



Steele Creek Area Plan

**Citizen Advisory Group Meeting
Charlotte Police and Fire Training Academy**

September 3, 2009

6:00 p.m.

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1. Welcome and Introductions

2. Draft Vision Statement

3. Natural Environment

4. Wrap-up and Next Steps





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VISIONING



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Vision Guidelines

- Community based strategic planning effort in which citizens and staff work together to identify the kind of community that people who live, work, play, and do business in the Steele Creek area would like to see it become over the next 20 to 30 years.
- It will be used to set priorities for capital projects, direct city services, and guide decisions impacting the community.



- **Statement or list of characteristics.**
- **Creative but grounded in reality.**
- **Achievable.**

Online Survey Results

- **What do you like most about the plan area?**
 - 66% Rural character
 - 61% Interstate Access
- **What concerns you the most about the plan area?**
 - 70% Loss of natural habitat / tree cover
 - 69% Too much traffic
- **What environmental issues concern you the most about the plan area?**
 - 77% Loss of tree cover
 - 59% Greenway network / open space

Considerations

- Opportunities and constraints identified by public.
- Description of community people who live, work and play in the area would like to see.
- Reflects areas history, heritage, and environmental features.
- Addresses long range issues to help shape and direct plan goals while embracing Charlotte's broader community wide policies.
- Guides community design.



Draft Vision Statement

Option 1

The vision for the Steele Creek area is to create a unique and sustainable community that is a great place to live, work, and recreate, while preserving the community's character by incorporating natural and historic features into new development.

The community will implement this vision through the following actions:

- Protecting the Catawba River, McDowell Nature Preserve, natural features, and historic places;*
- Providing a balanced mixture of land uses with enhanced public facilities;*
- Developing a safe, accessible and efficient transportation system for pedestrians, bicyclists, transit users, and motorists;*
- Encouraging community design that recognizes the natural environment; and*
- Creating an interconnected network of parks, greenways, and open space amenities.*

Option 2

The vision for Steele Creek area is to create a unique and sustainable community that is great place to live while incorporating natural and historic features into new development to preserve the community's character.



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NATURAL ENVIRONMENT

Opportunities

- Protection of open space
- Preservation of tree canopy
- Protection of Catawba River and watershed(s)

Constraints

- Loss of open space
- Pollution of the Catawba River
- Air Quality



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GENERAL DEVELOPMENT POLICIES

- **General Development Policies (GDP)**
 - **Purpose:** Provide guidance to City Council, staff, and the general public to ensure that future growth and development is well-designed and consistent with the long-term goals of Charlotte-Mecklenburg.
- **GDP – Environment** (adopted 2007)
 - **Purpose:** Minimize the negative environmental impacts of land use and land development on our air, land, and water resources.
 - **Goal:** 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

GDP - Natural Environment Four Guiding Principles:

- Make protection of our natural environment a priority in land use and development decisions.
- Facilitate a land use pattern that accommodates growth while respecting the natural environment.
- Promote and enable environmentally sensitive site designs.
- Consider the environmental impacts of land use and development comprehensively and strive to reconcile the various environmental concerns with each other and balance them with other land and economic development considerations.



