

**ORANGE COUNTY
ASSEMBLY OF GOVERNMENTS**

ACTION AGENDA ITEM ABSTRACT

Meeting Date: March 25, 2010

Action Agenda

Item No. 2

SUBJECT: Emergency Medical Services Delivery Report

DEPARTMENT: Emergency Services

PUBLIC HEARING: (Y/N)

No

ATTACHMENT(S):

PowerPoint Presentation
3/16/10 Memo – Municipal Fire and
Emergency Services Perspective

INFORMATION CONTACT:

F. Rojas Montes de Oca, Jr., Emergency
Services, 919-245-6100

PURPOSE: To present an update to Assembly of Governments members regarding the delivery of emergency medical services (EMS) and the impact on stakeholder agencies particularly in the Towns of Carrboro, Chapel Hill and Hillsborough.

BACKGROUND: During the mid-1990's, the Department of Emergency Services began to evolve as a result of the changing demographics and increased urbanization within Orange County. The calls for emergency medical treatment and transport continued to increase, making apparent changes needed to continue providing reliable, consistent service. The volunteer medical transportation service merged with the County-operated treatment (paramedic) services in 2003 to create the current Orange County Emergency Medical Services system.

INCREASED CALLS FOR SERVICE REQUIRE INCREASED RESOURCES

Since 2000 emergency medical services (EMS) calls for service have increased from 6,864 to the current calls for service workload of 11,500+. In 2000 there were 3 (24-hour) ambulances and 1 peak-load (12-hour) ambulance. In 2010 there are 4 (24-hour) ambulances and 1 (12-hour) ambulance. Although the population has increased by 13% since 2000, the calls for service have increased 68%.

In 2000 there were 6.25 telecommunicators (dispatchers) assigned to each 12-hour shift. In 2010 there are 6.5. The telecommunications phase of the call is critical to ensuring the request (911 call) is processed quickly and effectively. The goal is to process and push the call to the first response agencies within 90 seconds of receipt, but due to added workload and flat resources, the current average process time is 135 seconds.

Emergency Services is failing to meet performance goals established in 2001. At that time, the Department set a goal of 12 minutes for a paramedic to reach every patient. Today the time to

reach a patient is 17 minutes. This increase in response times impacts area first response agencies, which provide the immediate care to the victim prior to transferring the patient to EMS for definitive care and transport to area hospitals. The unintended consequences of increasing EMS response times is extending the time that a resident having a medical emergency must rely only on basic life support capabilities of fire department personnel. This occurred 220 times in 2009 when an ambulance was not available. This places a burden on fire suppression units and their resources.

Vital patient information that should be relayed to first responders is being delayed due to the increased workload and call-stacking by telecommunicators. The State of North Carolina best practice benchmark is 90 seconds for call processing. Orange County has an overall process time of 135 seconds. Performance goals cannot be accomplished without additional resources including communications personnel. While improved technology can address these gaps, personnel are still vitally important.

Appropriate resources must be available to assure an equitable, high-performance service delivery system. Those resources include: medical, supervisory, communications, logistical and planning personnel; and a reliable fleet commensurate with advances in medical treatment to maintain high levels of system fidelity. An effort to bring the system up to a moderate level of performance will require additional resources to maintain pace with growth and system needs.

RESOURCES NEEDED UNDER IDEAL CONDITIONS

- 4 paramedics to address shortages created by the system merge in 2005**
- 4 emergency medical technicians (EMTs) to address shortages created by the system merge in 2005**
- 5 paramedics for a new ambulance
- 5 EMTs for a new ambulance
- 1 telecommunicator to balance shifts
- 8 telecommunicators add an additional position to handle increased call load
- Transport unit: fully stocked and operational ambulance

**These staffing gaps are currently filled with part-time temporary employees.

FINANCIAL IMPACT: The cost to fully implement an additional unit and added telecommunicators is \$1.2M annually and \$325,000 for vehicle, equipment, training and support.

