



Thank you for your continued participation!