Mayor Patrick L. McCrory	Mayor Pro Tem Susan Burgess
Michael Barnes	John W. Lassiter
Nancy Carter	Don Lochman
Andy Dulin	James Mitchell, Jr.
Anthony Foxx	Patrick Mumford
Patsy Kinsey	Warren F. Turner

CITY COUNCIL WORKSHOP

Tuesday, September 4, 2007

Room 267

5:00 p.m.	**Dinner**
5:15 p.m.	**Suggested Modifications to the Council Annual Retreat**
5:45 p.m.	**Environment and Economic Development: General Development Policies: Environment and Infrastructure**
6:15 p.m.	**Environment Committee's "Blue Sky" Ideas for Council Guidance**
6:35 p.m.	**Economic Development: Planning, Design and Construction Contracts for Capital Projects**
7:00 p.m.	**Economic Development: Small Business Development Program Participation in CMU Construction Contracts**
7:30 p.m.	**Citizens' Forum** **Room 267**
	Adjourn

COUNCIL WORKSHOP
AGENDA ITEM SUMMARY

TOPIC: Suggested Modifications to the Council Annual Retreat

STAFF RESOURCE: Curt Walton, City Manager

KEY POINTS:

Staff recommends the Mayor and Council consider the following relative to the annual retreat:

- Continue development and review of Council focus areas at the annual retreat
- Modify the priority-setting process to make priorities more specific, while limiting the number of priorities
- Continue use of a retreat planning committee
- Establish the first Wednesday, Thursday and Friday of February as the standing dates for the annual retreat
- Formalize the practice of even-year retreats being out of town and odd-year retreats being in town
- Continue review of the City's overall financial picture

COUNCIL DECISION OR DIRECTION REQUESTED:

City Council may choose to:

- Take no action on the suggested changes
- Refer the item to Restructuring Government for further discussion
- Place the item on the September 10th agenda for action

ATTACHMENTS:

Draft Agenda Item should Council choose to consider changes

. Mayor and Council Annual Retreat Process

Action:	Consider modifications to the annual retreat process relative to policy development and logistics

Staff Resource: Curt Walton, City Manager

Background

- The Mayor, Council and key staff have used an annual retreat process for many years to confirm focus area plans, develop yearly priorities and discuss the City's overall financial position.
- A Retreat Planning Committee has traditionally been appointed by the Mayor in November/December to begin planning the annual retreat in January/February. Staff believes the actions outlined below will strengthen the work of the Retreat Planning Committee and enhance the results of the annual retreat.
- Traditionally, retreats in even calendar years have been held at out-of-town locations and at in-town locations during odd calendar years.

Explanation

- It is recommended that the Mayor and City Council consider changes to the logistical and policy development components of annual retreats.
- The changes are recommended for the following reasons:
    - Provide as much advanced planning as possible for annual retreats
    - Allow the Mayor and Council members the maximum time to consider focus areas and to determine priorities
    - Provide the Mayor and Council with the most in-depth financial overview as possible
    - Secure the best possible locations for annual retreats
    - Secure the best possible facilitators for annual retreats
    - Reduce the facility costs of retreats by making location decisions earlier and interjecting competition into the negotiation process for facilities and facilitators
- Recommendations for change fall into two categories: Policy Development and Logistics

<u>Policy Development Recommendations</u>

1. <u>Continue development and review of Council focus areas at the annual retreat</u>. The recommended process for focus areas would be:
    a. Staff presentation of the draft focus area plans to the appropriate Council committee in January.
    b. Introduction of the focus area topic by the appropriate committee chair at the annual retreat, followed by staff presentation and Council discussion of the draft focus area plans.

c. Referral of the draft focus area plans back to Committee following the retreat, with subsequent Committee recommendation.
d. All focus area plans come back with a Committee recommendation to a business meeting agenda in March for review and approval.

2. Continue identification of Council priorities at the annual retreat under a new format.
    a. The facilitator would meet individually with the Mayor and Council members in December and January to determine the priority issues.
    b. The facilitator would compile priority issues for presentation and discussion at the annual retreat.
    c. At the retreat, the Mayor and City Council would narrow those priority issues and/or initiatives to a small number, preferably 3, and state those as the City's priorities. It is recommended that the priorities not be a restatement of the focus areas, but rather specific issues or initiatives around which the Mayor and Council want to ensure action over the next two years. This is more in keeping with how priorities were established in the 1990's (when there were priorities such as the vintage trolley, the Eastside strategy plan, the Westside strategy plan, criminal courts expansion, etc.). However, priorities in any given year grew to ten or more by 1999, which is when priorities as a sub-set of focus areas emerged. Neither the financial nor the staff resources were available then or are available now to make a make significant progress on that many initiatives.
    d. The priorities identified at the retreat would be placed on a regular business agenda in March for review and approval. Priority implementation plans would be presented as part of the Manager's Recommended Budget in May.

3. Continue use of the retreat planning committee.
    a. The committee has traditionally been appointed by the Mayor and includes the Mayor and three Council members.
    b. The committee has traditionally selected the facilitator and the location and develops the retreat agenda.
    c. Staff requests that use of a retreat planning committee continue and that this committee be appointed as early in November as possible.

Logistical Recommendations

1. Establish the annual retreat date as the first Wednesday, Thursday and Friday in February of each year, with 2:00 pm Wednesday through noon on Friday as the targeted time frame. For 2008, that would be February 6, 7 and 8. Establishing a common date will allow the staff to bring the retreat planning committee options for both facilitators and locations at better negotiated prices. It will also allow the dates to be posted on the Council calendar earlier to avoid scheduling conflicts with other community events.

2. Formalize the practice of even-year retreats being out of town and odd-year retreats being in-town. Establishing this as the approved practice facilitates identification of potential retreat locations earlier, which reduces the cost and expands availability.

COUNCIL WORKSHOP
AGENDA ITEM SUMMARY

TOPIC: General Development Policies – Environment and Infrastructure

COUNCIL FOCUS AREA: Environment and Economic Development

STAFF RESOURCE: Jonathan Wells and Garet Johnson, Planning Department

KEY POINTS:

- Staff has completed draft policies for the next two chapters of the *General Development Policies* document – Chapter V: Environment; and Chapter VI: Infrastructure.

- The policies for both chapters were developed with the assistance of interdepartmental/ agency staff teams, as well as citizen advisory/stakeholder groups. A public meeting is scheduled for September 12, 2007 to present the draft policies to the community.

- The purpose of the Environment policies is to minimize impacts of land use and land development on the environment.

- The purpose of the Infrastructure policies is to more closely link land use and land development decisions to the availability of public infrastructure needed to support it.

- Staff is proposing to bring the policies forward for Council review and adoption as follows:
  - Sept. 12: Public meeting (5:30 PM in Room 267)
  - Sept. 18: Public comment with Planning Commission (Planning Committee)
  - Sept. 24: Public comment with City Council
  - Oct. 16: Planning Commission (Planning Committee) recommendation
  - Sept.–Nov: Review and recommendations from Council Committees
  - Nov. 26: City Council Action

COUNCIL DECISION OR DIRECTION REQUESTED:

- Council previously referred the General Development Policies for Environment to Council's Environment Committee at their August 28, 2006 business meeting.
- Refer Draft General Development Policies for Infrastructure to Council's Economic Development and Planning Committee for review.
- Set date of September 24, 2007 for Council to receive public comment on the Environment policies and the Infrastructure policies.

ATTACHMENTS:

Draft General Development Policies for Environment
Draft General Development Policies for Infrastructure

DRAFT

Chapter V: Environment

General Development Policies

GDP

Transit Station Area Principles

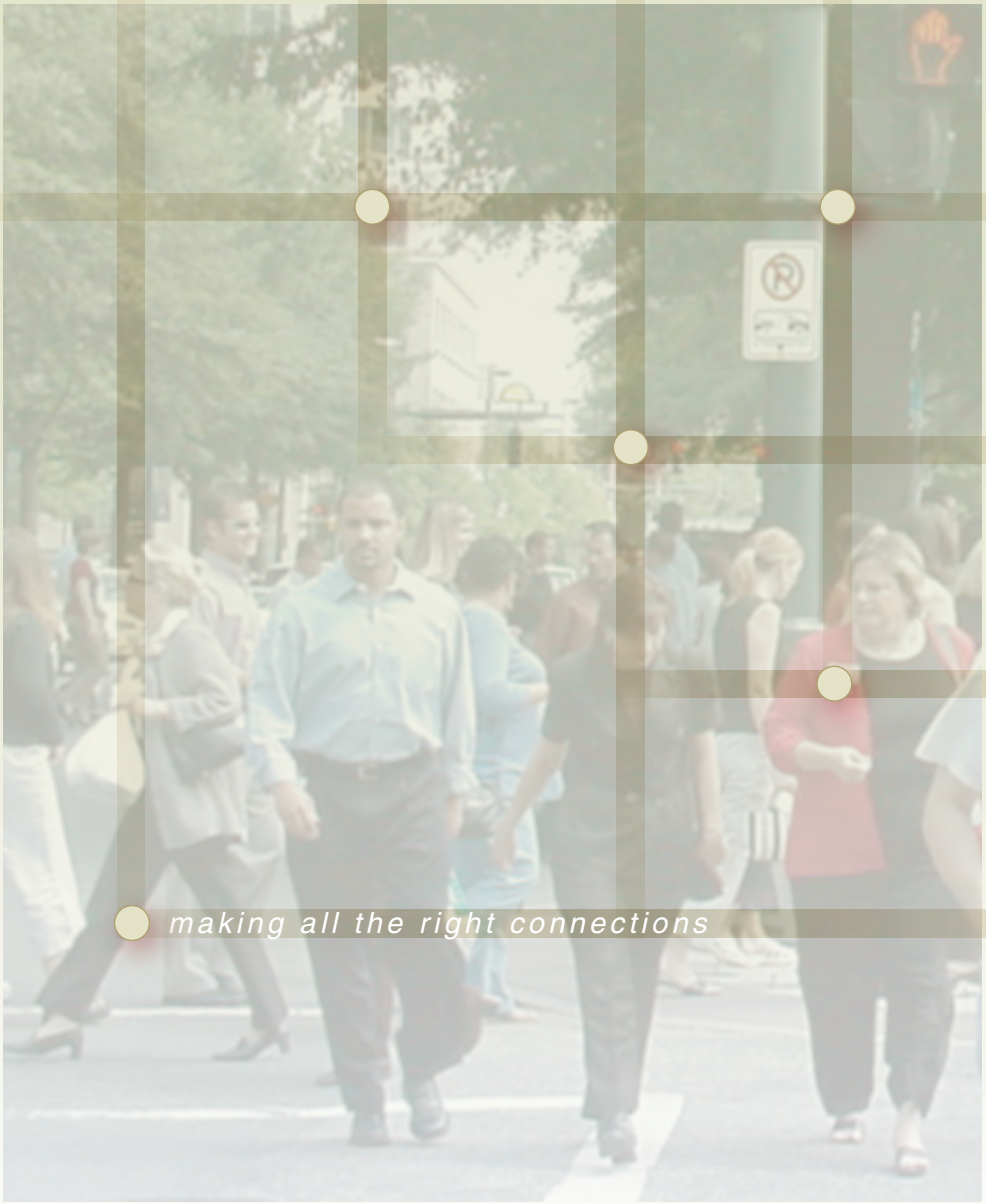
Residential Location & Design

Retail-Oriented Mixed / Multi-Use Centers

Plan Amendment Process

Environment

Infrastructure



Future Update

Future Update

Future Update

Future Update

Future Update

making all the right connections

Charlotte-Mecklenburg Planning Department August 2007

Acknowledgements

The Charlotte-Mecklenburg Planning Department acknowledges and thanks the following citizens who contributed to and participated in the development of the Environment Chapter of the *General Development Policies.**

Larry Airey
David Allen
Mark Baldwin
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Nancy Bryant
Ron Bryant
Mary Bures
Dottie Coplon
Bill Daleure
Jim Evans
Walter Fields
Jana Finn
Chris Gawle
Todd Glasier
Karla Hammer Knotts
John Highfill
Dan Latta
Lee McLaren
Tim Morgan
Belle Nance
Sylvia Nance
Gray Newman
Bailey Patrick, Jr.
Joe Polite
Sandy Roork
Rick Roti
Nancy Pierce Shaver
Matt Tendam
Gail Thomas
Grady Thomas
Mary Thomsen
David Tibbals
Lawrence Toliver
Christa Wagner
Susan Yates
Martin Zimmerman

**Approximately 125 people were included in stakeholder meeting notifications and other communications throughout the process. Those stakeholders listed by name above, attended at least ¼ of the stakeholder meetings.*

General Development Policies

The Charlotte-Mecklenburg Planning Department has worked with an interdepartmental staff team and a group of citizens representing neighborhood and development interests, to update the City's General Development Policies (GDP).

The first phase of the update process included policies addressing four priority topics:

- Transit Station Area Principles — adopted in November, 2001
- Residential Location and Design — adopted in November, 2003
- Retail-Oriented Mixed/Multi-Use Centers — adopted in November, 2003
- Plan Amendment Process — adopted in November, 2003

Phase two of the update includes draft policies addressing two additional topics:

- Environment — under review, August, 2007
- Infrastructure — under review, August, 2007

Once the phase two policies are adopted, they will be incorporated into a single document with the phase one policies.

This current document includes proposed revisions to overall GDP goal statements; the draft Environment Chapter of the GDP; and associated appendix information.

Charlotte-Mecklenburg Planning Department

Draft

August 2007

The following goals were adopted by City Council in 2003 as part of the first phase of the GDP. As each successive "chapter" of the GDP is developed, the goals will be reviewed, and revised if necessary, to reflect and guide the policy framework provided by the addition of that chapter. Proposed revisions to the goals to better represent the focus of the work on the Environmental policies are indicated by underlined text in the box below.