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NATURAL FEATURES





Steele Creek Area Plan

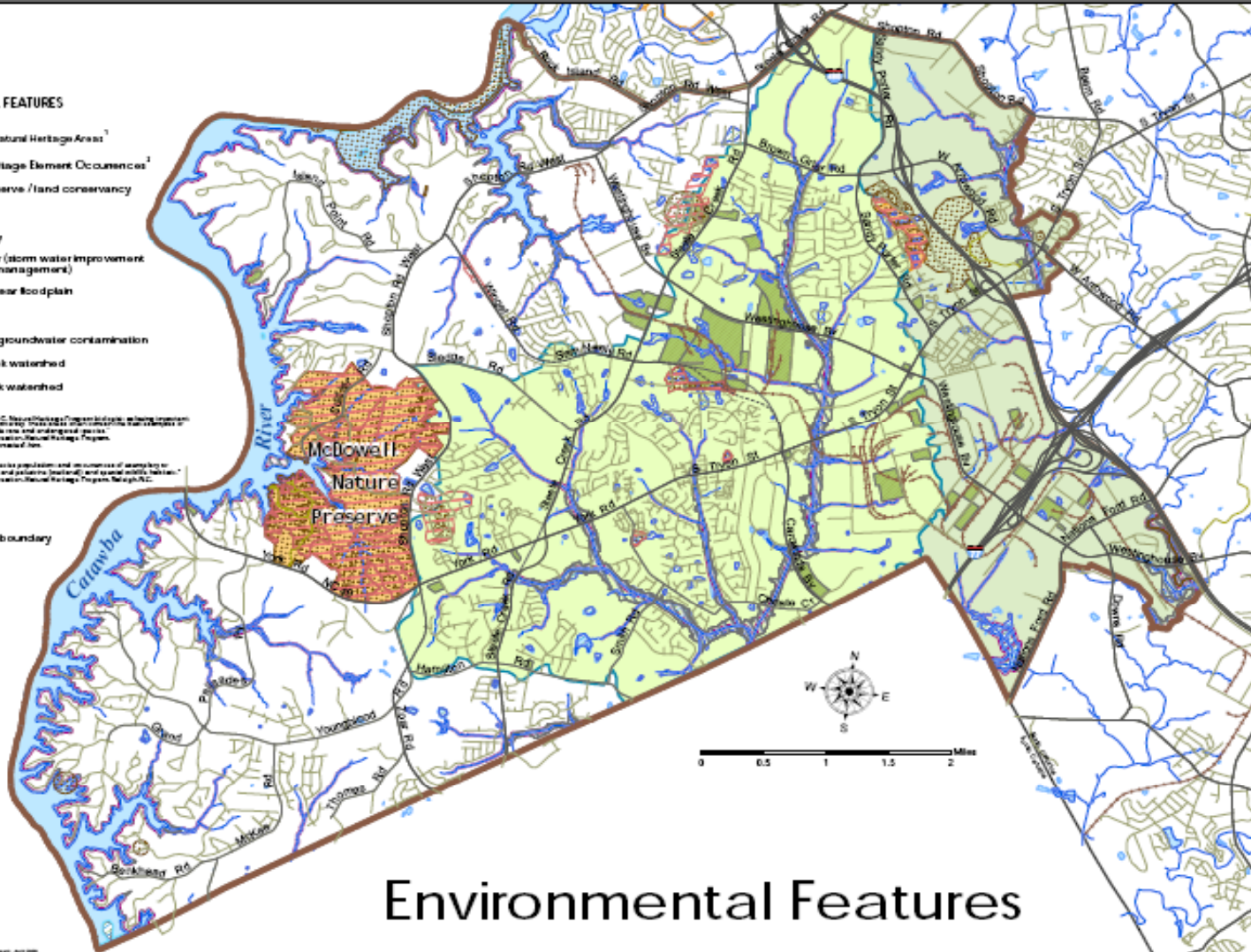
ENVIRONMENTAL FEATURES

- Significant Natural Heritage Areas¹
- Natural Heritage Element Occurrences²
- Nature preserve / land conservancy
- Stream
- Water body
- SWM buffer (storm water improvement and management)
- FEMA 100-year floodplain
- Wetlands
- Soil and/or groundwater contamination
- Steele Creek watershed
- Sugar Creek watershed

¹ Source of land use and/or identification: N.C. Department of Environment and Natural Resources, Division of Parks and Recreation, Natural Heritage Program, 2005. www.dnr.state.nc.us/heritage/

