



### Chapter 8. Services and Facilities Element

#### 8.1. PURPOSE AND SUSTAINABLE GOVERNMENT

This Services (Utilities) and Community Facilities Element provides guidance and direction regarding the provision of public facilities and services in Orange County. The goals and objectives identified within this element serve as the foundation for establishing future public services and facilities policies and action strategies undertaken by Orange County, its advisory boards, and staff. This specific process for developing a services and facilities implementation strategy is outlined in *Section 1.4: Administration and Implementation Guidelines*.

Service delivery responsibilities and the types of facilities required vary widely among counties. Services and facilities should be provided in a manner that reflects the specific needs of the community, while taking into account its fiscal limitations. The role and responsibility of Orange County government is to ensure that a proper balance is reached that will maintain social equity and diversity and that relies upon, supports, and promotes the wise use and reuse of natural and fiscal resources in all of its actions and programs. Although sustainability is discussed throughout this Plan, the concept of Sustainable Government is introduced and emphasized here to reflect that the relationship between Orange County government and the provision of services to the community is more than that of simply service provider and customer.

#### 8.2. OVERVIEW

Orange County provides a robust array of publicly funded and managed facilities and services to County residents. The availability of infrastructure and community services adds considerable value to the community. A general list of these facilities and services provided in Orange County includes:

- **Animal Services** - The Animal Services Department is responsible for Animal Control and Animal Sheltering activities within Orange County. The Animal Control Division enforces State and County laws that apply to animals, including cruelty laws, nuisance animals and dangerous wildlife, within the unincorporated portion of Orange County and the Town of Hillsborough. Orange County's Animal Shelter is an open-door facility and operates both intake and adoption services.
- **Emergency Services** - Orange County contributes to the provision of fire prevention and rescue services, hazardous materials response, emergency medical services, and emergency 911 services throughout the County.
- **Erosion/Control and Stormwater Management** - Erosion control and stormwater management activities in the County are regulated by state laws and County ordinances to ensure that land disturbance activities do not adversely impact our water bodies and natural lands. County inspectors monitor development activities to ensure these regulations are upheld.
- **Law Enforcement** - The Orange County Sheriff's Department protects and serves the people of Orange County by enforcing local



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laws, preserving the peace, and carrying out other duties aimed at protecting the health, safety, and welfare of the County's residents.

- **Libraries** – Orange County's library system works in conjunction with municipal library systems to provide a variety of print, digital, and audio resources to County residents.
- **Provision of Public Water and Wastewater** – The County leads the coordination of the provision of public water and sewer services throughout the County. The County works with five utilities that provide direct potable water and/or sanitary sewer services to ensure that limited water resources are managed wisely, and to ensure an adequate provision of services are available to future populations.
- **Public Court System** – North Carolina's District 15B court system is located in Orange County. This includes Superior and District Courts, as well as a Small Claims Court, and several specialty courts.
- **Public Education** – Two public school districts operate in Orange County: Orange County School District, and the Chapel Hill-Carrboro School District. The County provides operating and capital financing to these districts and coordinates with the school districts on the provision of education in the County. The Durham Technical Community College, Orange County Campus, opened its doors for continuing education and basic skills courses in May 2008, with curriculum courses starting Fall Semester 2008.
- **Public Health and Mental Health** – The County offers public health and mental health services to area residents. Prevention of epidemics, protection against environmental hazards, education regarding healthy behaviors, and mental health assistance programs are provided to residents of the County.
- **Services for the Aging** – The County provides a variety of programs and services to increase the health and wellness of aging residents. Services include special activities and events, professional health and wellness consultations, community volunteering, and coordination of local services to the aging.
- **Solid Waste Management** – Solid waste management services in the County are provided and coordinated by Orange County. Services include operating the Orange County Landfill, Orange County Solid Waste Convenience Centers and Orange Community Recycling Programs.
- **Telecommunications** – Within Orange County and the four municipalities there are sixty-one known wireless telecommunication structures (towers). Tower siting has become a very contentious issue with local citizens, and the County is working to address siting of these towers.

The Comprehensive Plan addresses several other public services directly in other elements (i.e., Natural and Cultural Resources, Land Use, Housing, Parks and Recreation). This element, Services and Facilities, addresses services that provide



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the facilities we need to live together as a community. It highlights water and wastewater, erosion control and stormwater management, solid waste management, law enforcement, fire and emergency services, library services, and public education. The education component of this chapter focuses on school facilities. Other education issues and policies are addressed in related documents listed at the end of the chapter.

Other public services (Public Court System, Public Health and Mental Health, Services for the Aging, and others) are also critical components of County government that are addressed in other County plans and policy documents, listed at the end of this chapter.

### 8.3. GOALS

The following public services and facilities goals will guide future policy and implementation strategies for the County.

**Services and Community Facilities Overarching Goal:** Growth consistent with the provision of adequate and sustainable County services and facilities while managing the impacts upon the environmental infrastructure and effectively protecting the County's natural and cultural resources.

#### **Services and Community Facilities Goal 1:**

Efficient provisions of public water and sewer service systems which are consistent with the Land Use Plan and which abide by the current Water and Sewer Management Planning Boundary Agreement, the existing Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, and future agreements to be negotiated among the County and public and private service providers.

#### **Services and Community Facilities Goal 2:**

Adequate, safe, and healthy groundwater withdrawal and wastewater disposal systems with minimal impacts upon water and land resources.

#### **Services and Community Facilities Goal 3:**

High quality educational facilities that support our diverse and growing population and present opportunities for life-long learning.

#### **Services and Community Facilities Goal 4:**

High quality library facilities that support our diverse and growing population and present opportunities for life-long learning.



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### **Services and Community Facilities Goal 5:**

Efficient and effective drainage, stormwater, floodplain management, and erosion control systems.

### **Services and Community Facilities Goal 6:**

Less solid waste per capita with cost effective and environmentally responsible disposal and management.

### **Services and Community Facilities Goal 7:**

Efficient and effective public safety, including police, fire, telecommunications, emergency services, and animal services.



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### 8.4. COMPONENT ELEMENTS

The Services and Facilities Element addresses public facilities and services independently by providing background information about the service and the service area, trends in providing the service/facility in the County, and goals and objectives for guiding future decisions regarding these services.

#### 8.4.1. WATER AND WASTEWATER

Over the past quarter-century, citizens and policy-makers in Orange County have expended tremendous energy to evaluate and protect current and future drinking water supplies, whether surface water or ground water. Much of the early interest was driven by droughts and a lack of supply in the 1970s and 1980s that saw regular water shortages in Chapel Hill, Carrboro, and Hillsborough and eventually led to the creation of new reservoirs. Droughts were not the only reason water supplies were a critical issue. The increasing population of Orange County also influences the quality and quantity of water. Growth trends are expected to continue and will require that the orderly provision of water and wastewater services are adequate to meet the needs of current and future populations. (See *Section 6.4.5: Water Resources* for more information on surface and ground water supplies in Orange County.)

#### WATER AND SEWER MANAGEMENT, PLANNING, AND BOUNDARY AGREEMENT

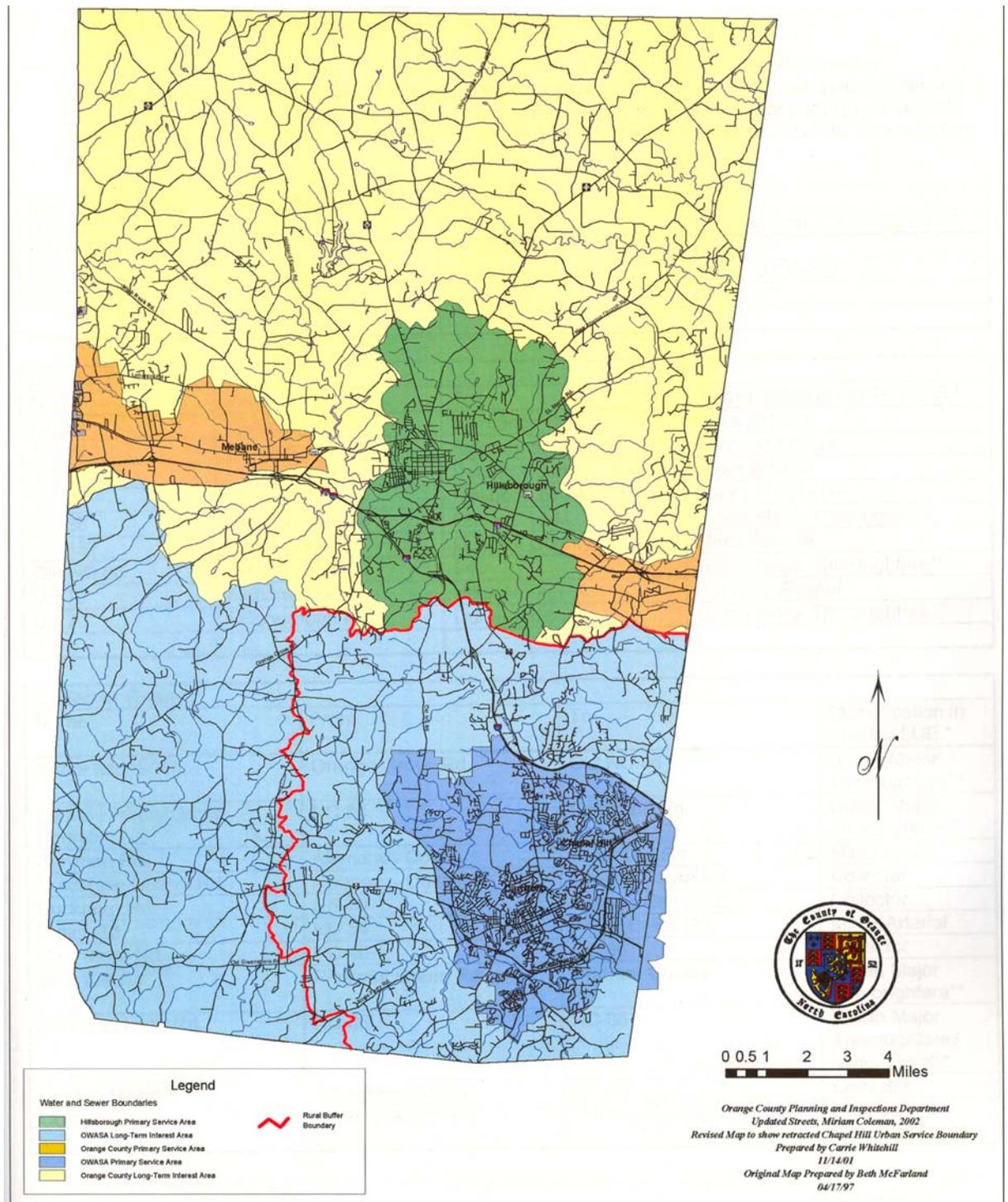
Limited water resources and an expanding population base require strategic coordination to ensure that existing and future populations can be adequately served.

In December, 2001, to further its goal of strategic coordination, the Orange County Board of Commissioners, OWASA, and the Towns of Chapel Hill, Carrboro, and Hillsborough entered into a Water-Sewer Management, Planning, and Boundary Agreement. The agreement designates a countywide system of utility service areas for water and sewer service providers upon which the signatory entities could rely when making decisions related to issues such as planning, land use, annexation, zoning, and growth management. The agreement is in effect for 10 years and will renew automatically unless a signatory party provides notice of intent to withdraw. All parties to the agreement must approve any requested changes. The Water and Sewer Management, Planning, and Boundary Agreement is included as *Appendix N*.

Map 8-1 below outlines the service area boundaries that were established through this agreement. Primary Service Areas designate areas where water and/or sewer service is now provided, or might reasonably be provided in the future. Long-Term Interest Areas designate areas where public water and/or sewer is not anticipated to be provided, but identifies the potential service provider should an “emergency” situation arise where extension of service is required, such as private system failures. Map 8-1 also shows the boundary of the Rural Buffer which was established as part of the Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan.