Goals of the GDP

The intent of the land use policies discussed in this document is to achieve certain key goals by enabling appropriate, quality development in the rapid transit corridors (South/Northeast, Southeast, West and North) and at major activity centers/transit hubs. Additionally, the policies provide guidance to ensure that development outside of the corridors is equally appropriate, well-designed and consistent with the long-term goals of the entire community. The GDP help guide development to achieve these important community goals:

1. Provide a broad range of housing, employment, leisure and educational opportunities throughout the community.
2. Foster long-term neighborhood and economic viability.
3. 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.
4. Create well-designed communities that are interconnected; well-maintained; have adequate open space; are accessible to public facilities and services; promote healthy lifestyles; respect the natural environment and offer a variety of transportation choices.
5. Integrate land use and transportation.
6. Support the centers and corridors land use vision by focusing higher intensity development in transit station areas and key activity centers.
7. Encourage a more compact, multi-use development pattern, including appropriate infill and redevelopment, to enable people to live, work and shop in close proximity.

V.

Environment

Definition and Purpose

> ► *Purpose of the Environmental GDP: Minimize negative environmental impacts of land use and land development.*

As one of the fastest growing cities in the U.S., Charlotte is particularly vulnerable to the impacts that growth and development can have on the natural environment. This chapter of the GDP is intended to provide direction to help accommodate growth and change without undermining the environmental systems on which we depend, including the quality of our air, water and land.

It is increasingly being recognized that livability and the quality of life – including economic vitality – is tied to the quality of our physical environment. A healthy environment enriches our quality of life and can give us a competitive advantage in economic development.

A healthy environment can give us a competitive advantage in economic development.

This Environment chapter is therefore intended to give guidance to City Council, staff and the broader community in acknowledging environmental factors in decision-making and day-to-day operations. Environmental concerns cover a broad spectrum and may include a variety of issues. This Environment chapter focuses on those issues that are directly related to land use and seeks to address the interrelated impacts of growth and development on our air, land and water resources.

In practice, these environmental policies will help guide staff recommendations and City Council action on a variety of initiatives including land use policies and plans, development proposals, rezoning petitions, regulatory and process changes and the design and construction of public projects. In addition, the environmental policies can help in establishing priorities and guiding coordinated action among City departments, referred to as Key Businesses, in a way that uses the City's resources to maximum advantage in protecting our community's environment.

The City already has various policies and regulations that address environmental concerns related to land use and development and is in the process of adopting others, including the Post Construction Controls Ordinance. This Environment chapter is not intended to replace such policies and regulations. Rather, it is intended to address those issues related to environmental impacts of land use and development that are not adequately addressed by existing and proposed policies and regulations.

> ► *Thoughtful implementation of these environmental polices will result in a healthier urban environment.*

Since the mid-1990s, most U.S. cities of comparable size to Charlotte have embarked on vigorous environmental programs, going beyond traditional regulatory functions to more far-reaching programs in recognition of the importance of the environment to quality of life. Fundamentally, there is a wide acceptance of the notion of "environmental stewardship" and a growing awareness of the concept of living in our "ecological footprint" or "ecological carrying capacity" – meaning, simply, that the earth's resources are limited, we should use no more than we need, and we should replenish what we use for the next generation. The City of Charlotte is in a position to exercise leadership in that regard for our community. The environmental policies of the GDP will help provide a framework for that leadership in terms of land use and development.

Planning Context

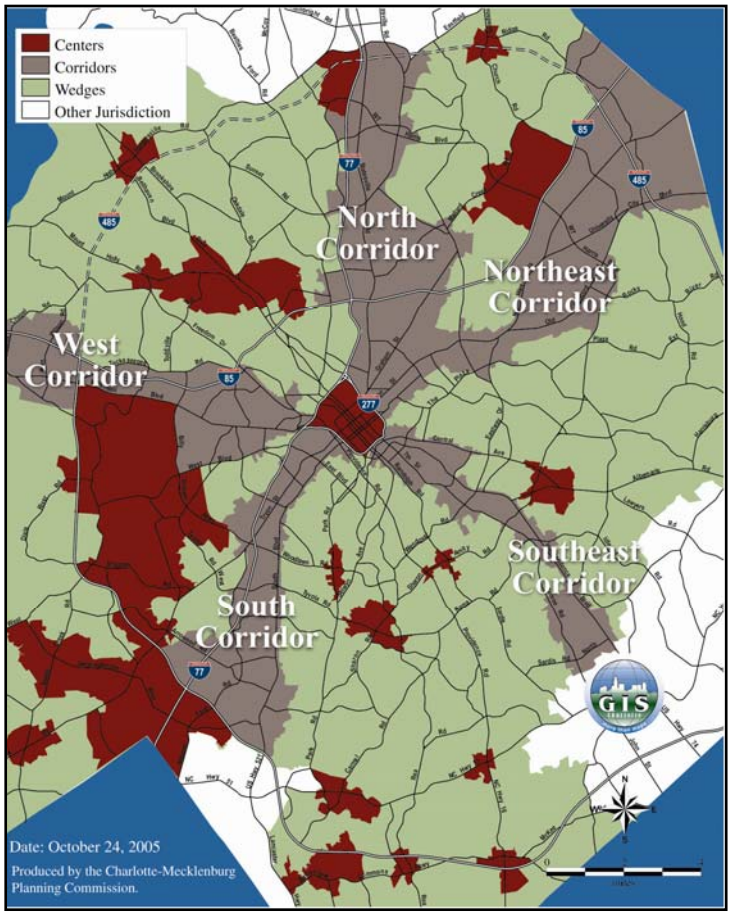
> ► *The vision for the City of Charlotte is to be an urban community of choice for living, working and leisure.*

The *Centers, Corridors and Wedges Growth Framework* was originally introduced in the early 1990s and reaffirmed in 1997 with the adoption of the *2015 Plan*, as a key tool to guide future growth. *Centers, Corridors and Wedges* is intended as a framework for organizing and managing growth to help ensure that development happens in a way that enhances the community and contributes to its character and identity.

Centers, Corridors and Wedges is discussed in the introduction of this GDP document. However, it is currently being revisited to provide an updated growth strategy for the community that focuses on strengthening the ties between land use and transportation networks; promoting more efficient use of existing infrastructure systems; and, establishing a context for addressing land use and economic development issues. The framework is intended to help the City of Charlotte achieve the vision of becoming an urban community of choice for living, working and leisure.

Policies and principles have been created as part of the *Centers, Corridors and Wedges* update which focus on various "characteristics" in three distinct geographies - activity centers, growth corridors and wedges – by providing guidance relative to land use, transportation systems, infrastructure and urban design. These characteristics help define and differentiate the unique conditions found in the activity centers, growth corridors and wedges, and may be used to better determine where population and infrastructure improvements can be targeted within these areas.

From an environmental perspective, *Centers, Corridors and Wedges* is especially important because it facilitates a more compact development pattern that not only helps to make more efficient use of land, but also encourages the use of alternative modes of transportation and increases the potential for conservation of open space.



A thoughtful growth strategy will ensure that development happens in a way that enhances the community and contributes to its character and identity.

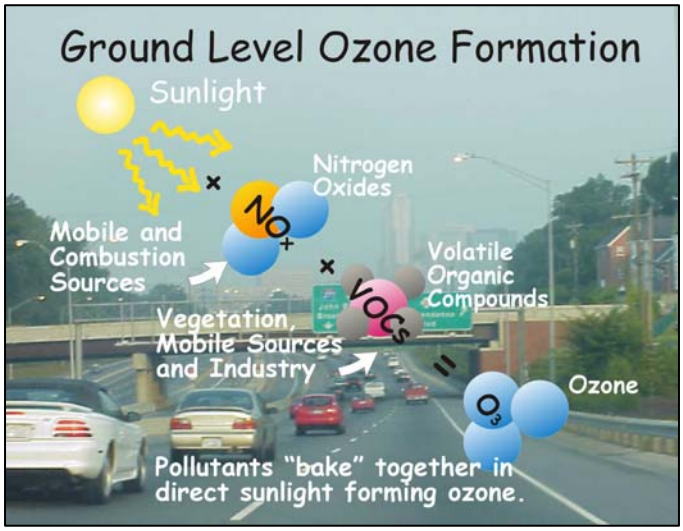
Existing Conditions and Trends

The Mecklenburg County Land Use and Environmental Services Agency (LUESA), biennially, develop a report that summarizes the environmental conditions of the Charlotte area's air, land and waters. Unless noted otherwise, the existing conditions and trends information provided in this section was extracted from the 2006 edition of that report, the *State of the Environment Report (SOER).* The example strategies, while not included in the *SOER*, are generally accepted as ways to address the various environmental issues identified.

Air Quality

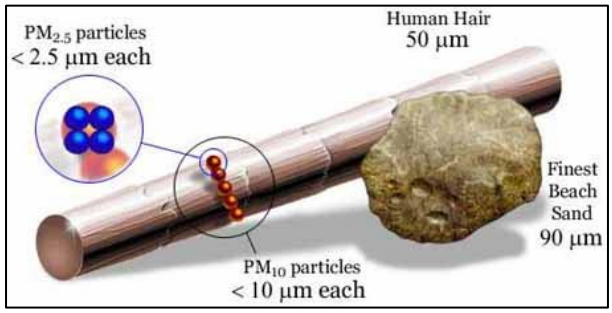
While a number of air pollutants are monitored in the Charlotte area, ozone and fine particulate matter are of the most concern because their concentrations locally are closest to the limits set by the U.S. Environmental Protection Agency (EPA).

Ozone is not emitted directly into the air. Rather, it is formed by the reaction of volatile organic compounds (VOCs) and oxides of nitrogen (NOx) in the presence of heat and sunlight. Local sources of VOCs and NOx include mobile sources such as cars and trucks, as well as stationary sources like power plants and manufacturing facilities.



The EPA's standard for ozone is based on an 8-hour average daily concentration measured from April 1st through October 31st. Since the 1980s, Charlotte has consistently exceeded the 8-hour ozone standard and, as a consequence, in 2004 the EPA designated the Charlotte area (8-county region) as an ozone "non-attainment" area. For the past three years, the value used to determine compliance with the EPA standard has decreased, possibly as a result of favorable weather conditions (i.e., cool and wet). However, ozone concentrations were still approximately 4% above the 8-hour standard in 2005.

Since the EPA's standards for ozone and other pollutants are based upon public health and welfare thresholds, this means that multiple days a year the air is unhealthy to breathe.



Particulate matter refers to a mixture of solid particles and liquid droplets found in the air. Some particles are large enough to see as dust or dirt. Others can only be seen with a microscope. Particulate matter includes primary particles such as dust from roads or soot from combustion sources emitted directly in to the atmosphere. It also includes secondary particles which are formed in the atmosphere from primary gaseous emissions such as nitrates formed from NOx emissions from power plants and automobiles. Particulate matter compounds air quality issues, which is a concern for Charlotte since it hovers near the standard for PM 2.5, which are the fine particles less than or equal to 2.5 micrometers in diameter.

Changes in federal and state regulations such as those recently proposed by the EPA to strengthen the ozone standards by reducing the parts per million standards will, hopefully, compel needed reductions in both ozone and particulate matter over time. However, local action is also needed now to ensure both the attainment of standards and the continued improvement of Charlotte's air quality.

Mobile sources of pollutants, primarily automobiles, are the main culprit for Charlotte's air quality problems. Therefore, improving air quality is directly contingent upon reducing the

time and distance individuals spend traveling in automobiles, also called vehicle miles traveled (VMT) per capita. Some strategies to reduce VMT per capita include:

- providing a mixture of well-connected land uses at appropriate locations;
- filling in vacant land or redeveloping underutilized parcels;
- locating development to take advantage of existing infrastructure and services;
- facilitating use of alternative modes of transportation, including bicycling, walking and riding transit; and
- shortening travel distance by increasing street connections.

Water Quality

Mecklenburg County has over 3,000 miles of streams and 197 miles of lake shore. However, during 2003-2004, the Mecklenburg County Water Quality Program calculated that only 33 percent of the monitored streams were suitable for prolonged human contact. Point and non-point sources of pollution are problematic for the Charlotte's water resources; however, non-point sources of pollution are the hardest to combat.

Non-point sources of pollution are associated with storm water run-off. In urbanized areas, large expanses of impervious surface, such as roads and parking lots, force storm water into drains and ditches. As the water runs off the land, it carries with it pollutants and sediment, which degrade water quality in destination streams and lakes. Furthermore, channelized drainage causes the water to move faster, eroding stream banks and picking up more sediment. According to the *2004 State of the Environment Report*, an estimated 20 percent of Mecklenburg's 530 square miles was covered by impervious surfaces – a number projected to grow – so if water quality is to improve, non-point pollutants need to be addressed.

Strategies for reducing the impact of non-point pollution on water quality include:

- minimizing impervious surface area;
- improving the quality of stormwater run-off; and
- reducing erosion and sedimentation.

Land Use

As Mecklenburg County becomes more urban, its land resources are threatened. According to US Census data, from 1960 to 2000, Charlotte's population grew 168%. Also during this time, Charlotte's land area increased by 274%, suggesting land consumption is far outpacing population growth. With land consumption, often comes loss of environmental features, which are critical to ecosystem function and quality of life. For example, according to American Forests, between 1984 and 2003, Mecklenburg County lost 35% of its tree canopy, an asset vital for natural habitat, water quality and energy efficiency. As a result of this rapid growth, two issues in particular relating to land use confront Charlotte: 1) How can we make the most efficient use of our land? And 2) How can we preserve key natural features and protect environmentally sensitive areas?

Applicability

The policies contained in this chapter apply throughout the City of Charlotte, as well as the area it can eventually annex (its extraterritorial jurisdiction). The policies will be used to provide direction in addressing environmental impacts of development when developing future land use plans as well as in making rezoning decisions. They will also give direction in updating zoning and subdivision ordinances, and other regulations.

Following adoption of the Environmental GDP, the intent is to include specific guidance and recommendations in area plans to address environmental impacts of land use and development. The area plans, in most cases, would enhance and supersede the GDP guidance. Where the GDP and a specific area plan (that predates the GDP) are in conflict, the more rigorous guidance will take precedence.

The conditional rezoning process provides a tool to implement many of the environmental policies. However, the conditions attached to a conditional zoning district (CD) plan are agreed to voluntarily by the petitioner. The petitioner ultimately decides which requests to include on the site plan for the rezoning approval.

