

History of Wake County EMS

Research notes by Mike Legeros
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- - Facility opened, changed, or closed.
- - Units activated or relocated.
- - Fleet changes.
- - Major incident or event.

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- Help Wanted!

Pre-History Part 1

The first emergency ambulance providers in Raleigh (and Wake County) were funeral homes. In 1953, the Raleigh Fire Department formed a rescue squad, and also provided emergency ambulance service as needed. In 1962, the first county rescue squad was formed in Wendell.

By the 1960s, emergency ambulance service in Raleigh was provided by funeral homes. In 1965, six of seven funeral homes in Raleigh ceased this service. Ambulance Service of Raleigh (later renamed Beacon Ambulance Service) began operation that year.

In 1968, the company began receiving a county subsidy for providing emergency ambulance service in the city of Raleigh, and in county areas where funeral homes weren't serving. Ambulance service in Raleigh was also provided by Overby Funeral Home and, as needed, Raleigh Emergency Rescue Squad.

See Wake County Rescue History.

Pre-History Part 2

In 1976, the primary emergency ambulance provider for Raleigh residents is Beacon Ambulance Service. If they're not available, secondary service is provided by the Raleigh Fire Department's two

rescue trucks. Each Beacon ambulance and Raleigh rescue unit is staffed with at least one EMT, as required by a new state law for ambulance personnel.

Beacon is contracted by the county for its service in Raleigh, but is operating with financial difficulty. Their level of service also has room for improvement. On April 20, 1976, county commissioners were presented with four options for improving ambulance service in Raleigh:

- City-county ambulance service, combining the city's two rescue trucks with county-purchased ambulances. Staffed with city firefighter EMTs, they would respond in Raleigh, and some areas outside the city limits.
- City-operated ambulance service, contracted by county.
- County-operated ambulance service.
- Renew contract with Beacon.

See Wake County Rescue History.

[1976-1979](#)

1976

April 20, 1976 – Wake County Board of Commissioners rejects both a proposed city-county ambulance plan and a continued subsidy to Beacon Ambulance service. They instead vote to create a county-financed ambulance service for Raleigh and northwestern Wake County.

- The Raleigh City Council approved the city-county ambulance plan two weeks prior, but County Commissioners were split on approving the city-county plan, or continuing to subsidize Beacon Ambulance Service Inc.
- The commissioner's compromise vote, for county-only service, was four to one.
- The estimated cost of the new service was set at \$388,000, a figure based on purchasing four new ambulances and hiring about twenty-six people to operate them.
- After collecting ambulance fees, the net cost for the county was estimated at \$298,000.
- This contrasted with the county's \$345,000 cost before collections, of the city-county plan. And the Beacon subsidy would have cost \$194,500.
- Source: Source: N&O, 4/21/76.

Notes/Questions:

- Wake County Emergency Preparedness Director Russell Capps was charged with creating the new organization.
 - Emergency ambulance service, with EMT level of service.
 - Named Wake County Emergency Medical Services (EMS).
 - Wake County Department of Emergency Preparedness.

- Capps was the first Director of Wake County EMS, while concurrently also the EP Director and the county Fire Marshal.
 - He was given three (?) months to place the organization into service. (RC)
- He traveled to Pennsylvania and compelled the Swab Wagon Company to sell four ambulances to Wake County, based on the urgency of getting the program operational.
 - Four new Dodge/Swab ambulances were purchased.
 - Two of the four were originally built for other agencies, and had even been lettered. (RC).
 - They were white with green trim, the color chosen by Capps.
 - He had a friend in the State Highway Patrol who drove for the Governor.
 - His vehicle was an unmarked green Plymouth Fury.
 - The exact color was used for the ambulances and other vehicles, as well as for uniform colors.
 - Source: RC.
 - Swab told Capps that they'd get the third ambulance to the county in thirty days, though that took a bit longer, which is why Wake County EMS was delayed (by six weeks?) in becoming operational. (RC)
- **What was the deadline for getting the program going, July 1, 1976?**
 - The contract with Beacon was continued until August 15, perhaps extended at the last minute? (N&O, 9/28/76.)

June 1, 1976 – Jesse Glenn, 35, hired as first Wake County EMS Supervisor.

- Formerly worked for the Raleigh Fire Department.
- Was certified EMT, and taught EMT courses at Wake Tech.
- Previously led one of the fire department's rescue squads.
- His new role would have him recruiting staff for the new county organization.
- His salary was \$12,516.

June/July

- Starting salaries for Wake EMS members with no rescue experience was about \$8,280.
- Those with some experience earned a minimum of \$9,060.
- They would be trained at "Wake Technical Institute."
- About seventy-five people applied for the twenty-one EMT positions.

July 15, 1976 – The initial employees have been hired:

- Director Russell Capps
- Chief Supervisor Jesse Glenn
- Secretary Pauline Wood
- Billing Officer Callie Johnson
- A-Shift – Alan Harris, Roger Couch, Dennis Ellis, Eddie Godwin, Bill Green, Fred Hutchins, Jimmy Mallard, Norm Ramsey.

- B-Shift – John Servis, Gene Barry, Carson Brame, Barry Bunn, V. J. Hilliard, Jorge Olivia, Rick Paratski, Wallace Piper.
- C-Shift – Fred Loy, Linwood Barham, Jerry Brown, Mike Hall, Harold Hamilton, Rick Holland, M. J. Johnson, Donald Powell.

July/August - Training

- Field personnel are trained over a month's time.
- EMTs spend more than 100 hours at "Wake Technical Institute" studying procedures "for medical emergencies ranging from childbirth and heart massage to underwater rescue and radioactive fallout" to pass the state qualification test. (N&O, 8/18/76)

August 13, 1976 – Wake County EMS personnel are sworn-in, at 2:00 p.m. ceremony in Room 700 of county courthouse. (N&O, 8/13/76)

■ ■ August 15, 1976 – Wake County EMS placed in service.

- First call at 8:43 a.m.
- They responded to nineteen ambulance calls.
- They responded in less than five minutes to twelve of the calls.
 - Five were automobile accidents.
- Two EMS stations are opened:
 - Station 1 at 201 W. McDowell Street.
 - Station 2 at 513 E. Whitaker Mill Road at the Wake County Home.
 - Station 3 at 5305 Six Forks Road will be opened in several weeks.
- The three stations will put seventy-seven percent of Raleigh's citizens within five minutes of an ambulance.
- Source: N&O, 8/18/76.

August/September - Overview:

- Provides Basic Life Support (BLS) level of care.
 - Charge patients \$35 fee to transport from any point in the county to any hospital. (N&O, 8/18/76)
 - Phone number for emergency service is 829-1911.
 - Serves Raleigh and northwestern Wake County. The remainder of county will be covered by volunteer rescue squads. (N&O, 8/13/76)
- Four ambulances.
 - Built by the Swab Wagon Company.
 - Each cost \$19,188.
 - Dodge chassis.
 - Equipped with 440-HP engines.
 - One or two of the ambulance bodies may have been later remounted on newer chassis. (GL)
- Supervisor's car.
 - Dodge station wagon. (GL)

- Replaced by a Chevrolet Suburban, that was disposed to Knightdale Rescue Squad for one dollar when they were organized. (GL)
- Three stations:
 - 201 W. Martin Street, one-story garage/warehouse building built 1925. One-bay building that could hold five (?) vehicles.
 - EMS 1 and EMS 4.
 - Building originally designed for a tire company.
 - Contains “sleeping area with four beds, an office area, two bathrooms, and a huge living quarters they shared with two ambulances, a hydraulic lift, the stove, a refrigerator, some cabinets, the dining table, and a few chairs.”
 - EMS crews painted the interior white, over the “dull grayness” that was previously there. They performed most of the building’s maintenance as well. (N&O 11/28/76)
 - Originally with districts for EMS 1 and EMS 4, divided into east and west. They quickly realized that the call volume was lopsided and their responses were switched to rotating calls. (JH)
 - 513 E. Whitaker Mill Road, Wake County Group Home (today Mayview Convalescent).
 - EMS 2 (and EMS 3 until third station opened).
 - Personnel occupied a room (single?) on the south side of the second floor, with outside staircase to side parking lot.
 - 5305 Six Forks Road, former Six Forks Volunteer Fire Department building, built 1962.
 - EMS 3.
 - Opens several weeks later.
- Original staff consists of 26 employees:
 - Director J. Russell Capps
 - Chief Supervisor Jesse Glenn
 - Three Shift Supervisors
 - Twenty-one field EMTs.
 - Have at least 81 hours of training.
 - Pay scale ranges from \$8,280 to \$10,401 per year.
 - Each is also a member of a volunteer rescue squad, off-duty.
 - They work twenty-four hour shifts, three in nine days. Same schedule as Raleigh Fire Department: on/off/on/off/on/off/off/off/off.
 - Their day begins around 7:15 a.m. They must be out of bed by 7:30 a.m. When coming on duty, they check every piece of equipment on their ambulance, roughly 175 items. (N&O, 11/28/76)
- Budget of \$353,000 this year. (N&O, 8/13/76)

Memories of Station 1

- Building history included as a Dodge dealership, then a Yellow Cab (?) company, then Wake County EMS. Was equipped with outside gas pumps. (JZ)
- When EMS took over occupancy, they used the whole building. There was a freight elevator that ran to the basement. Supplies were stored in a caged area downstairs. The basement was a bit scary. (FL) (JZ)
- Also downstairs was a huge boiler with a coal chute in a side alley. (JZ)

- Cancer Society stored hospital beds in the basement, and crews loaded and unloaded the beds as needed. (JZ)
- The vehicle bay included an area for maintenance, for changing oil and filters and other tune-ups, and putting on “rain tires. “ (FL)
- Members painted the bay area, both during work and off duty. The county supplied the paint. (FL)
- The bay area was used as a dining room, until the members (with county supplies?) built a kitchen and day room space. (FL)
- The county then built a work area for Diane and an office for Joseph Zalkin. It was crowded. (FL)
- In the front was the office of Russell Capps and the office of Mrs. Wood. The building was crowded. (FL)
- In the back was one bedroom with five beds, a bedroom for the Captain and an office. (FL) Had/later had three sets of bunk beds. (JZ)
- There were bay doors that opened on both Martin (equipped with opener) and McDowell (manually opened) streets. The McDowell street door wasn’t used much. The Director and the Training Officer parked their vehicles on that apron. (JZ) (JH)
- Inside the bay on the right was Russell's car, EMS 1 and EMS 4, and EMS 101. (FL)
- In 1986 or 1987, additional concrete was poured on the bay floor to support the weight of three ambulances. The middle ambulance, EMS 4, had to back into the building and park on a six-inch concrete platform. (AF)

See Appendix for more memories.

1977

■ Major Incident - June 30, 1977 –As many as 200 people become sick from apparent food poisoning at a hotel on Highway 70, west of Raleigh.

On the afternoon of Thursday, June 30, as many as 200 people became sick from apparent food poisoning at the Royal Villa Hotel on Highway 70, west of Raleigh. They were attending a national garden club convention, and had had lunch a couple hours earlier at Meredith College. A private lounge lounge at the hotel was turned into a makeshift medical facility, as area ambulances and rescue squads were rushed to the scene.

Units from Six Forks, Raleigh FD, Wendell, Cary, Clayton, Butner, Wake EMS, and Medical Transport responded. More than 100 responders and nine ambulances helped shuttle patients back and forth to Rex, Wake, and Durham County General hospitals. The county EM director, J. Russel Capps, said it was "largest requirement for ambulances" in the county that he could remember. As the first units arrived and reported multiple patients, the county's emergency plan called "Plan Eagle" was placed in effect.

Several Raleigh city buses were also used to transport patients, who complained of stomach pain and diarrhea. Rex Hospital treated about 75, Wake medical Center treated 46, and Durham County General Hospital treated 40. Many who were transported were suffering from dehydration due to vomiting and diarrhea. Three were admitted at Rex, and one at Wake. By that evening, health officials had taken cultures from the food served at the college.

The lobby of the hotel was filled with patients and responders into the early evening. Wrote the News & Observer on July 1, "many of the ill who were able to walk carried plastic garbage cans or ice buckets from their room to use in case they had to vomit." At the hotel's front door, chairs were lined up, for patients waiting for transport. Motel employees and responders also conducted a room-to-room search, to be sure all patients were found. About 500 people were attending the convention, and most were staying at that hotel. (MJL)

■ ■ October 1977 – EMS 2 station at Wake County Home is closed, for reason including “adverse weather conditions and unsatisfactory living conditions – including crew complaints of rodent and insects in the sleeping areas.” (RT, ?/?/78)

- EMS 2 is moved to Station 1.
- Plans are drawn for a shelter to be constructed on Whitaker Mill Road between the home and Emmanuel Baptist Church.
- The \$45,000 building is discussed in a November 10, 1977, news story.
 - The planned building might be built within 90 to 100 days.
 - It would include a heated ambulanced bay and an area for sleeping, cooking, and lounging.
- When the EMS unit was parked at the home, the ambulance sat outside during North Carolina’s coldest winter on record.
 - The vehicle’s windows iced over, the ambulance was cold, and patients were uncomfortable when placed inside.
 - Medicine bottles would burst, and response time was impacted when getting the ambulance started.
- Source: N&O, 11/10/77.

November 1977 – Snapshot.

- Fifteen months after the service was started, Wake EMS had received 7,100 emergency calls and transported 4,300 people to the hospital.
- A survey was conducted among fifty-fifty policemen, highway patrolmen, doctors, and emergency room nurses, asking to rate the performance of the service.
- In the forty-three returned questionnaires, comments were very good, and only two minor complaints noted.
- Source: ?