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**MAP 8-1: WATER AND SEWER MANAGEMENT, PLANNING, AND BOUNDARY AGREEMENT.**



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### SERVICE PROVIDERS

The majority of public water and sanitary sewer users in Orange County are located within the municipalities and receive these services through utility providers. OWASA and the Town of Hillsborough are the primary providers in the County. Orange County does not own or operate a utility and therefore is not a direct service provider in Orange County. Orange County government leads the coordination of water and wastewater services in the County. The County advises and in some instances is part of the governing structure of the four providers of water and/or wastewater services in Orange County: the Orange Water and Sewer Authority (OWASA), the Town of Hillsborough, and two providers that deliver services under contract with Orange County - the Orange-Alamance Water System, Incorporated, and the Graham-Mebane Water System, operated by the City of Mebane. The County is responsible for ensuring that adequate services are provided to County residents. As stated in the County's Water and Sewer Policy document, the County's role in the provision of water and/or sewage disposal services are:

- To correct a public health emergency;
- To provide service to an essential public facility;
- To provide for economic development opportunities; and
- To provide bases (information and infrastructure), consistent with the Orange County Comprehensive Plan, for the extension and expansion of existing water and sewer services.

Provided here are descriptions of the service providers in the County.

### ORANGE WATER AND SEWER AUTHORITY (OWASA)

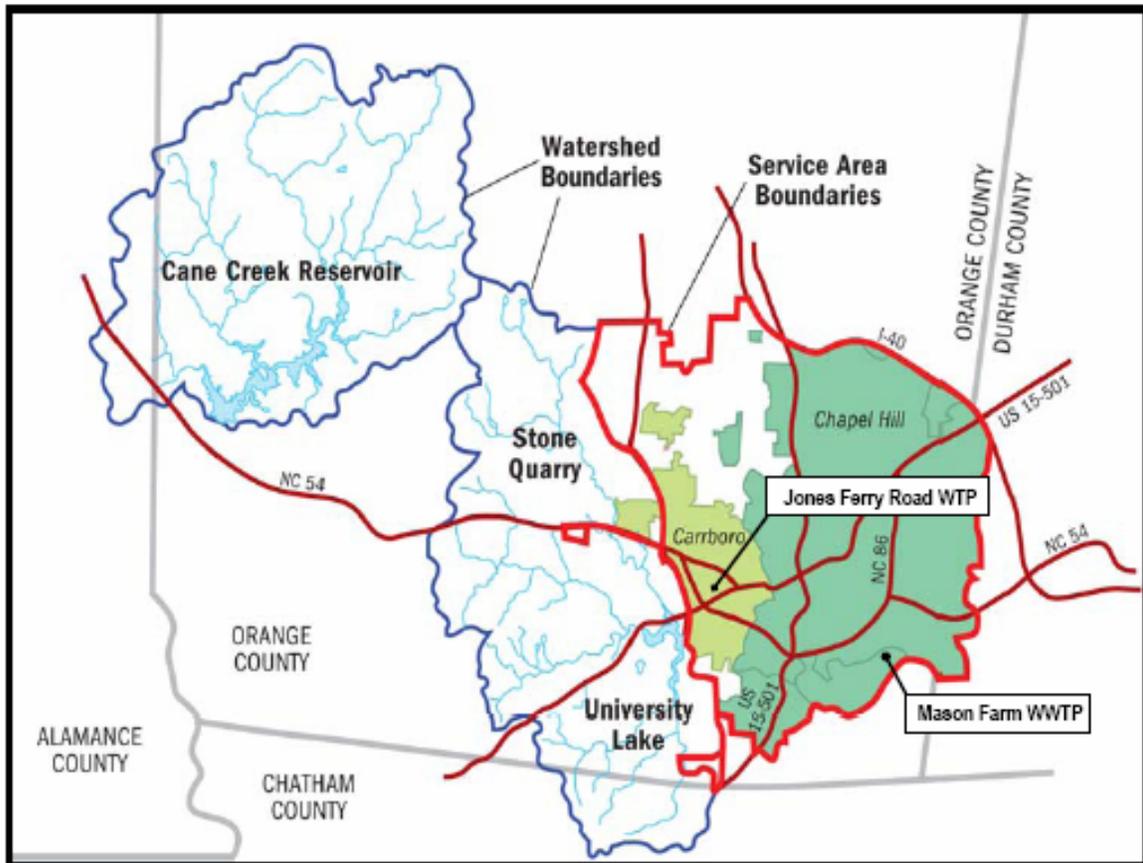
Since 1977, the Orange Water and Sewer Authority has provided water and sewer services to the Towns of Chapel Hill and Carrboro and portions of unincorporated Orange County. OWASA is a non-profit utility governed by a Board of Directors, who are appointed by the elected boards of Carrboro, Chapel Hill, and Orange County. Drinking water and wastewater collection were provided to an estimated 80,000 people (approximately 66% of the County population) through more than 19,000 accounts in 2007. Approximately 55% of OWASA's water demand is by residential customers, 30% by UNC-Chapel Hill, and 15% by commercial, institutional (non-UNC), and all other customers.

OWASA draws from three raw water sources: the Cane Creek Reservoir, University Lake, and the Stone Quarry Reservoir with a storage volume of 3.6 billion gallons. This system can reliably supply about 11.5 million gallons of water per day (mgd) under extreme drought conditions. Between 1980 and 2000, water demand increased by an average of about 0.22 mgd per year. Water is treated at the Jones Ferry Road Treatment Plant. Future plans for the water supply include expanding the Stone Quarry reservoir from its present volume of 200 million gallons to a volume of 2.4 to 3.0 billion gallons by 2030. OWASA also holds a storage allocation equivalent to approximately 5 mgd from the U.S. Army Corps of Engineers' B. Everett Jordan Reservoir in Chatham County. This allocation may be developed in the future, perhaps in partnership with other local entities, to provide a supplemental supply source during periods of extreme drought.



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OWASA manages more than 300 miles of public sanitary sewers and 24 pump stations. Wastewater is treated at the Mason Farm Wastewater Treatment Plant (WWTP), which has a maximum monthly capacity of 14.5 mgd. The WWTP also accepts and treats “septage,” the high strength waste pumped out of septic tanks by private companies. Beginning in 2009, OWASA’s Mason Farm WWTP will provide more than 0.6 mgd of highly treated reclaimed water for non-potable use on the UNC campus. OWASA’s service area, reservoirs, and treatments plants are identified in Map 8-2 below.



**MAP 8-2: OWASA SERVICE AREA, RESERVOIRS, AND TREATMENT PLANTS.**

Source: Fiscal Year 2005 OWASA Sustainability Report

OWASA’s water distribution system is linked to neighboring systems in Durham, Hillsborough, and Chatham County. These interconnections can provide supplemental service during unplanned outages or scheduled maintenance.

OWASA has responded to the demand for more sustainable water resource management brought on by water shortages and drought conditions in Orange County by developing a long-term water conservation goal, related objectives, and specific water use reduction targets. The goal is to “develop,



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fund, and implement a cost-effective water conservation and demand management program that will meet our community's long-term water supply needs (through 2050) by making the highest and best use of our local water resources and eliminating the need for costly new water supply sources and facilities." Two essential components of OWASA's water supply and conservation strategy are the continued recycling of water treatment "process water", and the use of highly treated "reclaimed water" to meet non-drinking water needs.

### *TOWN OF HILLSBOROUGH*

The Town of Hillsborough owns and operates a municipal utility that provides water and sanitary sewer services. Service is provided to most areas within the town limits and extra-territorial jurisdiction (ETJ), and additional portions of Hillsborough and Eno Townships to the south and east of town. The Town has identified a future utility service area that extends south and east of the current Town and its ETJ. The Town recently implemented a Strategic Growth Plan (2006) that identifies a potential urban services area. If adopted, this urban services area would define the utility service area for Hillsborough.

The town provides service to more than 4,000 customer accounts. Approximately 92% are residential users, 7% are commercial/institutional users, and 1% are industrial users.

Hillsborough's 10 mgd raw water storage supply is drawn from Lake Ben Johnston on the Eno River. The safe yield supply is 2.58 mgd, with a 810 million gallon storage capacity. Available supply is affected by withdrawals upstream at Corporation Lake. Under optimal conditions, the County can allow Hillsborough to draw water from Lake Orange. The current agreement allocates 1.8 mgd to Hillsborough when the lake is at normal levels.

The water treatment plant capacity is 3.0 mgd, which provides for 2.0 mgd peak day demand. Hillsborough has an agreement to treat up to 0.4 mgd from the county-owned Efland/Cheeks sewer system. Expansion of the system will increase peak day demand service to 3.0 mgd.

Water usage has increased steadily at a rate of 6% annually over the past 10-20 years. Future expansions of the system will increase the safe yield to 5.58 mgd with an additional 1,014 million gallon storage capacity. Hillsborough has interconnection agreements with OWASA, Durham, and the Orange-Alamance System to meet demands during crisis situations. Estimates show that even with planned expansions, Hillsborough is likely to need additional water supplies by 2011.

### *ORANGE-ALAMANCE WATER SYSTEM, INC.*

Orange Alamance Water Systems, Incorporated, a non-profit membership organization, was formed in 1969 to serve populated areas in western Orange and eastern Alamance Counties. Orange Alamance Water Systems has a service area in and around the Efland area. It crosses the ridgeline separating two major drainage basins, the Cape Fear and the Upper Neuse, serving the US 70 corridor west from Efland, the Mebane area, and several rural communities in eastern Alamance County. A small portion of Cedar Grove Township is also served with water by the system. The system currently serves more than 8,000 customers in Orange and Alamance Counties near the Towns.



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The primary raw water source for Orange Alamance Water System, Inc., is Corporation Lake, an impoundment on the Eno River just north of U.S-70. This source has a 20-year safe yield of 0.7 mgd, and a storage capacity of 20 million gallons. Because of sedimentation problems with the impoundments, the storage capacity has been limited since the dam's construction in 1969. In addition, the Orange County Water Conservation Ordinance, effective 1988, allocates 0.8 mgd to Orange Alamance Water System, Inc. from Lake Orange when the lake is at normal levels. This allocation drops to 0.32 mgd when Lake Orange reaches crisis level. The system purchases additional water from the Towns of Graham, Mebane, Haw River, and Hillsborough; and can draw additional water supplies from these systems during crisis situations. The system plans on purchasing 0.800 million gallons of additional water supply from the Town of Haw River by 2025.

### **GRAHAM-MEBANE WATER SYSTEM**

In the summer of 2004, Orange County entered into a Utility Service Agreement with the City of Mebane to deliver water and wastewater service to much of the Buckhorn Economic Development District between West Ten Road and Interstate 40/85.

### **CITY OF DURHAM**

Part of the City of Durham crosses over into Orange County. There is little development in this area today; however, the Durham long-range plan designates part of the unincorporated areas of Orange County along I-85 as a future Urban Growth Area. In the future, the City of Durham is expected to provide water and wastewater service to this area that includes the Eno Economic Development District and a few additional surrounding properties. (See Map 5-3 on page 5-5.)

### **COUNTY WATER INITIATIVES**

As Orange County's population grows, so will demand for water and sanitary sewer services. Droughts occurring in recent years (2001-2002; 2007-2008) have raised the level of concern regarding adequate water supplies in the County. Water restrictions were enacted to ensure that capacities were used efficiently and water conservation was achieved. Because the County does not directly provide water and wastewater services, it must coordinate with area providers to ensure the County has sustainable water supplies into the future.

Orange County holds a 1-Million Gallon per Day (MGD) allocation of water held within Jordan Lake. The State of North Carolina has been assigned the use of the entire water supply storage in Jordan Lake and can assign this storage to local government having a need for water supply storage.

In 2008, the County hired a water resources coordinator. The charge of the coordinator is to focus on water conservation and public health efforts countywide, coordinating with the service providers and private well and septic users to ensure long-term sustainability of County water supply and treatment systems.



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### 8.4.1.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS

The following data provide background information on potable water and wastewater use in Orange County. Additional data and trends on water resources can be found in *Section 6.4.5: Water Resources* and *Appendix A: County Profile (Data) Element.* .

**TABLE 8-1: AVERAGE AND MAXIMUM DAILY WATER DEMAND PER YEAR (1992-2003)**

Water Provider	1992	1997	2001	2003
<b>OWASA</b>				
Average Daily Demand (mgd)	7.14	8.98	10.17	8.22
Maximum Daily Demand (mgd)	12	14.34	13.75	12.81
Public Water Supply Safe Yield	13.5	13.5	15.1	12.5
<b>Hillsborough</b>				
Average Daily Demand (mgd)	1.46	1.8	1.23	1.2
Maximum Daily Demand (mgd)	2.04	2.65	1.87	1.83
Public Water Supply Safe Yield	0.68	0.68	2.58	2.58
<b>Orange - Alamance (Orange County portion of service area)</b>				
Average Daily Demand (mgd)	0.24	0.36	0.29	0.3
Maximum Daily Demand (mgd)	0.34	0.44	0.39	0.4
Public Water Supply Safe Yield	0.12	0.12	0.12	0.12

In 2000, the majority of water demand in the County came from residential, commercial, and institutional water users (75%), 11% from domestic and individual well users, 5% from agricultural irrigation, 2% from livestock use, and 7% from other uses. Over the period of 1985-2000, Orange County increased water usage from 10.33 mgd to 17.19 mgd, a 66% increase.