RECOMMENDATION(S): The Managers recommend Assembly of Government members accept the report from the Director and provide feedback and guidance on incorporating these recommendations for FY2010 -11 and future budget cycles. Current economic realities dictate that a full implementation of these improvements must be phased over several County budget cycles. However, it should be recognized that equipment, staffing and the communications elements are key components to improving emergency medical service response times as they now exist.



Critical Mass

The impacts of resource limitations of EMS delivery throughout Orange County

Colonel F. Rojas Montes de Oca, Jr.
Orange County Emergency Services Director

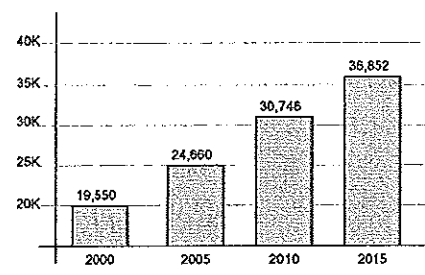
March 25, 2010

A Changing Community



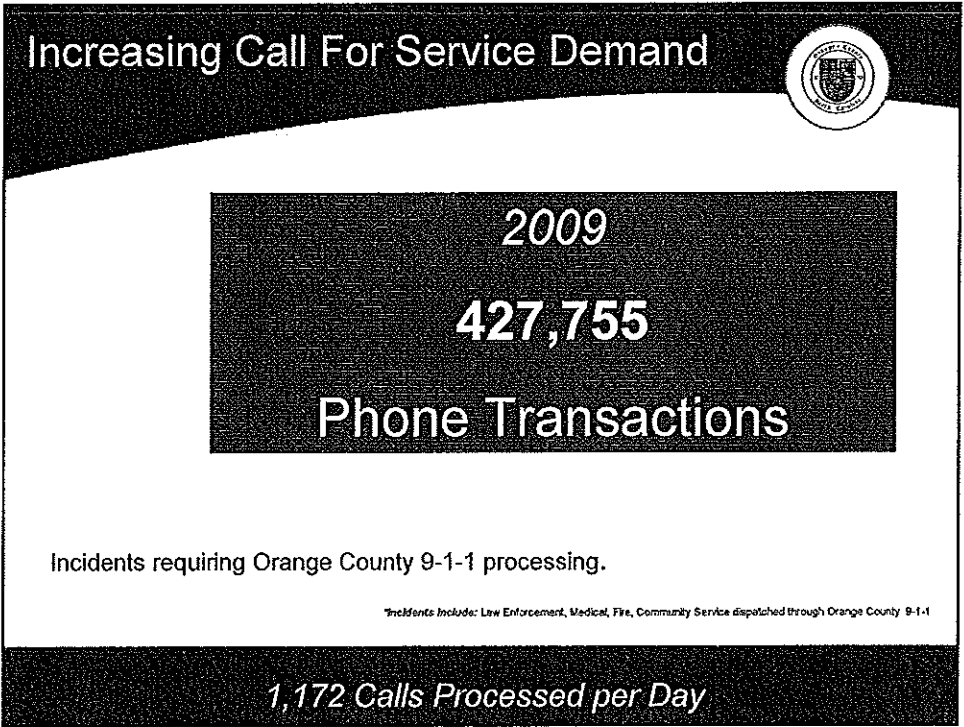
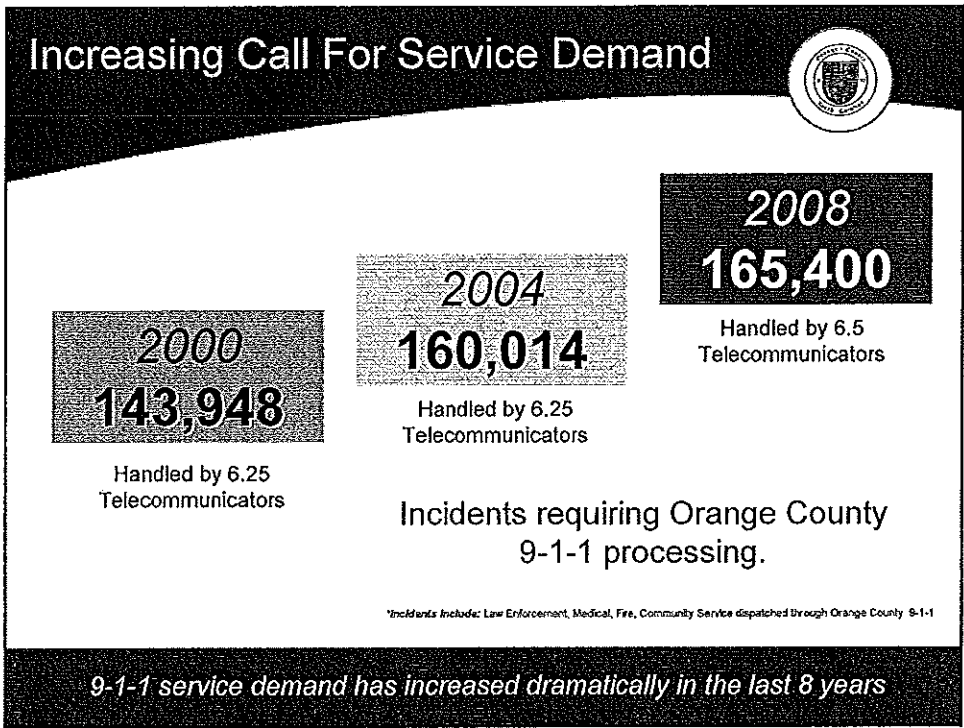
- Increases in overall population
- Growth in traditionally rural areas
- Increases in chronic disease
- Population is aging