1978

■ Undated *Raleigh Times* story reports on plans for an “ambulance shelter” near former Station 2 location:

- Cost \$64,400.
- Recommended by committee of Wake County Commissioners.
- First proposed in early 1977.
- Cost \$55,573 in early February (1977?).
- Commissioners rejected project as too costly and sent to Education and Finance Committee for further study.
- Committee proposal to be submitted to Commissioners for approval on September 5.
- Committee tentatively accepted low bid of \$64,400 by Ray Sparrow Construction.
- Highest of five bids was \$81,000.
- Committee of three people spent eleven months discussing the shelter.

- Shelter designed to provide EMS service for what Director Russell Capps say serves an area “which generates the highest percentage of emergency calls.”
- Location Whitaker Mill Road, between county home and Emmanuel Baptist Church.
- Residents of area, plus city council members, asked county to ensure shelter blends in with surrounding neighborhood.
- Brick building planned, which was opposed by committee, which had hoped to build a \$30,000 metal structure.
- Facility will be 1,800 square-feet, house two ambulances, and have kitchen, living, and sleeping quarters.

Undated *News & Observer* or *Raleigh Times* story:

- Ambulance shelter approved by Wake Board of Commissioners.
- Location subsequently changed to Noble Road.

November 1978 – Snapshot.

- Wake County EMS averages about twenty calls a day.
- Their busiest day included forty-six runs.
- They have twenty-seven members.
- They will soon begin an additional 600 hours of training, which will enable them to perform such tasks as assisting with childbirth and administering IV solutions.
- Each run costs the county about \$70.
- Each person transported is charged \$35.
- There are two EMS stations, on Martin/McDowell streets and Six Forks Road.
- Third station is being built on Noble Road, and is scheduled to open this (fiscal?) year.
- Prior location was Whitaker Mill Road, beside county home.
- Source: N&O, 11/30/78

1979

■ April-May (?), 1979 – EMS 3 relocated from Station 1 to new Station 3.

■ May 17, 1979 – Opening ceremonies held for third EMS station at 2024 Noble Road. Two-bay facility. Note: county real estate records cite building built in 1983. (N&O, 5/17/79)

1980-1989

1980

First Responder program in Raleigh Fire Department expands city-wide. The program was created over four years. See Wake County Rescue Squad document, appendix.

May 1, 1980 - **Gerald Brown** hired as Director. Serves until 2000. Capps remains Director of Emergency Management and Fire Marshal. Source: WCEMS News.

Brown's primary mission is raising the organized to Advanced Life Support level, e.g. EMT-Intermediate and/or Paramedic. This requires more training, equipment, supplies, and personnel. County approves. Next step is getting hospitals to sponsor the EMS system. This request contractual agreements that they support EMS personnel providing advanced care in the field, prior to transport. This was an uphill battle as the concept was still new and uncommon in the United States. After many meetings, Wake Memorial Hospital signs on, and soon followed by Rex Hospital. (JH)

1980 – Snapshot, as recalled by Gerald Brown in May 1990:

- All EMS employees were EMT certified
- Formal ongoing training consisted of an EMT refresher every two years.
- EMS was dispatched on VHF 155.280 along with all other county rescue squads. 155.340 was the only means of communicating with the hospital.
- There were nine rescue squads and five funeral home ambulance providers. All but one of the funeral services are out of business.
- There were 58 law officers and 290 firemen certified at EMT level, but no first responder.
- EMS had four ambulances operating 24/7.
- There was no Advance Life Support, Audit and Review Committee, Medical Director (off line) or 911 telephone system.
- EMT salary range was \$10,000 to \$12,400, with a mean of \$11,200. Source: WCEMS News.

Wake EMS handles about 9,000 calls. (WCAR, 1981)

Wake EMS implementing an advanced level of training for its technicians, which will allow them to administer IV injections and fluids and install breathing tubes. (WCAR, 1981) (JH).

■ Major Event - September 28, 1980 – Rex Hospital on Saint Mary's Street relocates. Fire department rescue units and local rescue squads assist with transporting 168 patients from Saint Mary's Street building to Lake Boone Trail facility. (MJL)

1981

Wake EMS advanced to a higher level of patient care, EMT-Intermediate. This incorporates IV administration using fluids (Lactated Ringers, Normal Saline, DSW) and Esophageal Obturator Airway (EOA) or breathing tubes. May also include use of Military Anti-Shock Trousers (MAST).

Source: Wake County EMS history web page, JH.

November 1981 - Joseph Zalkin hired as first training officer.

- Assigned unit number 105.
- Hired to develop ALS program.

Zalkin memories:

- From 1981 to 1985, ALS program developed.
- Wake EMS ran continuous classes on EMT-I, then ran three nine-month Paramedic classes.
- First two classes held for WEMS members.
- Third class added for county rescue squad members.
- After 1985, initial paramedic education program was transferred to Wake Tech.
- During the process of training paramedics for county rescue squads, WEMS placed paramedics at county squads. This took place over about two years, after which time the county squads had their own medics. The WEMS personnel then returned to WEMS duty.

Hammerstein memories:

- For paramedic, Wake EMS staff was divided into two groups. First group took the class, then second group.
- Paramedic certification was not required, and a couple members decided to remain at EMT-I level. There was no penalty.
- Paramedics had to be precepted (issued orders by a legal authority), so there were ER physicians and specially certified nurses called Mobile Intensive Care Nurses (MICNs) who had the responsibility to precept new paramedics on scene. Some rode on ambulances during these times, others rode on the supervisor unit and chased paramedic level calls.
- At this time paramedic protocols were relative short and simple. All EMT-I and paramedic treatment required direct order from an ER physician or MICN. Paramedics could potentially receive orders for treatment that was within their skill set, but not directly outlined in the protocols. In that case, though, the order had to be from a physician and not an MICN.
- During this time paramedic service was only provided in the Wake County EMS district. It's important to note that at that time, the district line was very significant. No agency took a call in another agency's district unless the resident agency "turned the call over" or there was never any response from the home agency after two sets of dispatches from Rescom.
- That could cause situations where a citizen may get a paramedic, EMT-I, or an EMT, based on which side of a street they were standing.

1982

Between July 1, 1982, and June 30, 1983:

- New UHF radio system allows personnel from any location to speak to doctors and receive instruction. Completed between July 1, 1982 and June 30, 1983. (WCAR, 1982-83; WCB FY83)

■ Major Incident – October 8-11, 1982 - Gunman holds three people hostage on train in Raleigh.

Gunman holds woman and two children hostage on Amtrak train at railroad station on Seaboard Road. Fire department personnel stands by along with emergency medical crews. Standoff starts about 7:30 a.m. on a Friday, after gunshots are heard in passenger car. Male subject surrenders at 5:45 a.m. on following Monday. Body of woman and nine-month old infant discovered in cabin. Four year-old infant survives. [UI] (October 8-11, 1982)

1983

July 1, 1983 - Paramedic program has started. (WCB, FY84)

- Wake EMS has thirty-five “technicians,” some of whom have begun using their paramedic training. Source: WCAR, 1983-84 < [Does this citation belong under 1984?](#)
- First Paramedic class for Wake EMS started in the fall of 1983. Members started on the streets about a year later. (OH)

■ Between July 1, 1983 and June 30, 1984 - Fifth ambulance added. EMS 5 activated, housed at Station 1.

- Three “downtown ambulances” now rotate calls between EMS 1, EMS 4, and EMS 5.
- Sources: (WCAR, 1983-84) (JH)

1984

Wake EMS implements the highest level of pre-hospital care, EMT-Paramedic. Source: Wake County EMS history web page.

- Paramedics in service around fall of 1984.
- Required staff to be trained and tested.
- Required agencies to receive designation by the county and the State Office of EMS.
- Also required additional equipment: defibrillators, medication allocations, and more. (OH)

[Need more details here. Dates for when program started, how many people in program, tell about the program, when did they graduate/get certified, etc.?](#)

1985

■ Between July 1, 1985 and June 30, 1986:

- New ambulance added to fleet.
- Chassis changed for other ambulance(s).
- “Microcomputer” purchased.
- EMT-I positions reclassified as EMT-P.
- Source: WCB, FY86.

1986

■ Between July 1, 1986 and June 30, 1987:

- Six paramedic positions staff “seventh” (actually sixth?) ambulance.
- Supervisor’s vehicle replaced.
- Old supervisor’s vehicle retained for future use as disaster/MCI vehicle, cites budget document.

- Source: WCB, FY87.

1988

■ Sixth ambulance added by this time, EMS 6 at Station 2. **Placed in service prior year?**

- Housed at Station 2.
- Two sets of bunk beds were installed in a tiny EMS station.
- Source: Jeff Hammerstein

Snapshot:

- In November 1988, the organization operated from three stations:
 - Station 1 at 201 W. Martin Street housed three ambulances (EMS 1, EMS 4, EMS 5), and a shift supervisor (EMS 103, EMS 104, EMS 105, depending on who was working. They were personally assigned unit numbers).
 - Station 2 at 2024 Noble Road housed two ambulances (EMS 2 and EMS 6).
 - Station 3 at 5305 Six Forks Road housed EMS 3.
- Each ambulance was staffed with two paramedics.
- The organization was led by Director Gerald Brown (EMS 100).
 - He supervised Operations Director Linwood Barham (EMS 101) and two Training Officers, Joseph Zalkin (lead) and Steve Gardner (assistant).
- They were each paramedics and also participated in emergency responses as available or requested.
- Source: Oral history.

■ Major Incident – February 19, 1988 - American Eagle commuter plane crashes at Raleigh-Durham International Airport. Both crew and all 10 passengers killed aboard after Fairchild SA227-AC crashes shortly after takeoff. (MJL)

■ Major Incident – November 28, 1988 – Tornado in northwest Raleigh.

Tornado strikes northwest Raleigh. Storm strikes at 1:00 a.m. with virtually no warning, destroying K-Mart on Glenwood Avenue among many other buildings. Site subsequently utilized as command post and staging apparatus for incoming emergency units from surrounding counties. Four people killed, 154 injured. Dozens of businesses and hundreds of homes also damaged or destroyed. Tornado eventually tracks 83 miles through NC nearly to VA border. (MJL)

Read more: <http://legeros.com/ralwake/raleigh/history/writing/tornado-1988.pdf>

1988

Between July 1, 1988 and June 30, 1989:

- ■ Two new ambulances added.
 - **Two additional EMS units placed in service?**
- ■ Two more ambulances replaced.

Source: Wake County Budget, FY89.

1989

- Pediatric Advance Life Support (PALS) program placed in service. Training started in 1988. (WCAR, 1988)
- ■ Seventh EMS unit (EMS 7) added at Station 3. Two sets of bunk beds were added in the very small living quarters. (WCAR, 1988) (JH)

■ Between July 1, 1989 and June 30, 1990 - Two ambulances replaced. (WCB, FY89)

December 31, 1989 – 14,897 total calls. Source: WCEMS News.

1990-1999

1990

■ ■ March 14, 1990 – Two new EMS stations open, and new response districts are created:

- Station 4 at 4017 District Drive.
- Station 5 at 4704 Hargrove Road.
- House EMS 4 and EMS 5, respectively, relocated from Station 1.
- Both are two-bay facilities. (WCEMS News)

March 14, 1990 – Ambulance relocations:

- EMS 6 from Station 2 to Station 1
- EMS 7 from Station 3 to Station 1
- This greatly eases overcrowding at the two stations. (JH) (WCEMS News)

■ May/June 1990 - Disaster/MCI unit placed in service.

- Old ambulance with Chevrolet chassis, old EMS 8.
- Previously purchased used, due to urgent need for a unit.
 - One or more ambulances may have been wrecked, creating the need.
- Bought from a coastal department, four-wheel drive vehicle.
 - No one liked driving the truck.
 - Was removed from service as soon as replacement arrived.
- Joseph Zalkin may have suggested converting to a disaster unit.
- Outfitted by project team, led by Steve Gardner.
 - Gardner designed the patient compartment conversion, and wrote the specifications for the equipment and supplies.
 - Frank Kannon did the construction work.
 - Mark Justice created an equipment list.

- Several others also helped including Glenn Barham, Bennie Collins, Dean Hodde.
- Activated around June 1990.
- Based at Station 1.

- Usage was extremely low.
- By September 1990, used twice: airport drill and landing of hostages from Iraq.
- Carried multiple backboards, oxygen, soft goods, IVs, an inflatable tent and tarps, lots of light, and tools.
- No equipment for rehab, however. That functionality was added with introduction of Truck 1, over a decade later.

- Later replaced with two trailers, believed to have replaced this truck.
- Concept was that they could be stationed on north and south ends of county, any supervisor could get them.
- At least one trailer still part of fleet, but not stocked, and housed at Emergency Management warehouse as of early 2014.
 - One trailer may have served as the original bike team trailer, and current bike team secondary trailer.
- Sources: (JH) (SG) WCB, FY87, WCEMS News

June 2, 1990 – EMS participates in airport drill and brings new disaster supply unit.

■ Major Event - September 1990 – By this time, the disaster truck has been used twice: airport drill in June, and landing of repatriated citizens from Iraqi-occupied Kuwait.

- The latter were three “repatriation flights” in September with 267, 312, and 112 patients aboard. Five evacuees were transported to hospitals.
- Several others were treated at airport, but not transported. Most not transported required IVs for rehydration.
- The second flight had the greatest number of sick people, with a large number suffering from nausea, vomiting, and diarrhea.
- Nearly everyone was Arab.
- Most on first and third flights understood English, but less than half on second flight did.
- Most families had members who could translate, and Shaw University had translators there.
- Cary and Six Forks rescue squads were also participants.
- Source: WCEMS News.

October 1990 – Wake EMS provides coverage for at least four days of the State Fair. Source: WCEMS News.

November 1, 1990 – Six new employees hired. Source: WCEMS News.

■ ■ December 7, 1990 - EMS 6 placed in service at Raleigh-Durham International Airport at 12:00 noon.