### 8.4.1.2. ORANGE COUNTY WATER AND WASTEWATER NEEDS

Orange County has worked diligently to conserve and ensure wise use of its precious water resources. Consideration of the following issues will ensure water resources will meet the demands of future County populations.

- Orange County needs to coordinate the provision of water and wastewater services with area providers to ensure that the needs of future populations are met.



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- OWASA has led the County in water conservation programs and measures. Other providers could learn from and implement similar measures to ensure long-term sustainability of their systems.

### 8.4.1.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decision-making by the County related to the provision of water and wastewater services. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 1:** Efficient provisions of public water and sewer service systems which are consistent with the Land Use Plan and which abide by the current Water and Sewer Management Planning Boundary Agreement, the existing Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, and future agreements to be negotiated among the County and public and private service.

**Objective WW-1:**

Maintain a sustainable and high quality supply of ground and surface water so that available resources meet existing and projected needs. (See also Water Resources Objective WR-2.)

**Objective WW-2:**

Coordinate the provision of potable water and sanitary sewer services with the County's Land Use Plan and Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, targeting these services to urban, transitional, and economic development districts in a manner that does not endanger environmental resources. (See also Land Use Objective LU-1.1, Housing Objective H-1.5, and Economic Development Objective ED-2.10.)

**Objective WW-3:**

Maintain and add new partners to the existing Water and Sewer Management Planning and Boundary Agreement with the Towns of Chapel Hill, Carrboro, and Hillsborough and OWASA. Work to establish similar agreements with the Cities of Mebane and Durham and Orange-Alamance Water System. (See also Land Use Objective 3.6.)

**Objective WW-4:**

Orange County welcomes opportunities to coordinate with Orange-Alamance Water System to plan future service areas in the County.

**Objective WW-5:**

Maintain a cooperative joint planning process among the County, the municipalities, and water and wastewater providers and guide the extension of service in accordance with the Comprehensive Plan, the Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, and the policies of the municipalities. (See also Water Resources Objective WR-5.)



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### **Objective WW-6:**

Develop and implement a process whereby the responsibilities and duties associated with the operation and management of package sewage treatment plants are specified as a requirement of the permitting process for such facilities.

### **Objective WW-7:**

Revisit and revise the Water Sewer Management Planning and Boundary Agreement to ensure consistency with the Land Use map and land use categories. (See also Land Use Objective LU-6.2.)

### **Objective WW-8:**

Reduce the number of requests from utility authorities and others for plan and zoning amendments needed to accommodate public water and wastewater facilities.

### **Objective WW-9:**

Ensure that public water and sewer services are provided in those areas that can be practically and efficiently served by these facilities, as provided in the Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, and as delineated in the Water and Sewer Management Planning and Boundary Agreement, as well as any inter-local government agreement that implements the Agreement.

**Services and Community Facilities Goal 2:** Adequate, safe, and healthy groundwater withdrawal and wastewater disposal systems with minimal impacts upon water and land resources.

### **Objective WW-10:**

Ensure that all development projects of a dense character have access to clean, safe, and reliable water supplies.

### **Objective WW-11:**

Increase educational efforts that increase citizen understanding of water quality problems and the need for water conservation. (See also Water Resources Objective WR-2.)

### **Objective WW-12:**

Prohibit package sewage treatment plants in the Watershed Critical Areas.

### **Objective WW-13:**

Prohibit the establishment of public water and sewer services in the areas designated as Watershed Critical Areas, except to address emergency public health situations.

### **Objective WW-14:**

Designate prime reservoir sites in the County, and protect those sites from adverse development. (See also Natural Areas Objectives NA-5 and NA-17 and Land Use Objective LU-2.2.)

### **Objective WW-15:**

Prohibit commercial and industrial land uses from locating and/or expanding within identified Watershed Critical Areas. (See also Economic Development Objective ED-2.7 and Land Use Objective LU-2.5.)



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### **Objective WW-16:**

Ensure that the type of wastewater disposal facilities serving a development are appropriate given present and future demand for service, the distribution of users, and the capacity of the natural environment to absorb the impact.

### **Objective WW-17:**

Ensure that buyers of property within the County are fully informed about the on-site sewage disposal requirements of their property.

### **Objective WW-18:**

Allow on-site wastewater disposal in rural areas where soil conditions are acceptable. Where there are unacceptable soils, state-approved on-site sewage disposal systems shall be required.

### **Objective WW-19:**

Establish a continuing wastewater treatment inspection program within identified Protected and Critical Water Resource Areas. (See also Water Resources Objective WR-6.)



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### **8.4.2. EROSION CONTROL AND STORMWATER MANAGEMENT**

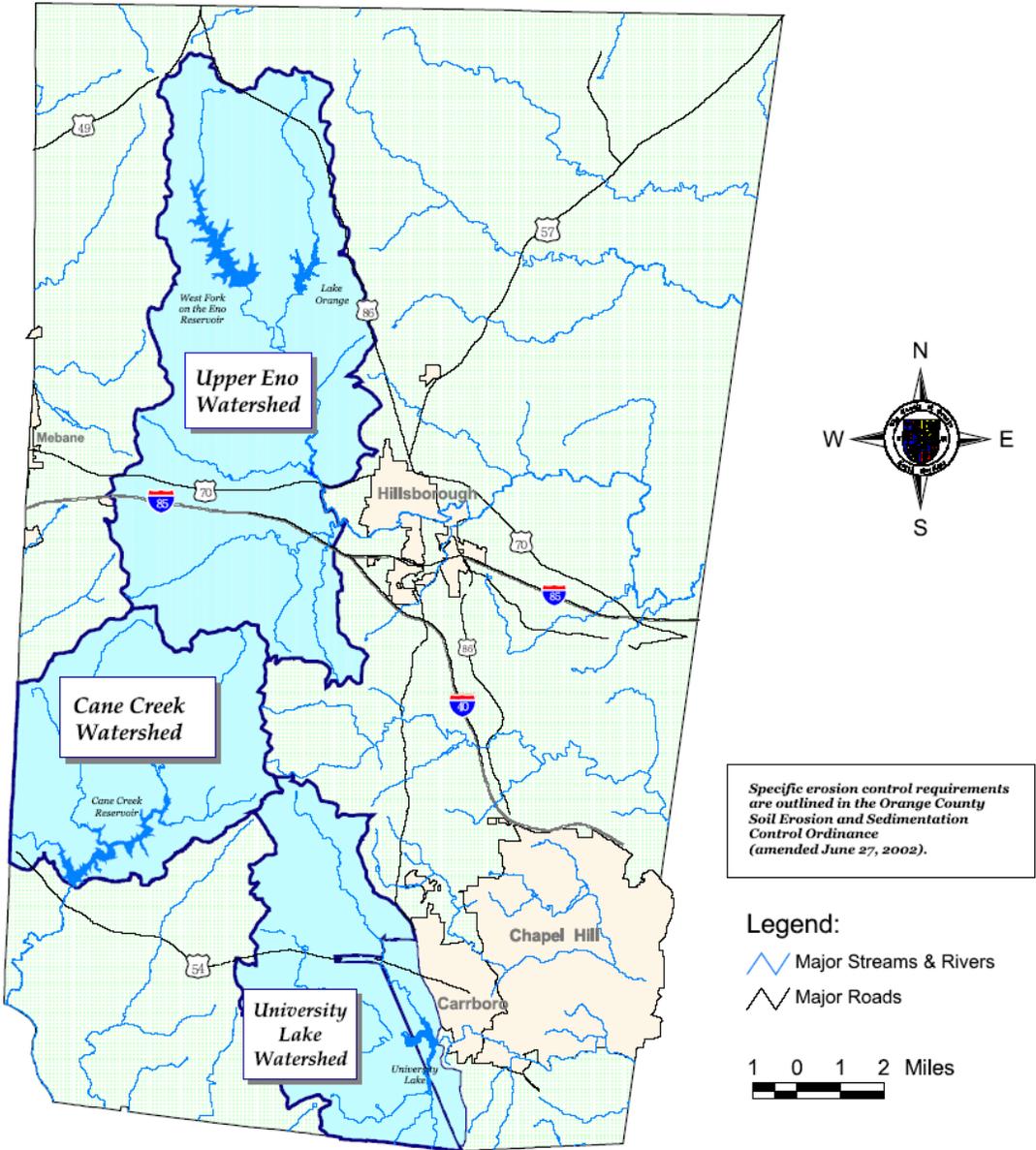
Orange County's Erosion Control Division is charged with enforcing County Erosion Control and Stormwater Ordinances, including inspections of land development, and review of erosion control plans. These ordinances regulate land development activities to ensure that watersheds are protected from adverse affects of development, and that grading and site development do not create hazardous stormwater flows. The division also administers the Neuse Buffer Rules and participates in regional watershed planning initiatives.

The Erosion Control division reviews land disturbance activities and erosion control plans countywide, including parts of Durham County annexed by Chapel Hill. Disturbance of more than 20,000 feet in a non-protected watershed and disturbance of more than 10,000 square feet in a protected watershed must obtain pre-approval from Erosion Control and applicants are required to submit an erosion control plan. The County holds several agreements with the municipalities for enforcement, including enforcement of Hillsborough's National Pollutant Discharge Elimination System Phase II Stormwater Program and erosion control enforcement in Chapel Hill, Carrboro, Hillsborough, and the portion of Mebane in Orange County. In addition, the division develops educational materials and conducts educational programs related to erosion control, stormwater runoff pollution, stream buffers, and water quality protection.

Of the 32 local governments in the Neuse River Basin, Orange County was the first and only to receive delegated authority from the state Environmental Management Commission to enforce the Neuse Rules. Any land disturbance in University Lake, Cane Creek, and the Upper Eno watersheds are reviewed by the division. Entities with the power of eminent domain, such as the Department of Transportation, University of North Carolina, OWASA, and School Districts, are regulated by the state. Orange County does monitor some of these entities through various voluntary agreements, such as a written request from the Chapel Hill-Carrboro School System to monitor Carrboro High School. Map 8-3 identifies the watersheds where Neuse River Basin erosion control measures are required.



### Watersheds with Additional Erosion Control Requirements Orange County, NC



Specific erosion control requirements are outlined in the Orange County Soil Erosion and Sedimentation Control Ordinance (amended June 27, 2002).

**Legend:**

- Major Streams & Rivers
- Major Roads

1 0 1 2 Miles

Contact the Erosion Control Division at (919) 245-2586 for more information.

Orange County Planning & Inspections Department

MAP 8-3: WATERSHEDS WITH ADDITIONAL EROSION CONTROL REQUIREMENTS.



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Per the Neuse River Basin rules, Erosion Control staff are trained in surface water identification and can legally define and differentiate ephemeral, intermittent, and perennial streams. The purpose of this is to identify riparian buffers during erosion control and stormwater review to ensure that they are not encroached by development.

### 8.4.2.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS

The Erosion Control Division provides monthly reports to the state regarding number of inspections, total acres permitted and disturbed, enforcement, and several other metrics. This is also tracked and reported to the municipalities. The table below shows the number of projects inspected, by municipality, during the months of July through September 2007.

**TABLE 8-2: EROSION CONTROL LAND DISTURBANCE SUMMARY (JULY - SEPTEMBER 2007)**

	Orange County	Hillsborough	Chapel Hill	Carrboro	Mebane
<b>July 2007</b>					
Projects Inspected	5	2	2	0	0
Acres Graded	10.2	5.7	11.8	0	0
Revenue YTD	\$6,885	\$2,866	\$8,919	\$0	\$0
<b>August 2007</b>					
Projects Inspected	2	2	2	0	0
Acres Graded	1.8	2.9	3.7	0	0
Revenue YTD	\$7,724	\$4,287	\$11,218	\$0	\$0
<b>September 2007</b>					
Projects Inspected	0	1	3	1	0
Acres Graded	0	3	1.9	19.5	0
Revenue YTD	\$7,724	\$5,808	\$13,402	\$34,807	\$0

Between January and September 2007, the Erosion Control Division conducted 397 inspections.