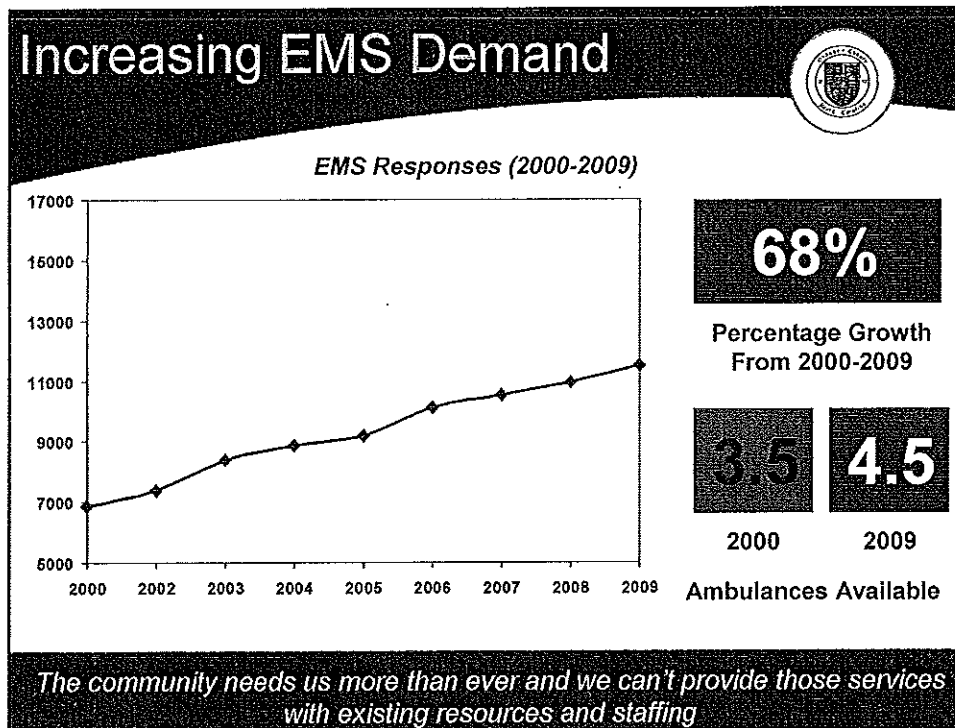
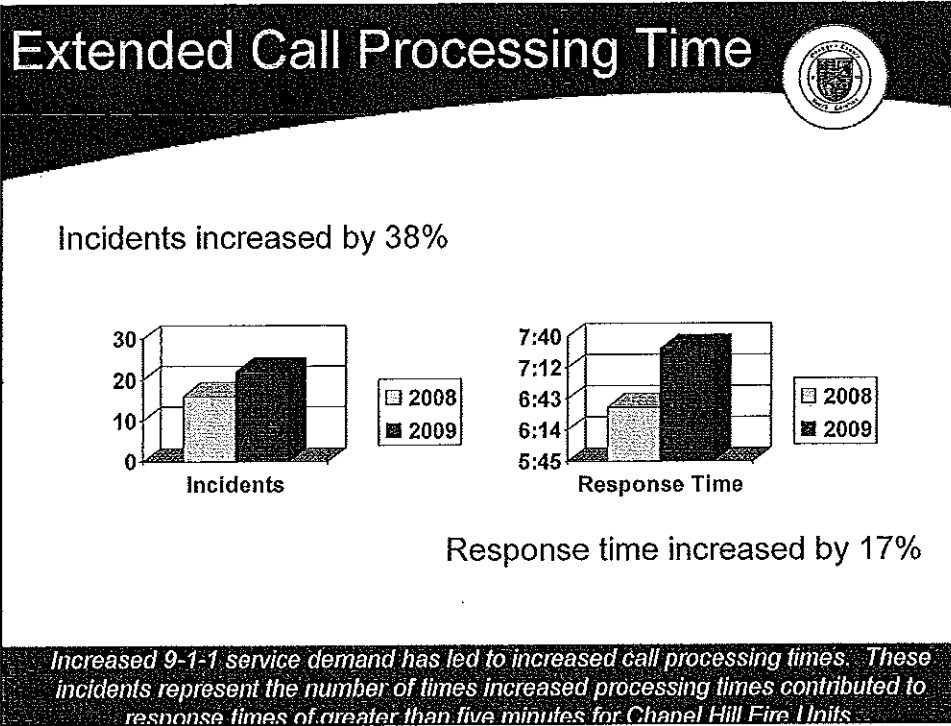
26%
Percentage Growth
From 1990-2000