- Housed in a retrofitted old house on east side of Airport Boulevard, just south of Aviation Parkway. Formerly home of Airport Director.
- Ambulance is stored in A-frame garage building with single door that was added to site.
- First EMS unit deployed outside of the Raleigh municipal limits.
- Downtown EMS units are renamed EMS 1, EMS 7, and EMS 8.
- Source: JH, WCEMS News

Operational notes:

- Never leave station unlocked when you leave.
- Never leave visitors, including family members, inside the fence, when you leave the grounds.
- Limit movements outside the station to an area no greater than 10 yards from the ends or back of building. You may use all of the front area.
- Never go near or allow others near the storage barns in the rear of the building.
- No firearms are allowed on the property for any reason, except for law officers.
- No fires allowed in the fireplace.
- Do not allow strangers through the gate for any reason.

Notes from FY91 budget:

- The Airport Authority will construct and equip station, and purchase and outfit ambulance.
- Each year after, airport will pay EMS \$100,000.
- Six paramedics to staff ambulance.

December 31, 1990 – Total of 16,434 dispatches for year.

1991

■ January 1991 – By this time, two ambulances have been wrecked. With EMS 6 activated at airport, there are no spares until the ambulances can be repaired. Source: WCEMS News.

■ February 4, 1991 - Wake County EMS assumes primary service in Fuquay-Varina.

- Fuquay Rescue was having some problems, and had to cease service, while they worked on a reorganization.
- The Board of Commissioners voted on February 4 to act on a resolution passed the week before.
- “C” shift was notified to send a unit to the district, and area mutual aid providers (Apex, Angier, Garner) were informed of the need for extrication services and second-duty back-up.
- By 9:00 p.m. the same day, EMS 8 was in the district.
- EMS 9 deployed soon thereafter.
- Housed at Fuquay-Varina Fire Department, until Fuquay-Varina Rescue Squad has their building ready to house the unit.

Operational notes:

- At the discretion of the Wake EMS crew, if Fuquay Rescue personnel are present at the time of dispatch, up to two members may ride on the ambulance.
- If Wake EMS needs assistance after arrival, call Rescom to have Fuquay Rescue dispatched for manpower assistance. If they are unavailable, request nearest fire department.
- Fuquay Rescue has nine certified members. Use them wherever possible.
- Wake EMS is responsible for keeping the building clean. You can use the squad's equipment for cleaning.
- Wake EMS can use the kitchen facilities.
- Donald Powell is Chief of Fuquay Rescue.
- Fuquay Rescue is contracted to provide extrication and water rescue services.

Source: Oral history, N&O, 4/4/91, WCEMS News.

April 4, 1991 – EMS 9 moved from Fuquay-Varina fire station to Fuquay Rescue building. Source: WCEMS News.

■ May 6, 1991 – Two Ford 1991 Ford F-350 modular ambulances delivered from First Response Inc. for EMS 66 [EMS 6 at Station 6] and EMS 99 [EMS 9 at Station 9]. Members are cautioned about the wider body, which is 15 inches greater than their current ambulances. Source: WCEMS News.

May 18, 1991 – Public Safety Day at Dorton Arena. EMS 66 [EMS 6 at Station 6] makes its debut, one of two new ambulances. Source: WCEMS News.

■ August 15, 1991 - Station 1 opens at Public Safety Center at 330. S. Salisbury Street.

- Four bays, each two vehicles deep. EMS station faces Davie Street.
- Also houses the administrative offices of Wake County EMS, which was part of the Department of Public Safety.
- Also houses the administrative offices of the Sheriff's Office.
- Source: Wake County EMS history web page, WCEMS News.

October 1991 – By this time, the majority of county rescue squads have approached the county, for permission to establish a fee service and conduct a membership drive. Source: WCEMS News.

December 31, 1991 – 18,140 calls for year, including 1,213 in Fuquay-Varina area. Source: WCEMS News.

1992

■ February 1992 – By this time, truck 18 [EMS 8 at Station 1] in service. Expecting truck 1 [EMS 1] and truck 7 [EMS 7] to be converted.

February 16, 1992 - New supervisor schedule. Instead of a single supervisor per shift, a different supervisor will be scheduled on each day of the work cycle. Supervisors now work 24 on and 48 off. Source: WCEMS News.

May 9, 1992 – Second annual (and last) Public Safety Day at State Fairgrounds. Source: WCEMS News.

■ June 1992 – Remounted EMS 7 delivered and work begins on remounted EMS 1. The chassis were delivered in January/February. At that time, EMS 7 had passed 100,000 miles on the odometer. Source: WCEMS News.

July 1992 – By this time, County Commissioners have approved recommendation that county-wide paramedic service be implemented by July 1, 1994. Funding will be made available to conduct two alternate pilot programs in the west and the east, with one Wake EMS paramedic on a squad 24/7. Wake EMS will employ six paramedics to accomplish this goal. All existing franchises and contracts be terminated, and new ones approved by Board. That Emergency Medical Dispatch be implemented as part of EMS system. Source: WCEMS News.

■ August 1, 1992 - Wake County EMS begins providing primary paramedic service to Northern Wake Rescue & EMS residents, after organization votes to reorganize.

- EMS 10 is stationed at Wake Forest fire station.
- They run first-duty calls for the district, while Northern Wake runs second-duty at a reduced level (non-paramedic) of service.
- Sources: Oral history, N&O, 2/4/93, WCEMS News.

■ November/December 1992 – New ambulance delivered from Southern Ambulance Builders. Once delivered, remounting of EMS 33 [EMS 3 at Station 3?] and EMS 44 [EMS 4 at Station 4?] will begin.

December 31, 1992 – 19,150 calls for year.

1993

February 8, 1993 – EMS 9 involved in accident on Highway 55 in Holly Springs. Unit is returning to ambulance base after transport to a local hospital. While traveling south, an impaired driver runs a stop sign and strikes the ambulance in the driver's door. This causes the ambulance to overturn. Both EMS employees receive injuries, and are held upside-down in their seats by the seat belts. Despite their disorientation and own unknown injuries, they immediately begin assisting the occupants of the other vehicles. One receives critical injuries, another serious, and the third minor.

Patricia Griffin and Randall Moore are later nominated for the county's quarterly Caring, Service, and Respective Customers award. Ignoring their own painful injuries, notes the nomination form, they devote all their attention to the other more serious injured people. "This is commitment to service excellence" notes EMS Operations Officer Linwood Barham, who submits the nomination.

They are recognized on March 10, 1993, by the County Manager. They are presented with special pins, and an exception to the uniform policy was made, so they can wear the pins as part of their EMS uniform. EMS 99 is removed from service due to the damage, and is declared a total loss. Source: WCEMS News.

February 15, 1993 – Wake County EMS begins providing paramedic service with Apex and Knightdale rescue squads, providing one person each day, for the first-duty unit. This is a pilot program. Source: WCEMS News.

March 1993 – Board of Commissioners decide that all county residents should have option of paying annual subscription fees for ambulance services, as those served by volunteer rescue squads have done. Residents can pay \$50 per year, or be billed between \$109 and \$300 for calls. (N&O, 3/2/93)

May 1993 – Campaign to solicit subscriptions for ambulance service in Wake County underway.

- News reports widespread confusion among residents.
- Campaign includes radio spots and glossy ads in local newspapers and postal mailed.
- Under plan, households can pay \$50 for one year of unlimited ambulance service.
- Non-subscribers will be billed between \$217 and \$302 per trip.
- Officials hope that 12 percent of county's 198,000 households will join program, and contribute \$1.5M to county rescue squads.
- Source: N&O, 5/20/93.

June 1993 – By this time, new fees for service have been implemented, county-wide:

- \$303 – ALS transport
- \$152 – ALS non-transport
- \$217 – BLS transport
- \$109 – BLS non-transport
- Plus continued \$15 per mile for out-of-county transports.
- Source: WCEMS News.

July 1993 – Ambulance updates:

- New EMS 9 in service in Fuquay-Varina.
- New EMS 15 in service at Station 3.
- New ambulances from Southern Ambulance Company.
- Remounted EMS 44 ready in a few weeks.
- EMS 33 sent to be remounted.
- Remounting by Rescue One.
- Source: WCEMS News.

July 1993 – Snapshot of stand-by procedure: When EMS 1, EMS 7, and EMS 8 are busy on calls, EMS 2 is the first to relocate to Station 1. If EMS 2 is also busy, then EMS 102 will decide the unit to relocate. During extremely busy times, the last available unit will relocate to Station 2. Source: WCEMS News.

July 1993 – Pulse oximeters and end tidal CO2 detectors added as equipment. Source: WCEMS News.

October 1993 - Director Gerald Young retires. He's the first field employee to retire from Wake EMS. He requests to remain as a part-time paramedic, after his retirement. Source: WCEMS News.

October 7, 1993 – Target date for paramedic coverage in Wendell and Zebulon, with one Wake County EMS paramedic assigned to the first-duty ambulance. Source: WCEMS News.

November 29, 1993 – Raleigh Fire Department begins EMT-D service. At same time, Raleigh-Durham Airport Fire Department begins EMT-D service. Wake County EMS Training/Education department jointly conducted the program, started in July/August. Source: WCEMS News.

■ Major Incident - December 13, 1993 – Ice storm, with 128 dispatches during the 24-hour period. “A” shift covered the first eight hours, and “B” shift the last sixteen. Source: WCEMS News.

1993, December 31 – Total dispatches for the year: 22,048. Source: WCEMS News.

1994

By July 1, 1994 - Paramedic response is implemented county-wide, in a program with provisions from Medical Director Donald Vaughn:

- Home agency can provide paramedic coverage on their own (Wake County, Cary, Garner, Six Forks).
- Wake County would send a single paramedic and paramedic equipment to ride on a home agency ambulance, with EMT or EMT-I as driver/partner.
- Wake County would deploy a full paramedic ambulance as primary unit in that district.
- Wake County EMS sends paramedics to Apex, Knightdale, Wendell, and Zebulon.
- Source: Hammerstein.

July 1994 - Two field-training officers are added per shift. They're called Paramedic II or PII, and later named Field Training Officers. They are Jay Randall, Doug Campbell, Bart Lineback, Jeff Hammerstein, Bennie Collins, and Tony Crawford. (JH) (WCEMS News)

■ March 1994, Circa – Remounted Truck 33 [EMS 3 at Station 3?] delivered. Source: WCEMS News.

■ March 1994, Circa – Truck 55 [EMS 5 at Station 5?] has accident. In April/May, sent to Robinson Body Works in Virginia to be repaired, for remounting on new chassis. When it returns, EMS 2 will be sent for refurb and remounting. Source: WCEMS News.

■ Major Incident - April 20, 1994 – Mass-casualty incident at Sir Walter Raleigh Hotel at 400 Fayetteville Street Mall. Two-alarm fire starts in room 319. Heavy smokes fills the 70 year-old building. EMS assists with the evacuation, evaluation, and treatment of 135 elderly and disabled residents. (WCEMS News)

■ May 20 – Expected delivery date of new ambulance from First Response.

■ August 1994, circa – Second and third supervisors added. They are newly promoted paramedics: Edie Evans, Randy Moore, Jon Olson, Larry Barham, Glenn Barham, and Allan Foster.

- Two per shift.
- Assigned unit numbers EMS 104 and EMS 105.
- Numbering follows the sequence of EMS 103, the downtown shift supervisor.
- Operate Chevrolet S-10 Suburbans and are both housed at Station 1.
- Soon moved to Station 4 (southwest district) and Station 5 (northwest district).
- Later, EMS 105 is moved to Wake Forest.
- Sources: (JH) (WCEMS News)

■ October/November 1994 – Remounted EMS 55 [EMS 5 at Station 5?] delivered, and EMS 22 [EMS 2 at Station 2?] is sent to be remounted. Source: WCEMS News.

November 1994 – By this time:

- New portable radios to be placed in each ambulance. VHF radios contain six tactical channels for disaster coordination in Wake County. Also for backup when UHF system goes down. The attendant will be responsible for this radio, while the driver will remain responsible for the UHF portable radio.
- WEMS-TV is broadcasting on cable channels 22 and 23. (WCEMS News)

■ Major Incident – December 13, 1994 –Commuter plane crash at airport. American Eagle commuter plane crashes in Morrisville at night, approximately 5 miles short of runway at Raleigh-Durham International Airport. Both crew and 13 of 18 passengers killed. Responders take tractors and off-road vehicles to reach crash site off Davis Drive. (MJL)

1995

Wake Forest EMS begins operation. Provides second-duty ambulance (non-paramedic?) in Wake Forest. EMS 10 continues to serve as first-duty unit. (MJL)

Circa 1995-96

■ Fourth EMS unit added downtown. EMS 11 is activated. They rotate calls with EMS 1, EMS 7, and EMS 8. (JH)

1996, circa

■ EMS 12 activated as the first peak-load unit. Housed at Station 5. This may have necessitated the move of EMS 105 to Wake Forest. (JH)

■ EMS 10 moved to the old Northern Wake Hospital at 220 S. Allen Road. The unit was previously housed at the Wake Forest fire station.

Hospital memories:

- Though the hospital was closed, a wing with patient rooms was open as private doctor offices. The building wasn't vacant. One of the doctors, Dr. Mosley (sp?), was a well-known family doctor in the area.
- EMS occupied a three-room suite that included an emergency room, a surgery room and a recovery room. They were interconnected, and right inside the door of the ambulance bay. EMS 10 was parked outside, and without protection from the elements.
- Our day room was the emergency room. It came complete with old fashioned shiny ceramic bricks/tiles typical of an old hospital. It had IV poles, oxygen lines and a giant exam light still coming from the ceiling. The walls were adorned with stainless steel cabinetry, an X-Ray lighted panel, and white porcelain sinks reminiscent of any ancient hospital. There was an awful smell in the room, however, which led to the place nicknamed "the morgue." Because it smelled like death.
- The surgery room was a step nicer, and it was home to EMS 105, the district supervisor at the time. The connected recovery room was our sleeping quarters. The walls still had many old references to its days as a recovery room. For example, there was a bold sign that said no one was to be released from this room with a Glasgow Coma Score of less than 10 (or such).