### 8.4.2.2. ORANGE COUNTY EROSION CONTROL AND STORMWATER MANGEMENT NEEDS

Orange County leads the state in erosion control and stormwater management inspections. Efforts to further improve the activities of the Erosion Control Division include:



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- Needed improvements to ongoing surface water mapping in the County; and
- Needed additional water quality data to inform inspection and watershed protection programs.

### 8.4.2.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decisions-making by the County related to regulation of erosion control and stormwater systems. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 5:** Efficient and effective drainage, stormwater, floodplain management, and erosion control systems.

**Objective EC-1:**

Continue to use Best Management Practices (BMP's) for stormwater control, as outlined within the Orange County Zoning Ordinance, Stormwater Ordinance, and Sedimentation Control Ordinance, to minimize potential adverse impacts on the water quality. (See also Land Use Objective LU-2.3, Natural Areas Objective NA-4 and Water Resources Objective WR-20.)

**Objective EC-2:**

Protect and maintain the chemical, physical, and biological quality and integrity of water supply reservoirs.

**Objective EC-3:**

Prohibit activities that adversely affect surface and ground water systems that may serve or do serve as a public water supply.

**Objective EC-4:**

Use low-impact stormwater design principles when developing new or retrofitting existing drainage systems that do not functionally approximate the natural drainage pattern.

**Objective EC-5:**

Minimize sedimentation and erosion to reduce the transport of sediment and pollutants to surface waters.

**Objective EC-6:**

Protect and maintain the existing aquatic, riparian and terrestrial habitats-of fish and wildlife.

**Objective EC-7:**

Prevent flood damage to public and private property.

**Objective EC-8:**

Protect the absorptive, purifying and retentive functions of the natural systems existing in the County.



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### **Objective EC-9:**

Provide educational materials and programs to school groups, civic groups, developers and interested citizens about water quality protection.

### **Objective EC-10:**

Develop programs and incentives that encourage the implementation of Best Management Practices, Low Impact Design, and on-site capture of stormwater in development projects.



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### 8.4.3. SOLID WASTE AND RECYCLING

Countywide solid waste material disposal and recycling is managed by Orange County. Orange County deposits an average of 57,200 tons of municipal solid waste and 16,000 tons of construction and demolition waste annually at its 208-acre Solid Waste Management Facility on Eubanks Road in the Chapel Hill Township, just north of the Town limits.

The County owns and operates two separate landfills at its solid waste management facility:

- The lined landfill on the south side of Eubanks Road accepts **municipal solid waste** and covers about 26 acres of the 80 acres on the south side. Other operations at this site include collection and processing of electronics and hazardous waste which may continue to operate after landfill closure.
- The **construction and demolition waste** landfill is on the north side of the Eubanks Road site. It occupies 13 acres of the 120 acres owned and operated by the County on that side of the road.

Other activities at the facility include an 8,000 ton per year yard waste mulching and sales operation, compost sales, wood waste grinding, scrap metal and corrugated cardboard recovery, tire recovery, and recycling processing and transfer. A 45-acre closed and capped municipal solid waste landfill and an 11-acre closed and capped construction and demolition landfill are also located at the site. Methane from the closed municipal solid waste landfill is passively vented and groundwater sites are monitored twice a year at multiple locations surrounding the waste sites.

The County owns another sixty acres of land immediately south of the southern part of the landfill that is not designated for solid waste functions, but was purchased in 1984 by the Solid Waste Enterprise fund. There is an adjoining 108 acres further south (the Greene Tract) remaining in joint ownership of the County and the Towns of Carrboro and Chapel Hill that had also been purchased by the Solid Waste Enterprise Fund. That is not slated for solid waste activity either and has potential for other types of development. Currently it remains open space and no definite plans have been made for long-term development.

The Solid Waste Department also owns two remote properties that house solid waste convenience centers at Ferguson Road and Old Greensboro Highway and Walnut Grove Church Road. A third such site is on landfill-owned property at Eubanks Road. Another two convenience center sites are leased at Bradshaw Quarry Road and High Rock Road. A sixth site is under consideration for development on county-owned land in the northeast quadrant of the County.

#### LANDFILL GAS RECOVERY

The closed 45-acre municipal solid waste area of the landfill generates a biogas that is vented to the atmosphere. There is an opportunity for installation of a biogas capture system by a private third party, should they deem it cost-effective. The newly emerging market for carbon credits coupled to the actual dollar value of the energy in the gas along with various



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tax credits for renewable energy development may make this relatively small project economically attractive to a private developer in the near future.

The active 26-acre municipal solid waste lined area of the landfill will close in a little more than three years and there are plans to install a gas recovery system at this site. Orange County is currently negotiating with the University of North Carolina to develop a process for recovering this methane gas to produce energy.

### FUTURE USE OF LANDFILL FACILITY

Closed municipal solid waste landfill sites tend to generate a gas that is a mixture of predominantly methane, carbon dioxide and water vapor with traces of other molecules such as hydrogen sulfide. The gas can emerge into the atmosphere in combustible concentrations whether it's captured and piped or simply migrates out through the soil. Federal regulations for capped landfills make it difficult to find short-term public uses for any closed municipal solid waste landfill site. Some passive uses might be considered under special circumstances. Thirty years is the U.S. Environmental Protection Agency's estimated time-frame for biological activity to have slowed enough so that more active use of the site may be possible.

Use of not only the municipal solid waste site, but the closed construction and demolition site, is further constrained by the presence of adjoining active solid waste operations. These active areas are slated to remain active solid waste management sites for the foreseeable future, thus further constraining any consideration of alternative uses. Monitoring and controlling public access for non-solid waste activities would be very challenging to say the least. The Solid Waste Department has not therefore promoted any alternative uses of the closed portions of the site.

#### **8.4.3.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS**

Municipal solid waste tonnage in Orange County has been the same for the past seven years and construction and demolition waste has been the same for the past three. In light of increasing populations and development activity, sustaining the same levels of waste disposal is a success for the County. The table below states the amount of waste by type of material in Orange County.



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**TABLE 8-3: ORANGE COUNTY SOLID WASTE MANAGEMENT STATISTICS**

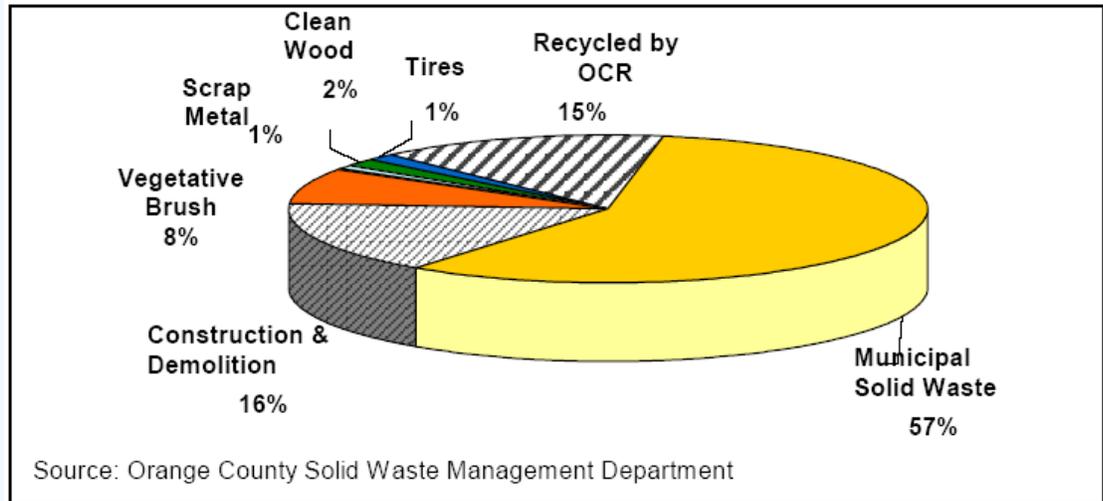
Type of Material/Waste	Tons	How Managed
Municipal Solid Waste	57,298	Buried in lined landfill
Construction & Demolition (includes stumps, trailers)	15,546	Buried in unlined landfill
<b>Subtotal Buried at Landfill</b>	<b>73,844</b>	
Brush/Vegetative Waste/Yard Waste	8,144	Chipped and aged for sale as mulch on site
Clean wood waste - lumber, plywood	1,529	Chipped for sale as fuel
Scrap metal	793	Segregated for sale
White Goods/Appliances	342	Segregated for sale
Whole Tires	1,557	Segregated and shipped off for recycling
<b>Subtotal Recycled at Landfill</b>	<b>12,366</b>	
Recyclables from curbside, drop off apartments, commercial	15,000	Processed & sold for remanufacturing
Hazardous wastes, motor oil, filters, antifreeze, batteries, and electronics	642	Segregated and sent off for recycling, recovery, combustion, neutralization, secure landfilling
<b>Subtotal Managed by Recycling Program</b>	<b>15,642</b>	
<b>Total Solid Waste Materials</b>	<b>101,855</b>	

In fiscal year 2005-2006, the majority of waste managed in the County was municipal solid waste (57%), followed by construction and demolition waste (16%), recycled waste (15%), vegetative brush (8%), clean wood (2%), and scrap metals and tires (both 1%). See Figure 8-1 below.



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**FIGURE 8-1: TONS OF SOLID WASTE MANAGEMENT BY ORANGE COUNTY  
(FY 2005/2006)**

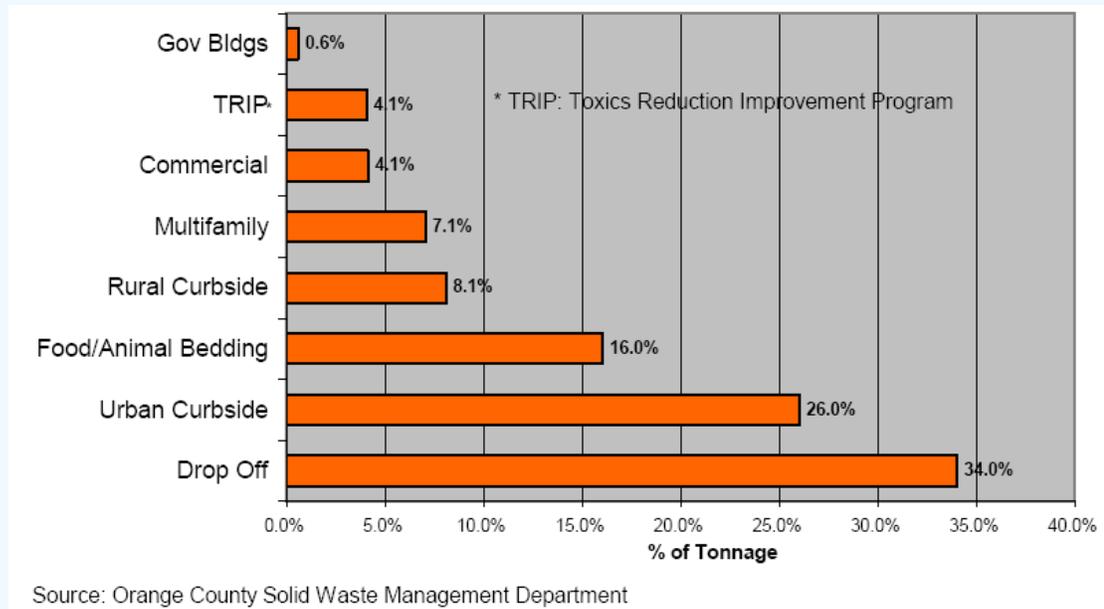


In fiscal year 2005-2006, the largest percentage of recycled materials in Orange County was from dropped off recycling (34%), followed by urban curbside (26%), food/animal bedding (16%), rural curbside (8.1%), multifamily (7.1%), commercial (4%), Toxic Reduction Improvement Program (4.1%), and government buildings (0.6%). See Figure 8-2 below.



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**FIGURE 8-2: RECYCLING PROGRAMS BY TONNAGE  
(FY 2005/2006)**



### MEASURING PROGRESS TOWARDS 61% WASTE REDUCTION GOAL

Orange County, as all other counties in North Carolina, measures its solid waste management effectiveness by a waste reduction calculation when compared to the benchmark year of 1991-92. In our County, that benchmark is 1.36 tons per person. Orange County has an ambitious goal of reducing waste by 61% per capita compared to that benchmark year. That benchmark measurement included all tons managed by Orange County, including waste deposited into landfills, recyclables collected that year, mulched brush, and other operations, such as appliance recycling, that recycle or dispose of materials in ways other than placing in a landfill. This was done to give those counties that had begun recycling prior to setting the benchmark some credit for that work.