Guiding Principles

Charlotte Mecklenburg is endowed with an abundance of natural resources, including trees, streams and rivers, lakes, wetlands, wildlife and natural beauty. Increasingly, development impacts are threatening the quality of the natural environment that makes Charlotte a special place to live and work. Recognizing that environmental protection represents prudent stewardship of land and good business, the City of Charlotte embraces the following principles to guide future growth and development:

1. ***Make the protection of our natural environment a priority in land use and development decisions.***
2. ***Facilitate a land use pattern that accommodates growth while respecting the natural environment.***
3. ***Promote and enable environmentally sensitive site designs.***
4. ***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 the other land development considerations.***

Policies

GUIDING PRINCIPLE 1: Make the protection of our natural environment a priority in land use and development decisions.

POLICY 1.a: Support local and regional efforts to inventory natural features to enable identification and protection of environmentally sensitive areas.

The intent of this policy is to support proactive identification of environmentally sensitive areas to provide better guidance for acquisition and protection, and to determine where more environmentally sensitive land use and development practices are especially warranted. Identifying environmentally sensitive areas will be important to do at a regional scale, especially to facilitate linking these areas across jurisdictional boundaries. But, it will also be important that this information is available and utilized at a local level.

Data from the *Open Space Framework Plan* and City/County GIS information can be used as the foundation for a local and regional inventory of natural resources. However, the data should be enhanced with additional information and continually updated. The intent is to present the most accurate information possible to provide the foundation for sound decision making. Implementation of this policy will likely require additional funding/resources to enhance current data and to delineate areas of highest environmental sensitivity.

POLICY 1.b: Identify environmentally sensitive areas in land use plans and development proposals and address how they will be protected or mitigated.

Environmentally sensitive areas are characterized by the presence of natural features such as significant wetlands, streams and floodplains; tree canopy; and/or topography and are not limited to those addressed by existing ordinances and regulations. The following guidance should be used to determine if the natural feature is of a significance to protect and/or mitigate:

1. Could it link to existing or future protected sites or undisturbed areas?
2. Does it have rare or unique habitat or features?
3. Is there a diversity of species present?
4. Is it identified on an adopted plan as an area of environmental concern?
5. Does it have multiple environmental benefits?

A “yes” to all of these questions is not needed for a feature to be environmentally significant. However, the more “yes” answers certainly heightens the probability of significance.

In addition to the five guidelines listed above for determining the significance of natural features, when considering topography, the concern is especially with naturally occurring slopes, particularly near water, that are of sufficient height and steepness to cause problems such as accelerated erosion or increased flooding when disturbed.

The intent of this policy is to better understand the existing environmental conditions and to ensure that plans for future development can minimize potential impacts to the natural environment. This includes protection/ mitigation of the natural feature and, even more importantly, the characteristics that make it environmentally significant. Further, the intent is to allow the potential impacts to the various aspects of the natural environment to be evaluated concurrently to better understand any potential trade-offs.

Identification and protection of environmentally sensitive areas in land use plans (i.e., small area plans) will typically be at a broader scale, providing less detail than can be achieved in a specific development plan. Additionally, while both the land use plans and development proposals may propose various alternatives for protecting or mitigating environmentally sensitive areas, the land use plans typically will not "choose" among the alternatives. Thus the land use plans will provide flexibility for when the property is actually proposed for development or redevelopment. A development plan, on the other hand, will identify which of the various alternatives will be utilized to address the impacts.

The implementation of this policy should recognize that, when feasible, protection is typically preferred over mitigation. The protection and/or mitigation of an environmentally sensitive area may be influenced by the conditions of the watershed in which it is located. Implementation should include additional research on ways to protect the natural environment (such as incorporating environmentally sensitive areas into required open space; providing undisturbed buffers for natural features; public purchase for parks/nature preserves; conservation easements; and dedication to home owner's associations or parks), as well as on developing innovative techniques for mitigating impacts. Additionally, implementation of this policy will require that our current environmental data be continuously refined and updated.

POLICY 1.c: Consider environmental opportunities and constraints, including watershed conditions, when identifying appropriate future land uses in area plans.

Although Policy 1.b provides guidance for addressing environmentally sensitive areas in land use plans, Policy 1.c seeks to better integrate consideration of environmental conditions when determining future land uses in the area planning process. For example, if greater emphasis is placed on these conditions in the area planning process, it is more likely that areas with constraints (such as significant topography and hydrology, groundwater contamination, or voluntary deed restrictions) would be recognized and the most compatible type of future land use could be identified.

Additionally, land use plans should recognize that within Charlotte's sphere of influence there are several watersheds (Yadkin, Central Catawba, etc), at varying stages of development, that provide a variety of uses (endangered species habitat, recreation, drinking water). These differences may require distinctive development patterns and land uses. Land use plans should identify a development vision appropriate for the watershed and guide future development recognizing the cumulative impacts on water quality.

POLICY 1.d: Provide the education, information and outreach to facilitate the successful implementation of environmental policies.

The intent is to raise the awareness and understanding of the importance of our natural environment (including air, land and water) and how it can be protected, and to provide a broader context for communicating the GDP.

Part of implementing this policy should be providing a better understanding of how various policies and regulations can work together, rather than at cross-purposes to ensure environmental protection. Also part of this policy should be to seek out partnerships to provide information and assistance to ensure the ongoing management of natural areas within developments. While protected and restored natural areas generally require much less maintenance than conventional landscapes, basic maintenance functions may not be familiar to many property owners. Additionally, property owners may not understand the value of protecting the natural areas. Therefore ensuring that ongoing management is successful could include such things as partnering with the private sector to provide property owners with educational material or assisting in establishing an institutional structure for long-term permanent management of the site.

POLICY 1.e: Target environmentally sensitive areas when acquiring land for public protection.

Land acquisition for public purposes that provide an opportunity for protection of environmentally sensitive areas should focus on such areas. Examples of such public purposes could include passive parks; nature preserves; greenways; and cultural heritage, natural heritage or historic sites.

GUIDING PRINCIPLE 2: Facilitate a land use pattern that accommodates growth while respecting the natural environment.

POLICY 2.a: Pursue strategies to encourage and facilitate redevelopment of abandoned/underutilized sites and development of vacant sites in built up areas (infill).

A greater emphasis on infill and redevelopment that is designed to be environmentally sensitive and is located appropriately will help to: 1) accommodate some growth that might otherwise spread out to undeveloped areas; 2) reduce the growth in vehicle miles traveled (VMT) per capita; and, 3) improve on-site environmental conditions.

It is particularly important that infill and redevelopment be located where it can be served by existing and/or planned infrastructure and services and that it be designed to be integrated with and connected to the surrounding area. Additionally, improving the existing site conditions (e.g., removing hazardous materials, adding trees and vegetation, removing impervious areas like large surface parking lots) should be emphasized in redevelopment projects. One way to make sure sites with groundwater contamination are safe for redevelopment is to utilize the Brownfields program if the project is eligible.

While infill and redevelopment are both valuable strategies for ensuring efficient use of land, redevelopment can be even more desirable when the project improves existing conditions. This distinction should be made in prioritizing redevelopment strategies, particularly in providing any incentives.

POLICY 2.b: Facilitate the incremental development of well-designed and well-connected mixed/multi-use development in appropriate locations.

Existing policies and regulations already provide direction for achieving a complementary mix of land uses within the same building and/or on the same site, which has been identified as a strategy to help reduce both VMT and land consumption per capita. However, while achieving such a mix within the same building and/or on the same site is often ideal, a similar outcome can be achieved incrementally as single uses are developed if they are: 1) located so they are consistent with adopted land use plans and can be served by a variety of transportation modes; 2) complement existing and/or planned land uses to create a compatible mixture in the immediate area; and 3) are designed to be integrated with and connected to each other and the surrounding area.

Enhancing the guidance provided in area plans for mixed/multi-use development and non-residential development will be a key tool to help facilitate this type of "incremental mixed-use." This type of development can help to reduce the length, and possibly the number of automobile trips that people make to work, shop and recreate. It may also help to reduce the amount of land and/or impervious area needed to provide supporting infrastructure and services.

POLICY 2.c: Encourage more of our new development to be located where transportation facilities, public utilities and services already exist, or are planned, to minimize impacts to undeveloped areas.

Focusing development where it can best be supported by existing and planned infrastructure and services can help to make the most efficient use of infrastructure and land. On a per capita basis, this can help to reduce VMT, land consumption, impervious surface and land disturbance, resulting in less impact on the natural environment.

POLICY 2.d: Encourage partnerships (e.g., joint use) to enable the sharing of both public and private facilities.

Sharing of facilities has the potential to reduce land consumption and impervious area by making more efficient use of land, buildings and parking. An example of such a joint use might be a church and an abutting office building sharing some parking. Since the two uses have different periods of peak usage, the needs of each could be accommodated together, with less overall impervious surface.

POLICY 2.e: Integrate plans for existing and future bus routes/service improvements and expansions with adopted future land use plans.

The ability to serve future land uses with CATS bus service has become a key consideration in the development of land use plans. However, adopted future land uses have yet to be given similar importance in the development of future bus routes/service improvements.

The intent is to provide CATS bus service to areas planned for higher density development and other land uses particularly supportive of transit. In addition, the intent is to make sure the development and surrounding area are designed to support air quality goals and to make it easy for people to use the bus service (i.e., conveniently located bus stops/shelters, safe walkways and crosswalks, direct connections).

POLICY 2.f: Ensure that public facilities (including schools, parks, libraries, recreation facilities, etc.) are well connected to the surrounding area and to each other and take advantage of joint use opportunities.

The intent is not only to make it easy for people to walk or bicycle to nearby public facilities, but also to shorten automobile trips to these facilities and to connect them to each other and to transit when possible. Although students often do not live near the schools they attend, these facilities still need to be well connected to the surrounding area as they serve other functions (e.g., meeting rooms, events, playgrounds, tracks, voting) for area residents. If public facilities are located together (joint use), they may be able to make more efficient use of the site as well as reduce the need for people to make multiple trips to various facilities.

In addition to making sure public facilities are well connected, it will also be important from a VMT perspective to ensure that there are a sufficient number of such facilities and that they are located appropriately to serve the population without necessitating long automobile trips.

GUIDING PRINCIPLE 3: Promote and enable environmentally sensitive site designs.

POLICY 3.a: Enable site designs and construction practices that: 1) facilitate the use of alternative modes of transportation and the reduction of ground level temperatures; 2) minimize impacts to natural features; 3) reduce the amount and improve the quality of stormwater run-off; and 4) use water efficiently.

The intent of this policy is to consider and minimize onsite environmental impacts from development during the site design process. Identifying the characteristics of environmentally sensitive site design takes the "guess work" out of the site design by specifying what should be addressed up front, while allowing flexibility on how it will be addressed. Below is a list of some characteristics of environmentally sensitive site design. Not all characteristics are applicable in every development. Applicability is dependent on the type, intensity and location of the development.

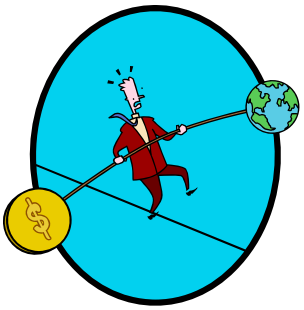
- Preserves and/or restores environmentally sensitive areas and connects them to other significant natural features as much as possible and integrates them into the development when appropriate,
- Minimizes impervious surfaces, including building footprint and parking area.
- Uses low maintenance native vegetation as much as possible.
- Shades constructed/impervious surfaces (e,g, with landscaping) and/or considers replacing them with vegetated surfaces.
- Emphasizes pedestrian mobility, comfort and safety.
- Facilitates conservation of water, energy and other natural resources
- Seeks to minimize the amount and improve the quality of storm water run-off
- Minimizes site disturbance and related erosion and sedimentation.

Part of implementing this policy will be to ensure that existing ordinances and regulations result in environmentally sensitive site design and construction practices; that staff, citizens and elected/appointed officials understand the importance/purpose of the various regulations; and that the ordinances and regulations have enough flexibility to ensure that unique circumstances and/or specific site constraints can be addressed in the most appropriate manner. Encouraging the use of innovative design solutions, materials and construction practices should also be part of implementing this policy.

POLICY 3.b: Minimize impacts to the City's tree canopy to allow it to flourish and to be a healthy and viable part of our environment.

Although protection/mitigation of the tree canopy is addressed in Policy 1.b in regards to environmentally sensitive areas, the intent of this policy is to ensure tree regulations are adequate to achieve desired results including: 1) making sure trees in parking lots, urban districts and other "hostile" environments can grow to their full potential; 2) ensuring that tree save requirements not only preserve our tree canopy, but also minimize impervious surface; and, 3) promoting opportunities to "revegetate" areas that were previously developed.

GUIDING PRINCIPLE 4: 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 the other land development considerations.



POLICY 4.a: Raise awareness and understanding of the environmental costs and benefits of land development and better incorporate this information into the decision making process.

The intent is to better understand how land use and development negatively impact the natural environment and to determine what can be done to mitigate these impacts. The focus should include awareness of costs and benefits including: tangible and intangible; site specific and overall; public and private; and, short and long term. Health-related impacts should be included in the discussion.

POLICY 4.b: Ensure that implementation of the City's various land development - related policies and regulations minimize the overall environmental impacts that result from the need to accommodate future growth.

The aim is to ensure that when policies and regulations are implemented that the results minimize the environmental impacts of land use and development. In particular, this policy is meant to address the issue of competing interests between various policies and regulations recognizing that area and site conditions may influence how land can be developed. Implementation of this policy will likely require a review of, and changes to existing and proposed policies, regulations and practices.

POLICY 4.c: Ensure that public projects are designed and constructed to minimize environmental impacts.

Recognizing that public projects may be subject to state and federal regulations, in addition to/or instead of local regulations, the intent is to make sure that local public projects also follow or exceed the guidance provided in these GDP.

APPENDIX 2.b

Implementation Tools – Environment

This appendix outlines strategies to help guide staff work in implementing the Environment policies once they are adopted. Many of the strategies listed below will require future City Council direction and approval, particularly those items suggesting changes to existing ordinances and regulations. Such changes will also require additional public input and will typically involve stakeholder group review.