² Source of stream and/or wetland species population and occurrence: N.C. Department of Environment and Natural Resources, Division of Parks and Recreation, Natural Heritage Program, 2005. www.dnr.state.nc.us/heritage/

study area boundary



Environmental Features



Charlotte, North Carolina / Planning Department, April 2008



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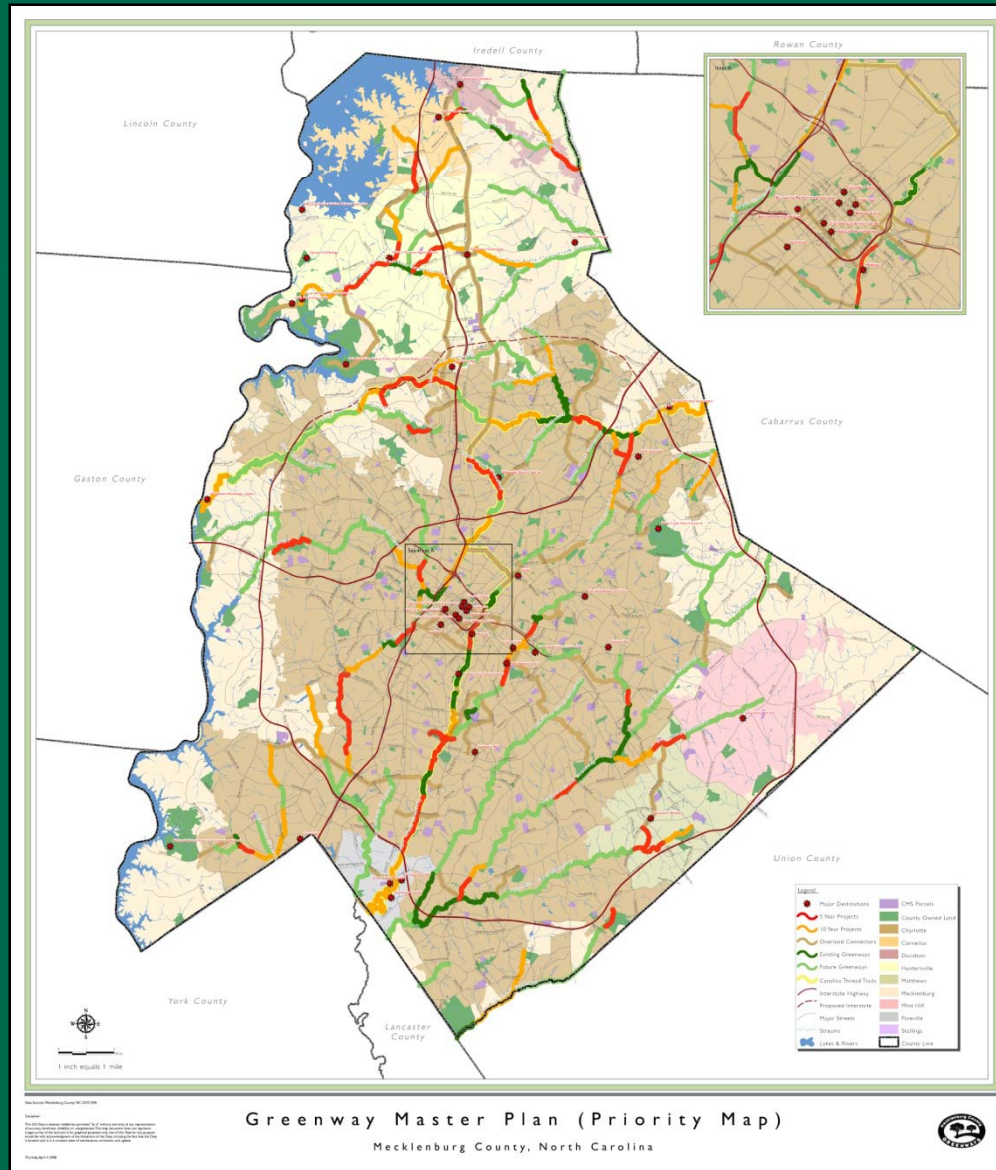


PARKS AND GREENWAYS

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CITY OF CHARLOTTE Greenway Acquisition and Development