As part of the North Carolina solid waste management statutes, the state solid waste office required a solid waste plan and set goals of 25% waste reduction per capita by 1996 and 40% by 2001. Orange County has achieved and even surpassed these goals since developing its first solid waste plan in 1997. The County's own goals were 45% waste reduction by 2001 and 61% initially by 2006. The latter goal was retained as a numerical goal, but any time frame has been rescinded. A few of the progress marks include 1995-96, 2001 and 2005-06 shown in the table below. The tentative waste reduction percentage for 2006-07 is given by the State at 47.6%. This new reduction level shows some



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more progress towards the ultimate County goal after hovering around 45% for several years.

**TABLE 8-4: WASTE REDUCTION RATES IN ORANGE COUNTY**

Year	1991-92	1995-96	2001-02	2005-06
Tons per capita	1.36	(n/a)	0.81	0.77
Waste reduction rate	(n/a)	(n/a)	40%	43%

### 8.4.3.2. ORANGE COUNTY SOLID WASTE AND RECYCLING NEEDS

Orange County Solid Waste planning efforts have identified several activities in the County to address current and future solid waste management needs. The following needs are being addressed through ongoing planning activities:

1. **Development of an integrated solid waste management plan.** The overarching goal of the plan is the county-adopted goal of 61% waste reduction per capita. There is a solid waste work plan group consisting of elected officials, the Solid Waste Advisory Board and staff from the towns and County developing recommendations on approaches to reducing waste sent to landfills, financing the effort, and future disposal options. They project to conclude work in the summer of 2008 with a recommendation to the Board of County Commissioners.
2. **Search for a transfer station site.** The municipal solid waste lined landfill is projected to reach capacity in 2011 and at that point, solid waste would be transferred out to some remote facility via tractor trailer trucks. A site for transferring the waste from individual garbage collection trucks to these long distance hauling vehicles is needed. The search is being led by the Board of County Commissioners using a solid waste consultant and Orange County Solid Waste staff, and includes discussions of site size, and other screening and selection criteria. The site search, design, permitting and construction are projected to take at least three and a half years.
3. **Ongoing staff-led activity to accommodate program growth and changes.** Solid waste management in our County remains a dynamic activity with a high degree of public scrutiny, demand for more recycling services, environmental regulations and constant technical innovations driving staff to continuously create new responses. This incremental planning for operational changes must take place regardless of the pace of the two previous activities; thus there is a constantly shifting playing field to accommodate the ongoing pressures to change and provide more services. Every effort is made to integrate incremental activities with the broader solid waste planning efforts in items 1 and 2 above.



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### 8.4.3.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decision-making by the County related to regulation of solid waste management. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 6:** Less solid waste per capita with cost effective and environmentally responsible disposal and management.

**Objective SW-1:**

Continue to affirm, support, and work towards achieving a 61% waste reduction goal adopted by the County in 1997.

**Objective SW-2:**

Encourage the recycling of solid waste, including but not limited to the preference for deconstruction practices over demolition, to minimize waste disposed of in landfills.

**Objective SW-3:**

Evaluate the solid waste collection system presently used by the County in terms of efficiency and long-term sustainability. Recommend alternative systems or means to improve the existing system based on this evaluation.

**Objective SW-4:**

Use land use planning, zoning regulations, and the process of development approvals to enable the appropriate environmental controls and oversight of necessary solid waste facilities. (See also Land Use Objective LU-4.2.)

**Objective SW-5:**

Require new construction and substantial remodeling of non-single family property to set-aside adequate space and access for solid waste management and recycling materials storage on site.

**Objective SW-6:**

Work with municipalities in Orange County to review development proposals to ensure that adequate space for solid waste management facilities is included within site plans.



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### 8.4.4. PUBLIC SAFETY AND TELECOMMUNICATIONS

Law enforcement, fire prevention, and emergency services are delivered by County and municipal service providers throughout the County. Partnerships between the County and towns provide opportunities for co-location and efficient provision of services countywide. Telecommunication facilities are located throughout the County and provide for critical public safety communications. These facilities are regulated by the County's development regulations, as well as federal laws.

#### EMERGENCY SERVICES

Orange County Emergency Services is comprised of three divisions and complemented by the network of telecommunication facilities:

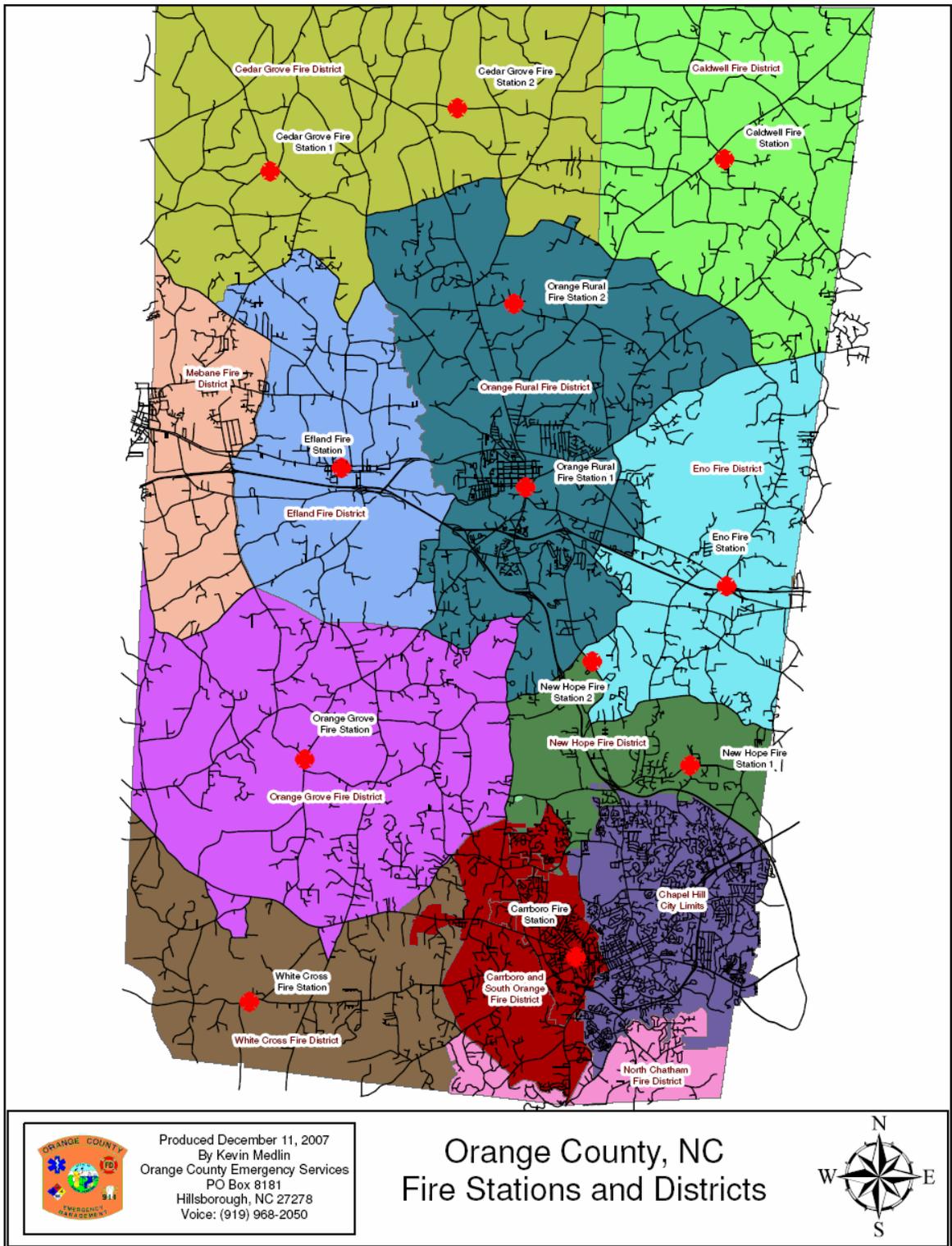
- **911 Communications** provides emergency communications and dispatch for three police departments (Hillsborough, Carrboro, and Chapel Hill), the Sheriff's office, three municipal fire departments (Hillsborough, Chapel Hill and Carrboro), eight volunteer fire departments, and two rescue squads (Orange County Rescue Squad (Hillsborough) and South Orange Rescue Squad (Carrboro)).
- **Emergency Medical Services** provides basic and advanced medical services to all of the residents in the County, supplemented by the two volunteer rescue squads (Carrboro and Hillsborough). The County contracts out for building space for personnel and equipment. This space is shared with the two volunteer squads. The County also houses one ambulance and paramedic at the office on New Hope Church Road and a paramedic is stationed in Efland. The two rescue squads provide emergency medical services and rescue services to residents in the County.
- The **County Fire Marshall** is responsible for enforcing the North Carolina fire prevention code, conducting fire inspections, reviewing plans for new building construction, fire/arson investigations, County fire department coordination, and hazardous materials response in the unincorporated areas of Orange County. Eight volunteer fire departments provide fire protection and basic first responder services in the County. In addition, Mebane and North Chatham Fire Departments provide services in Orange County. There are 12 fire stations located throughout the County.
- **Telecommunications** facilities are located throughout the County. Both public and private facilities located water towers, electrical transmission towers, or on rooftops, complement other telecommunications systems used by the State Highway Patrol, 911 Communications, Emergency Medical Services, local police and fire departments, and local utility providers.

Residents are served by the respective fire station or stations within respective fire districts. Map 8-4 shows the fire stations and fire districts in



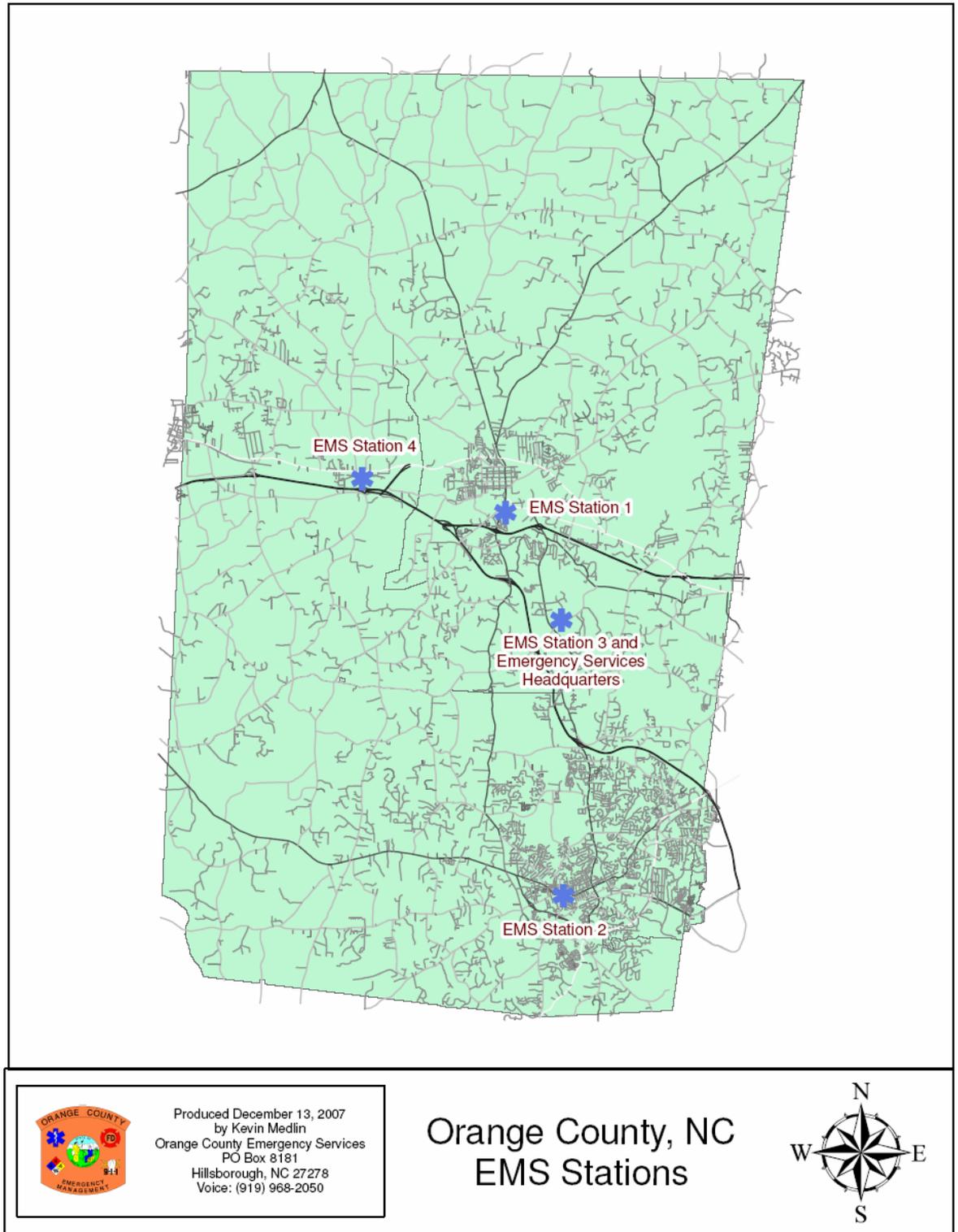
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Orange County. Map 8-5 identifies emergency medical service station locations in the County.