Around this time, paramedic service has been extended to Rolesville.

- EMS supervisor EMS 105 moved to Wake Forest/Rolesville.
- For a period of time, EMS 105 housed in the old fire station, earlier used by Northern Wake Rescue Squad.
- Ambulance service is provided by EMS 10, stationed in Wake Forest.
- Then Rolesville EMS organizes and begins operation in (July?) 1995. (OH) (MJL)

■ Major incident – September 6, 1996 –Hurricane Fran.

Hurricane Fran strikes eastern North Carolina, eye of Category 3 storm making landfall near Wilmington, NC, with 114 mph winds at 11:00 p.m. Eye of storm passes west of Raleigh around 7:00 a.m. City receives 10.46 inches of rain and wind gusts as high as 79 miles per hour. Power outages are widespread with all 420 traffic signals in the city limits believed out at sunrise on September 6, 1996. Many roads are blocked by trees from the I-440 beltline down to the smallest residential street. Flooding is severe along Crabtree Creek, which rises 16 feet in 14 hours, cresting at 7 feet above flood stand and flooding numerous roads and intersections, including the Glenwood Avenue bridge and Wake Forest Road south of Six Forks Road. By 4:25 p.m., the lower level of Crabtree Valley Mall is flooded with a foot of water. Guests at the Sheraton Hotel at Crabtree Valley are stranded by 6 feet of run over from the creek. Residents in Forest Acres off Wake Forest Road retreat to rooftops. [WE] (September 6, 1996)

July 1, 1996

Annual budget (FY96-97) notes:

Planned for coming fiscal year:

- Install new software package to allow greater collection of EMS and other fees. Will allow merging of subscription fee data with call reports, to minimize fee collection tasks.
- Source: WCAB.

1997

■ Station 6 relocates to new building on National Guard Drive. The two-bay building is constructed by the Airport Authority. EMS 6 previously operated at the old airport manager's house, about a quarter-mile north on the east side of Airport Boulevard. (MJL)

July 1, 1997

Annual budget (FY97-98) highlights:

- Volunteer rescue squad in Wake Forest ceased operation in April. County established a paramedic unit (six employees and an ambulance) in the Wake Forest area.
- Source: WCAB.

1998

■ 1998 – New facilities are opened:

- Station 7 completed at 2910 Kidd Road. EMS 7 relocates from Station 1. (JH)
- Station 10 completed at 706 S. Franklin Street in Wake Forest. (WCRER)
 - Before the move, for a short period of time, EMS 10 was again housed at the Wake Forest fire station. (OH)

February 1998 – County commissioners ask county staff to develop short-term improvement plans for Holly Springs and Wake Forest. Source article [temporarily] included below.

Towns spur ambulance plan review
February 3, 1998 | News & Observer, The (Raleigh, NC)
Author/Byline: Lynn Bonner; Staff Writer | Page: B4 | Section: News

Raleigh -- Wake commissioners are leaning toward ordering a long-range study of ambulance needs, prompted by complaints from smaller towns about inadequate service.

Commissioners on Monday asked the county staff to develop short-term improvement plans for two of those towns, Holly Springs and Wake Forest, until the county determines how their requests would fit into a county ambulance plan.

Holly Springs has asked the county to let the town start its own emergency medical service, and it already has purchased two ambulances and equipment. The town also has asked the county for help financing the service.

Ambulances from Fuquay-Varina and Apex now answer emergency calls in Holly Springs.

But officials in Holly Springs say population growth and heavy traffic on N.C. 55, the main road through town, make it dangerous to continue relying on ambulances from out of town.

It takes an ambulance 10 minutes on average to respond to a call for help from Holly Springs. The average ambulance response time in Wake is six minutes. The national average is eight minutes.

Commissioner Stewart Adcock said Holly Springs needs an ambulance.

"It does not take a rocket scientist to say we need an ambulance down there," he said.

"The response time is awful. "Getting down 55 is all but absolutely impossible."

While Holly Springs is seeking more autonomy, Wake Forest is seeking more county aid. The Wake Forest volunteer emergency squad is disbanding by March 31, leaving only one county ambulance to serve the town.

Wake Forest officials want the county to provide a second ambulance, but Wake officials don't want to provide a 24-hour service that would answer about 360 calls a year.

"We would not recommend you put a full ambulance with full crew with what amounts to one call per day," County Manager Richard Stevens said.

Commissioners want to consider adding an ambulance that would answer calls from Wake Forest, Rolesville, Wendell and possibly Knightdale, when other ambulances serving those towns are busy.

Commissioners said they would talk about the need for a long-range study when they meet in their annual retreat Sunday and Monday.

The county now provides a paramedic for one ambulance in each squad. Commissioners determine the area that each ambulance squad is responsible for.

"I have been pushing you for a year to have a comprehensive EMS [Emergency Medical Service] study," Commissioner Yevonne Brannon said.

She said commissioners should "take a deep breath" before they determine how to meet all the requests for improved service.

Commissioners have discussed hiring a consultant to make recommendations for ambulance service that will consider response times, coverage areas and station locations.

Stevens said an ambulance study would take about seven months to complete.

February 1998 – Wake County EMS is serving Wake Forest with one ambulance, in advance of town's rescue squad disbanding.

March 1998 – Wake Forest's volunteer rescue squad disbands.

March 1998 – Task force studies county EMS system. Source article [temporarily] included below.

Task force to study emergency services
March 11, 1998 | News & Observer, The (Raleigh, NC)
Author/Byline: FROM STAFF REPORTS | Page: B3 | Section: News | Column: Wake County Briefs

Wake County -- Doctors, rescue workers and government officials will meet this year to determine how to provide ambulance services in growing Wake County.

County commissioners this week approved the structure of a 25-member task force that will oversee a study of emergency medical services to be delivered to commissioners next year.

Commissioners will appoint seven people to the task force next month. The Wake County Mayors Association, the hospitals and the EMS/Rescue Association will also have representatives on the task force.

Ten rescue squads cover Wake, and the county supports the squads to some degree. But the types of services differ. Five squads put paramedics on all ambulances. Others use medical workers with less certification on some ambulances.

Mayors of some towns have complained that ambulance services are not equitable. And recently, commissioners pieced together plans for ambulance service in Holly Springs and Wake Forest that will be in place until the commissioners consider remedies recommended by the task force and a consultant's countywide study.

April 1998 – Wake Forest town commissioners endorse request by Wake Forest Rescue Squad board to give Wake County control over emergency service in area. One Wake EMS ambulance currently serves Wake Forest.

April 1, 1998 – Holly Springs Public Safety begins EMS service. Wake County EMS provides one full-time paramedic and ALS supplies. Town provides one ambulance, driver, and BLS equipment. Ambulance operates from Station 1 at corner of Holly Springs Road and Highway 55. Later moved to Station 2, and then to new Station 1 on Flint Point Lane. In 1998, the ambulance answers 406 calls. (MJL)

July 1, 1998

From July 1, 1998 to June 30, 1999:

- Dispatches: 41,620 (WCAB 00-01).

Annual budget (FY98-99) highlights of prior fiscal year:

- Completion of three new EMS stations, which enabled the rearrangement of response districts to improve response times.
- EMS subscription program enrolled more than 21,000 households, raising over \$1.6M for area EMS agencies.
- All ambulance personnel were outfitted with turnout gear to minimize exposure to blood born pathogens and other potentially infectious materials at automobile accident scenes. This ensured compliance with new OSHA regulations.
- Comprehensive review of current EMS delivery system was conducted to “chart the future” of EMS in Wake County.
- Source: WCAB.

1999

■ Station 8 completed at 1361 Varsity Drive. EMS 8 moved to new station. Downtown EMS units now named EMS 1, EMS 11, and EMS 13. (WCRER) (JH)

June 16, 1999 – Final report submitted, “Comprehensive Assessment of the Wake County Emergency Medical Services System,” by TriData.

- Recommendations are issued to address projects of substantial growth in county, and to address complaints about the mechanisms employed by the county to fund the independent rescue squads, the latter which resulted in the formation of an EMS task force, which requested the outside study.
- Recommendations include:
 - Erase geopolitical boundaries that define EMS delivery in county. Implement proximity-based dispatch.
 - Distribute EMS resources currently clustered, to lower response times and increase coverage to underserved areas of the county, particularly those experiencing growth/development.
 - Implement two-tier response system: BLS units for “alpha” and “bravo” calls, and ALS units for “charlie” and “delta.”
 - Replace outdated CAD system with start-of-art system.
 - Contract EMS billing with vendor that specializes in same.
 - Increase EMS stand-by fee from \$40 to \$60 per hour.
 - Implement extrication user fee of \$100.
 - Consider adding development impact fees, to offset cost of increase services.
 - Automate ambulance call writing using pen-based or optical mark reader system.
 - Modify franchise contracts to create performance standards based on response zones.

- Hire full-time, dedicated quality assurance coordinator.
- Linked automated ambulance call reporting into quality assurance auditing system.
- Make public education, information, and relations a higher priority.
- Create full-time EMS Medical Director.
- Ensure adequately sized classroom/meeting facility is built for EMS, in proposed Public Safety Training Facility.
- Rectify communication infrastructure problems that impact ability to give timely radio reports to hospitals.
- Hire a volunteer coordinator. Possibly share with Office of Fire Marshal.
- Standardize ambulance vehicle specifications and EMS capital equipment specifications throughout county.

Read report: <http://legeros.com/ralwake/photos/weblog/wcfc/tridata/1999/tridata-ems-1999.pdf>

Snapshot:

- WCEMS is a division of the WCDPS.
- Primary provider of out-of-hospital emergency medical care to Raleigh residents, and some surrounding communities.
- Provider of last resort for all areas of Wake County, covered by other squads, should any squad cease operating.
- Over 140 personnel, almost all of whom are paramedics.
- Twelve EMS units, with thirteen to be added July 1, 1999.
- WCEMS also stations paramedics, alone or with partners, at squads outside Raleigh, on ambulances belong either to WCEMS or an outside agency.

- EMS 9 housed at Fuquay-Varina Volunteer Rescue Squad, and provides first-duty coverage. The squad provides second-duty coverage.
- WCEMS provides a paramedic for Holly Springs Fire-Rescue, assigned to an ambulance.
- WCEMS provides a paramedic for Knightdale EMS, assigned to the first-duty ambulance.
- WCEMS provides a paramedic for Wendell Rescue Squad, assigned to the first-duty ambulance.
- WCEMS provides a paramedic for Zebulon Rescue Squad, assigned to the first-duty ambulance.

- Covers 103.9 square miles.
- Population (1995): 206,835.
- Paid personnel: 140+
- Paid hours: 24/7.
- Budget (1998): \$6.2M
- Calls (1998): 25,169
- Transport rate (1988): 65.5%
- Average response time (1988): 6.9 min.
- Ninetieth percentile response time (1988): 11 min.

■ July 1, 1999 – Thirteenth EMS unit added.

July 1, 1999

Snapshot:

- Fourteen ambulances.
- Ten private EMS providers in Wake County EMS System.

Statistics from July 1, 1998 to June 30, 1999:

- Dispatches: 42,130 (WCAB 00-01) or 45,547 (WCAB 01-02)
- Transports: 31,421.

Highlights from prior fiscal year:

- Replaced all defibrillators.
- Signs contract with EMS collection firm to collect all current and delinquent EMS bills. Since that time, EMS fee revenues are higher than past years. (WCAB 01-02)

Source: WCAB.

2000-2009

2000

Joseph Zalkin named interim Director. Serves until 2002.

July 1, 2000

Between July 1, 2000 and June 30, 2001:

- Total dispatches: 46,719 (WCAB 01-02) or 50,807 (WCAB 02-03)
- Total transports: 33,098.

Issues for this fiscal year:

- Increase Special Events fee from \$40 to \$60, to cover salaries for paramedics, effective July 1, 2000.
- Analyze EMS services at airport in conjunction with contract renewal. Lease agreement expires December 31, 2000.

2001

■ April 1, 2001 – Fuquay-Varina EMS ceases operation.

- Wake County assumes responsibility for entirety of EMS services in their district.
- Six paramedics and a new ambulance are planned for coming fiscal year.
- EMS 9 has been providing a first-duty unit since 1991.
- EMS 14 activated on March 1, 2001. Rotates with EMS 9 for first and second-duty calls.
- Fuquay-Varina 771 continues to operate from 0600 to 2200 through the month of March, serving as third-duty.
- All three ambulances respond from Fuquay Avenue rescue building.
- Sources: (N&O, 2/17/01) (WCEMS News) (WCAB, FY02)

July 1, 2001

Between July 1, 2001 and June 30, 2002:

Statistics:

- Total dispatches 52,536. (WCAB 02-03)
- Total transports: 34,178.

Notes:

- Fourteen ambulances.
- Serves City of Raleigh a portion of unincorporated Wake County.
- Responsible for:
 - Emergency dispatch response.
 - Billing users of ambulance services.
 - Filing insurance claims for Medicare and Medicaid.
 - Marketing membership/subscription program in county.
- Wake County EMS System also includes eight private EMS providers.
- Wake County EMS is part of Public Safety division, which also comprises Fire/Rescue, Emergency Management, and CCBI.
- EMS oversight group establishes treatment protocols and service quality improvements.
 - Comprised of over 100 doctors, nurses, and hospital administrators.
- Source: WCAB.

Accomplishments:

- Negotiated with Fuquay-Varina Rescue Squad to assume EMS operating responsibilities in that area.
- Established Quality Improvement Coordinator as recommended by 1999 EMS Study.
- Implemented new defibrillators in EMS and Rescue Squads.
- Established committees to address employee recruitment/retention, supplies and materials, and automation/computerization.
- Established data interchange with the area 911 centers to assist in performance tracking from call taking to ambulance arrival.
- Established a liaison committee with each hospital to address concerns and needs.