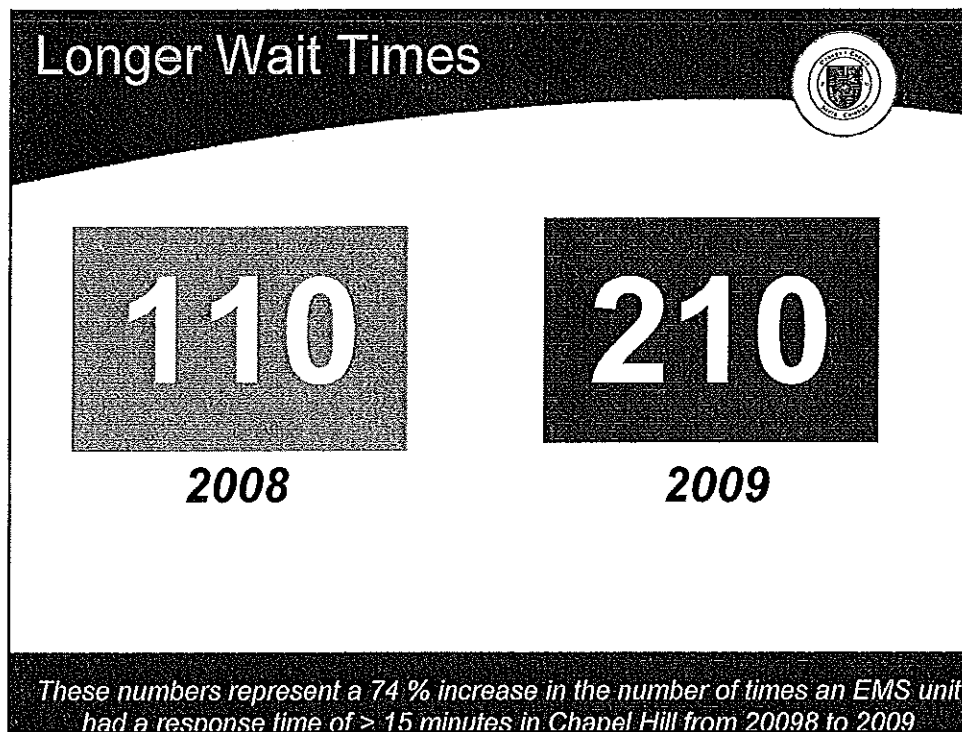
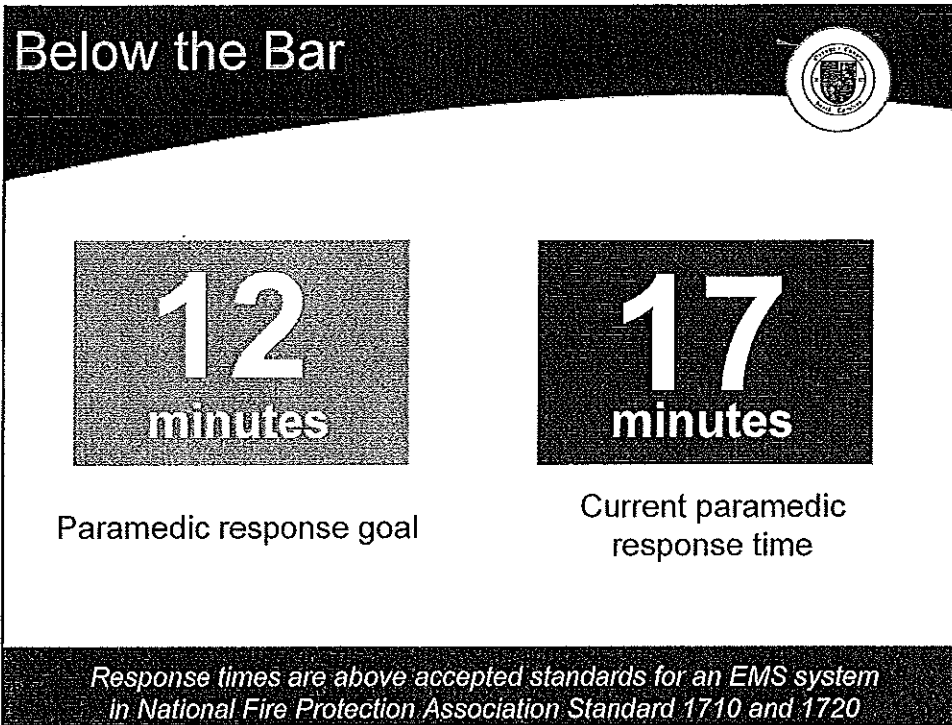