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**MAP 8-5: ORANGE COUNTY EMERGENCY MEDICAL SERVICE STATIONS**



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### LAW ENFORCEMENT

The Orange County Sheriff's Office provides law enforcement services throughout the County. Assistance is provided to municipal law enforcement departments (Chapel Hill, Carrboro, Hillsborough) when they ask for or need assistance. The Sheriff, as in all counties in North Carolina, is elected for a term of four years. The Sheriff and Sheriff's deputies have the authority to arrest for any violation of the law and are the only law enforcement officers in the County with authority to serve Civil Process, such as domestic orders, civil summons, summary ejections, etc. Deputies are responsible for answering and resolving complaints such as domestic violence, domestic abuse, missing persons and runaways, drug violations, assaults, larcenies and burglaries, homicides, arsons, vandalisms, and other offences.

In the unincorporated portions of the County, the Sheriff's Office provides 24-hour patrol service and responds to emergency and non-emergency calls, and administers civil processes. Required by state statute, Orange County must provide bailiffs for the County courts, opening and closing court when they are in session. The County also provides School Resource Deputies that serve eight (8) County schools daily.

The only jail in Orange County is maintained by the Sheriff's Department. All persons sent to the jail from court or sentenced by the court to jail are held in this facility in Hillsborough, and the Sheriff transports prisoners accordingly.

### TELECOMMUNICATION TOWERS

In Orange County and the four incorporated towns, there are presently sixty-one (61) known telecommunication tower sites, and local governments continue to receive permission to locate additional towers. The average tower height is 214 feet with a range between 30 and 1,307 feet. Fifteen of the telecommunication towers in Orange County are more than 200 feet in height. All but five towers more than 200 feet are guyed, and except for the recent Piedmont Electric replacement tower, all were constructed before 1996.

Recent innovations have eliminated the need for tall towers, but have created digital technologies, which require more bandwidth capacity, shorter ranges, and greater data transmission capacities. The County will likely continue to see development proposals for additional towers over the long-term.

#### **8.4.4.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS**

Key data and trends that inform future decision-making regarding law enforcement, fire prevention, and emergency services in the County include:

- Fire department responses for fire and medical calls average 17 calls per day in the County. This includes calls in the Town of Hillsborough as Orange Rural Fire Department contracts with the Hillsborough for fire and first responder services within the town limits.



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- The County jail houses 129 persons and, on average, exceeds this daily capacity. In the next few years, the County will face the burden of having to build another jail.

### 8.4.4.2. ORANGE COUNTY PUBLIC SAFETY AND TELECOMMUNICATION NEEDS

Growth and service delivery is the area of most concern at this time. The County is faced with the challenge of how to provide adequate services, projected staffing needs, and location of new facilities to provide optimal response for future populations. Key needs to be addressed include:

- The fire departments in the County are faced with **increasing numbers of responses and recruitment/retention issues**. As a result, five of the eight volunteer fire departments now have paid staff to supplement volunteers for emergency response and service delivery.
- Fire Departments and Emergency Medical Services are challenged with the **increase in call volumes**. Emergency medical services call volumes are expected to exceed 10,000 calls in 2008.
- 911 communications and emergency medical services are **challenged with the increases in populations as well as service delivery in the County and towns**. Carrboro Fire and Rescue Department and Efland Fire Department are about to begin construction of new fire stations and have approached the County about the possibility of entering into a partnership with the County to place emergency medical service stations at the fire stations. That scenario would enhance delivery of services to the residents and could eliminate the need for the County to purchase property for emergency medical service stations. Several new facilities are being built to service retirement/assisted living facilities in the County as well as the towns.
- Much of the rural character of the County is changing from primarily open land and farms to residential developments. The County has very **limited infrastructure (water lines and fire hydrants) in place to accommodate fire suppression efforts**. As a result, the fire departments are faced with having to develop some unique techniques to provide water for fire suppression efforts. With the increasing number of homes being constructed, the number of emergency responses increases yearly.
- Section 704 of the federal Telecommunications Act of 1996 created a new framework for the regulation of telecommunication facilities, particularly wireless “cell” towers and the associated equipment and infrastructure. In essence, **the federal government limited the authority of local governments to regulate or create a “barrier to entry” of new telecommunication facilities** that would create the



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public interest “information highway.” Since 1996 all local governments have grappled with the limits of their authority in this field to protect their local interests through local zoning regulations. As a result, local regulations have been pushed into a somewhat unchartered limit of authority that has resulted in hundreds of lawsuits in an attempt to resolve the balance intended in the 1996 Act. The County needs to keep abreast of legal challenges that will set precedent on the extent of local regulations on these facilities.

### 8.4.4.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decision-making by the County related to the provision of law enforcement, fire, emergency services, and telecommunication facilities. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 7: Efficient and effective public safety including, police, fire, telecommunications, emergency services, and animal services.**

**Objective PS-T-1:**

Ensure the provision of adequate public safety protection standards for residential, commercial, and industrial development.

**Objective PS-T-2:**

Ensure that all state roads in the County receive non-duplicated names to be posted on signs at intersections and that all houses are numbered in order to improve the response times of law enforcement and emergency vehicles. (See also Transportation Objective T-2.3.)

**Objective PS-T-3:**

Establish and maintain an appropriate level of service for law enforcement and emergency services and ensure the provision of adequate public safety protection standards for residential, commercial, and industrial development throughout the County.

**Objective PS-T-4:**

Maintain high levels of cooperation and sharing of equipment among all departments and agencies involved in law enforcement, public safety, crime prevention, fire protection, and emergency services to assure a high level of service in a cost effective manner.

**Objective PS-T-5:**

Include in applied site design standards for residential, commercial, and industrial development, appropriate road design standards to ensure adequate law enforcement and emergency vehicle access to the development. (See also Transportation Objective T-2.3.)

**Objective PS-T-6:**

Develop a mechanism for cooperation with telecommunication facilities stakeholders regarding the siting and design of towers.



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### **Objective PS-T-7:**

Manage the number of future wireless telecommunication facilities by identifying preferred locations capable of accommodating service Countywide.

### **Objective PS-T-8:**

Encourage the expansion of affordable, high-speed Internet access, fiber-optic lines, and other high-speed communication networks to rural and underserved areas.

### **Objective PS-9**

Maintain a radio communication system that ensures reliable notification and oversight of emergency assets, such as personnel, vehicles, and response equipment, throughout Orange County and inter-operability of communication among jurisdictions.



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### 8.4.5. LIBRARY SERVICES

Orange County's public library services are delivered through a hierarchical library system that includes regional, County, and municipal library facilities and services.

The Hyconeechee Regional Public Library System covers Orange, Caswell, and Person Counties. The Orange County Public Library in Hillsborough is the headquarters for the six branch regional system. Together the libraries exchange books, programs, and information to better serve the three counties, and surrounding areas.

The Orange County Public Library System consists of three public libraries (Orange County Public Library, Carrboro Branch Library and Cedar Grove Branch Library) and the Carrboro Cybrary facility.

The Chapel Hill Public Library, which is a Town-owned and managed library outside of the County library system, is the busiest public library per capita in North Carolina. It serves 300,000 people annually with an average of 1,000 visitors a day. Chapel Hill is in the process of expanding this facility to add an additional 45,000 square feet of library space and an art garden.

#### LIBRARY PLANNING

In 2004, Orange County undertook a task force led planning effort to develop a plan for improving library services and to make recommendations to improve library services and facilities. The scope of the 2025 Long-Range Library Facility Planning report covered a broader array of library planning recommendations than originally intended due to significant findings that pointed to the need for a more comprehensive countywide vision to increase the quality and quantity of library services in the County. The needs assessment section addresses the key findings of this report.

One of the key findings was a need for a new Orange County central library facility in Hillsborough. Construction of this facility, which will be located on Margaret Lane in Hillsborough, is anticipated in 2009.

#### **8.4.5.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS**

Despite a number of very positive attributes of the Orange County Library – the quality, creativity, and initiative of library staff, its programs, and outreach efforts, and its local history collection, among others – facility space, staffing levels, and collection size are significantly below average professional standards. Steps have been taken over the last decade to extend services beyond the central library, and the library administration has made a concerted effort to find creative and collaborative ways to bring the system closer to state standards, but the County system still lags significantly behind the norm. See Table 8-5 below for a comparison of the County and Chapel Hill public library systems to state averages and guidelines for service.



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**TABLE 8-5: LIBRARY RESOURCES COMPARED TO STATE AVERAGE AND STANDARDS (2002-2003)**

Resources	Orange County Central Library	Chapel Hill Public Library	NC Average/Guidelines
Est. 2002 population	71,225	50,540	8,323,375
Books per capita	1.01	2.75	1.88 (basic standard = 2)
Reader seats/1,000 population	0.88	1.8	N/A (professional standard = 3-5)
Full-time equivalent staff/2,000 population	0.27	1.22	1
Square footage per capita	0.18	0.54	Standard = 0.65
Registered borrowers / % of populations	19.8%	50%	50%
Circulation per capita	2.02	15.55	5.38
Library income per capita	\$10.12	\$38.40	\$18.88
Local Government Revenues per Capita	\$8.16	\$33.03 (Town and County)	\$15.55

### 8.4.5.2. ORANGE COUNTY LIBRARY NEEDS

The 2004 assessment of library services in the County identified the following needs:

- The population of the County as a whole values education and is supportive of library services, but it is **confused by the current system of library governance and funding responsibilities.**
- The **development of library services for Orange County residents has been fragmented at best**, resulting in great disparity in the level of library services provided throughout the County.
- The **facilities and resources of the Orange County Public Library system are significantly below the standard required** to provide effective public library services. Library staff has been creative and resourceful in “making do” with very limited resources.
- The population is growing at a high rate, with significant growth in the number of older residents and residents moving here from other countries. The **central library has**



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**not been enlarged in more than 20 years**, despite the growth in population during the same period.

- The residents of the County depend heavily on the Chapel Hill Public Library to supplement the resources of the Orange County Library for their library needs. **The presence of this library, operated by a separate jurisdiction, affects the planning of countywide library services.**
- Orange County is proud of its history and rich in historic resources that are preserved by a number of institutions in Hillsborough, including the public library. **Public access to these resources is limited**, however.

### 8.4.5.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decisions-making by the County related to library services. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 4: High quality library facilities that support our diverse and growing population and present opportunities for life-long learning.**

#### **Objective L-1:**

Develop a comprehensive 3-5 year strategic plan that places priority on achieving a vision of countywide equitable library services and resources for all citizens of Orange County, and identifies specific measures for implementing Library Service Standards adopted by the Board of County Commissioners.

#### **Objective L-2:**

Adopt a long-range library facility plan that takes into consideration the needs of the entire County and is based on 20-year population projections.

#### **Objective L-3:**

Establish an Orange County Heritage Center to make accessible the local history materials now located in various facilities.

#### **Objective L-4:**

Establish a branch library to serve the central west area of the County centered on Cheeks Township that will accommodate the future population growth of this area over the next 10-20 years.

#### **Objective L-5:**

Provide additional library services to people in the southwest area of the County centered on Bingham Township.

#### **Objective L-6:**

Evaluate the rural community for the establishment of cybraries or small branch libraries to provide access to library resources at these more distant sites.



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### **8.4.6. EDUCATION**

Orange County is nationally known for its excellent public education systems. Two districts serve the residents of Orange County – the Chapel Hill-Carrboro City School District and the Orange County School District. The County funds the two school districts, and the Towns of Chapel Hill and Carrboro levy additional taxes to supplement school district funding. The two school districts are governed by separate School Boards that determine school district policies, approve development and expansion of facilities, and provide overall direction for the activities of the school districts. This chapter focuses on school facilities provided by the two districts. Other educational policies and issues are addressed in related documents listed at the end of this chapter.