Issues for this fiscal year:

- Hire six additional paramedics to provide EMS service in Fuquay-Varina.
- Move to automated call reports (ACRs).
- Evaluate and review alternate service delivery models.
- Continue implementation of EMS study as approved.
- Implement new fee schedules for services that addresses mileage and criticality.
- Implement new scheduling system to improve part-time personnel availability and cost issues.

2002

July 1, 2002 – Wake County EMS begins contracting contract with the Emergency Medical Division of the UNC School of Medicine for full-time Medical Director services. The budget provides for a six-month transition period where both the new and retiring Medical Director will be on staff, working jointly on new State EMS regulations and a rewrite of the EMS service delivery plan. (WCAB)

July 1, 2002

From July 1, 2002 to June 30, 2003:

- Total dispatches 55,134.
- Total transports 35,760.

Accomplishments:

- Implemented service delivery plan for Fuquay Varina rescue district and reduced response times for EMS service in this area. All citizens in this district now receive EMT-Paramedic service on all EMS responses.
- Awarded Computer-Aided Dispatch (CAD) bid to enhance 911 dispatching for EMS/Rescue services.
- Began automated ambulance call report project, which should result in both a cost savings in copying and printing reports, and increased revenue from ambulance billing by faster electronic billing.
- Implemented Continuous Positive Airway Pressure (CPAP) device use in Wake County. Wake is the first county in the state to implement this program to provide better ventilatory support to patients suffering from respiratory difficulty.
- Implemented new advanced medical protocols allowing EMT-Paramedics to provide more advanced care to patients on scene without first contacting a physician at the hospital. The result is faster treatment to patients suffering from life threatening illnesses.
- Implemented a needle stick prevention program required by federal law

Issues for this fiscal year:

- Reduced operating expenses this fiscal year by approximately \$119,000. To reach this amount:
 - Released vacant EMS Assistant Director position.
 - Reduce subscription advertising and billing expenses.
- Establish full-time Medical Director for Wake County EMS System, but contracting with UNC beginning July 1, 2002.
- Develop state plan for delivering EMS service to citizens of Wake County, as required by new state legislation.
- Implement new fee schedule of services that mirrors categories of care by Medicare definition.
- Implement automated ambulance call report system.
- Reduce response times for ambulances by looking at alternative delivery methods, reallocating resources, and shifting locations of ambulances based on response patterns.
- Provide negotiated support to contracted EMS providers when fees and other revenue sources are not sufficient to meet their needs.
- Implement automated scheduling program for personnel.

Source: WCAB.

October 5, 2002 – Moore County's former EMS director **Barry Britt**, 47, reported as hired as new Wake EMS Director.

- He will begin work later this month.
- He worked in Moore County from 1990 to January 2002, then joined FirstHealth.
- He had worked in various paramedic and other positions since 1979 in Montgomery and Guilford Counties.
- Serves until 2004.

2003

March 2003 - EMS System begins using an Electronic Call Reporting system (ECR) from Healthware Solutions. The ECR system and laptop computers allows for faster patient care documentation and billing. (WCEMS web site)

February 25, 2003 - Designated a Model System by State of North Carolina's Office of EMS. The Wake County EMS System was the third system designated with this honor. This designation will afford the System special privileges under State rules, including less regulatory oversight and longer credentialing periods for its personnel. The Model System designation is similar to accreditation, ensuring that the EMS system is providing the best service to Wake County. (WCEMS web site)

July 1, 2003

Statistics:

- 116 full-time positions

Accomplishments:

- Established a full-time EMS System Medical Director for Wake County on January 1, 2003.
- Received NC EMS "Model System"
- Implemented a new fee schedule for services that mirrors categories of care by Medicare definition.
- Began a new, County-wide electronic patient care reporting (PCR) system
- Implemented an automated scheduling program for EMS personnel.
- Implemented "hot/cold" (emergency/non-emergency) response program dispatch
- Additional funds are included in EMS for the purchase of a new vehicle as part of reorganizational effort. This initiative will allow staff supervisors to improve on-scene efforts of field staff and better manage part-time staff resources.

CIP:

- Stony Hill EMS: Complete construction and open new combination Fire/EMS facility by end of second quarter.
- EMS Renovations at Fuquay-Varina Fire Stations #1 and #2: Complete renovation of these two fire stations to add space for EMS vehicles and crew.
- EMS Facility Assessments: Complete 80 percent of life safety, code improvements and emergency generator improvements as identified in the February 2003 report; prepare bid package and obtain bids from contractors for remainder of Phase I improvements.
- Master Plan for EMS Facilities: Complete master planning process, review with Wake Rescue Squad Association and obtain approval from Board of Commissioners; incorporate master plan recommendations into capital plan as appropriate.

Source: WCAB.

November 2003 - Snapshot:

Wake County EMS has total staff of 170, including full- and part-time personnel.

TABLE 41: COUNTY EMS DEPLOYMENT AND DEMAND

Station	CID	Location	Daytime Staffing	Nighttime Staffing	Apparatus Complement	Call Volume
1	N/A	331 S. McDowell St.	6 P	6 P	3M 2Mr	8,341
2	N/A	2020 Noble Rd.	2 P	2 P	1M	2,077
3	N/A	5305 Six Forks Rd.	2 P	2 P	1M 1Mr	2,385
4	N/A	4017 District Dr.	2 P	2 P	1M	2,312
5	N/A	4707 Hargrove Rd.	4 P	4 P	2M	4,440
6	N/A	1015 National Guard Dr.	2 P	2 P	1M	472
7	N/A	2910 Kidd Rd.	2 P	2 P	1M 1Mr	2,149
8	N/A	136 Varsity Dr.	2 P	2 P	1M	1,973
9	33	301 S. Fuquay Ave.	4 P	4 P	2M	2,600
10	N/A	706 S. Franklin St.	2 P	2 P	1M	1,523
14	7	5617 Hilltop Rd.	relocated	N/A	1M	N/A
15	R22	9350 Durant Rd.	relocated	N/A	1M	N/A

Note: EMS 11 becomes EMS 15 at Raleigh Station 22 from 0900 to 1900 daily. EMS 14 relocates to CID 7 from 0800 to 2000 daily (this will likely become a permanent relocation in the spring of 2004).

(EMS Comment, add as a footnote: Strike line referencing EMS 15; this project ended in early October due to a time limitation established between EMS and the Raleigh Fire Department – any reference to this in the report should note that it is not currently underway, but that the data generated by it substantiated the need for a resource in that location.)

Source: Wake County Fire/EMS Capital Facility and Equipment Study Final Report – November 2003, by TriData.

2003, Circa – District 1 relocated from Station 1 to Station 8. Occurs at the same time as the equalizing of ranks of all District Chief positions. Previously, Shift Supervisors supervised two District Chiefs for each shift.

2004

Chris Colangelo named Interim Director. Serves until 2005.

July 1, 2004

From July 1, 2004 to June 30, 2005:

- 122 full-time employees.
- \$11,684,855 budgeted expenditures.
- \$5,286,726 projected revenues.

Accomplishments:

- The Wake County EMS System continues to provide high-quality pre-hospital care under the direction of a NCOEMS approved Model EMS System plan
- Implemented a new fee schedule for services that mirrors categories of care by Medicare definition.
- Implemented a new CAD (Computer Assisted Dispatch) system on October 21, 2003.

- In FY 2004, the County implemented a CAD system for public safety emergency response. The system has improved the County's and municipalities' speed in responding to emergency events by dispatching the nearest ambulance regardless of municipality borders. However, the system operates by station location - it is unable to dispatch the nearest ambulance based on its real-time unit location.
- Assisted contracted Rescue/EMS agencies as needed.
- Expanded utilization of an automated scheduling program for personnel.
- Relocated two Wake EMS ambulances and three EMS supervisors to effectively address underserved areas
- Monitored system resource utilization and public safety using a system of emergency/non-emergency dispatching.
- Implemented the 800MHz Smartzone system for EMS in April 2004
- Reassigned EMS unit to the new Stony Hill Fire Station in March 2004

2005

April 4, 2005 – **Skip Kirkwood** starts employment as Wake EMS Director.

- Leads staff of 170 full- and part-time personnel.
- Previously Executive Director and Chief EMS Officer for Area Ambulance in Cedar Rapids, IA.
- Previously Director of EMS for Munroe Regional Health System in Ocala, FL., and as battalion chief for EMS Quality Improvement and Operations for Tualatin Valley Fire & Rescue District near Portland, OR.
- Holds bachelor's degree from State University of New York, a master's in Health Services Administration from Central Michigan University, and a law degree from Rutgers University.
- Renames the title of his position to Chief.
- Serves as Director (named Chief) until 2008.
- Serves as Chief from 2008 to 2013.

■ Major incident – January 19, 2005 – Surprise snowfall during rush hour.

Surprise snowfall sends fire and EMS units scrambling to multiple medical calls, vehicle accidents, and single-engine response fire alarms. Though only about an inch accumulates in the Capital City, melting snow on the roadways soon refreezes due to the low temperatures. Early-closing schools and businesses soon clog the slick streets with a record number of cars and buses. The resulting congestion stalls traffic and slows emergency responses on both major thoroughfares and popular cross streets. Gridlock also hampers the efforts of crews clearing snow and applying sand. Tire chains are ordered onto fire apparatus about 2:30 p.m. Gridlock persists on major roads into the early evening and increasingly poor road conditions affect response times to some incidents. Dozens of abandoned cars litter roadways and firefighters assist some stranded motorists with finding shelter. Routine commutes take as long as ten hours for some drivers. Multiple-vehicle accidents occur throughout the afternoon, though no serious injuries are reported. The Raleigh Police Department responds to 422 vehicle accidents between 11 a.m. and 9 p.m., with another 60 reported accidents pending. By midnight, officers are taking information over the phone for minor wrecks. Another 3,000 children around the county are being sheltered at 56 schools for the night. Major arteries including both the Beltline and New Bern Avenue remain stalled into the late evening. By 11 p.m., Governor Mike Easley has declared a state of emergency for Wake County, allowing state government buildings to be opened as shelters. Other motorists sleep overnight in their cars. The Raleigh Fire Department answers 152 calls between 0800 hours Wednesday and 0800 hours Thursday, nearly a 50% increase over the average volume of 82 calls per day.

In early 2005, Wake County converted to a digital Motorola Smartzone 800-Mhz system for all communications. This will allow for different agencies, such as fire and EMS, to talk to each other at the scene of an emergency. (WCEMS web site)

July 1, 2005

Snapshot:

- 122 full-time employees.
- \$12,309,609 budgeted expenditures.
- \$6,936,892 project revenue.

Notes:

- EMS special event fee is \$105/hour per ambulance, \$50/hour additional charge if 2 or more ambulances are requested.

Accomplishments of prior fiscal year:

- Negotiated budget ground rules with contracted EMS squads
- Continued to provide high quality pre-hospital care under the direction of a NCOEMS approved Model EMS System plan
- Revised the CAD system in early 2004 allow for incidents to be recommended to the geographically closest EMS station
- Continued to assist contracted Rescue/EMS agencies as needed
- Expanded utilization of an automated scheduling program for personnel
- In October 2004, fully implemented the new 800MHz Smartzone radio system, allowing digital communications countywide and significantly enhancing interoperability with other responders and improving medical communications to the hospitals

Bicycle Response Team organized.

- For special events such as downtown fairs, road races and marathons, sporting events, and the state fair.
- Purpose is both public relations and marketing, and patient care.
- Teams enhance the image of Wake County EMS to the public. Members are approachable.
- Teams provide rapid response within mass gatherings. They're not limited by street closure. They also save fuel and are environmentally friendly.

Source: Wake County EMS bike team presentation slides, August 21, 2009.

2006

January 2006 - Radio systems are changed from UHF to 800 mhz VIPER system.

■ February 2006 – Seven 2006 Ford/Wheeled Coach Type III ambulances delivered.

Specifications include:

- Ford E-450 with 170-inch modules.
- Rear-mounted back-up cameras.
- Whelen strobe/LED light package, used on county ambulances for last two years.
- Federal EQ2B sirens.
- Full-height reflective chevrons on the back, a first for Wake County EMS. The striping scheme is part of newer DOT guidelines, designed to help divert attention away from the truck, and thus away from the incident.
- Source: Legeros blog comments, January 2006.

Press release dated February 7, 2006:

Wake County Emergency Medical Services (EMS) took delivery of 7 new Wheeled Coach/Ford ambulances this week to replace aging units in the County's ambulance fleet. The new ambulances feature ultra-high visibility markings on the rear exterior surface designed to increase the safety of both paramedics and the public alike.

"We want to be certain we're putting the safest possible equipment on the road," says Skip Kirkwood, Chief of Wake County EMS.

"With the new high-visibility markers, we're ensuring that approaching motorists recognize us earlier and with greater clarity while we're on the scene of a motor vehicle collision or stopped in front of a business or residence. Greater visibility equals greater safety for all involved."

Studies show that bold, fluorescent and reflective diagonal striping on the back of emergency equipment help approaching motorists see the vehicles better in all lighting conditions.