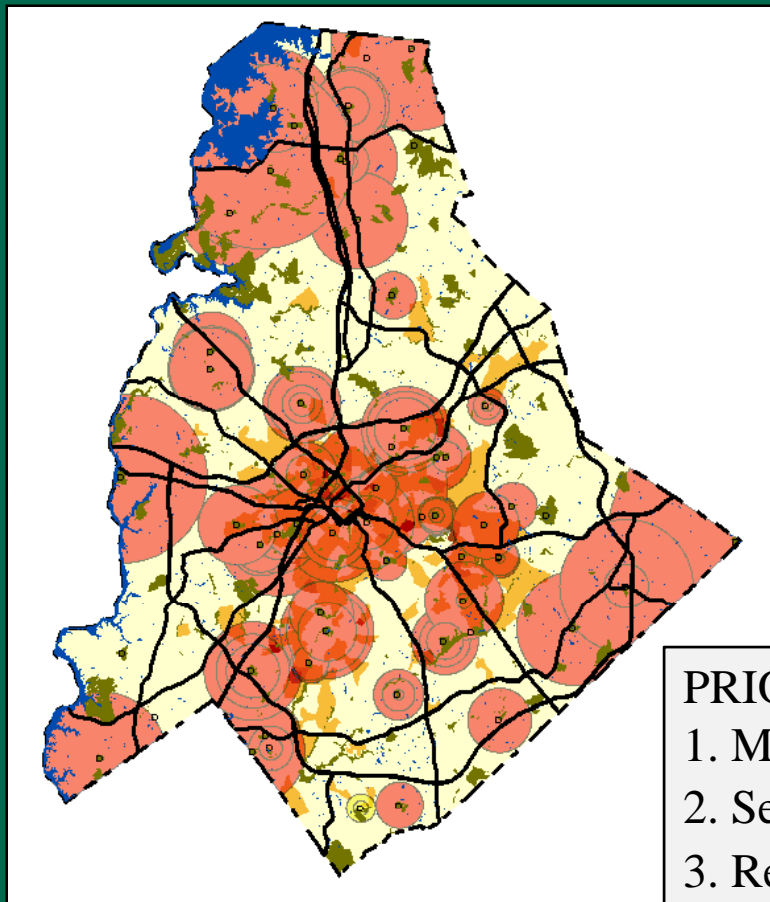
- ❖ Working with agencies to build relationships
- ❖ Prioritize greenways for construction by many criteria (land!)
- ❖ Southwest Area Priorities:
 - ❖ Walker Branch
 - ❖ Steele Creek
 - ❖ RiverGate to Smith Road



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Parkland Acquisition and Development

“Greenprinting”



1. Capacity Service Area Analysis

Existing assets – establish and map service areas based on facility category and capacity.

2. Gap Analysis and Parcel Prioritization

Identify opportunities for new facilities in service gaps and apply physical and geographic criteria to individual parcels to determine priorities.

PRIORITY CRITERIA:

1. Master Planned
2. Service Gap
3. Residential Population
4. Partnership Opportunity

5. Linkages
6. Mass Transit
7. Access
8. Constructability
9. Size and Capacity



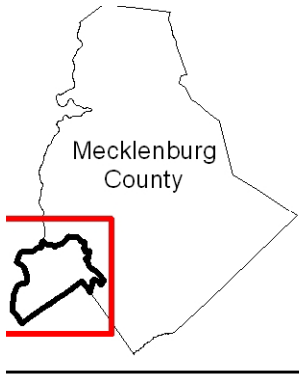
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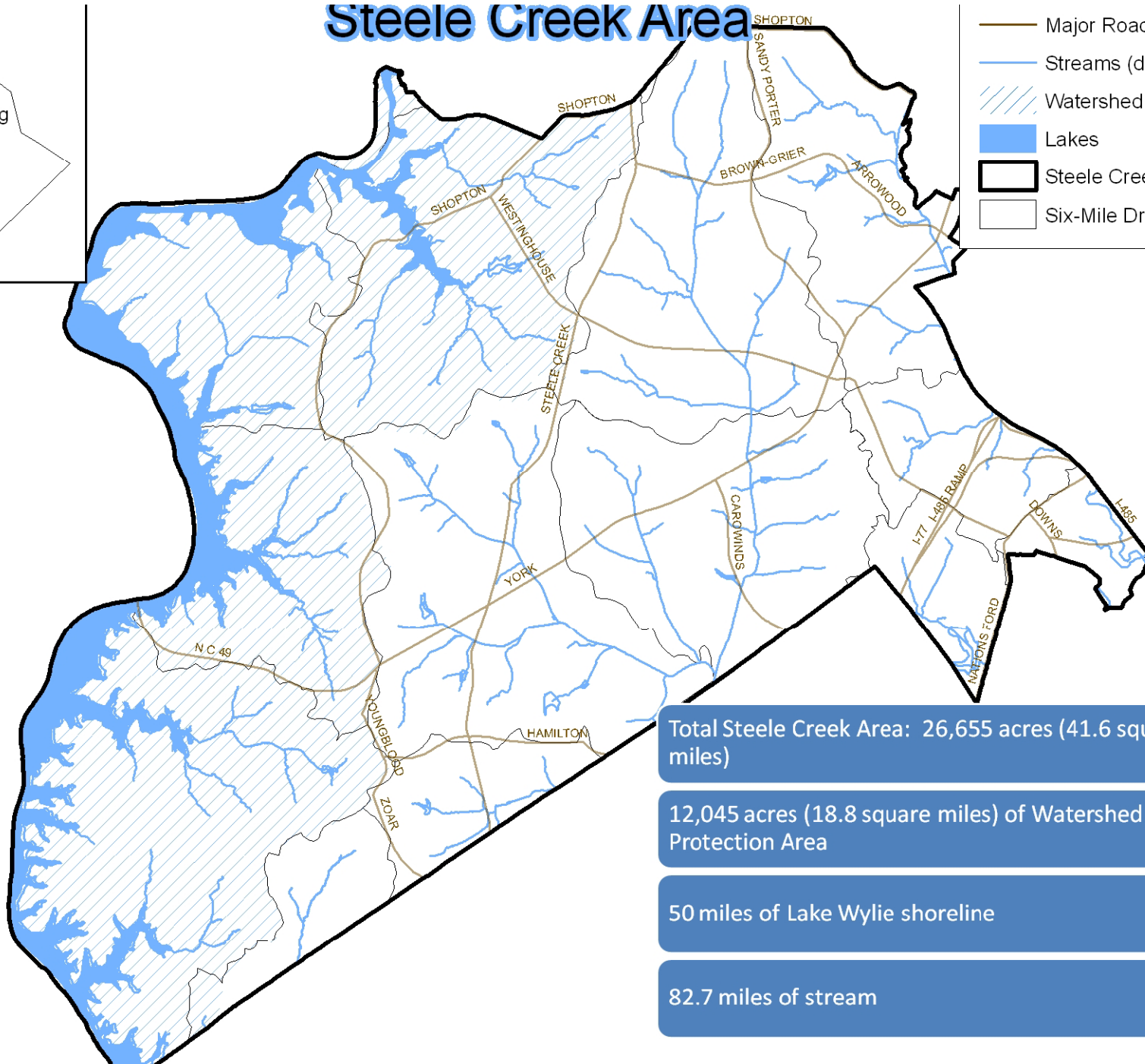
STORM WATER PROTECTION

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Steele Creek Area



- Major Roads
- Streams (draining >50 acres)
- Watershed Protection Area
- Lakes
- Steele Creek Area
- Six-Mile Drainage Basins



Total Steele Creek Area: 26,655 acres (41.6 square miles)

12,045 acres (18.8 square miles) of Watershed Protection Area

50 miles of Lake Wylie shoreline

82.7 miles of stream

0 0.5 1 2 3 4 Miles

Prepared by M. Moore 9-2-20



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



- **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).