Area Planning

- Use the Centers, Corridors and Wedges growth framework as guidance for developing recommendations in area plans.

- Use existing data layers and enhance with additional information/surveys for the plan area to document the existing environmental conditions. Examples of the types of existing conditions that could typically be addressed in area plans (if data can be made available) include:
    - Topography
    - Tree cover
    - Wetlands, streams and floodplains
    - Undisturbed/natural areas within plan and surrounding area
    - Known rare or unique natural habitats
    - Known rare or unique features
    - Areas with a potential diversity of species
    - Natural heritage sites, parks and nature preserves
    - Protected and/or preserved areas
    - Watershed conditions and drainage pattern
    - Known hazardous sites and/or areas with potential environmental contamination.

- Identify any environmentally sensitive (per Policy 1.b) areas within area plans, to the extent possible, and suggest ways to protect and/or minimize impacts to these areas.

- Fully consider the existing environmental opportunities and constraints when determining the appropriate type, intensity and form of future land use and development in area plans.

- Identify appropriate locations for infill and redevelopment in area plans and provide design guidance to ensure that it occurs in an environmentally-friendly fashion.

- Provide guidance to facilitate incremental mixed use development at appropriate locations within area plans.

- Share future land use plans with CATS operations for consideration in developing County-wide services plans and include CATS staff on area plan development teams and on area plan assessment team. Additionally, ensure that area plans identify the need for providing transit facilities.

Research, Data and Analysis

- Establish a city/county staff team tasked with development and maintenance of an inventory/database of natural features that can be used, in particular, to help identify environmentally sensitive areas. This will likely involve creation of an "environmentally sensitive areas" GIS layer (map).

- Develop a user-friendly guide(s) with information on environmental protection methods, innovative mitigation techniques and characteristics of environmentally sensitive site design.

- Develop tools (i.e., guidelines, checklist) to help determine environmental significance.

- Identify strategies to encourage appropriate infill development and to meet development targets in Centers and Corridors.

Information and Education

- Work with private sector to develop and distribute information to help ensure the long-term appropriate management of environmentally sensitive areas, particularly in residential areas.

- Seek opportunities to educate staff and elected/appointed officials on environmental impacts related to land development.

- Provide information on the various costs and benefits of minimizing environmental impacts of land use and development.

Land Acquisition and Disposal

- Utilize an environmental inventory/geodatabase to target areas for continued public ownership (as opposed to disposal as surplus property) or future public acquisition.

Interagency Communication/Cooperation

- Work with public agencies to identify future facility needs and opportunities for joint use and to ensure that new facilities are located, designed and constructed to minimize environmental impacts. (Parks, Schools, Libraries, Fire, Police, Transit)

Rezoning and Subdivision Process

- Identify areas thought to be environmentally sensitive and recommend ways to protect and/or minimize impacts to these areas through the rezoning and subdivision processes. Include this information in the rezoning staff analysis.

- Fully consider the environmental impacts when assessing development proposals. In particular, consider the existing environmental opportunities and constraints when evaluating the type, intensity and form of the land uses in a development proposal.

Ordinance Changes (zoning, subdivision, tree etc.)

- Add language to zoning and subdivision ordinances to help minimize impacts to environmentally sensitive areas.

- Add characteristics of environmentally sensitive site design into the zoning ordinance as standards for certain districts.

- Review the zoning ordinance to enable "small-scale" mixed-use development and to enhance the ability to implement area plan recommendations (particularly recommendations for mixed-use land uses).

- Review parking requirements in zoning ordinance relative to environmental impacts, particularly looking for ways to reduce parking needs such as making shared parking more appealing/feasible and establishing parking caps in some districts.

- Review tree ordinance to ensure that tree regulations are adequate to achieve desired results. (underway)

Ongoing Policy Review and Alignment

- Review existing policies and regulations to address any inconsistencies or conflicts among them and to ensure they meet intent of GDP to minimize environmental impacts of land use and development.
  - As part of the process of updating the GDP Phase I, incorporate environmental policies as appropriate.
  - Continue work on policy alignment of GDP, draft post construction controls ordinance (PCCO) and draft Urban Street Design Guidelines (USDG) as these are adopted and implemented.

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Transit Station Area Principles (Adopted 2001); Residential Location & Design (Adopted 2003); Retail-Oriented Mixed / Multi-Use Centers (Adopted 2003); Plan Amendment Process (Adopted 2003); Environment (Draft 2007); Infrastructure (Draft 2007)

DRAFT

Chapter VI: Infrastructure

General Development Policies

GDP

Transit Station Area Principles

Residential Location & Design

Retail-Oriented Mixed / Multi-Use Centers

Plan Amendment Process

Environment

Infrastructure

Future Update

Future Update

Future Update

Future Update

Future Update

making all the right connections

Charlotte-Mecklenburg Planning Department August 2007

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General Development Policies

The Charlotte-Mecklenburg Planning Department has worked with an interdepartmental staff team and a group of citizens representing neighborhood and development interests, to update the City's General Development Policies (GDP).

The first phase of the update process included policies addressing four priority topics:

- Transit Station Area Principles — adopted in November, 2001
- Residential Location and Design — adopted in November, 2003
- Retail-Oriented Mixed/Multi-Use Centers — adopted in November, 2003
- Plan Amendment Process — adopted in November, 2003

Phase two of the update includes draft policies addressing two additional topics:

- Environment — under review, August, 2007
- Infrastructure — under review, August, 2007

Once the phase two policies are adopted, they will be incorporated into a single document with the phase one policies.

This current document includes proposed revisions to overall GDP goal statements and the draft Infrastructure Chapter of the GDP.

Charlotte-Mecklenburg Planning Department

Draft

August 2007

The following goals were adopted by City Council in 2003 as part of the first phase of the GDP. As each successive "chapter" of the GDP is developed, the goals will be reviewed, and revised if necessary, to reflect and guide the policy framework provided by the addition of that chapter. Proposed revisions to the goals to better represent the focus of the work on the Infrastructure policies are indicated by underlined text and strikethroughs in the box below.

Goals of the GDP

The intent of the land use policies discussed in this document is to achieve certain key goals by enabling appropriate, quality development in the rapid transit corridors (South/Northeast, Southeast, West and North) and at major activity centers/transit hubs. Additionally, the policies provide guidance to ensure that development outside of the corridors is equally appropriate, well-designed and consistent with the long-term goals of the entire community. The GDP help guide development to achieve these important community goals:

1. Provide a broad range of housing, employment, leisure and educational opportunities throughout the community.
2. Foster long-term neighborhood and economic viability.
3. 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.
4. Create well-designed communities that are interconnected; well-maintained; have adequate open space; are appropriately served by ~~accessible to~~ public infrastructure, facilities and services; promote healthy lifestyles; and offer a variety of transportation choices.
5. Integrate land use and transportation.
6. Ensure that the availability of public infrastructure is considered when making land use and development decisions.
7. Support the Centers and Corridors land use vision by focusing higher intensity development in transit station areas and key activity centers.
8. Encourage a more compact, multi-use development pattern to enable people to live, work and shop in close proximity.

VI.

Infrastructure

Definition and Purpose

The City of Charlotte - like many other communities experiencing growth - is attempting to balance investments in capital infrastructure between maintaining viable systems and expanding systems to accommodate growth and increasing demand. Meanwhile, decisions regarding infrastructure investment are not always well connected to decisions regarding future land use and development. This creates the potential for infrastructure shortfalls which impact the quality of life, particularly within fast-growing areas of the community.

Johnston Road

These Infrastructure GDP are therefore intended to provide guidance to City Council, City staff, and the broader community in recognizing the relationship between infrastructure availability and investments, and land use and land development decisions that will impact the demand for that infrastructure. They can also be used to guide infrastructure providers in enhancing the processes used to project and anticipate infrastructure needs and to identify innovative measures to fund and provide infrastructure to the Charlotte community.

This Infrastructure chapter of the GDP focuses generally on types of infrastructure that can be most directly impacted by development and land use changes, and that may include the following:

- transportation systems
- storm water facilities
- sewer and water facilities
- schools
- public safety facilities
- parks, greenways, nature preserves and recreation facilities.

> ***Purpose of the Infrastructure GDP:*** *More closely link land use and land development decisions to the availability of public* infrastructure needed to support it.

This Infrastructure GDP is intended to be used to:

- help make future land use decisions (both during the land development review process and the area planning process),
- guide the identification, prioritization, and funding of infrastructure projects,
- enhance the levels of collaboration among infrastructure planning providers,

- guide the identification of alternative funding and innovative delivery of infrastructure, and
- help guide the design, location, and construction processes of future infrastructure improvements.

Many communities that are grappling with the issues of growth and the ability to provide the infrastructure to accommodate that growth have enacted laws and ordinances that deal specifically with the land development permitting process. Impact fees, adequate public facilities ordinances (APFO's) and concurrency are the three most common tools applied to the complex relationship between development and infrastructure. The Infrastructure GDP takes a different approach, instead identifying a set of broad policies that certainly deal with the development approval process, but also deal with such diverse issues as:

- the internal City capital investment planning process,
- the various facilities and infrastructure planning initiatives undertaken by different infrastructure agencies,
- the identification of potential new and innovative methods to fund infrastructure,
- the relationship between various infrastructure providers,
- the use of the area planning process and growth framework as a means of identifying and prioritizing future infrastructure investment,
- the impacts upon the environment of infrastructure development, and
- the regional context of infrastructure.

The Infrastructure GDP provide a comprehensive policy framework that can be used to draft appropriate implementation tools to respond to a broad spectrum of the complex issues of development and infrastructure, ranging from land development proposal review, to capital infrastructure planning coordination, to land use planning.

Planning Context

South Boulevard

The *Centers, Corridors and Wedges Growth Framework* was originally introduced in the early 1990's and reaffirmed in 1997 with the adoption of the *2015 Plan*, as a key tool to guide future growth. *Centers, Corridors and Wedges* is intended as a framework for organizing and managing growth to help ensure that development happens in a way that enhances the community and contributes to its character and identity.

Centers, Corridors and Wedges is discussed in the introduction of this GDP document. However, it is currently being revisited to provide an updated growth strategy for the community that focuses on strengthening the ties between land use and transportation networks; promoting more efficient use of existing infrastructure systems; and

establishing a context for addressing land use and economic development issues. The framework is intended to help the City of Charlotte achieve the vision of becoming an urban community of choice for living, working and leisure.

Policies and principles have been created as part of the *Centers, Corridors and Wedges* update which focus on various "characteristics" in three distinct geographies - activity centers, growth corridors, and wedges – by providing guidance relative to land use, transportation systems, infrastructure, and urban design. These characteristics help define and differentiate the unique conditions found in the activity centers, growth corridors, and wedges, and may be used to better determine where population and infrastructure improvements can be targeted within these areas.

From an infrastructure perspective, *Centers, Corridors and Wedges* provides a policy context within which both private development investments and public infrastructure investments can be coordinated, and which infrastructure development can be aligned with one another, as well as with other related City policies and initiatives. An outcome will not only be more efficient use of land, but also more efficient use of limited resources committed to the development of infrastructure.

Existing Conditions and Trends

The local governmental agencies within Charlotte and Mecklenburg County responsible for the construction and maintenance of infrastructure (notably Charlotte-Mecklenburg Schools, the City Department of Transportation, Charlotte Mecklenburg Utility Department, and Mecklenburg Park & Recreation) typically develop long-range facilities needs assessments and master plans based upon generally-accepted growth projections and established infrastructure levels of service. Additionally, a ten-year Capital Needs Assessment is developed every two years: in even-numbered years for City agencies and in odd-numbered years for County agencies. Finally, Charlotte and Mecklenburg County annually develop Capital Investment Plans that prescribe infrastructure implementation and funding.

Ardrey Kell High School

Within the Charlotte-Mecklenburg growth environment, the resources needed to adequately maintain current infrastructure and construct new infrastructure to meet projected needs, nearly always exceed available and anticipated resources. Levels of infrastructure service consequently have eroded as demand exceeds local government's ability to meet that demand. As evidence of this shortfall:

- since 2000, CMS student enrollment has grown by 33,000 students while 20 new schools were constructed, yet building utilization has increased from 91% to 102%.
- Some 29 percent of City major roads are currently ranked as having extremely poor levels of service.
- In 1990, there were 13 acres of land per 1,000 population designated for public parks while today that figure stands at 12 acres per 1,000 population.

Applicability

The policies contained in this chapter apply throughout the City of Charlotte, as well as the area it can eventually annex (its extraterritorial jurisdiction).

The Infrastructure GDP will be used to help guide:

- decisions regarding future land use and development
- decisions relating to land development regulations such as revisions to the Zoning and Subdivision Ordinances
- updates to infrastructure needs assessments and facilities plans,
- decisions regarding prioritization for funding of various infrastructure types,
- the manner in which limited infrastructure resources may be used and
- allocated,
- options associated with the funding or delivery of infrastructure,
- the role of the private sector in the provision of infrastructure,
- the consideration of potential environmental impacts of the development of infrastructure, and
- the assessment of the impact of infrastructure upon the community and the region

In applying the Infrastructure GDP, it will be important to balance the needs and benefits of the Infrastructure GDP with the needs and benefits of other City Council policies.

Guiding Principles

Charlotte Mecklenburg continues to be challenged with the rapid physical changes that accommodate growth, and its ability to effectively respond to increased demands upon its infrastructure to support this growth. At the same time, aging infrastructure in need of modernization and replacement is competing for limited resources with the needs associated with system expansions to address growth. To enhance our community's ability to coordinate growth and development with its responsibility to provide infrastructure to serve its citizens and visitors, the City of Charlotte embraces the following Guiding Principles:

1. *Define infrastructure needs comprehensively and with enhanced coordination among infrastructure providers.*

2. *Use existing and future infrastructure resources efficiently.*

3. *Seek new/additional/innovative funding sources to help meet unfunded local government-identified priority infrastructure needs.*

4. *Coordinate growth with the provision of infrastructure.*

5. *Ensure that infrastructure provision seeks to minimize negative impacts to both the natural and social environment.*

6. *Seek regional solutions – where applicable – to infrastructure issues and problems.*

Policies

GUIDING PRINCIPLE 1: Define infrastructure needs comprehensively and with enhanced coordination among infrastructure providers.