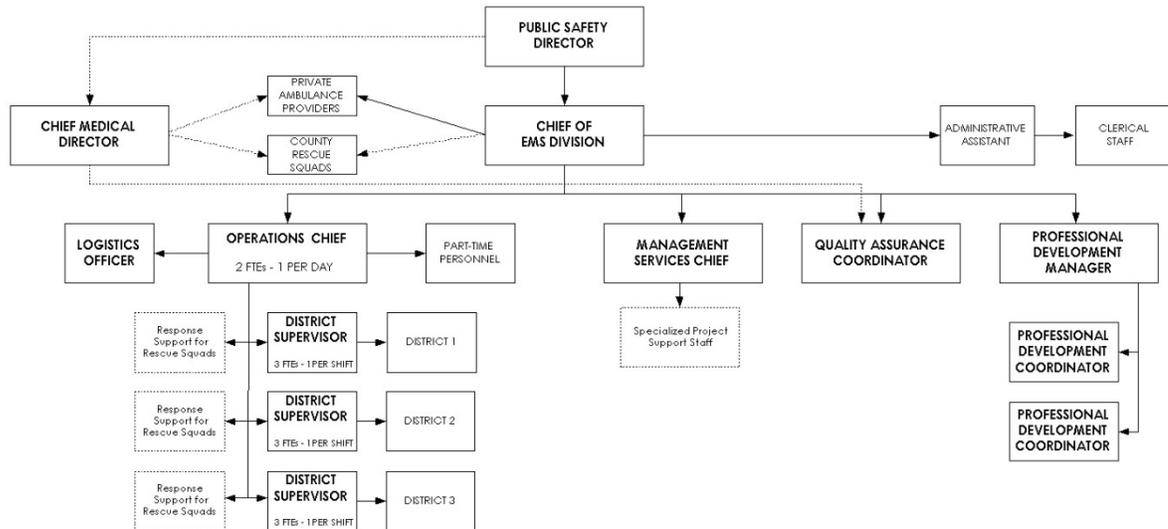
The seven new ambulances, to be deployed at various locations across Raleigh and Wake County, are scheduled to go into service on March 1st.

March 2006

Snapshot:

- Demographics
 - 860 square miles
 - 702,210 residents
 - \$65B tax base
 - \$638M budget
 - \$54,990 median income
- Wake County EMS System
 - 50,812 dispatches
 - 825 ALS staff
 - 625 BLS staff
 - 23 locations
 - Four hospitals
- Wake County EMS
 - 102 field staff
 - Nine district supervisors
 - 12 PIIs (field training officers)
 - 14 ambulances
 - 11 stations
 - Including Holly Springs, Knightdale, Wendell
 - Other staff
 - Two Professional Development Coordinators
 - Quality Improvement Coordinator
 - Medical Director (full-time)
- 20 ambulances
 - 15 primary units are late-model Wheeled Coach Type III modular with extended cabs
 - Ford E Super Duty chassis
 - 162x95 patient compartment
- Support vehicles
 - Supervisor response vehicles
 - Medical Director vehicle
 - Training vehicle
 - Logistic vehicle

- Organizational chart:



July 1, 2006

From July 1, 2006 to June 30, 2007:

- 136 full-time employees.
- \$14,748,054 budgeted expenditures.
- \$7,451,967 expected revenues.

Accomplishments of prior fiscal year:

- Generators installed at seven county-owned EMS stations.
- Renovation of bay area and day room of EMS Station 1 at Public Safety Center.
- Delivered high-quality advanced life support services as an accredited “Model EMS System” recognized by the North Carolina Office of Emergency Medical Services.
- Deployed new, state of the art cardiac monitor-defibrillators throughout the system in December, 2005.
- Became the first EMS system in North Carolina to fully deploy level-C personal protective equipment to all paramedic personnel with the help of a grant from the Federal Health Resources and Systems Administration.

In 2006, Induced Cooling by EMS, or ICE, was started. This pioneering procedure increases survivability in post-cardiac arrest patients. (WCEMS web site)

2007

Haz-mat and USAR programs started, with select Wake EMS personnel trained to respond with NC Haz-Mat Regional Response Team 4 and NC USAR Task Force 8. (WCEMS)

- April (?) 2007 - Major Operations Support Unit placed in service.

- 2007 Sterling/Hackey heavy rescue truck
- Call sign is Truck 1, housed at Station 1.
- Serves two purposes, as a multi-patient unit with equipment for 25 patients, and as responder rehab, with fans, cooling chairs, fluids, ice, and necessary medical equipment.
- First call answered on April 17, 2007, to house fire on Fayetteville Road in Fuquay-Varina.

Press release:

- Wake County, North Carolina purchased a Hackney model DF1082 mounted on a Sterling cab and chassis with vertical exhaust. Wake County serves the capital region of central piedmont North Carolina, home of the Research Triangle Park, several universities and high tech industrial sites. The primary mission of this vehicle is to support multi-casualty situations.
- It is outfitted to be a base of operations for the Medical Branch at large scale incidents. Specialized compact portable equipment is available for use by EMS Strike Teams triaging and treating patients on a complex scene.
- Equipment and supplies are stored according to triage levels for the establishment of a treatment area/casualty collection point. The vehicle contains all the necessary equipment for establishing a state-of-the-art responder area. From hydration coolers, thermal cooling chairs, folding benches, to an extensive array of medical monitoring equipment, this truck is suited to assist responders at all types of incidents. All of the rehab equipment is packaged to move - whether up a street or up 30 floors to support the Rehab Group during a high-rise fire scenario. In addition, the truck is equipped to function as a Paramedic response unit, as well as in support of the Wake County EMS Special Operations teams.
- The truck is available regionally as needed and is a primary response asset to incidents at Raleigh-Durham International Airport. The unit is currently stationed at the Public Safety Center on Davie St. in Downtown Raleigh. It is staffed during the daytime by Administration and other hours by designated ambulance crews that are stationed at the PSC.
- Jonathan Olson, Division Chief – Management Services, states that “in designing the apparatus, personnel looked back at deficiencies on incident scenes in recent years and focused on designing a single response vehicle with enough volume of storage space to transport critical equipment.” Hackney was identified as a prime supplier due to its vast compartment storage space, enhanced by the drop/pinch frame. The body provides an incredible 925 cu.ft. of fully useable storage capacity.
- A primary need identified was lighting. This unit is outfitted with significant primary lighting, including a Will-Burt tower and body lamps on each side, tripod lighting on the rear, and underbody lighting. It has dual 200' power reels with distribution blocks to allow the establishment of lights in proximity to the truck using portable ground and stand lights. To get even further away, the truck is equipped with 3 Honda 2KW portable generators. The truck also serves as a point to recharge batteries on extended scenes as it is equipped with both radio and defibrillator battery charging units. On the chance that the unit is deployed in time of major disaster, it is outfitted with an ICOM VHF/UHF/HF amateur band radio - as well as standard public safety VHF, UHF, and 800Mhz VIPER radios.
- The vehicle was sold by C.W. Williams and Company.

April 16, 2007 – New vehicle tracking system for Wake EMS unveiled. System is paid for by \$1.1M federal grant.

Press release:

Wake County emergency responders are implementing new technology that will help 911 telecommunicators quickly find the closest unit to an emergency. The Automatic Vehicle Location (AVL) technology, funded by federal grants, is a GPS-based system that provides the 911 center with real-time information on the exact location of Wake County Sheriff Department units, EMS units and animal control units. The result is a greatly enhanced ability to send the closest unit to an emergency.

“One of the great advantages is responder safety,” says Wake Sheriff Donnie Harrison. “With this new technology we can actually visualize where our units are. That enhances their safety and the safety of everyone citizen and visitor in Wake County.”

Wake County Commissioner Chairman Tony Gurley says the AVL system is simply building on tremendous improvements in local emergency communications in the last 5 years.

“In 2001, the Wake County Board of Commissioners approved a cutting-edge emergency dispatch system that identified and dispatched resources from the closest station regardless of political or municipal boundaries. The AVL system takes that to the next step by identifying the closest physical unit to the emergency, whether that unit is in the station or on the road.”

Join Congressman David Price, Commissioner Tony Gurley, Sheriff Donnie Harrison, EMS Chief Skip Kirkwood, and _____ from the Raleigh-Wake Emergency Communications Center at 10:00 am on Monday, April 16th 2007 at the Wake County EMS Training Center at 4011 Cary Dr., Raleigh for an AVL Media Rollout Event. More information on the program will be on hand along with AVL hardware and a visual depiction of the software in use.

Spring (?) 2007 - Wake County implemented a system-wide closest-vehicle dispatching system that uses GPS-based automatic vehicle tracking and in-vehicle MARVLIS navigation. The EMS System was also recognized for its groundbreaking cardiac arrest survival rates. (WCEMS web site)

July 1, 2007

July 1, 2007 to June 30, 2008:

- 136 full-time employees.
- \$16,264,219 budgeted expenses.
- \$8,804,301 projected revenues.

Accomplishments of prior fiscal year:

- Renovations (continued and/or delayed from last year) at EMS Station 1.
- Facility Master Plan completed for EMS facilities, which include proposed location and implementation schedule for future EMS stations, and updates to EMS station prototypical designs.
- The EMS Division has improved its special operations capability through training, equipping, and deploying a Tactical Emergency Medical Support Team, a Hazardous Materials / Urban Search and Rescue Medical Support Team, and a Paramedic Bicycle Response Team.
- The newly-created Mass Casualty Response unit, funded by Department of Homeland Security grant dollars, was operational during the first quarter of 2007.
- All EMS resources in the Wake County EMS system were dispatched based upon recommendation of a GPS based location system during FY07.

November 28, 2007 – New Wake County EMS System unit numbering becomes effective.

EMS 1 - EMS 39	Ambulances
EMS 17	Holly Springs ambulance
District 1 - District 3	District chiefs
Chief 100 - Chief 109.	Administrative chiefs
Chief 200, Chief 201.	Operations chiefs
Chief 202.	Special events chief
MD-1, MD-2, MD-20.	Medical Director staff

Circa 2007 - District 1 relocated from Station 8 to Station 1.

2008

Wake County reorganizes its departments, and Wake County EMS became its own department.

- **Dr. Brent Myers**, the EMS System Medical Director, is appointed as the new EMS Director. Serves until April 30, 2015.
- Source: Wake County EMS history web page.

July 1, 2008

July 1, 2008 to June 30, 2009:

- 161 full-time employees.
- \$18,905,488 budgeted expenses.
- \$9,329,101 projected revenues.

Capital Improvements Program includes details on EMS Facilities Master Plan:

- EMS Facilities Master Plan has sets of projects in two phases. Phase I is planned over the course of the FY 2009-15 CIP period and includes 8 stations. Those include: Durant Road, Fuquay-Varina, Southeastern Wake, Knightdale South, Zebulon, Pleasant Valley, Caraleigh and Wendell Falls. The total cost is over \$10 million.
- A facilities master plan for Emergency Medical Services was developed over the past two years to address needs through FY 2015 and beyond. The plan evaluated areas where response times to emergencies are currently in excess of standards, and where those gaps are likely to appear in the next few years based on population growth.
- These areas will request new ambulance units in the future, and facilities are needed to not only store the ambulance, but allow emergency personnel to decontaminate after calls, store medicines and equipment and sleep if they are on a 24-hour shift.
- An allocation of \$2 million was appropriated in FY 2008 to begin funding the actual facilities and it will fund the Durant Road Substation, the Fuquay-Varina co-located facility and a portion of the Southeast Wake County co-located facility.
- An additional \$8,252,000 is being proposed in FY 2011 through FY 2015.
- Other planned facilities in Phase I include: FY 2011: additional funds to finish Southeast Wake County; FY 2011-2012: Knightdale South co-located facility; FY 2011-2013: Zebulon Substation; FY 2012-2014: Pleasant Valley Substation; FY 2013-2015: Wendell Falls co-located facility; and FY 2014-2015: Caraleigh Substation.

Accomplishments of prior fiscal year:

- The EMS system has continued to adapt to the growth of Wake County, handling over 68,000 requests for service in calendar year 2007. In January 2008, the system made the transition to GPS-based ambulance dispatching, where automatic vehicle location technology assists the Raleigh-Wake Emergency Communications Center in assigning the closest EMS vehicle to every call.
- The primary purpose of our EMS system is to deliver clinical care that is of the highest quality and based on the latest available medical evidence. To that end, our EMS system is involved in two major initiatives. First, our "induced hypothermia" program has received national recognition, and was presented at the Society for Academic Emergency Medicine Annual Conference in Washington, DC. Second, our model for measuring clinical performance for patients suffering heart attack, congestive heart failure, seizures, asthma, and major trauma has been adopted by over 20 of the nation's largest EMS systems and was published this month as the lead article in the peer-reviewed journal Prehospital Emergency Care.
- As we continue to be good stewards of tax-payer dollars, the EMS system evaluates mergers and other consolidations. To that end, there are now 5 remaining contract agencies, after the FY 2008 merger of Rolesville and Eastern Wake EMS. Over the next year, each agency will be evaluating the risks and benefits of various types of system design.
- EMS's Major Operations Support Unit, designed to facilitate effective management of multiple-patient incidents, was placed in to service during the first quarter of 2007. This unit, purchased using grant funds from the Department of Homeland Security, has already responded to 40 requests for service, including several large fires, hazardous materials incidents, and motor vehicle crashes.
- EMS has improved its ability care for patients in hazardous environments, by training and equipping small teams of paramedics especially trained and equipped to deal with hazardous materials incidents, technical rescue incidents, dangerous law enforcement scenarios, and large-scale community events.
- The EMS system, under the leadership of its medical director and chief officers, has continued to strive for seamless delivery of service. We recognize that to a citizen needing emergency medical care is concerned only with the timeliness and the quality of care rendered, and is not at all concerned with the corporate structure or identity of the providers of that service.

2009

■ January 6, 2009 – Advanced Practice Paramedic (APP) program placed in service.

- Each APP operates as a single provider and focuses their activities in three areas:
 - Co-response with EMS ambulances to high-acuity calls.
 - Prevention and public health visits.
 - Alternate destinations.
- Each operates a 2008 (?) Dodge Charger with Batternburg markings, a checkered pattern developed in the United Kingdom.
- Call signs are Medic 91, Medic 92, Medic 93, Medic 94, and Medic 95.

Press release:

On, Tuesday, January 6, Wake County's Advanced Practice Paramedics will take to the road. The APP program is a unique, innovative program designed to match specially-trained paramedics with the most acute patients, prevent emergencies in some high-risk patient populations, and seek further care for those patients who may be better served at locations other than local emergency departments.