Population 55+ Years Old
from the OC Master Aging Plan

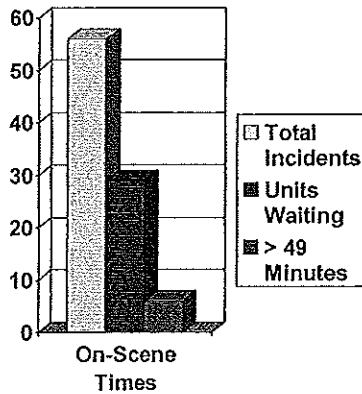
Demographic shifts are increasing demands for emergency services







Impacts on Partner Agencies



- There were 56 total incidents in 2009 of scene times of > 40 minutes for CHFD.
- 29 of those incidents occurred because Orange County did not have an ambulance available.
- 6 of these incidents resulted in scene times > 49 minutes.

These incidents impact our partner agencies by reducing their ability to respond

Impacts to FDs



	Ave Time on Scene		
	2008	2009	% change
Carrboro	0:53	1:01	11%
Chapel Hill	0:53	0:58	8%
Hillsborough	1:07	1:06	-1%

Below the Bar



220

The number of times in 2009 that a community member called 9-1-1 for an ambulance and none was available.


Solutions - Decrease Response Times



- Increase Personnel
 - 4 Paramedics and 4 EMTs (right-sizing)
 - 6 Paramedics and 6 EMTs (added unit)
- Improve 9-1-1 Center Process
 - 1 Telecommunicator (right-sizing)
 - 8 Telecommunicators (decrease stacking)
- Equipped Ambulance

Additional ambulance will be requested in FY 2011 or FY 2012

Projected Funding Need



- \$1,200,000 in personnel
- \$325,000 for equipped ambulance

MEMORANDUM

TO: Roger Stancil, Chapel Hill Town Manager
Steve Stewart, Carrboro Town Manager

FROM: Dan Jones, Chapel Hill Fire Chief
Travis Crabtree, Carrboro Fire Chief

SUBJECT: Municipal Fire and Emergency Services Perspective for Orange Assembly of
Governments Agenda Item on EMS for 3/25/10

DATE: March 16, 2010

Per your request, we have reviewed the Orange County abstract and power point presentation concerning the Emergency Medical Services Delivery Report prepared by Director Montes de Oca and intended for the Assembly of Governments joint meeting on March 25. We (Jones, Crabtree, and Fire Chief Jeff Cabe of Hillsborough/Orange Rural) actually worked with Director Montes de Oca and his staff in the development of this report and we are in support of the data and numbers presented. However, we want to share some of the material we submitted for inclusion in the report that was not used. We do believe the delivery of emergency medical services is a significant issue and warrants attention as soon as possible.

The problem of deficient resources for emergency medical services (EMS) and emergency communications (911 Center) in Orange County is not new and has been developing for a long period of time. System modifications (QRV response), an active first responder system of fire departments, support from volunteer rescue and EMS squad, an old radio dispatch system, and lack of data all combined disguised the depth of the issue. In a bullet point list below we would like Orange County officials to consider some immediate needs of the system as it relates to responsiveness to residents and visitors, detrimental impacts the EMS system is having on other emergency services and the frequency of incidents when emergency coverage of Orange County is placed in jeopardy by these issues.

- To ensure quick service during medical emergencies, the municipalities have taken the lead by providing first responder or other medical services through their fire departments to assist in protecting the lives of residents and visitors. Each fire department has a mission statement to protect lives and property and wants to be a good partner with the County. However, the county is charged by state statute with the obligation to provide EMS.
- If the fire departments were unable to provide first responder services, there would be even more concern about the delayed responses of County EMS units.
- As an example the increasing pressure on Orange County EMS resources directly impacts the fire departments due to an increase in on-scene times of fire units that have arrived as first responders and then the delayed arrival of EMS means those fire units must be committed longer and are unavailable for their primary charge of fire protection responses. From 2008 to 2009, data show a 74% increase in the number of times an EMS unit had a response time in Chapel Hill greater than 15 minutes.”