POLICY 1.a: Take a comprehensive and coordinated approach to defining existing and future infrastructure needs, based on the City's land use policies and overall growth framework of Centers, Corridors and Wedges.

Currently, both the City and County identify capital needs for a 10-year planning horizon through their Capital Needs Assessment (CNA) processes. However, City and County needs aren't identified together or cumulatively, don't cover the same 10-year period, and may not be based upon the same assumptions, geography, or growth policy framework. Additionally, many major infrastructure providers (CMS, CDOT, etc.) derive CNA projects from their own agency's infrastructure needs assessments and master plans that are developed and updated on schedules unrelated to one another.

The intent of this Policy is to build on existing processes so that individually identified needs of both City and County (including CMS) can be identified jointly to provide a more comprehensive and coordinated picture of the needs the community is facing, and to recognize the inter-relatedness of some categories of infrastructure investments. Needs identified by other key agencies (e.g. NC Department of Transportation) should also be included for reference. As proposed, the needs assessment would:

- Establish a common and consistent growth framework,
- Identify all infrastructure needs and costs together to allow a better understanding of the cumulative impact,
- Include short and long-term needs (including planning for Charlotte's entire extraterritorial jurisdiction), even if funding is not available,
- Include the need for - in addition to system expansions to accommodate growth – renovation and/or expansion/upgrade of existing facilities (including

defining terms such as "renovation/upgrade" and making a clear distinction between what is a capital budget expense vs. an operating budget expense),
- Be based on the same assumptions (e.g. population projections),
- Address any needed adjustments to level of service standards/expectations from individual infrastructure service providers,
- Address any needed adjustments to how infrastructure needs may be met differently in the future (e.g. enhanced use of technology, changing lifestyle preferences,
- Be multi-jurisdictional (eg, reflect City, County, State – and possible other – infrastructure need for Charlotte's jurisdiction.),
- Be conveniently summarized for public review; and
- Assure that there are no redundant and/or overlapping processes among multiple City and County agencies.

GUIDING PRINCIPLE 2: Use existing and future infrastructure resources efficiently.

POLICY 2.a: Support a coordinated and comprehensive funding/prioritization strategy for all public infrastructure (as defined in these GDP) making Centers and Corridors priority areas for capital investments.

The intent of this Policy is to improve upon existing capital investment planning processes, in particular to use the information from the needs assessment detailed in Policy 1.a and to align priorities with the Centers, Corridors and Wedges Growth Framework. Implementation of this policy could include the development of a comprehensive land use and infrastructure plan/policy and would also likely result in some revisions to the "Guiding Principles of Capital Planning."

POLICY 2.b: Strive to have infrastructure projects that address a variety of needs, are multi-purpose (e.g. Right-of-Way and greenway) and take advantage of opportunities to share elements (e.g. parking, best management practices for stormwater projects, sidewalks, and schools/parks/watershed protection).

POLICY 2.c: Seek innovative techniques for meeting infrastructure needs.

This Policy recognizes that there may be a variety of ways to meet infrastructure needs that would help to use resources more efficiently. For example, in the future greater reliance on technology may help lessen the burden on some types of infrastructure. Expanding partnerships with the private and/or not-for-profit sectors may also leverage resources or enhance efficiencies. Additionally, greater use of design/build strategies and joint use opportunities could help to "stretch" infrastructure budgets. Finally, the ability of philanthropic gifts in helping to meet infrastructure resources should be fully explored.

POLICY 2.d: Ensure that privately-constructed infrastructure (e.g. stormwater infrastructure) meets all local standards prior to the City accepting ownership of it.

POLICY 2.e: Design and construct public infrastructure to maximize anticipated life and minimize life cycle costs.

This Policy recognizes that there must be a balance between the cost of providing public infrastructure and the longer term costs (e.g. maintenance, replacement) often associated with the quality of infrastructure design, construction and materials. Using infrastructure resources efficiently may sometimes mean spending more up front and/or exceeding minimum design and/or construction requirements to provide a high quality product that avoids more costly maintenance, repair or replacement in the longer term.

POLICY 2.f: Provide funding to ensure that existing infrastructure is well maintained.

This Policy recognizes that any cost savings realized in the short term by not adequately maintaining our existing infrastructure will be more than offset, in the longer term, by the cost of repairing or replacing it when it fails due to inadequate maintenance. The Policy also recognizes that as our community continues to grow and mature, increased interest in (and emphasis upon) redevelopment and infill development will be dependent upon well maintained and well functioning infrastructure in previously developed areas.

GUIDING PRINCIPLE 3: Seek new/additional/innovative funding sources to help meet unfunded local government-identified priority infrastructure needs.

POLICY 3.a: Continue to consider both non-financial and financial strategies that are potential/feasible options for Charlotte to better meet infrastructure needs.

From 1996 – 2006, the City has been able to fund about 43% of non- enterprise funded needs identified in the City C.N.A. (with 2007-08 figure improving slightly above 50%). The intent of this Policy is to provide guidance to ensure that funding can be provided to meet Council identified priority infrastructure needs.

GUIDING PRINCIPLE 4: Coordinate growth with the provision of infrastructure.

POLICY 4.a: Facilitate growth consistent with the Centers, Corridors and Wedges Growth Framework.

POLICY 4.b: Encourage infill and redevelopment as one strategy to take advantage of existing infrastructure

This Policy intends to encourage infill and redevelopment located where it can be served by existing or planned infrastructure and services, and which supports the City's overall growth framework, as well as the draft Environment chapter of the GDP.

POLICY 4.c: Use area plans as a tool to better link future land uses with infrastructure needed to serve it and with the Centers, Corridors and Wedges Growth Framework.

This Policy is intended to better utilize the area planning process to identify, coordinate, and prioritize future infrastructure needs and to better coordinate these needs with planned future land uses identified in the area plans. Additionally, it is intended to raise the funding priority for infrastructure projects identified in an adopted plan developed through an inclusive, community-based process with interdepartmental/agency cooperation. Implementation of this Policy might call for greater participation of infrastructure providers in area planning processes and for greater participation of land use planners in the infrastructure planning processes. It may also call for some land use recommendations in area plans to depend upon the existence of Capital Investment Plans that would ensure availability of infrastructure to serve the recommended land uses.

POLICY 4.d: Ensure that decisions regarding location and intensity of development take into account geographic areas in which infrastructure is (and will be) available.

The centerpiece of this Policy would be revising the GDP Residential location criteria to emphasize geographic areas in which infrastructure is available. This might involve replacing the current "potential connectivity" standard with an infrastructure indicator tied to existing and/or funded projects, and/or a refinement of the road network evaluation.

POLICY 4.e: Consider both the on-site and community-wide impacts of a proposed development on public infrastructure (e.g., roadways, parks and recreation, police and fire protection, schools, stormwater, water and sewer); as well as the possibility of timing/phasing development as infrastructure can be provided.

The intent of this Policy is to provide a more complete picture of developments' infrastructure impacts and to help determine any needed mitigation measures, mitigation timeline, and mitigation responsibility.

GUIDING PRINCIPLE 5: Ensure that infrastructure provision seeks to minimize negative impacts to both the natural and social environment.

POLICY 5.a: Make the protection of the natural environment a priority in the infrastructure design and construction process, while acknowledging the need to balance the advantages of the improvements with their environmental impacts.

The intent of this Policy is to ensure that infrastructure projects are designed and constructed so that their impacts on the natural environment are acknowledged and can be minimized as much as reasonably possible. The Policy recognizes that environmental protection is one of many competing priorities and that it must be balanced with these other factors. (Guidance for minimizing/mitigating environmental impacts is provided in the draft Environment Chapter of the GDP.)

POLICY 5.b: Consider the impacts to existing neighborhoods when providing infrastructure.

The intent of this Policy is to ensure that when constructing new infrastructure, such as streets and sewer and water lines, impacts are considered such as physically

dividing neighborhoods, creating safety issues and/or eyesores or negatively impacting existing service.

POLICY 5.c: Consider sustainability (location, design, materials, operation) when making infrastructure decisions.

The intent of this Policy is to ensure that decisions pertaining to future infrastructure include consideration of principles of "sustainability", defined as the long-term implications of the infrastructure's location, design, etc. upon the community, the environment and upon operations and maintenance expenses. This exercise needs to acknowledge any additional costs associated with sustainability and the potential benefits (including lower maintenance and operational expenses and environmental benefits).

GUIDING PRINCIPLE 6: Seek regional solutions – where applicable – to infrastructure issues and problems.

POLICY 6.a: Encourage regional partners to be engaged in collaborative problem-solving to identify creative regional solutions to infrastructure issues.

Infrastructure solutions might be found in the development of partnerships with organizations beyond the boundaries of the City of Charlotte. Many transportation, stormwater and utilities infrastructure issues can be more effectively addressed with regional infrastructure investment solutions. Additionally, it is important to ensure that local decisions do not have unintended impacts regionally. Enhanced communication on infrastructure issues with regional partners is one means of achieving this.

Also important to understand is that the nature of the issue will influence the definition of "regional". For example, the regional partners gathered to address an air quality issue may represent different geographic areas than those gathered to address water quality issues.

Implementation Tools – Infrastructure

Infrastructure Master Planning and Capital Investment Planning

- Ensure that City and County infrastructure providers understand the Centers, Corridors and Wedges Growth Framework and are enabled to use it to guide infrastructure master planning initiatives and capital needs assessments.

- Update the City's capital planning principles to incorporate the Centers, Corridors and Wedges Growth Framework and to more strongly address the need for collaborative and coordinated infrastructure planning. Additionally, ensure that these principles are consistently used to identify and prioritize capital projects.

- Work with City and County infrastructure providers to enhance infrastructure master plans and needs assessment processes so that needs are identified in coordination with one another and data and reporting is more standardized among providers.

- Seek greater collaboration between and among City and regional (especially County, but also including NC Department of Transportation) Infrastructure Master Planning and Capital Investment initiatives.

- Create a reliable timely and convenient electronic medium that can be used by each infrastructure provider (City and County) that allows for comparison among various agencies' infrastructure Master Plans and capital investment plans so that adjustments may be made accordingly in Master Plan and capital investment plan updates.

Land Development Review and Regulatory Processes

- Create mechanisms that allow all infrastructure providers to more actively and meaningfully participate in reviewing & evaluating land development proposals.

- Consider short-term and long-term (ie. in excess of 10 years) infrastructure implications as articulated in various long range infrastructure plans when reviewing land development plans and proposals.

- Review land development ordinances and regulations to ensure that they do not make it more difficult to develop in infill and Center and Corridor areas than in other geographies.

Communication and Coordination

- Explore means of establishing more formal inter-jurisdictional relationships (e.g. joint resolution like Joint Use Task Force) that may involve development of interdepartmental and inter agency agreements to coordinate major planning initiatives.

- Utilize regional organizations (such as the Centralina Council of Governments) as a platform for regional infrastructure planning, communication, and coordination discussions, focusing particularly upon establishing and maintaining regular, meaningful, and reliable communications on pertinent infrastructure issues with a goal of enhanced collaboration.

Land Use Planning

- As part of the update of the Phase I General Development Policies, incorporate greater consideration of infrastructure availability and capacity.

- Incorporate greater consideration of infrastructure availability in developing recommendations in area plans.

- Reflect infrastructure needs articulated as part of Area Plans in:
    - Individual agencies' infrastructure needs assessments and
    - Capital Investment Programs and Capital Needs Assessments.

Funding and Resources

- Explore the potential role of the NCDOT for roadway improvements outside of the City's corporate limits.

- Continue the process to explore new funding sources for infrastructure used following passage of the Transportation Action Plan in 2006. This should include identification and examination of funding and resource approaches used successfully in comparable communities to finance/expedite/enable infrastructure to be developed, and the identification of regulations that may be obsolete, duplicative, or otherwise unnecessary that unfairly burdens localities' ability to develop needed infrastructure.

- Identify and monitor legislative approaches to innovation (e.g. proposed legislative authority to use "design-build" process for utilities projects; legislative authority to allow school districts to contractually partner with private sector to build schools, etc.); advocate for legislative reforms where warranted.

- Explore potential creative financing opportunities that may involve public/private partnerships, IRS tax codes, naming rights, philanthropic gifts of infrastructure or funding, etc.

- Explore alternate means of infrastructure service delivery in annexation areas as a means of potentially softening the infrastructure cost impacts of serving annexed areas.

Research & Data Analysis

- Quantify the funding gap between projected infrastructure needs and likely resources available to meet those needs, using reasonable revenue projections alongside updated capital needs assessments and infrastructure plans.

- Explore innovative approaches that can be used to reduce the demand for infrastructure and to ensure that environmental impacts are minimized.

- Develop an infrastructure sustainability checklist to help determine sustainability of infrastructure decisions (location, design, materials, etc.).

- Develop and maintain an inventory of environmental resources and obstacles to be considered both in location and design of infrastructure and for land use and land development decision-making.

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Transit Station Area Principles (Adopted 2001); Residential Location & Design (Adopted 2003); Retail-Oriented Mixed / Multi-Use Centers (Adopted 2003); Plan Amendment Process (Adopted 2003); Environment (Draft 2007); Infrastructure (Draft 2007)

COUNCIL WORKSHOP
AGENDA ITEM SUMMARY

TOPIC: "Blue Sky" Ideas for the Environment

COUNCIL FOCUS AREA: Environment

RESOURCES: Julie Burch, City Manager's Office
Members of the City's Environmental Cabinet

KEY POINTS:

- The Council adopted the first Focus Area Plan for the Environment in March 2007. The plan contains five major initiatives and serves as the guiding policy document for staff.

- In April the Council concurred with the Environment Committee having a "Blue Sky" discussion to brainstorm new and additional ways the City might be a leader or participant in protecting the environment.

- The Committee kicked-off its brainstorming discussion by watching the "Chicago" segment of the PBS "Edens Lost and Found" series. This 2006 series showcased both community leaders and professionals in pursuing best practice solutions for urban environments.