Late last fall the County's EMS Department provided 17 experienced paramedics with intense classroom and clinical training in preparation for the APP program. These paramedics will be operate as single paramedics in cars equipped with EMS equipment, and they will fulfill three main functions:

- Ensure that at least one additional, very experienced paramedic is assigned to each high-acuity EMS call, which often requires multiple paramedics to perform a number of time-sensitive procedures in a short period of time. In the past, the system sometimes used two ambulances to provide the necessary number of paramedics. An Advanced Practice Paramedic will allow many of those patients to be appropriately treated without the second ambulance.
- Evaluate, educate and provide preventive care for some patient populations, to include certain diseases, substance abuse, and senior citizens at high-risk for falls in the home. Billed as an "EMS Sprinkler System," this prevention programs seeks to improve the health and well-being of these patient populations and prevent medical emergencies, much as fire prevention programs have led to fewer and fewer structure fires over the years.
- Seek alternative destinations for EMS patients that would be better served somewhere other than local hospital emergency departments. Current practice calls for patients to be transported only to emergency departments. In some cases, the APP may free up the ambulance for other serious calls for help while remaining with the patient until the most appropriate care facility can be identified and transportation arranged. That may include alcohol treatment centers, shelters or outpatient clinics.

"We have a shortage of paramedics, both nationally and in the state of North Carolina," says Dr. Brent Myers, Wake County EMS Director. "This program allows us to make more efficient use of the paramedics that we do have, not only by getting the paramedics where we need them the most, but also by investing their time in prevention with the most acute patient populations that we see."

"We spend a lot of time and resources responding to emergencies. With the APP program, we also spend time and resources preventing some of those emergencies."

"All in all, the APP program works to make emergency medical care more efficient," adds Wake County Commissioner Chairman Harold Webb.

"In these tough economic times, we're all obligated to find the most efficient way to deliver service while maintaining the quality and value that our citizens need, expect and deserve."

The Advanced Practice Paramedics will work from Dodge Chargers with the standard emergency vehicle package. There will be staggered shift start times that will allow for five APPs on duty across Wake County through the busiest parts of the day, and two APPs on duty through the night.

A media conference will be held at 10:00 am, Monday, January 5, 2009 at the Wake County EMS Station 1, 331 S. McDowell St., Raleigh.

■ Major incident – June 9, 2009 –Explosion, fire, and structural collapse at industrial plant in Garner.

Food processing plant explodes at 4851 Jones Sausage Road in Garner. Engine 26 and Garner fire units are dispatched at 11:30 a.m. to an explosion and fire at the ConAgra Foods processing plant. Arriving units find a 50,000 square-foot industrial building partially collapsed, with fires inside, and numerous victims evacuating the structure. Command is established by the Garner Fire Department, and the command post is located in the front of the plant. Raleigh Fire Department technical resources are requested as mutual aid, along with haz-mat units, due to leaking ammonia.

Task Force 8 is mobilized, and Raleigh USAR units are dispatched along with personnel and equipment from Cary, Chapel Hill, and Durham fire departments. Construction engineers and heavy equipment are also sent to the scene. Fire and EMS personnel treat and transport 46 patients including three firefighters. Another three employees are still trapped inside. As haz-mat personnel perform recon, Task Force 8 began planning for an extended search and rescue operation.

The first search teams enter the building at 8:00 p.m. They operate for 30 to 35 minute periods, and then change air bottles. During periods of severe weather, operations are halted due to the possibility of a secondary collapse. A base camp is also established, with climate-controlled shelters for sleeping, eating, and sanitation. The mission concludes on June 10 at 4:00 p.m., with the recovery of the third victim. The total haz-mat and USAR personnel number 93, including off-duty members. Just over 600 man hours are spent in the debris pile for search and recovery. (MJL)

July 1, 2009

Accomplishments of prior fiscal year:

- Special event fee added for Wake County EMS bike teams, \$90 per hour. Wake County EMS provide bike teams for mass gathering events where rapid access to patients by ambulances or other quick response vehicle medics is not practical and/or feasible. Wake County is the location of a substantial number of community events including North Carolina State University football games, the North Carolina State Fair, and numerous community festivals, parades, arts and crafts events. Following discussions with numerous frequent users, EMS believes that the creation of the user fee will not deter the use of EMS bike teams while recovering a portion of the costs. The special event fee is considered a non-regulatory fee and is not intended to discourage the use of the service. As such, the proposed fee changes are not designed to recover full costs of the service. However, in this case, the proposed fee will recover near full costs of the service and will not significantly reduce demand for the service.
- Paramedics and Emergency Medical Technicians who access and treat patients via bicycle do so on a voluntary and overtime basis. The cost to the County for EMS bike teams is approximately \$90 per hour. The proposed special event fee is \$90 per hour and includes limited cost recovery for personnel, equipment and supplies, and administrative costs. The proposed fee changes are compliant with the User Fee Policy.

■ August 13, 2009 – Mobile evacuation bus (MAB) is delivered, 2009 Thomas/Sartin.

- Built by Thomas Bus Company of High Point.
- Outfitted by Sartin Services of Archdale.
- Call sign is Evac 1.
- Housed at Emergency Management warehouse, off Highway 401.
- Built by Thomas Bus Company in High Point
- Outfitted by Sartin Services in Archdale
- Cost \$299,557
- Paid by U.S. Department of Homeland Security.
- Length 37 feet
- Weight about 35,000 pounds.
- Capacity of 22 patients upright or 16 lying down with 14 in wheel chairs
- Mileage 10 MPG estimated
- Speed 65 MPH maximum.
- (N&O, 1/14/11; Legeros blog)

August 21, 2009 - Snapshot of bike team:

Specs:

- Organized in 2005.
- 18 members.
- 11 bicycles.
- Front-line bikes are Trek Police Bikes
- Cargo trailer for transport, single-axle, with blue over white lettering and logos.
- Also utilize electric-powered flatbed utility vehicle with enclosed two-person cab.
- 50 to 60 events per season, which runs April through January 1.

Requirements:

- Paramedics, both released to practice and in good standing with department.
- Physically fit.
- Love to cycle.
- Outgoing personality.
- Application and try-outs required.

Events in 2008:

- 55 events
- 208 patient contacts: 88 injury, 120 medical.
- Average response time: 1.15 minutes.
- Prevented ambulance dispatch: 49 times.
- Source: Wake County EMS bike team presentation slides, August 21, 2009.

Source: Wake County EMS bike team presentation slides, August 21, 2009.

September 22, 2009 – Snapshot of units and stations:

- Station 1 – EMS 1, EMS 11, EMS 13, special event unit(s), District 1
- Station 2 – EMS 2, EMS 32, spare unit
- Station 3 – EMS 3 – spare unit
- Station 4 – EMS 4, EMS 32 – spare unit
- Station 5 – EMS 5, EMS 16
- Station 7 – EMS 7, EMS 15
- Station 8 – EMS 8
- Station 10 (Wake Forest) – EMS 10, District 3
- Fairview FD Station 1 – District 2
- Fuquay-Varina FD Station 1 – EMS 9
- Stony Hill FD Station 1 – EMS 12, EMS 33
- Fuquay-Varina FD Station 2 – EMS 14
- Raleigh FD Station 22 – EMS 15 (standby location only)
- Source: WCEMS document.

■ October 13, 2009 – District Chief 4 placed in service, operated by Six Forks EMS. The unit responds primarily in the north and northwest region of Wake County. The vehicle is a 200_ Dodge Ram covered pick-up.

2010-present

2010

■ January 5, 2010 – New District Chief vehicle placed in service, 2009 Dodge Ram truck with four-person cab and utility body. Third truck-style vehicle for District Chiefs, after District 5 (Cary EMS) and District 4 (Six Forks EMS). Source: Legeros blog.

■ Major Incident – February 13, 2010 –Dozens experience sickness at downtown hotel.

Saturday morning saw emergency personnel converging on the Raleigh Sheraton. Dozens of students attending a conference were complaining of nausea, vomiting, and diarrhea. Conference rooms were converted to triage and treatment areas. Ambulances lined South Salisbury Street. And by that afternoon, those dozens of students had been evaluated, with many treated on scene.

The first call was reported about 9:30 a.m. as a patient with respiratory distress at 421 S. Salisbury Street. Engine 1, EMS 1, and Medic 94 were dispatched. Upon arrival, they learned of approximately 150 juveniles complaining of stomach and intestinal distress, believed caused by food poisoning. The original call was also determined as a patient with the same symptoms.

Recognizing the scope of the incident, the APP unit requested a third-alarm medical response, which added 13 paramedic ambulances along with three District Chiefs, an additional APP unit, Truck 1, and MD 1 (Medical Director).

The fire department quickly concluded that hazardous materials were not involved, and command was transferred to the first-arriving EMS District Chief, District 1.

Following their Mass Patient Protocol, hotel areas were designated for incident functions, including the command post (first-floor room), triage (second-floor meeting room), and treatment (third-floor ballroom). As the Public Information Officer later explained, EMS made the decision to treat in place, instead of overwhelming area hospitals.

Apparatus and vehicles staged one block north on Salisbury Street, which police had closed. Fayetteville Street, on other side of the hotel, was also utilized as additional staging. The Transportation sector was designated as Salisbury Street, in front of the hotel.

Wake County EMS command staff responded, along with the Medical Director and his staff. Dr. Brent Myers (MD1) served as Treatment Officer. Other roles included Chief 200 (Operations Chief) as Command, Chief 100 (Chief) as Triage Officer, Medic 93 as Staging Officer and District 1 as Public Information Officer.

Additional fire units were requested by command, to provided manpower for treatment and transportation. Engine 1, Engine 13, Engine 3, Ladder 4, and Rescue 2 were dispatched and parked just north of the hotel on Salisbury Street., Battalion 3 and Chief Car 10 (Division Chief) were also on scene. Engine 26 relocated to Station 1, for coverage. They then reported to the scene for relief, about 90 minutes into the incident, along with Engine 24, Ladder 1, and Rescue 3.

At the command post, a mobile CAD terminal allowed Command to monitor the resources and call volume of the entire EMS system. Command worked with hotel staff to procure rooms, furniture, and supplies. In the treatment room on the third floor, blankets and pillows turned floor and later chair space into comfortable cots. Stretchers were staged on the second floor, and brought to the third floor as needed. Even upturned chairs were pressed into service, as IVs were administered to help with hydration.

Raleigh hospitals were notified and kept aware of pending patient needs by Command. They utilized a second radio channel, the Mass Care talk group Hotel, which is named phonetically. It was chosen as "H" for hospital.

Logistical support was provided by Wake County EMS staff. They helped procure operational supplies, such as the many radios and batteries needed. Cases of bottled water and boxes of snacks were also brought to the scene, in addition to those supplies carried on EMS Truck 1, the Mobile Operations Support Unit. Water and later food was also brought for the personnel on scene, during the extended operation.

Wake County Human Services (Public Health) and Environmental Services (Sanitation/Inspection) were quickly on scene, and were supported by the State Public Health Response Team based in Chapel Hill. The latter provided epidemiological experts to investigate the cause of the illness.

Red Cross, Wake County Fire-Rescue, and Wake County Emergency Management representatives were also present, and ready to make resources available.

Interviews were conducted with all patients. The students ate at a banquet at the Raleigh Convention Center the prior night, and their kitchen was subsequently inspected and cleared to prepare for another banquet Saturday night.

In addition to patient areas, a staging area for parents was established, and a second room was provided for media. Hotel staff provided interior security, directing the hundreds of students and guests toward or away from the treatment and triage areas. Raleigh police officers provided building security, and also closed two blocks of South Salisbury Street.

By mid-afternoon, the last students with symptoms were seen. Approximately 150 medical evaluations had been performed. Some 30 students were treated, and five were transported. The treatment and triage areas were closed. Fire department personnel were released at 3:30 p.m.

EMS units were returned to service as soon as possible, though supplies required restocking. Some units remained out of service as supplies were transported from the EMS warehouse south of Raleigh, to EMS Station 1, located just two blocks from hotel.

Units on scene included:

- EMS 1, EMS 3, EMS 4, EMS 8, EMS 11, EMS 15, EMS 16, EMS 33, EMS 52, EMS 55, EMS 81, EMS 83, EMS 122, EMS 124,
- M94, M93
- D1, D2, D5
- Chief 100, Chief 102, Chief 200
- MD1, MD2, MD20
- Truck 1, Logistics Unit
- E1, E3, E13, L4, R2, B3, C10
- E24, E26, L1, R3 (all relief)
- WC1.

Source: Legeros Blog

■ ■ May 31 (?), 2010 – Garner EMS ceases operation. Wake County EMS assumes role of provider for their response area. Garner EMS & Rescue Squad continues to operate two other divisions, rescue services and convalescent transport. Wake County EMS places three units in service:

- EMS 16 (24-hour unit) at Garner Fire Station 2, 9115 Sauls Road. The EMS station is named Garner South.
- EMS 18 (two 12-hour shifts) at Garner Fire Station 3, 1695 Timber Drive. The EMS station is named Garner Main.
- EMS 19 (two 12-hour shifts) at Garner Fire Station 1. Later in year assigned to Garner Fire Station 4, 125 Spaceway Court. The EMS station is named Garner East.