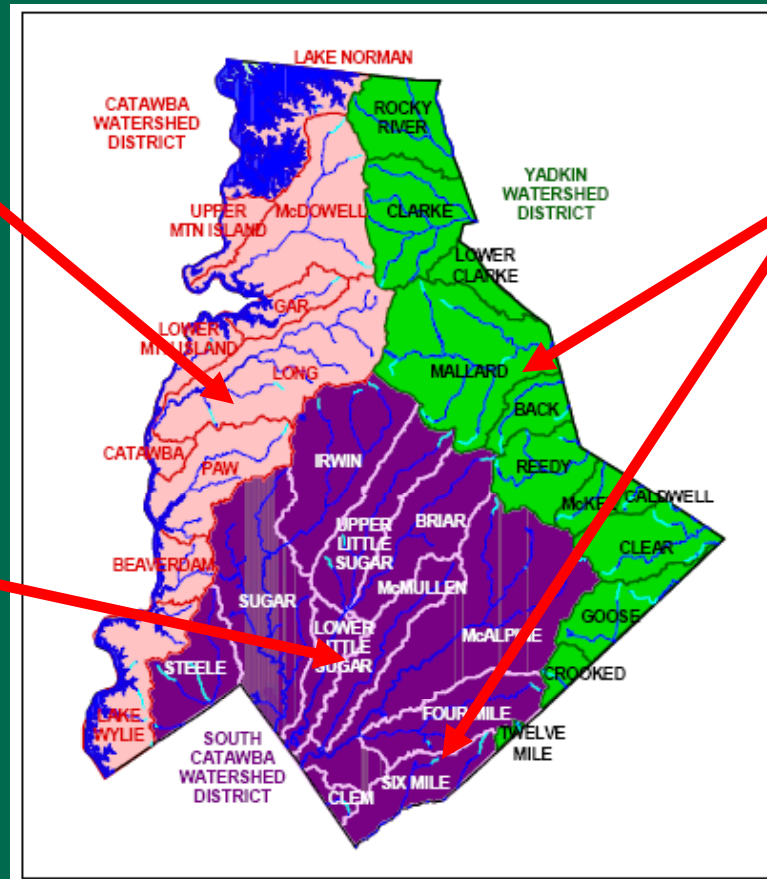
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PCCO Requirements

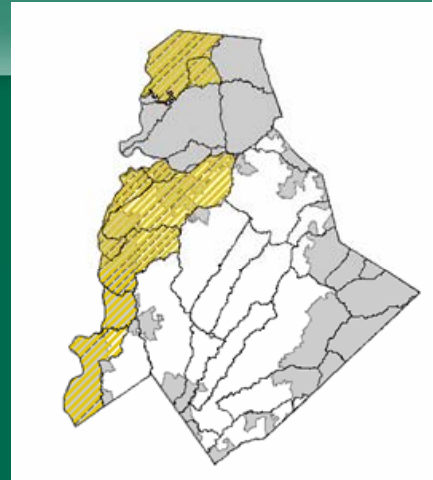
Western Catawba

Yadkin-Southeast
Catawba

Central Catawba



Central & Western Catawba Watersheds



Standards For Low Density Projects

- Less than or equal to 24% (CC) 12% (WC) 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 24% (CC) 12% (WC) 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.



Central & Western Catawba Watersheds

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 24% (CC) 12% (WC) 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 24% (CC) 12% (WC) 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.