Fire Chief's memo to Town Managers on EMS Report 3/16/10

- Another impact is the increasing percentage of emergency medical calls in the total call volume of the fire departments. Chapel Hill is up nearly 9.5% in four years at 44.5 % of total volume compared to 35% in 2005. Carrboro is at 52%. The result is less availability of fire units for the community and campus when fire protection and hazard abatement are the fire department's primary functions. The increasing demand for medical calls may negatively impact fire response and all of the fire departments' insurance ratings.
 - On February 22, 2010 Orange County EMS ran out of available ambulances five times during the 24-hour shift. While this is just one example and not a normal day, it is also not that unusual. This type of situation is happening with increasing frequency, thus leaving residents and visitors more vulnerable.
 - On February 23, 2010 a Town of Carrboro employee came to the Carrboro Fire Department complaining of breathing problems. The firefighters treated the employee with their basic emergency medical technician (EMT) skills just like they would any other citizen in the county. When they called 911 to request a paramedic ambulance, the 911 telecommunicator stated that they already had four calls stacked and they would be the fifth waiting in line.
 - Potentially lifesaving medications can only be administered by Orange County paramedics who arrive with the EMS unit or Carrboro EMT's. The expectations of citizens in a true life threatening emergency may not be met when fire department first responders are asked by the victim or family members with increasing frequency, "what is taking the ambulance so long?".
 - Due to simultaneous incidents and multiple agencies reporting to one telecommunicator, the 911 center should utilize the higher level of technology it has for dispatching services. The fire departments have increasing concerns about the dispatch resources at the 911 center when these have not kept pace with increasing call volume. The fire departments are dispatched much the same as 15 to 20 years ago despite the increased call volume, a new 911 center, a new 800 MHz radio system, and service delivery advances. This results in greater call processing time and overall response time for all first responders. The telecommunicators' stressful job is performed by a dedicated staff who work extremely hard to obtain quality information from frantic citizens during emergencies. When obtained in a timely manner, this ensures our first responders and the public's safety.
 - We encourage the County to consider adding more EMS units in the field ASAP. All three municipalities are willing to work with the County to identify places to park EMS units. Additional dispatch personnel are also needed to separate the 12 fire, EMS, and rescue agencies into more manageable groups—these are currently handled by one telecommunicator. While we understand the budgetary constraints faced by all local governments, we believe this to be an urgent public safety resource need.
- Attached to this memo is a chart that demonstrates levels of EMS resources and populations covered in surrounding areas.

EMS SYSTEM COMPARISON - MARCH 2010

Agency	Pop. Served	# of staffed Units per day	Size of Area Served	Tiered System	Calls per year	Size of Area Served	Calls per year
Orange	126,532	4.5 Ambulances	401 sq miles	Yes	13,000	401 sq miles	2888 calls per unit/year
Durham	262,715	11 ambulances, 1 IRV	298 sq miles	Yes	31,012	298 sq miles	2584 calls per unit/year
Alamance	148,053	7 Ambulances, 3 IRV's	435 sq miles	Yes	24,000	435 sq miles	2400 calls per unit/year
Greenville	72,233	4.5 ambulances plus 6 ALS fire engines	31.8 sq miles	Yes	10,000	31.8 sq miles	2222 calls per unit/year
Guilford	472,216	16 Ambulances plus 7 IRV's	658 sq miles	Yes	47,000	658 sq miles	2043 calls per unit/year
Vance	44,000	3 ambulances	245 sq miles	Yes	5760	245 sq miles	1920 calls per unit/year
Person	35,623	3 Ambulances, 2 more ordered.	404 sq miles	No	5588	404 sq miles	1862 calls per unit/year
Caswell	23,501	2.5 ambulance	428 sq miles	Yes	4000	428 sq miles	1600 calls per unit/year
Smithfield	18,000 residents, 50,000 during business hours	3 ambulances	83 sq miles	Yes	3700	83 sq miles	1233 calls per unit/year
Chatham	49,329	4.5 Ambulances, 3 IRV's	709 sq miles	Yes	7,000	709 sq miles	933 calls per unit/year
Washington	20,000	2 ambulances	78.65 sq miles	No	1800	78.65 sq miles	900 calls per unit/year