- The Committee brainstormed a number of different ideas in which the City could do more to support the environment. Staff provided a preliminary response to each, including basic information about what the City is already doing in some of the areas identified.

- On July 9, the Environment Committee decided to ask Council for direction about pursuing the ideas and opportunities identified. Committee members present were: Anthony Foxx, Chair; Pat Mumford; Susan Burgess; Nancy Carter; and Don Lochman.

- The attached list provides a brief description of the idea, related major policy initiatives already underway, and a possible next step if Council wishes to pursue an idea further. Next steps would involve staff time in several Key Businesses to gather more information and report back to the Council.

COUNCIL DECISION OR DIRECTION REQUESTED:
Council is asked to provide guidance to the Environment Committee and to staff about pursuing these ideas since further research and policy development will require additional staff time.

ATTACHMENTS:
List of Committee Brainstorming Ideas
Committee Briefing Paper, July 9, 2007
Adopted Focus Area Plan for Environment

Discussion of Environment Committee "Blue Sky" Ideas

City Council Workshop
September 4, 2007

The Environment Committee is seeking direction from the Council about pursuing additional ways to support the environment. Below is a summary list of ideas generated by Committee brainstorming. The list provides a brief description of the idea, related major policy initiatives already underway, and next steps. Next steps involve Council review and action on current policy initiatives and/ or additional staff time to gather more information and report back to Council.

Ideas are numbered for reference purposes, not for any priority order. The attached briefing paper prepared by staff in July 2007 contains more information.

1. Encourage "Green infrastructure"

"Green infrastructure" is generally defined in three ways: 1) engineered structures that are designed to be environmentally-friendly; 2) areas of the natural environment that sustain air and water quality, natural resources and enhanced quality of life; and 3) a mix of the two, preserving natural systems and creating engineered systems that function similarly to or work in conjunction with natural systems.

Related Major Policy Proposals Now Under Review:

Proposed General Development Policies (GDP) – Environment (E) and Infrastructure (I) *Chapters*: Council briefing on September 4, with referral to Environment and Economic Development and Planning Committees, respectively

Proposed Post Construction Controls Ordinance (PCCO) – Environment Committee

Proposed Urban Street Design Guidelines (USDG) – Transportation Committee

Proposed Revisions to the Tree Ordinance – Council briefing this fall

***POSSIBLE* NEXT STEP:**
As part of the review of the Infrastructure chapter of the General Development Policies, Council could consider adding a specific reference to encourage green infrastructure. After Council review and action on that policy and the other proposals listed above, research other cities' initiatives and programs for possible additional policy options for further encouraging green infrastructure, if desired.

Discussion of Environment Committee
"Blue Sky" Ideas

2. Encourage green development, i.e. Energy Star or LEED, in the private sector

There are no current City policies that specifically encourage green development, that is, Energy Star or LEED, by private developers. The adopted first chapter of the General Development Policies provides some guidance for environmentally-friendly development, and many of the City's area plans have design guidelines that encourage environmentally friendly site designs.

Related Major Policy Proposals:

Four proposals listed under # 1.

***POSSIBLE* NEXT STEP:**
After Council review and action on the proposed policies, research other possible options and programs to further encourage green development, if desired.

3. Preserving Green Space

Tree save, SWIM buffer requirements, water supply buffers acquired by Charlotte-Mecklenburg Utilities, and greenway dedication, are examples of the main tools to help preserve green space.

Related Major Policy Proposals:

Four proposals listed under # 1.

***POSSIBLE* NEXT STEP:**
After Council review and action on the proposed policies, research other possible strategies to further preserve green space, if desired, such as: additional tree save and tree planting requirements; partnering with County to acquire land for open space; completing an inventory of environmentally significant areas and seek ways to preserve those areas (recommended in the GDP-Environment).

4. Green Buildings (City facilities)

The adopted Focus Area Plan has a target to design and construct energy efficient facilities and retrofit existing facilities using sustainable design criteria and professional engineering and Energy Star standards as appropriate.

Discussion of Environment Committee
"Blue Sky" Ideas

Charlotte-Mecklenburg Utilities is seeking the City's first Leadership in Energy and Environmental Design (LEED) certification at its new Environmental Services (Lab) Facility. Construction is scheduled for completion in November 2007.

NEXT STEPS:
Engineering and Property Management staff is beginning to study options and costs related to designing and constructing City facilities to LEED certification standards. It is anticipated that these options will be ready for Council consideration in early 2008.

Also, the Greenhouse Gas Emissions Inventory will be complete in spring 2008. This will help staff to determine the sources of energy consumption and emissions from City facilities and operations. With that information, an action plan to reduce consumption and emissions will be developed and brought to Council for approval.

5. Become a home for green industries/ technologies, *i.e.*, a center for sustainability

Encourage the development of "green industries" or "clean technology" in the Charlotte metropolitan area. Clean technologies can include: solar, wind, geothermal, fuel cells and hydrogen energy sources; advanced transportation technologies, biofuels; green buildings and green materials production; and water and air related technologies.

***POSSIBLE* NEXT STEP:**
Research other cities' initiatives; talk with the Charlotte Chamber and other stakeholders about interest and possible action steps, if desired.

6. Neighborhood and youth involvement in environment

Encourage neighborhood and youth organizations, including schools, to take an active interest and role in learning about and preserving their immediate natural environment. Examples of possible projects include community gardens, tree planting, recycling, stream watches and student internships. A comprehensive inventory of current community programs is not available and would need to be conducted.

***POSSIBLE* NEXT STEP:**
Research current efforts in the community, CMS and other cities; identify possible opportunities for greater civic education and involvement, if desired.

Discussion of Environment Committee
"Blue Sky" Ideas

7. Green affordable housing

Encourage affordable housing built by local providers to be environmentally-friendly. Benefits may include reduced operating costs, healthier living environments and protecting and conserving resources.

The Charlotte Housing Authority is hosting a Green Affordable Housing Roundtable Discussion on September 14 with the following stakeholders: the City, County, Developers, NC Housing Finance Agency, and others.

***POSSIBLE* NEXT STEP:**
Work with the Authority and local housing providers to further research options, including contact with other cities and the U.S. Green Building Council, if desired.

8. Eco-tourism

Eco-tourism can be defined in at least two ways: 1) promoting the use and enjoyment of parks, greenways, rivers, etc. and 2) minimizing negative aspects of conventional tourism on the environment.

Related to the second definition, the Charlotte Regional Visitors' Authority has initiated a "green team" to determine how convention and meeting events and facilities can be environmentally-friendly. City staff has been invited to participate to share information about the City's environmental initiatives.

***POSSIBLE* NEXT STEP:**
Related to the first definition, convene a group of stakeholders including CRVA, Parks and Recreation, and others to explore promoting the use and enjoyment of the area's natural resources, including a review of how other cities have approached this aspect of eco-tourism, if desired.

9. Collaboration with County, CMS and the private sector

One current example of collaboration for the environment includes the Clean Air Works! initiative to reduce emissions, especially on high ozone days. This private/ public partnership is led by the Regional Air Quality Board and has recruited 100 companies to participate in emissions reduction this summer.

Discussion of Environment Committee
"Blue Sky" Ideas

In August the County invited the City to participate in planning an Environmental Summit in the spring of 2008. This has potential to be an excellent opportunity to share information, learn about current and future trends to protect the environment and develop public/ private/ non-profit partnerships. Preliminary planning will be underway this month. Staff will advise Council as the City's role and other details are discussed and seek direction as necessary.

***POSSIBLE* NEXT STEP:**
Assist in the planning and participate in the Environmental Summit in 2008. Also, the GDP-E and GDP-I call for partnerships and collaboration between and among public and private entities on several initiatives. Council will be reviewing those proposed policies over the next few months.

10. Recycling Reforms

The Environment Focus Area Plan contains an objective to implement single-stream recycling for residential units by July 2009.

NEXT STEP:
Staff is doing additional analysis of the costs and benefits of single-stream recycling and will be briefing Council some time this fall.

11. Create an Award for Environmental Stewardship

The City and County have several award programs related to the Environment. Examples: Utilities gives an "Environmental Excellence" award for wastewater permit compliance; the Tree Advisory Commission gives a "Tree Appreciation" award; the Keep Charlotte Beautiful Committee recognizes clean neighborhoods.

***POSSIBLE* NEXT STEP:**
If desired, identify other criteria for a more comprehensive City award for environmental stewardship.

Discussion of Environment Committee
"Blue Sky" Ideas

Other Ideas Discussed:
Additional Information Provided in Attachment

- Land Trust/ Conservation Easements
- Cataloging Brownfields (referred to the Environment Committee for further study and also addressed in the proposed General Development Policies)
- Lead-Based Paint Initiative
- Neighborhood Based WiFi
- Performance Contracting
- "Cutting edge" of air and water quality technology/ approaches
- Prescriptive vs. Flexible Regulations

Environment Committee
"Blue Sky" Discussion of May 21, 2007
Preliminary Staff Response
(Updated July 6, 2007)

Background: At the May meeting, the Environment Committee brainstormed a number of ideas for increased City leadership and participation in advancing the protection of the environment. The ideas on the table for further consideration are in addition to the adopted Council Focus Area Plan for the Environment.

Based on direction at the June meeting, staff has taken the list and divided them into two categories. The Committee will be asked at a future meeting to determine any ideas they would like to recommend to the City Council for further review.

CATEGORY A: "Already Doing or Studying"

The topics below are those for which there are already policies in place, policies in development or significant staff activity within general policy parameters.

Note: As part of the Committee direction in June, staff will be developing a series of information presentations on what is already being done or being pursued for "green" activities related to the internal operations of the City: buildings and operations, fleet and purchasing.

I. Green Space
Source: Planning

- From a planning and zoning perspective, the City focuses on ensuring development proposals meet guidelines and regulations for providing on-site open space.
- Tree save, swim buffer, and greenway dedication are the three main tools Planning currently uses to preserve open space.
- See Attachment 1 for more detailed information on green space including local initiatives that address open space preservation and potential strategies for increasing open space preservation.

II. More collaboration with County, CMS, and the private sector
Source: City Manager's Office

- One current example of collaboration on the environment with the County and the private sector includes the Clean Air Works! initiative to reduce emissions, especially on high ozone days.

- The County is exploring the possibility of hosting an environmental summit in 2008, which would be an opportunity for collaboration.

- City staff will be working with County environmental staff to gain the benefits of their expertise as we develop the inventory of greenhouse gas emissions from City operations.

- A representative from Mecklenburg County is a regular participant in the City's Environmental Cabinet staff meetings

- Staff will continue to explore additional opportunities for collaboration with the County, CMS, and the private sector.

III. Catalog Brownfields in Charlotte
Source: Economic Development

- Per Council's June 11th referral, staff will brief the Committee at a future meeting.

IV. Create an Award(s) for Environmental Stewardship
Source: City Manager's Office

- Please see Attachment 5 for a preliminary list of environmental awards provided by the City, County and Centralina Council of Governments.

V. Green Buildings
Source: E&PM

- The adopted Council Focus Area target is to "design and construct energy efficient facilities and retrofit existing facilities using sustainable design criteria, American Society of Heating, Refrigerating and Air Conditioning Engineers and EPA/ Energy Star Standards, as appropriate."

- Utilities has designed the new consolidated laboratory facility to meet LEED specifications and will be seeking "silver" certification.

- The results of the Greenhouse Gas Inventory for City facilities and operations will be a significant piece of information upon which to develop an action plan for retrofitting and constructing City buildings, both to reduce energy consumption and emissions. It is anticipated that the inventory will be complete this fall. Thereafter a proposed action plan will be developed for Council review and approval.

- Energy monitoring at facilities maintained by EP&M has occurred since 2002.

- Energy audits conducted by the State Energy Office have taken place at several large City facilities.

- Some recent examples are provided in Attachment 2.

X. Land Trust/Conservation Easements
Source: City Attorney's Office

- Staff has deliberated and discussed this concept with the Catawba Lands Conservancy and could not identify any obstacles to donating land within City limits.

- Property owners need to consult with their own accountants or tax experts to determine what restrictions or limitations may apply.

XIII. Lead Based Paint Initiative
Source: Neighborhood Development

- The City's Lead Based Paint Program recently received a "Green" rating from HUD and has been recognized as one of the leading LBP programs in the nation.

XIV. Neighborhood Based WIFI
Source: BSS

- The City's strategy is to facilitate the private sector's entry into our marketplace.

- Staff is holding meetings with potential partners to assess the will for creating a formal alliance and issuing an RFP.

- Staff is also examining the business processes associated with access to the City's right-of-way along with pole attachment requirements in order to make entry into the market easy for potential investors.

- A City-provided WIFI network would require at least $20 million in initial capital investment and $5 million annually.

XV. Performance Contracting
Source: E&PM

- City staff has reviewed this concept in the past and will continue to do so to determine if it makes good business sense by saving energy consumption and costs. At the present time, we do not have any performance contracts in place for City facilities.

- Performance contracting is having a private firm design and install new heating, lighting, etc. equipment at their cost. The private firm takes the risk that resulting energy savings will recover the cost and bring profit.

- This is a good solution under certain circumstances, such as if current equipment is very old or if funding doesn't exist to regularly replace equipment.

- The City's proactive energy management program in place for the 4 million square feet maintained by Engineering & Property Management, most of those buildings have equipment in good to excellent condition, produces significant energy savings to the City each year.

- For more information, see Attachment 4.

XVII. Look for ways to stay on cutting edge of air and water quality technology/approaches
Source: City Manager's Office

- City staff make a strong effort to stay on top of the latest trends and best practices. One way of doing so is by being active members of a number of professional associations related to the environment. Our staff is often consulted by other cities as well.

- At the June 18th Committee meeting, Doug Bean from Utilities made a brief presentation to the Committee about several innovative approaches to environment in his area.

XVIII. Prescriptive vs. Flexible regulations
Source: City Attorney's Office

- City Codes that address environmental issues offer flexibility on how one meets the basic regulations.

- A developer with a new and innovative approach is allowed to approach staff with the new idea and, if it meets the burden of proof, staff will approve it and the developer may use the new approach.