Central & Western Catawba Watersheds

Lots Less than One Acre

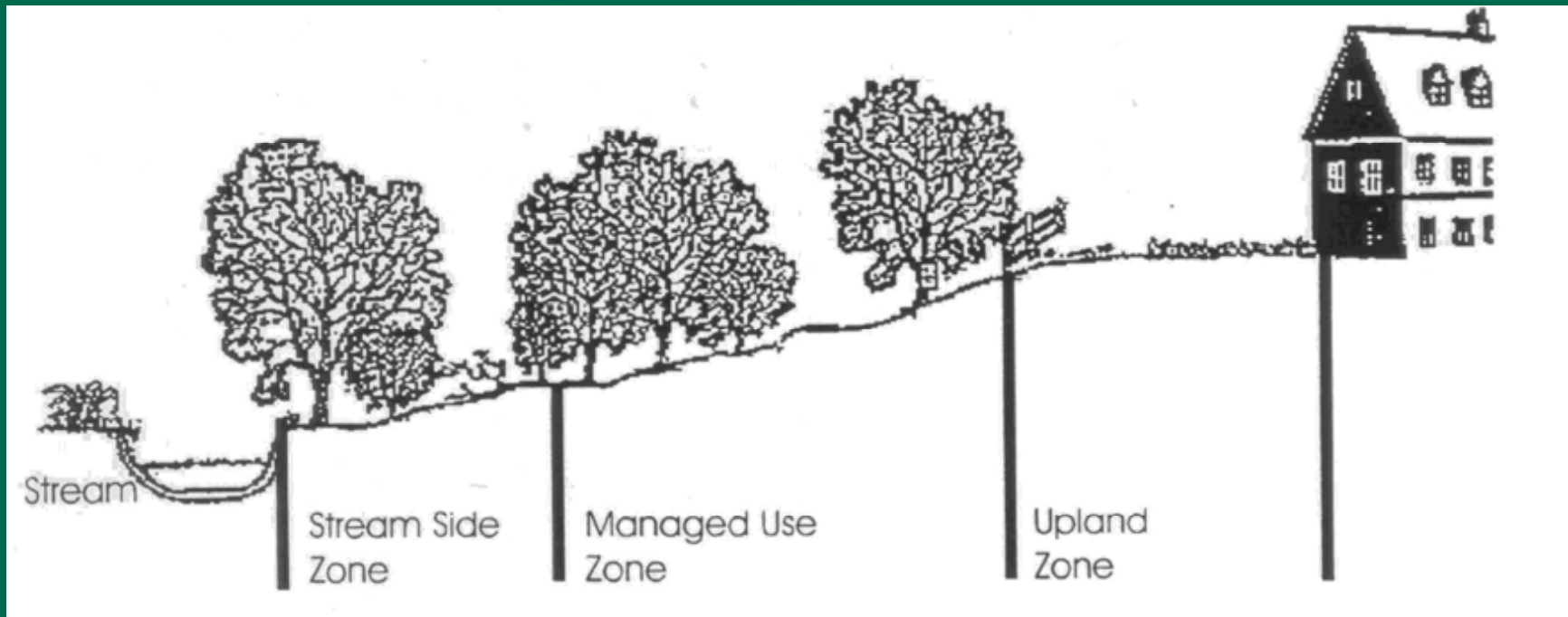
Development and Redevelopment on a lot less than one (1) acre in size measured in accordance with Section 106(H) is allowed by right to forego meeting the requirements of this ordinance provided the City is paid a mitigation fee according to rates set forth in the Administrative Manual and provided such 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.

Central & Western Catawba Watersheds

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





Lower Lake Wylie Watershed Buffers

- **Lower 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)	< 20% Low Density	50 Feet
	< 50% - High Density	100 Feet

Mountain Island Lake

Upper Lake Wylie: WS-IV

Critical Area (100' buffer)

Protected Area

Unregulated Area

Lower Lake Wylie: WS-V

Critical Area

Buffer 100' High density

Buffer 50' Low density

Protected Area

Buffer 100' High Density

Buffer 40' Low Density

Unregulated Area

City Limits

Upper Lake Wylie

Ordinance adopted June 1994

**Lower Lake Wylie
Critical Area**

1/2 mile from normal pool

**Lower Lake Wylie
Protected Area**

*from Critical Area to
edge of watershed
not to exceed
5 miles*

*Lower Lake Wylie Water
Supply Watershed
Protection Area*



Miles



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- Questions?



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- **Citizen Advisory Group Meeting #3**
 - September 17, 2009
Natural Environment (cont.)



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Thank You!

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