

DRAFT

# General Development Policies

GDP



Transit Station Area Principles



Residential Location & Design



Retail-Oriented Mixed / Multi-Use Centers



Plan Amendment Process



Environment



Infrastructure



*making all the right connections*

Future Update

Future Update

Future Update

Future Update

Future Update

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*\*Approximately 125 people were included in stakeholder meeting notifications and other communications throughout the process. Those stakeholders listed by name above, attended at least 1/4 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.

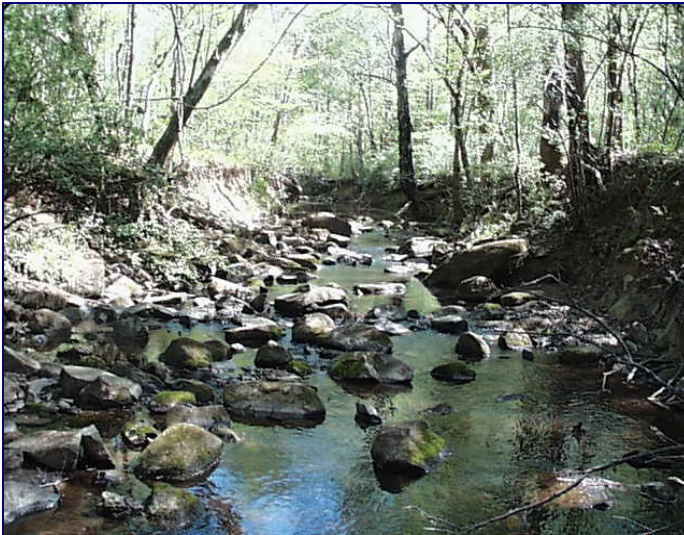
### *Environment*

#### Definition and Purpose

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.

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

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.

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.

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

## Planning Context

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.

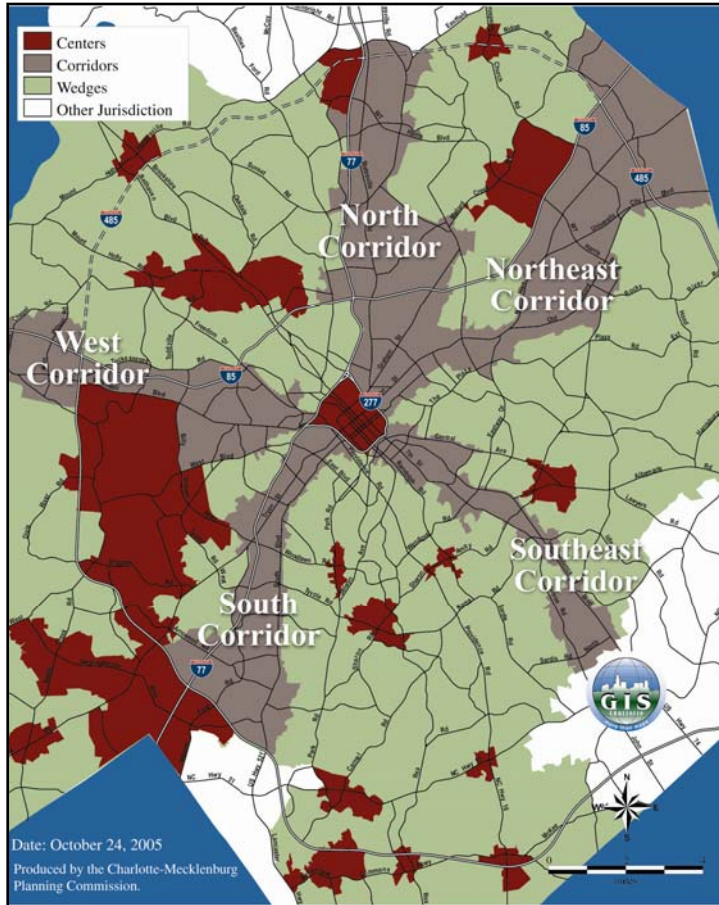
*Centers, Corridors and Wedges* is intended as a framework for organizing and managing growth to help ensure that development happens in a way that enhances the community and contributes to its character and identity.

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

*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

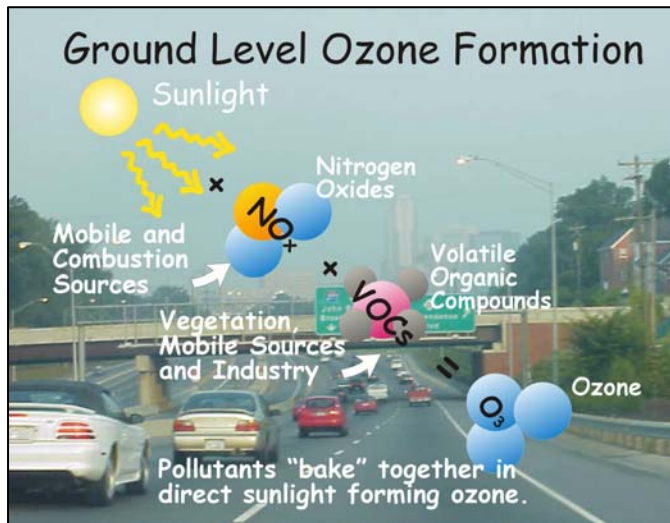
The Mecklenburg County Land Use and Environmental Services Agency (LUESA), biennially, develop a report that summarizes the environmental conditions of the Charlotte area's air, land and waters. Unless noted otherwise, the existing conditions and trends information provided in this section was extracted 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).

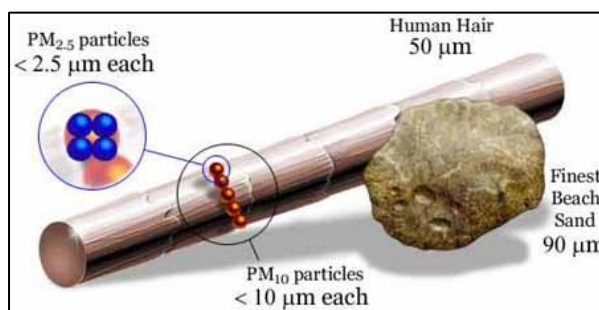
**Ozone** is not emitted directly into the air. Rather, it is formed by the reaction of volatile organic compounds (VOCs) and oxides of nitrogen (NO<sub>x</sub>) in the presence of heat and sunlight. Local sources of VOCs and NO<sub>x</sub> include mobile sources such as cars and trucks, as well as stationary 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 1<sup>st</sup> through October 31<sup>st</sup>. 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 NO<sub>x</sub> 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.

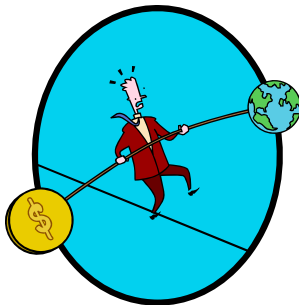
- Preserves and/or restores environmentally sensitive areas and connects them to other significant natural features as much as possible and integrates them into the development when appropriate,
- Minimizes impervious surfaces, including building footprint and parking area.
- Uses low maintenance native 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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