- Council will have several opportunities to review and make decisions on the degree of regulation in policy initiatives coming forward over the next several months, including the Post Construction Controls ordinance, Urban Street Design Guidelines, and Tree Ordinance.

CATEGORY B: "Opportunities"

The ideas below are those for which there may be opportunities for strengthening leadership or involvement, based on future Council direction. For a number of these, staff would need to do more research and gather information about the concepts, the possible applications and the range of costs.

VI. Green Infrastructure
Source: E&PM, Transportation

- Green Infrastructure can be defined in three ways: 1.) "engineered structures that are designed to be environmentally friendly", 2.) areas of the natural environment that sustain air and water quality, natural resources, and enhance quality of life, and 3.) a hybrid of the two, preserving natural systems and creating engineered systems that function similarly to or work in conjunction with the natural systems.

- See Attachment 6 for a more detailed discussion.

- If Council chooses to pursue this idea, staff would need to do additional work to inventory current and potential green infrastructure projects.

VII. Encourage Green Development in the private sector
Source: Planning

- The City does not currently offer any incentives for green development.

- Zoning and subdivision ordinances have little guidance on building materials, based on previous Council policy direction and stakeholder feedback.

- The Environmental chapter of the General Development Policies (GDP-E) recommends that environmental impacts of development be considered and minimized during the *site* design process.

- See Attachment 3 for more information and a list of potential future strategies.

IX. Can the Charlotte area become a home for green industries/technologies, i.e., a center for sustainability?
Source: Economic Development

- Economic Development has joined both Carolinas EcoCrescent and Green and Greater Charlotte, organizations that promote recruitment of green industry and sustainable business practices.

- If Council chooses to pursue this idea, staff would suggest we look at what other cities are doing to encourage green industries, talk with Chamber of Commerce staff, and do additional research.

XI. Recycling Reforms
Source: Solid Waste Services

- The Environment Focus Area Plan contains an objective to implement Single-Stream Recycling for residential units by July 2009. Staff is doing additional analysis of the costs and benefits and will be reporting to Council this fall.

- Staff will include information about City operations' recycling in a future presentation.

XII. Neighborhood and Youth Involvement in Environment

- If Council wishes to pursue this idea, staff would need to do additional research to inventory what's already being done in the schools and in the community and potential areas for enhancement.

XVI. Affordable Housing

- If Council wishes to pursue this idea, staff would do additional work including making contact with local housing providers, other communities, and the Green Building Council

XIX. Eco-Tourism

Source: City Manager's Office

- Eco-Tourism can be defined in two ways: 1.) promoting the use and enjoyment of parks, greenways, rivers, etc., and 2.) minimizing negative aspects of conventional tourism on the environment.

- The Charlotte Regional Visitors' Authority is initiating a city-wide "green team" to determine how convention and meeting events and facilities can become greener. City staff has been invited to participate.

- If Council wishes to pursue eco-tourism, staff would suggest convening a group of players including CRVA, Parks and Recreation, and others to explore this idea, including a review of how other cities have approached.

Attachment 1

I. Green Space

Source: Planning

Committee: "Where and how are we preserving land/greenspace?"

Current Approach & Application

From a planning and zoning perspective, the City focuses primarily on ensuring development proposals meet guidelines and regulations for providing on-site open space. Tree save and SWIM buffer requirements, along with greenway dedication are the three main tools the Planning Department currently uses to help preserve open space. The draft Post Construction Controls Ordinance (PCCO), as proposed by the PCCO Stakeholder's group, currently has an open space component.

When considering open space preservation, it is important to remember that all property within the City's jurisdiction is zoned for development, with the lowest intensity use being residential development at a density of up to 3 dwelling units per acre. Likewise, the City's land use plans typically recommend that specific parcels remain as open space only if:

1) They are owned by the City/County or some other entity that finds such use designation acceptable (eg. Land Conservancy); and/or
2) There are plans to purchase the property for such use; and/or
3) The land is located within the floodplain.

Some existing local initiatives that address open space preservation include:

- *Floodplain Acquisition* – a grant driven program initiated in 2000 that has removed flood damaged structures out of the floodplain. Following demolition, some areas remain open and grow under natural succession; some areas are restored with stream restoration, wetland creation, or stormwater best management practice structures.
- *Floodplain Regulations* – restrict development within the regulated floodplains to allow more areas for natural and beneficial uses of the floodplains. Currently, development is heavily restricted, on average, in approximately 75% of the floodplain area.
- *Water Quality Stream Restoration and Pond Restoration Programs* – these programs not only result in tree and vegetation planting, but also protect that space in conservation easements.
- *Greenway Master Plan, Parks Master Plan, Nature Preserve Master Plan* – these plans were developed by the County and address open space, park and recreation needs in Charlotte-Mecklenburg
- *Central Carolina Conservation Corridors Summary* - a GIS map prepared by Mecklenburg County for northern Mecklenburg County identifying critical wildlife corridors so that they can be protected and the natural habitats can be sustained.
- *Open Space Framework* - a conceptual plan intended to act as a reference and guide for preserving land for a wide range of open space benefits. The Framework contains consensus-based principles and criteria to be used by the region's open space

organizations to achieve the vision of an interconnected, multi-faceted open space system by the year 2020. Covering a 14-county, 2-state region, the Framework focuses on 6 types of open space: 1) Natural habitat; 2) Wetlands & floodplains; 3) Farmland & timberlands; 4) Rural heritage & scenic areas; 5) Urban greenspace; and 6) Parks & recreation.

Potential Strategies for Increasing Preservation of Green/Open Space

- Provide for open space requirements within the draft PCCO or some other development regulation.
- Ensure that as the tree ordinance is updated, it includes appropriate tree save and tree planting requirements.
- Devote more resources to floodplain acquisition.
- Require that future development be restricted in a greater percentage of the floodplain.
- Consider using the Open Space Framework as a guide for the City to partner with the County to acquire land for open space purposes.
- More aggressively partner with the County to implement greenway plans.
- Complete an inventory of environmentally significant areas and seek ways to preserve those areas identified as priorities for preservation.
- Consider revising the City's policy on sale of surplus property to retain ownership of land that could serve as community open space.

Attachment 2

V. Green Buildings

Source: E&PM

Committee: "City needs to be more aggressive and lead by example"

Listed below are some examples of recent energy improvements or tests:

1. Energy monitoring of City facilities maintained by Engineering and Property Management since 2002. This information is used to determine what energy improvement projects will be implemented annually. First projects were ones with the largest savings and shortest payback period.

2. Since the late 70's, the City has experimented with and utilized different technologies and used energy efficient products in building designs and building construction. When certain experimental systems are judged to save energy and are cost effective, they are used in other facilities.

3. We strive to balance environmental friendly design with capital costs and life cycle costs, to provide the best options possible within available funding.

4. Water atomization system at the Mint Museum of Art. The system eliminated steam boiler used for required humidification. Mint was cited in a recent publication as example of art museum with low utility cost. Low watt halogen exhibit lighting was also installed.

5. Gasification technology for carcass disposal at Animal Control. Installation of this technology was cooperative effort between Engineering – Building Maintenance and NCSU. This technology is commonly used on poultry and hog farms. The City is using it in a municipal setting and working with NCSU and the manufacturer to debug and make ready for use by animal control operations. Natural gas consumption of this type burner is < 60% (conservative estimate) than what we currently use in our standard crematory type unit.

6. Installed microturbines in 2002(paid for by Duke Energy and Piedmont Natural Gas) at Fire Station 23. Cooperative project used microturbines manufactured in California. Units were fuel efficient when running but reliability and availability of qualified service was a problem. Duke, PNG and the City decided to sell the units. The City may try this technology again now that the microturbine industry has a stronger local base.

7. The CMGC was relamped in 1998 to T8 lamps with electronic ballast. <u>The only incandescent bulbs in the CMGC are used on dimmer circuits.</u>

8. The City is currently installing solar assisted hot water heating in Fire Station 39.

9. The use of automated building controls and the City's ongoing comprehensive efforts to save energy costs by - sound construction/design decisions - sound maintenance and operation - have enabled the City to have a EUI (energy use index) of 65Kbtu/SqFT.

   This is compared to 131Kbtu/SqFt for NC State Government facilities – 102Kbtu/SqFt for Federal government facilities and 87Kbtu/SqFt for South Atlantic Facilities (data reported from Energy Information Administration)

Committee: "Conduct energy audits of city facilities"

1. The North Carolina State Energy Office provides funding for energy audits through a grant. Through them Charlotte gets quality energy audits for approximately $600. E&PM has completed audits at the CMGC, Old City Hall, CMUD – Brookshire Blvd., CMUD General Commerce Drive, CMPD Headquarters, etc. We implement as many of the suggestions as practical taking into consideration - budget, payback and any pending renovations or moving schedules.

Committee: "Look for opportunities for green roofs (CMGC?)"

1. Discovery Place was the first opportunity to retrofit a roof to green due to the additional weight of a green roof. E&PM will continue to look for opportunities to green our roofs.

Committee: "Switch over to CFLs."

1. The City has installed energy efficient fluorescent fixtures in most City facilities. Most facilities have fluorescent ceiling mounted fixtures. The City does not mandate CFLs in desk lamps.

Committee: "What has Raleigh done?"

Charlotte keeps up with practices of other municipalities and the State through our association with the NC State Energy Office. Staff will provide more information about Raleigh at a later date.

VII. Green Development

Source: Planning

Committee: "30 developers in the area who do energy star building . . . any way to give incentives for this type of development, i.e., green development?"

Current Approach & Application

Zoning and subdivision ordinances include little guidance in terms of building materials. Planning policy, too, has met considerable resistance from the development community to addressing such issues.

In developing the draft *General Development Policies for the Environment (GDP-E)*, considerable debate occurred over the issue of green buildings. While the draft policies do not speak specifically to green buildings, or the use of green materials, they do speak to "sustainable sites," also part of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. The *GDP-E* stakeholders recognized site design as being within the purview of land use planning, while building design was not. Rather than suggesting incentives for sustainable sites, the draft GDP-E recommends that environmental impacts of the development be considered and minimized during the site design process.

The Mecklenburg County Building Development Commission (BDC) has proposed a fee incentive program for sustainable designed and implemented projects. The proposed program requires legislative approval and a bill has already passed in both the House and Senate to allow the program to be implemented. Development of the program details is expected to be underway by the end of summer. The program would ultimately impact building permit fees in the way of a rebate for completed sustainable building projects.

Potential Future Strategies

- Promote participation in the BDC Sustainable Design Fee Modification Program
- Communities across the country have taken various approaches to providing incentives to encourage green development. Examples of the various types of incentives include:
  - Expedited plan review
  - Communication/education/promotion about green projects – For example, one community provides builders signs to post at the job site that informs the general public of the builder's commitment to environmentally responsible building. They also provide "green logos" for advertisements and elicit media exposure for green projects.
  - Technical assistance and design guidance
  - Facilitation of building design charrettes
  - Financial incentives including grants and reduction of fees (e.g., plan review, building permit)

Committee: "How do we preserve the terrain of Charlotte so that it is not all graded flat?"

Current Approach & Application

The draft *General Development Policies for the Environment (GDP-E),* provide policy guidance to help ensure that environmentally sensitive areas, including steep slopes and treed areas, are protected and/or development impacts mitigated. Additionally, the policies promote environmentally sensitive site design and include "minimizing site disturbance and related erosion and sedimentation" as a characteristic of such design.

Potential Future Strategies

- Ensure that as the GDP-E are adopted, they include adequate guidance for discouraging mass grading. This could include adding a policy to directly address preservation of steep slopes, something that was not acceptable to the stakeholder group during the policy development process. Defining the term "steep slopes" was a particularly controversial part of the stakeholder discussion.

XV. Performance Contracting

Source: E&PM

Engineering & Property Management has reviewed performance contracting as an option for realizing energy cost savings.

Performance contracting is contracting with a private firm to evaluate, design, and install new heating, ventilation and air conditioning systems, lighting and other energy saving improvements, at their cost. The private firm takes the risk that resulting energy savings will recover the capital and financing costs of the equipment and a profit, while the City commits to operational and temperature parameters in the buildings, independent measurement and verification of results, and investment grade energy audits required by financing entities. The most direct benefits of performance contracting are that the City would be able to reallocate the funding being used for HVAC and other energy improvements, and perhaps realize a small portion of the energy savings. In contrast, making self-funded, regular energy improvements would allow the City to realize all of the energy savings.

Many public agencies use performance contracting. Our review indicates it is a good solution when certain conditions exist, such as:

- Mechanical and lighting equipment is at the end of, or past, its service life, and in poor condition;
- Energy costs exceed $1.50 per square foot per year (benchmark from the North Carolina State Energy Office); and
- Funding and management resources are not available to regularly replace and upgrade equipment in-house.

For example, a study was made of a Charlotte Mecklenburg Schools performance contract covering 1.3 million square feet of space. The equipment cost was $5.6 million with projected energy savings of $553,000 per year. "Extra" costs associated with the performance contract are approximately $2.4 million, including finance charges, measurement and verification by the contractor and an investment grade energy audit. A local, independent Professional Engineer concluded that the total, life cycle cost to the school system was greater using a performance contract than it would have been to make the improvements themselves. However, given the circumstances of obsolete equipment and very limited capital investment resources, it was reasonable for the school system to make the improvements through a performance contract.

Some four million square feet of space in over 100 City facilities are maintained by Engineering & Property Management. A comprehensive energy management program was begun 9 years ago:

- The average annual cost of energy is $1.15 per square foot. For comparison, the Building Owners and Managers Association (BOMA) lists the average cost of utilities for a standard office building in 2003 in Charlotte as $1.33 per square foot.