#### **DURHAM TECHNICAL COMMUNITY COLLEGE**

The Durham Technical Community College (DTCC), Orange County Campus, is located on 20 acres in Hillsborough. This satellite campus opened its doors for continuing education and basic skills courses in May 2008, with curriculum courses starting Fall Semester 2008. The DTCC main campus is located on Lawson Street in Durham. The new campus building houses 22 instructional spaces, including multi-purpose rooms, computer labs and special purpose science labs, as well as flex space which could be used for vocational or trades classes. The facility also includes green building features such as "daylighting" utilizing aluminum light shelves, photovoltaic systems, solar-assisted domestic water heating, rainwater collection and reuse, waterless urinals, and operable window vents in all classroom areas, all of which will help the building be more energy efficient and ecologically friendly. The campus has the capacity for four more buildings. DTCC offers the following programs of study: Arts, Sciences, and University Transfer; Business and Public Service Technologies; Health Technologies; Industrial and Engineering Technologies; and Information Systems Technologies.

#### **CHAPEL HILL-CARRBORO CITY SCHOOL DISTRICT**

Established in 1909, Chapel Hill-Carrboro City Schools (CHCCS) provides educational services to school-age residents of the two Towns and some unincorporated areas near the Towns. The district operates three high schools, four middle schools, ten elementary schools, a school for young people being treated at UNC Hospital, and an alternative program for high school students. These schools serve more than 11,000 students. CHCCS employs 1,870 staff members of whom 1,150 are teachers or administrators.

The mission included in the CHCCS Strategic School Plan for 2008-2013 is "Empower all students to acquire the knowledge, skills and insights necessary to live rewarding, productive lives, prepared to contribute positively to the global community." The plan laid out annual capital expenditures for school facility and recreational expansion, identified funding sources for these projects, and set a schedule for implementation. The school district updates its strategic plan regularly.



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### ORANGE COUNTY SCHOOL DISTRICT

The Orange County School District provides public education services to student-age residents of Hillsborough, the portion of Mebane that lies in Orange County, and most of the unincorporated areas of the County. It operates seven elementary schools, three middle schools, and two high schools, and an alternative school. Orange County Schools has a projected enrollment of 7,000 students for the 2008-2009 school year. Board approved capital improvements for fiscal year 2007-2008 include more than \$2 million of improvements to existing facilities, including maintenance of heating and cooling systems, bathrooms, updating health and safety features, and improving athletic facilities.

The district provides its students with a wide range of excellent educational opportunities.

In 2008, Orange County Schools completed a series of studies that will increase efficiency and improve responsiveness district-wide. The Orange County Board of Education approved a re-allocation of Title I funding that will provide district residents with three pre-kindergarten classrooms for early intervention.

In the fall of 2003, Orange County Schools organized a task force of parents, students, community members, teachers, school administrators, and other staff to develop a five-year strategic plan for the district, which was later adopted by the district. Since that time, the plan has guided programmatic, operational, and financial decisions within the district, using five overarching priorities:

1. High Student Achievement;
2. Healthy Students in Safe and Caring Schools;
3. Quality Teachers, Administrators, and Staff;
4. Strong Family, Business, and Community Support; and
5. Effective and Efficient Operation.

### SCHOOLS ADEQUATE PUBLIC FACILITIES ORDINANCE

Orange County has express authority from the State of North Carolina to ensure that the provision of public education services in the County keep pace with new development activities that result in increased demand for school services. The County has a Schools Adequate Public Facilities Ordinance which outlines the specific standards that must be met before new developments can be permitted. The County also has a memorandum of understanding with the two school districts, and the Towns of Chapel Hill, Carrboro, and Hillsborough to work together to ensure that new growth within the school districts keep pace with new developments, and sets out the roles and responsibilities for implementing the ordinance. The parties work cooperatively to develop and implement a Capital Improvement Plan for the construction of schools. This plan sets certain standards for existing schools, exceedance of which triggers the need to expand system capacity. A Certificate of Adequate Public Schools is issued by the Board of Education to new developments. This certification process ensures that capacity exists to serve new students that will be generated by new developments. Orange



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County, the school systems, and municipalities are collaborating on opportunities to identify and secure potential sites for future schools. The Towns of Carrboro, Chapel Hill, and Hillsborough along with the City of Mebane have undertaken a specific effort to explore the prospects for school sites that are consistent with the new standards and that could potentially be “landbanked” for future use.

### SCHOOL IMPACT FEES

The County also has authority to levy school impact fees from residential developers. Impact fees are fees assigned to developers to offset the new demand for school services that the development will create. The concept is that new housing developments will generate new families and new students, and that developers should pay their “fair share” of the cost to provide services to these new students. Impact fees are assigned to new developments during the development review process and are based on the estimated student impact that the development is expected to generate. These funds are used for capital improvement purposes to provide adequate school services to these new students. Operating expenses for the two school districts are paid out of their general operating funds and not by impact fees.

### JOINT LOCATION OF SCHOOLS AND PARK/RECREATION FACILITIES

The Joint Master Recreation and Parks Plan Work Group, comprised of elected officials, advisory commission members, public at large and staff from Chapel Hill, Carrboro, Hillsborough, and Orange County was instituted in 1998. The charge of the group was to develop a blueprint for the direction of future joint parks and recreation efforts in the County. The work group developed a report with a central message that the best hope for a strong parks and recreation program lies in partnerships among the jurisdictions. It identified key opportunities for cooperation including the joint siting, design, and management of school and park sites across jurisdictions, and recommended strategies to implement this goal. Specifically, it recommended a Parks and Resource Lands Council to work closely with the existing Schools and Land Use Council to identify joint location opportunities and develop plans to this end. This effort is still supported today.

### SCHOOL DISTRICT CONSOLIDATION

In 2003, the Orange County Board of County Commissioners tasked County staff with evaluating whether the two County school districts should be merged. The key concern that drove this effort was the matter of educational funding equity. A goal related to the pursuit of “equitable school funding” has been included in the board’s annual set of formal goals since the early 1900s. The evaluation focused on the financial, organizational, and legal considerations of a possible school merger. Although no formal recommendations were made in the report, actions taken since that time have included the production of the Grumet Report, an efficiency study, and the establishment of collaboration meetings among the boards.

It was not the first time the County undertook such an evaluation. A study was performed in 1985 that recommended not merging school districts at that time, but that “a single school system will prove to be desirable in the



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future.” If the school districts continue to experience inequities in funding, it is likely that these discussions will continue.

### 8.4.6.1. HISTORIC DATA, CURRENT DATA, EVALUATION OF TRENDS

The following statistics provide a snapshot of the County’s two public school districts for the 2006-2007 school year. Table 3-11 compares the average size schools in the two school districts with the state average. Orange County’s school size is lower than Chapel Hill-Carrboro schools on average for all three school types. While slightly higher than state averages, the Chapel Hill-Carrboro City School District has only slightly larger elementary and middle schools. Only the high schools are significantly larger than the state average. See Table 8-6.

**TABLE 8-6: COMPARISON OF AVERAGE SCHOOL SIZES (2006-2007)**

School Districts	Elementary	Middle	High
Chapel Hill-Carrboro School District	552	646	1,736
Orange County School District	438	524	1,068
State Average	510	666	989

More pertinent, Table 8-7 compares average class sizes by grade for the two school districts and the state average. Both school districts generally align with state averages. However, Orange County has a larger average class size than the state average for grades 2-5 and 8. See Table 8-7.

**TABLE 8-7: COMPARISON OF AVERAGE SCHOOL CLASS SIZES (2006-2007)**

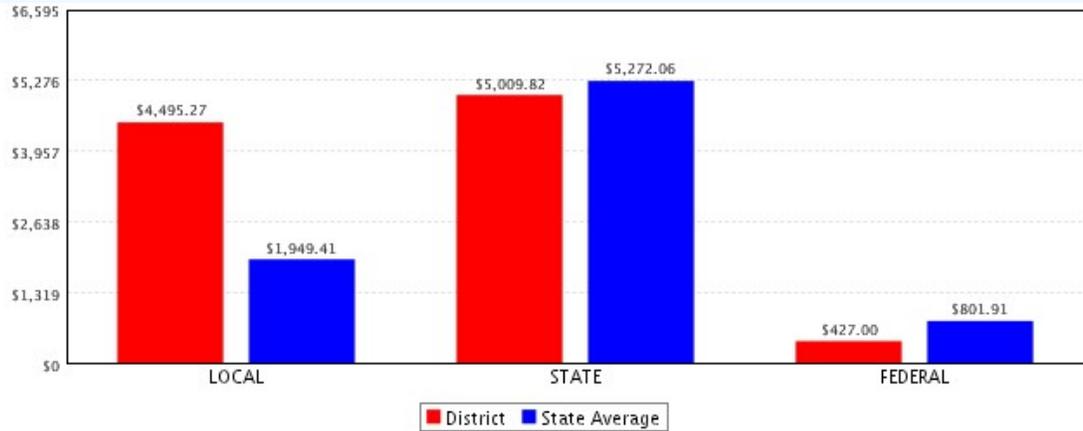
	Kind.	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
CH-Carr	18	19	20	19	22	22	20	20	19
OC	19	18	20	21	21	22	20	20	21
State Average	19	19	19	19	20	21	21	21	20

Comparisons of Chapel Hill-Carrboro City School District funding with state averages show that local funding of the school district is significantly higher than the state average for local funding. State and federal funding is slightly lower for the district. See Figure 8-3.



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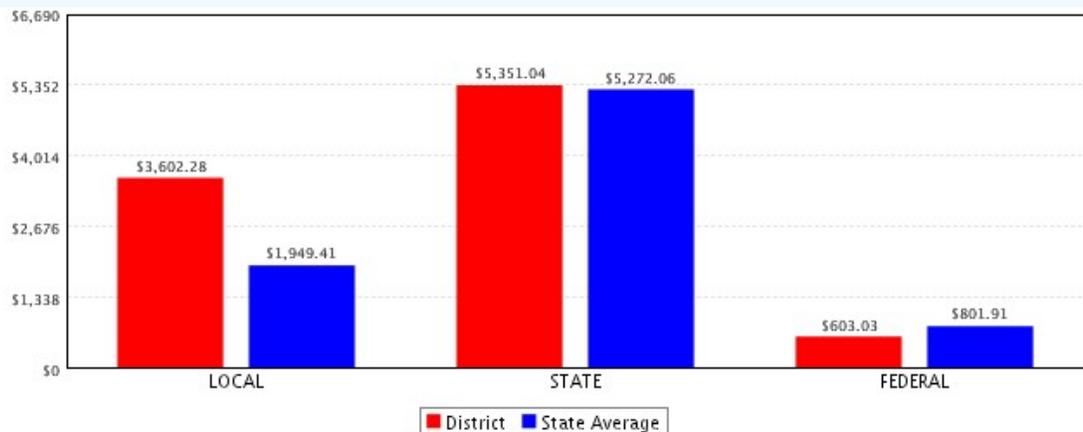
**FIGURE 8-3: COMPARISON OF SOURCES OF FUNDS PER PUPIL FOR CHAPEL HILL-CARRBORO DISTRICT AND STATE AVERAGE (2006-2007)**



Source: North Carolina Public Department of Instruction, 2007.

The Orange County School District also is higher than the state average for local funding, but is approximately \$900 less per pupil than the Chapel Hill-Carrboro district. The Orange County District receives more funding from the state than the average state district, and less from federal sources. See Figure 8-4.

**FIGURE 8-4: COMPARISON OF SOURCES OF FUNDS PER PUPIL FOR ORANGE COUNTY DISTRICT AND STATE AVERAGE (2006-2007)**



Source: North Carolina Public Department of Instruction, 2007.



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### 8.4.6.2. ORANGE COUNTY EDUCATIONAL NEEDS

As the County's population grows over the next 20 years, the County will need to work with the school districts to support and maintain the excellent quality of the two systems. The biggest challenge will be providing an equitable distribution of facilities and programmatic funding to the two districts to ensure that students across the County have equal opportunities. The County will also need to work with the school districts to maintain a socio-economic balance of students attending the two schools.

### 8.4.6.3. OBJECTIVES

The intent of this Plan is that this list of objectives will help guide regular and ongoing decisions-making by the County related to public education planning and funding. Each objective has a recommended timeline for completion. (Definitions of timelines provided in *Section 1.4: Administration and Implementation Guidelines*.)

**Services and Community Facilities Goal 3:** High quality educational facilities that support our diverse and growing population and present opportunities for life-long learning.

**Objective E-1:**

Continue the coordination of planning activities among the School Boards, Planning Boards, Planning Departments, and other jurisdictions to provide for the future space needs and appropriate location of schools to meet the long-term educational needs of Orange County residents.

**Objective E-2:**

Continue to work with parks and recreation providers in the County to identify opportunities for co-location and shared funding of school and public recreational "joint use" facilities. (See also Parks and Recreation Objective PR-2.4.)

**Objective E-3:**

Achieve an equitable distribution of educational facilities.

**Objective E-4:**

Develop a standard that requires residential developers to provide an adequate amount of acreage to meet future school facility needs.

**Objective E-5:**

Increase educational opportunities for older persons.



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**TABLE 8-8: GOALS AND OBJECTIVES LINKS TO PLANNING PRINCIPLES**

GOAL/ OBJECTIVE	BOARD OF COUNTY COMMISSIONERS' PLANNING PRINCIPLES									
	<ol style="list-style-type: none"> <li>1. Efficient and Fiscally Responsible Provision of Public Facilities and Services</li> <li>2. Sustainable Growth and Development</li> <li>3. A. Encouragement of Energy Efficiency, Lower Energy Consumption, and the Use of Non-Polluting Renewable Energy Resources B. Promotion of Both Air Quality Protection and the Development of an Effective Transportation System</li> <li>4. Natural Area Resource Preservation</li> <li>5. Preservation of Rural Land Use Pattern</li> <li>6. Water Resources Preservation</li> <li>7. Promotion of Economic Prosperity and Diversity</li> <li>8. Preservation of Community Character</li> </ol>									
	1	2	3A	3B	4	5	6	7	8	
Overarching Goal	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Goal 1 and Objectives WW-1 – WW-9	✓	✓	✓	✓	✓		✓	✓		
Goal 2 and Objectives WW-10 – WW-19	✓	✓	✓	✓	✓	✓	✓			
Goal 3 and Objectives E-1 – E-5	✓	✓						✓	✓	
Goal 4 and Objectives L-1 – L-6	✓	✓						✓	✓	
Goal 5 and Objectives EC-1 – EC-10	✓	✓			✓	✓	✓			
Goal 6 and Objectives SW-1 – SW-6	✓	✓			✓	✓				✓
Goal 7 and Objectives PS-T-1 – PS-T-9	✓	✓	✓				✓	✓		

### 8.5. LINKS TO OTHER ELEMENTS

Planning for public services and facilities requires coordination with land use planning, economic development, housing, and other planning objectives. Provided here is a list of the objectives from other Plan Elements that are linked to services and facilities objectives. Some of the Plan objectives that lend themselves toward the concept and spirit of Sustainable Government are noted with an asterisk (\*).



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### ECONOMIC DEVELOPMENT

#### **Objective ED-2.1:**

Encourage compact and higher density development in areas served by water and sewer.

#### **Objective ED-2.7:**

Select industrial sites in Economic Development Areas based on present and planned supporting systems, such as public water and sewer, access to adequate highway, rail, or public transportation infrastructures, and minimize detrimental environmental or negative social outcomes.

#### **Objective ED-2.10:**

Extend public water and sewer into all three Economic Development Districts.

### HOUSING

#### **Objective H-1.5:**

Ensure that a variety of housing types can be developed throughout the County in a sustainable manner that locates housing near employment centers and commercial centers and that efficiently uses existing and planned public services. (See also Land Use Objectives LU-1.1 and LU-6.2.)

Land Use

### LAND USE

#### **Objective LU-1.1:**

Coordinate the location of higher intensity / high density residential and non-residential development with existing or planned locations of public transportation, commercial and community services, and adequate supporting infrastructure (i.e., water and sewer, high-speed internet access, streets, and sidewalks), while avoiding areas with protected natural and cultural resources. This could be achieved by increasing allowable densities and creating new mixed-use zoning districts where adequate public services are available.

#### **Objective LU-1.3\*:**

Create a “sustainable development checklist” to be included as part of the development review process that would evaluate and report on whether proposed developments are appropriate considering existing on-site environmental conditions and features, whether they are compatible with existing natural and cultural resources, whether adequate provision of public services exist for the proposed land use, and whether the proposed development will enhance community character.

#### **Objective LU-2.2:**

Continue to protect valuable resource land such as productive agricultural acreage, managed forest areas, natural areas, historic sites and properties, and potential reservoir sites through the County’s Lands Legacy Program, and by directing incompatible development



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away from these areas through land use and zoning policies and regulations.

### **Objective LU-2.3:**

Require non-residential and higher-density residential developments within Transition Areas to use Best Management Practices (BMP's) for stormwater control, as outlined within the Orange County Zoning Ordinance and Sedimentation Control Ordinance, to ensure that potential adverse impacts on the water quality of existing and proposed reservoir sites.

### **Objective LU-2.7\*:**

Refine green building standards to guide the design, siting, construction, and management of publicly owned and managed buildings in a manner that conserves energy and/or uses non-polluting renewable energy sources. Explore the development of green building standards for private development. (See also Air and Energy Objective AE-11.)

### **Objective LU-2.5:**

Adopt and implement policies that specify appropriate land uses and intensities of development in Protected and Critical Water Resource Areas that will not have potential adverse impacts on water resources.

### **Objective LU-3.1\*:**

Discourage urban sprawl, encourage a separation of urban and rural land uses, and direct new development into areas where necessary community facilities and services exist through periodic updates to the Land Use Plan. (See also Economic Development Objective ED-2.8.)

### **Objective LU-3.2\*:**

Coordinate land use patterns to facilitate the expanded use of non-auto modes of travel, the increased occupancy of automobiles, and the development and use of an energy-efficient transportation system. (See also Transportation Objective T-1.1, Economic Development Objective ED-2.3, and Air and Energy Resources AE-8.)

### **Objective LU-3.6:**

Establish consistency between the Land Use Plan and the Water and Sewer Management Planning and Boundary Agreement and Map.

### **Objective LU-4.2\*:**

Review and amend the Orange County Zoning and Subdivision Ordinances to identify and eliminate existing regulatory impediments to objectives identified in the Comprehensive Plan. Such objectives include the development of energy efficient buildings within the County, and development of affordable housing.

### **Objective LU-6.2:**

Maintain a cooperative joint planning process among the County municipalities and those organizations responsible for the provision of water and sewer services to guide the extension of service in accordance with the Comprehensive Plan, the Orange County-Chapel Hill-Carrboro Joint Planning Agreement and Land Use Plan, and the policies of the municipalities.



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### **Objective LU-6.5\*:**

Establish a "one-stop" County central permitting office.

### **Objective LU-6.6\*:**

Evaluate and consider the "Community Building" recommendations of the Shaping Orange County's Future's Task Force.

## **NATURAL AND CULTURAL SYSTEMS**

### **Objective NA-5:**

Prohibit development that would cause adverse impacts on highly significant natural areas and wildlife habitat.

### **Objective NA-7\*:**

Ensure that significant natural areas and wildlife habitat located on County-owned lands are protected with adequate ecosystem management practices and stewardship.

### **Objective WR-2:**

Create long-term conservation programs for ground water and surface water that will help extend the life of our finite existing water supplies.

### **Objective WR-5:**

Promote and participate in regional efforts to plan for use of water supplies in the region in an equitable manner, including contingency planning for water supplies during droughts.

### **Objective WR-6:**

Ensure greater coordination among County agencies on water resources, including cooperative efforts to prevent surface and ground water pollution by addressing failing septic systems and wells.

### **Objective WR-20:**

Promote Best Management Practices for new developments which minimize stormwater runoff.

### **Objective AE-11\*:**

Improve the energy efficiency of buildings through several action steps: 1) upgrade existing buildings, including County and school buildings; 2) educate planning and building inspection officials about the technologies and techniques of energy efficient construction; and 3) encourage the use of LEED "Gold" (or equivalent) as a standard in new construction.

## **PARKS AND RECREATION**

### **Objective PR-2.4:**

Establish a mechanism to promote shared use of existing public and institutional buildings and grounds for public recreation, as well as for their primary uses.

### **Objective PR-5.1\*:**

Locate parks and recreational facilities close to residential areas to encourage informal interaction with nature, encourage walkability, and create areas of wildlife habitat with appropriate recreational facilities within the more populated areas.



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### **Objective PR-5.2\*:**

Landscape parks and recreational facilities with native vegetation and minimize water use where practical. Prohibit use of known invasive non-native species in County facilities, and take steps to eradicate occurrences of same.

### **TRANSPORTATION**

### **Objective T-2.3:**

Increase countywide access for emergency vehicles, including ways to improve response times, both for existing and new developments.

## 8.6. **OTHER KEY DOCUMENTS**

The following policy documents, reports, and studies were used to develop this element. (See *Section 1.2.5: Where to Look for Related Information* if you would like to obtain one of these documents.):

- *Orange County Water and Sewer Policy* (1991)
- *Mebane Water and Sewer Agreement* (2004)
- *Orange County Comprehensive Plan Draft* (Land Use Element – Water Resources Section begun 1989, revised through 2002)
- *2006 Efland-Mebane Small Area Plan*
- *2005 OWASA Sustainability Report*
- *Orange County Soil Erosion and Sedimentation Ordinance* (2006)
- *Monthly Land Disturbance and Revenue Report* (July 2007-October 2007)
- *Procedures for Erosion and Sedimentation Control Enforcement in the Town of Chapel Hill*
- *Solid Waste Management Report 1998*
- *Memorandum from the Solid Waste Advisory Board Stating Goals for the 2030 Comprehensive Plan* (May 2007)
- *Annual Recycling Tonnage Summaries* (2005, 2006, 2007)
- *County Waste Reduction Report* (2005 & 2006)
- *Long-Range Library Facility Planning Report* (2004)
- *County Library Service Standards* (2007)
- *Schools Adequate Public Facilities Ordinance*
- *Educational Facilities Impact Fees Ordinance*



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- 2003 Staff Report to Board of County Commissioners - *An Analysis of Potential Impacts Resulting from a Possible Merger of the OC and CH-Carr School Districts*
- 2003 Strategic Plan Priorities for Orange County School District
- 2007-2008 Board of County Commissioner's Approved Capital Improvement Projects for Orange County Schools
- Chapel Hill - Carrboro School Strategic Plan: A Commitment to Excellence (2002-2008)
- 2004-2014 Capital Improvement Plan for Chapel Hill - Carrboro Schools
- 2007 Orange County Master Aging Plan

### 8.7. INTERGOVERNMENTAL COORDINATION

Achieving these objectives will require coordination among service providers in the County.

- County and individual **water** suppliers must think in regional terms when planning for long-term public water resource strategies, and should coordinate efforts to maximize financial resources and existing infrastructure. Moreover, efforts should be coordinated to ensure that conservation efforts are equitable across the County and that each service area is doing its parts to efficiently use precious water resources.
- The County has provided strong leadership and human resource capacity to regulate and enforce state and local **erosion control** and stormwater management regulations. The County should continue to maintain agreements with the towns to inspect and monitor local developments, and to maintain consistent standards for land disturbance activities in the County.
- County **solid waste disposal and recycling programs** are provided countywide. Achieving the goal of solid waste reduction will require all jurisdictions in the County to take up this goal and encourage increased recycling and reduction in waste. The County will need to work with local governments to make sure that land use plans provide opportunities for siting needed waste management facilities. The identification of the location for a new landfill transfer station site will require a countywide dialogue to ensure that the new facility will not adversely harm certain communities more than others, and in general should be a location that is convenient to all County residents.
- Expected population growth in the County will require additional **law enforcement and fire/emergency services**. The County and towns have been very successful at coordinating the provision of these services to ensure consistent service delivery throughout the County through the use of paid and voluntary personnel, and joint use of facilities. The County will need to continue to work with the



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towns to identify gaps in service and create joint solutions for delivering services to these areas.

- **Library services** in the County have been disjointed and often not equitable across the County due to a lack of resources and funding. The library systems have been creative at finding ways to provide library resources countywide. As local financial resources likely will continue to be stretched, solutions for providing library resources may require joint funding strategies, better coordination between the two library systems, and siting of new facilities in locations that can provide resources to a wide service area.
- **Schools** have long been known to be a key factor in determining where demand for new development will occur. The County school districts have been proactive in working with the County and towns to coordinate the siting of schools with the land use plans of the jurisdictions to ensure that schools are located in areas that best serve the student populations and are located in areas where residential development exists or is encouraged. Continuing to maintain this dialogue will ensure good land use planning for the long-term.



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