- 83% of the City facilities operate at least 2 shifts – many (such as fire stations) run 24 hours/7 days a week.
- Annual appropriations of approximately $400,000 are used to replace and upgrade mechanical and lighting equipment. Equipment in each building is replaced at the end of its service life to minimize overall life cycle costs. As replacements occur, one-quarter to one-half of the funding is used for upgrades to more efficient equipment that will result in energy savings in all future years.
- Annual savings from improvements total $180,000 (efficiency improvements + rate corrections). Within only a few years, the annual energy savings will be fully recovering the annual $400,000 costs of capital improvements.
- Last year's rate structure analysis included a review of enterprise fund accounts and an additional $380,000 in savings was realized.
- By keeping equipment in good to excellent condition, making use of the full service life, and incurring only incremental costs for more efficiency when replacements occur, the City realizes all energy savings and avoids performance contracting costs, such as financing, audits, and contract administration.

In conclusion, performance contracting can be a good method for replacing energy equipment under the right circumstances. However, due to the City's proactive energy management program in place for the 4 million square feet maintained by Engineering & Property Management, most of those buildings have equipment in good to excellent condition, producing significant energy savings to the City each year. Performance contracting will always be an option for improvements when the circumstances of the individual building might make it the best overall solution.

IV. Create an Award(s) for Environmental Stewardship

Source: City Manager's Office

City Key Businesses provide the following awards for environmental stewardship in specific areas:

Utilities

- "Environmental Excellence Award", given by CMUD, recognizes businesses/industries with excellent wastewater permit compliance
- "WaterStar Award", given by CMUD, recognizes residents and businesses with outstanding or innovative water conservation strategies
- "Poster Contest" managed by CMUD during Water Week; winners are elementary students who illustrate a water or environmental theme.
- "Photo Contest" managed by CMUD during Water Week; winners are middle and high school students, adults and City/County employees who photograph a water-related theme

Engineering and Property Management

- "Tree Appreciation Award" given by the Tree Advisory Commission for sites that go above and beyond the requirements of the tree ordinance

Neighborhood Development

- "Neighborhood Recognition Program" given by the Keep Charlotte Beautiful Committee

Other awards related to the environment include:

Centralina COG

- Regional Award recognizing environmental planning and action. It's given to member governments for outstanding specific projects and programs

Mecklenburg County

- "Adopt-A-Stream Business/Industry of the Year Award" given by Mecklenburg County
- "LUESA Solid Waste Business Recycling Recognition Program" managed by Mecklenburg County

Attachment 6

V. Green Infrastructure

Source: E&PM and Transportation

Defining "Green Infrastructure"

The concept of "green infrastructure" has been interpreted broadly, but differently, resulting in a variety of definitions. One definition focuses on the way in which built infrastructure is provided – referring to "…engineered structures…that are designed to be environmentally friendly." (The Conservation Fund, undated, p. 5) This definition, most broadly interpreted, could be applied to many types of built infrastructure.

Another definition of "green infrastructure" focuses on conserving those areas of the natural environment that sustain air and water quality, natural resources, and enhance quality of life. This definition emphasizes land and open space conservation and, therefore, ways to systematically and proactively protect important environmental resources. Sprawling development patterns are cited as a threat to sustaining both green and built types of infrastructure.

A third definition serves as a composite of the previous two because it focuses on both preserving natural systems and creating engineered systems that function similarly to or work in conjunction with the natural systems. The emphasis is typically on providing or installing stormwater and water quality "infrastructure" that functions more like natural systems.

With the growth expected in Charlotte over the coming decades, some elements of each of the above definitions should apply. Our overall approach has become one of accommodating and guiding rapid growth in as sustainable a fashion as possible. Policy-related efforts that fit these definitions include:

- Centers, Corridors and Wedges Growth Framework (by focusing higher-intensity development in those areas that can support it)
- GDP-E (providing an opportunity to define and identify environmentally sensitive areas that should be protected or developed differently from other areas)
- PCCO (providing a toolbox of best management practices to be applied in conjunction with natural systems to manage runoff and improve water quality)
- USDG (implementing a multi-modal approach to providing capacity and mobility)

Transportation-Related "Green Infrastructure"

The proposed **Urban Street Design Guidelines (USDG)** are intended to create a network of "complete" streets – streets that provide capacity and mobility for motorists, while also being safer and more comfortable for pedestrians, cyclists, and neighborhood residents. While not crafted as a "green infrastructure" policy, the following aspects of the USDG support sustainability in a rapidly growing city:

- The "six-step" process for planning and designing context-based "complete" streets includes explicit consideration of environmental factors when making street design decisions (topography, creek crossings, stands of existing trees, e.g.)

- Recommendations for wider planting strips and large-maturing street trees will expand the street tree canopy, which is particularly important as ongoing urban development removes other trees. The USDG include guidance for flexible application in retrofit situations, in part to help preserve existing trees.

- The resulting "complete" streets will encourage and support the use of alternative transportation modes. While most trips will still be made by automobiles, implementing the USDG will, over time, provide a better network of bike lanes, sidewalks, better connections between various land uses and neighborhoods, and more local streets for more mobility options. Some types of trips that had previously been viable only by auto should become viable by other modes.

- For Local Streets, built through the land development process, the USDG provide the choice of several cross-sections to fit specific land use contexts. These options should often allow the narrowest feasible street width to be applied. The goal is to gain capacity in the street network through more, but smaller, streets.

- The recommended block lengths will result in more streets, thus creating shorter route options, allowing people to avoid congested intersections, increasing the potential to build narrower streets, and improving walkability and bikeability. Connectivity is a key aspect of the proposed LEED certification for subdivision design.

- The recommendations for creek crossings include flexibility in location and spacing.

- The USDG provide guidance about the potential use of swales, but also point out the need to further develop appropriate applications of water quality best management practices in more intensive urban environments.

- Several supplements to the USDG will be developed, including guidance for designing "green streets" and potential changes to horizontal and vertical curvature allowances (to support traffic calming, reduce the need for mass grading, and to mitigate for the impacts of creek crossings).

Undated. The Conservation Fund (Benedict and McMahon). Green Infrastructure: Smart Conservation for the 21st Century. Sprawl Watch Clearinghouse Monograph Series.

"Charlotte will safeguard the environment, balancing health, sound fiscal policy, and growth."

The City of Charlotte recognizes that environmental stewardship is fundamentally important to our quality of life and to a strong economy, both now and in the future. Protecting and improving the environment is a necessary element of the City's mission to enhance the quality of life for our citizens. 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.

Charlotte is the center of one of the fastest growing regions in the country. While growth contributes to our economic vitality, it also presents challenges for achieving and maintaining a healthy environment and a sustainable regional economy. *The City of Charlotte is committed to safeguarding the environment, which is integral to quality of life, in ways that balance environmental health, sound fiscal policy, and growth.* Consistent with these values, the City will:

- Recognize the important interrelationships between air quality, water resources, land preservation, and energy and resource conservation;
- Recognize that we share our environment with our regional neighbors, including other public and private entities, and that we will work cooperatively with them;
- Incorporate environmental goals and considerations in planning and decision making;
- Conserve energy and other resources;
- Protect natural ecosystems and habitats, including the tree canopy;
- Make wise land use decisions regarding growth and development;
- Adopt sound environmental practices in City operations; and
- Support sustainability, which is defined as meeting the needs of our residents today without compromising the opportunity of future generations to meet their own needs.

The City of Charlotte recognizes that conscientious environmental stewardship and concern for the public interest may require 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. The choices will include (1) determining that regulatory *compliance* is sufficient, (2) being *proactive* and initiating positive action, especially to avoid more costly remedial action later, (3) taking a *leadership* role and modeling best practices.

Successfully meeting environmental challenges is critical to Charlotte's future. These principles will shape the City's approach to fulfilling our environmental responsibilities.

Environment

Safeguard the Environment

ENV.1	Focus Area Initiative:	Support sustainability by making wise decisions regarding growth and development, recognizing the interrelationships between air quality, water resources, land preservation, and energy and resource conservation
▶	Measure:	Continue implementing Centers and Corridors Strategy
	Target:	Encourage minimum of 40% of new housing unit permits, 70% of new multi-family unit permits, 75% of new office development square footage, and 75% of new employment located within the centers and corridors this Fiscal Year
▶	Measure:	Adopt General Development Policies Phase II - Environment
	Target:	Adopt policies by December 2007
▶	Measure:	Adopt Post Construction Controls Ordinance
	Target:	Adopt ordinance by December 2007
ENV.2	Focus Area Initiative:	Protect natural ecosystems and habitats, including the tree canopy
▶	Measure:	Identify and protect environmentally sensitive areas
	Target:	Develop a strategy by December 2007, to conduct a future inventory of physical features necessary to identify environmentally sensitive areas
▶	Measure:	Maintain a significant and healthy tree canopy
	Target:	Conduct a baseline assessment of City's tree canopy
	Target:	Adopt revised Tree Ordinance by December 2007
▶	Measure:	Protect stream corridors, ponds, and wetlands through public acquisition of additional conservation easements and enhancing existing buffers
	Target:	Conduct a baseline analysis of land protected for environmental purposes, either through easements or other conservation practices
▶	Measure:	Maintain permit compliance with treated wastewater
	Target:	100% compliance with National Pollutant Discharge Elimination System permit requirements for all five wastewater plants
	Prior Year:	FY2006 - 8 violations
ENV.3	Focus Area Initiative:	Lead by example, adopting sound environmental practices in City facilities and operations
▶	Measure:	Implement strategies to reduce City fleet emissions
	Target:	Increase percentages of City fleet using alternative fuel or emission efficient technologies
	Prior Year:	31 hybrids (1%); 60 E85 ethanol vehicles (2% on-road fleet) (excludes CATS)
	Target:	Retrofit by December 2007, with emission reduction equipment 25% of Charlotte Area Transit System's fixed route bus fleet
	Target:	Reduce idling by 5% from FY2007 baseline data in Charlotte Area Transit System's fixed route bus fleet

Environment

ENV.3 (cont.)

►	Measure:	Incorporate environmentally responsible elements in the design, construction, and operations of City facilities
	Target:	Collaborate with all Key Businesses to develop a baseline energy consumption model by June 2008
	Target:	Establish baseline for City-wide purchasing of environmentally-friendly products
	Target:	Document current waste minimization practices and recycling programs in all City facilities by June 2008
	Target:	Achieve the City's first Leadership in Energy and Environmental Design (LEED) certification at the Utilities Environmental Services Facility from the U.S. Green Building Council
	Target:	Design and construct energy efficient facilities and retrofit existing facilities using sustainable design criteria, American Society of Heating Refrigerating and Air Conditioning Engineers (ASHRAE), and EPA/ Energy Star Standards, as appropriate

Develop Collaborative Solutions

ENV.4	Focus Area Initiative:	Collaborate with local and regional public and private partners to enhance environmental quality and long-term sustainability
►	Measure:	Continue collaboration and actively participate in public and private sector partnership's environmental and visioning initiatives
	Target:	Continue collaboration and participation with Sustainable Environment for Quality of Life, Centralina Council of Governments, Regional Visioning Council, and other partners' current initiatives
	Measure:	Increase single family recycling from 45% to 65%
	Target:	Implement single-stream recycling program by July 2009
	Measure:	Collaborate with NCDENR and public and private partners in the non-attainment area to accelerate the trend toward meeting the current 8-hour ozone air quality standard by 2010
	Target:	Gain approval, through collaboration with NCDENR, of Statewide State Implementation Plan (SIP) by January 2008
	Target:	Work with regional partners to develop options for air quality initiatives by May 2008, in addition to those required by the SIP and adopt Charlotte specific air quality initiatives by May 2008

Promote Learning & Growth

ENV.5	Focus Area Initiative:	Increase City employees' awareness of the environment as a priority for the community and the organization
►	Measure:	Implement a communication strategy for the environment focus area
	Target:	Develop by December 2007, a communication strategy and begin communicating the City's environmental principles, initiatives and programs to City employees

COUNCIL WORKSHOP
AGENDA ITEM SUMMARY

TOPIC: Planning, Design and Construction Contracts for Capital Projects

COUNCIL FOCUS AREA: Economic Development

RESOURCES: Jeb Blackwell, Interim City Engineer

KEY POINTS:

- Council members have raised questions from time to time about how the City manages capital construction projects. In response, staff will make a brief presentation about the capital project process, including planning, design, property acquisition, and construction.

- No matter how well-planned, there are points in almost any construction project that may mean a need for a change in design, schedule and/ or costs. These may be the result of unexpected circumstances or situations beyond staff control. It is at these points that Council may be requested to approve contract amendments and/or change orders. Staff will provide more information about the factors impacting the construction process.

- This presentation was originally scheduled for the July 23 Council meeting but was postponed due to time constraints.

COUNCIL DECISION OR DIRECTION REQUESTED:

None. This presentation is for information only.

ATTACHMENTS:

None.

COUNCIL WORKSHOP
AGENDA ITEM SUMMARY

TOPIC: Small Business Development Program
Participation in CMU Construction Contracts

COUNCIL FOCUS AREA: Economic Development

RESOURCES: Tom Flynn, Economic Development Director
Barry Shearin, Charlotte-Mecklenburg Utilities

KEY POINTS:

- At the July 23 Council meeting, City Council requested additional information about the Small Business Enterprise (SBE) goal setting process, and the low goal attainment on some Charlotte-Mecklenburg Utilities construction contracts.

- For construction projects, the Key Business Unit establishes an SBE Goal prior to bid using the Subcontractor Utilization Goal-Setting Matrix, developed by the SBD office. This process considers the engineers' estimate for the project and anticipated subcontracting opportunities and the estimated dollar value of each. The KBU forwards this goal to the SBD office for review and approval. Once the goal is approved by the SBD Office the project is released for bid.

- SBD and Utilities' staff recently met to discuss low goal attainment and are taking the following actions:
    - SBD staff is reviewing the vendor list to find certified SBE firms who perform work that is typically subcontracted on Utilities construction projects. This is taking place prior to bid to encourage the SBE firms to respond to solicitations received from potential bidders.
    - SBD and Utilities staff will work together to determine additional areas, if any, for possible SBE utilization.
    - SBD staff will compare several Utilities projects with non-Utilities construction projects to determine the differences in the types of construction work done and make the appropriate adjustments to the goal setting methodology.
    - SBD staff will coordinate meetings with SBEs and major utilities contractors to facilitate further subcontracting opportunities.

COUNCIL DECISION OR DIRECTION REQUESTED:
For information only.

ATTACHMENTS:
None.