County takes possession of four ambulances, which are re-lettered while retaining Garner EMS paint scheme. They enter the reserve fleet. (Legeros Blog)

■ June 30 (?), 2010 – Holly Springs Fire Department ceases EMS service. Wake County EMS places EMS 17 in service. Housed at Station 1 on Flint Point Lane. Town had been paying for cost of ambulance and three EMTs, one per shift. (MJL)

July 1, 2010

Major accomplishments of prior fiscal year:

- The EMS System has continued to adapt to the growth in Wake County and the current economic environment. The specific initiatives are listed below:
- 1. Clinical Care:
 - The EMS System has continued to enjoy a very high survival rate from out-of-hospital cardiac arrest, saving 60 lives in calendar year 2009.
 - Our nearly 40% survival for adult victims of ventricular fibrillation arrests remains among the best in the nation.
 - Additionally, the Wake EMS System has maintained an average scene time for victims of major trauma of less than 10 minutes for two years, a testament to the interagency cooperation between fire and EMS as well as to the dedication of our EMS System to the traumatically injured patient.
 - In addition to our continued national recognition for cardiac arrest patients, the care for heart attack victims who need to go emergently for cardiac catheterization has also been recognized at the national level.
- 2. Advanced Practice Paramedics (APP):
 - This unique program has enjoyed many successes in the short time it has been active.
 - While it is too early to provide statistically meaningful analysis, the experience on the street strongly suggests that the citizens of and visitors to Wake County are benefiting from this program.
 - Over 125 individuals are already enrolled in the "well-person check" program, a component of the APP delivery model whereby patients with chronic conditions such as diabetes receive a phone call or home visit while they are well to hopefully prevent an emergency before it happens.
 - The APPs have responded to many high acuity patient encounters and provided assistance.
 - Finally, in cooperation with Wake County Human Services, patients with substance abuse and/or mental health emergencies have been referred directly from their homes to clinics and other services rather than to an emergency department.
- 3. Operational:
 - Consistent with the County Commission Goals for this year, all members of the Department of EMS committed significant time and energy evaluating the risks and benefits of mergers and consolidations.
 - As a result of these efforts, Apex EMS merged with the Apex Fire Department and the EMS unit operated by the Holly Springs Fire Department will be absorbed in the Wake County EMS Division.
 - At this time, no other mergers or consolidations are planned; the EMS system will continue to evaluate system design on a regular basis and make appropriate future recommendations.
- 4. Infrastructure:
 - Through a collaborative effort with Finance, Information Services and the EMS contract agencies a new electronic patient care reporting system and billing system was procured.
 - The new system provides increased compliance with new state mandates for EMS data collection and improved bill processing. Also included in the RFP was a scheduling system and inventory management system.
 - Both systems provide for more collaborative and more efficient use of personnel and equipment/ supplies across the EMS system.
- Source: WCAB.

■ September 2010 - Eleven new ambulances being delivered to Wake County EMS. Type III modular units with a 170-inch box. Chevrolet 4500 chassis. Built McCoy Miller in Elkhart, IN. (Legeros blog)

■ November 8, 2010 – Durant Road EMS station opens at 10000 Durant Road.

- New permanent home for EMS 15, which had been based at nearby Raleigh Fire Station 22 for several years. (Unit was parked at the fire station, but never shared vehicle or living space.)
- EMS 33 will also be stationed at Durant Road at night, relocated from Stony Hill Fire Station 1.
- Construction contracts were approved by the Board of Commissioners in November 2009.
- Facility is part of the North Wake Landfill Post Closure Master Plan, a program to add public-use and public-protection facilities to the 260-acre property. That plan has involved city, county, state, and citizen committee participants.
- Facility is dedicated on the same day, in a ceremony at 11:00 a.m.

■ November 10, 2010 – Garner East EMS station opens at 125 Spaceway Court, co-located with Garner Fire Department at Station 4. Building is dedicated on Wednesday, December 1, at 10:00 a.m.

2011

■ ■ May 2, 2011 – Six Forks EMS ceases operation. Wake County EMS assumes role of provider for their response area at 0800 on Monday, May 3, and has placed four units in service:

- EMS 34 at the airport, operating 0800-2000. The EMS station is named RDU. The facility is a warehouse on Mt. Herman Road.
- EMS 35 parked outside Raleigh Fire Station 17, operating 0800-2000.
- EMS 36 at Bay Leaf Station 3. Full-time unit. The EMS station is named Six Forks Main.
- EMS 22 at Bay Leaf Fire Station 2. Full-time unit. The EMS station is named Six Forks North.

District 4 remains in service, and continues to operate from Bay Leaf Station 3 / Six Forks Main station. It is assigned a Dodge Durango. Some of the SFEMS assets, including ambulances, are subsequently transferred to Wake County.

■ December 29, 2011 – North Hills EMS station at 5305 Six Forks Road damaged by fire, when EMS 3 catches fire while parked in vehicle bay. Station is closed for repairs and EMS 3 is temporarily relocated to the Six Forks Main EMS station at 1431 Lynn Road.

Press release:

Shortly before 1 p.m. today a fire broke out at Wake County EMS Station No. 3, located at 5303 Six Forks Road, Raleigh. The fire started in an ambulance that was parked in a bay and quickly spread to the building. All of the people inside made it outside safely and were not injured.

The ambulance was heavily damaged and is no longer operational. The ambulance bay has significant roof damage and the living quarters have heavy smoke damage.

EMS crews are being transitioned to back-up equipment and will be working out of an alternate location by close of business today.

Fire investigators are evaluating the damaged ambulance to try to learn what caused the fire.

Wake County General Services Administration will weatherproof and secure the building until further repairs can be made. Additionally, Wake County General Services Administration are evaluating similar models of County ambulances to ensure safety.

During and following the fire there was no interruption to EMS service.

July 1, 2011

Annual budget notes:

- \$27,511,623 budgeted expenditures.
- \$21,136,845 projected revenues.
- 219 full-time employees.
- Centralized revenue model, including a distribution of system costs to all Wake County EMS system agencies, to be implemented July 1, 2011.
- APP program has enhanced the already strong bond between EMS and Human Services.
 - Relationship to continue to be improved this year, including in areas of pandemic preparedness and care for patients with mental illness/substance abuse.

Accomplishments in prior fiscal year:

- The EMS System has continued to adapt to the growth in Wake County and the current economic environment. The specific initiatives are listed below:
- Clinical Care:
 - The EMS System has continued to enjoy a very high survival rate from out-of-hospital cardiac arrest, saving 60 lives in calendar year 2009.
 - Our nearly 40% survival for adult victims of ventricular fibrillation arrests remains among the best in the nation.
 - Additionally, the Wake EMS System has maintained an average scene time for victims of major trauma of less than 10 minutes for two years, a testament to the interagency cooperation between fire and EMS, as well as to the dedication of our EMS System to the traumatically injured patient.
 - In addition to our continued national recognition for cardiac arrest patients, the care for heart attack victims who need to go emergently for cardiac catheterization has also been recognized at the national level.
 - In addition to cardiac arrest care, we monitor our care on a broad array of clinical conditions including heart attacks, trauma, seizures, asthma, and congestive heart failure.
- Advanced Practice Paramedics (APP):
 - This unique program has enjoyed many successes in the short time it has been active.
 - While it is too early to provide statistically meaningful analysis, the experience on the street strongly suggests that the citizens of and visitors to Wake County are benefiting from this program.
 - Over 125 individuals are already enrolled in the "well-person check" program, a patients with chronic conditions such as diabetes receive a phone call or home visit while they are well to hopefully prevent an emergency before it happens.
 - The APPs have responded to many high acuity patient encounters and provided assistance.
 - Finally, in cooperation with Wake County Human Services, patients with substance abuse and/or mental health emergencies have been referred directly from their homes to clinics and other services rather than to an emergency department.
- Operational:
 - Consistent with the County Commission Goals for this year, all members of the Department of EMS committed significant time and energy evaluating the budget development process and EMS System funding model.
 - As a result of these efforts, a new EMS System budget manual was developed and a centralized revenue model was adopted for the EMS System. This new model will be implemented in FY 2012.
 - Also new in FY 2012, the County EMS Division assumed responsibility for providing service in the former Six Forks EMS service area when Six Forks EMS ceased operations on May 2, 2011.
 - At this time, no other mergers or consolidations are planned. The EMS system will continue to evaluate system design on a regular basis and make appropriate future recommendations.
- Health Information Exchange:
 - The EMS System remains committed to participation in broader care for our patients, including data exchange.
 - Reliable data exchange allows not only for outstanding patient care but allows the EMS System to study our interventions and continually improve patient care.
 - We have entered into the final stages of real time data exchange with WakeMed Health and Hospitals and believe we will have such data exchange with Rex and Duke in the next year.
 - Additionally, we are trialing our first public-private partnership with a private physician group as it relates to data exchange for the patients EMS and their practice have in common.
- Source: WCAB.

2012

- First 2012 Ford Explorer delivered, to replace Dodge Chargers for APPs.

February 28, 2012 – Launch of new training program announced.

Press release:

The Wake County Emergency Medical Services (EMS) System will launch a unique training program known as a Simulance this week. The Simulance, an ambulance with a simulation manikin system, allows paramedics and Emergency Medical Technicians to practice a myriad of complex emergency medical treatment scenarios in a realistic setting. Members of the news media are invited to gather photographs and interviews of the Simulance during a staff training exercise on Wednesday, February 29, 2012, at 11 a.m., at the Varsity Drive EMS Station, 1361 Varsity Drive, Raleigh.

“Modern simulation technology allows paramedics to assess and interact with sophisticated training manikins. Changes in patient condition and a variety of information like vital signs, lung sounds and heart rhythms are facilitated by a hidden training specialist using computers connected to the manikin,” said Deputy Director of Wake County EMS Joseph Zalkin.

After positive field tests, the Simulance will hit the road during the last week of February to meet up with EMS crews across the Wake County EMS System.

“It’s important for us to develop methods like this. Number one, the training and testing occurs in the paramedics’ actual work environment – the back of an ambulance. Second, it allows us to work all of our paramedics through less common, but very complex medical scenarios and protocols. This system allows us to create as realistic an environment as we can to develop skills.”

The simulation manikin and computer system was integrated into an older ambulance that was scheduled for replacement. The Simulance will travel to several points in Wake County to provide training and skills enhancement to on-duty EMS personnel.

■ June 12, 2012 – North Hills EMS station re-opens. Repairs and renovations to the building included a complete reconstruction of the interior of the apparatus bay, including a new roof, new electrical components, and a new ventilation system. The crew quarters received new carpet and floor. Some remaining electrical items will be installed this week, including new lighting in the bay and on the outside of the building. The bay was repainted, and some exterior cracks in the building were also repaired.

June 2012

Wake County EMS system snapshot:

Numbering: EMS 1-39 (Wake County EMS), EMS 41-49 (Apex EMS), EMS 51-59 (Cary EMS), EMS 61-69 (Eastern Wake EMS).

CAD ID	STATION NAME	STREET ADDRESS	TOWN	EMS UNIT(S)	NOTES
APM	Apex Main	315 W. Williams Street	Apex	41	
BTC	Bethany Church	6529 Bethany Church Road	Wendell	68, 66	
CRM	Cary Main	107 Medcon Court	Cary	51, 53, 55, District 5	
CRW	Cary West	2101 High House Road	Cary	52	Cary FD Station 5
DRN	Durant	10000 Durant Road	Raleigh	15, 33	
DWN	Downtown	331 S. McDowell Street	Raleigh	1, 11, 13, District 1, Truck 1	EMS 13 runs out of Raleigh FD Station 2 during day.
ERL	E Raleigh	2910 Kidd Road	Raleigh	7, 31	
FRG	Fairgrounds	4017 District Drove	Raleigh	4	
FRV	Fairview EMS	3609 Ten Ten Road	Cary	42	Cary FD Station 6
FUQ	Fuquay	301 S. Fuquay Avenue	Fuquay	9	Fuquay-Varina FD Station 2
GRE	Garner East	125 Spaceway Court	Garner	19, 37	Garner FD Station 4
GRM	Garner Main	1695 Timber Drive	Garner	18	Garner FD Station 3
GRS	Garner South	9115 Sauls Road	Garner	16	Garner FD Station 2

CAD ID	STATION NAME	STREET ADDRESS	TOWN	EMS UNIT(S)	NOTES
HLT	Hilltop	5627 Hilltop Road	Fuquay	14	Fuquay-Varina FD Station 2
HSP	Holly Springs	700 Flint Point Lane	Holly Springs	17, 32, Medic 91	Holly Springs FD Station 1
	Holly Springs	1140 Avent Ferry Road	Holly Springs		Holly Springs FD Station 2. Closed due to tornado.
KDM	Knightdale	949 Steeple Square Court	Knightdale	61, Medic 92	Knightdale Public Safety
KDS	Knightdale South	4828 Clifton Road	Knightdale	62	Eastern Wake FD Station 1
MNC	Mini City	4704 Hargrove Road	Raleigh	5, 36	
MSV	Morrisville	10632 Chapel Hill Road	Morrisville	54	Morrisville FD Station 2
NCS	NC State	1361 Varsity Drive	Raleigh	8	
NHL	North Hills	5305 Six Forks Road	Raleigh	3	
RDU	Airport	6901 Mt Herman Church Road	Raleigh	34, 35, Medic 95	
RVM	Rolesville Main	108 E. Young Street	Rolesville	64	
SFM	Six Forks Main	1431 Lynn Road	Raleigh	6, District 4	
SFN	Six Forks North	13116 Norwood Road	Raleigh	22	Bay Leaf FD Station 2
SHL	Stony Hill	7045 Stony Hill Road	Raleigh	12, Medic 93	Stony Hill FD Station 1
WEN	Wendell Main	401 E. Third Street	Wendell	63, District 6	
WFM	Wake Forest	706 S. Franklin Street	Wake Forest	10, District 3	
WML	Whitaker Mill	2024 Noble Road	Raleigh	2, Medic 94	
ZEB	Zebulon	115 E. Vance Street	Zebulon	65	

July 1, 2012

Annual budget (FY12-13) notes:

- \$29,903,848 budgeted expenditures.
- \$22,814,501 projected revenues.
- 210 full-time employees.
- Department expenditure and revenue budget was increased through the annualization of contract agency subsidy budgets, and this is due to the continued implementation of the centralized billing model.
- Funding for shifting one 24-hour unit to 12-hour unit.
 - Unit was reduced two years ago through budget reductions, but utilization levels support shift to 12-hour unit.
- New ambulance billing rates established, and will be 150 percent of allowable Medicare rates.
 - New rates were benchmarked and aligned with other counties.

- Increased rate will generate \$750,000 in first year of implementation.
- FY13 budget process was first following transition to centralized revenue model.
 - Cary EMS funded for converting 24-hour unit to 12-hour unit, and additional staffing to provide adequate coverage.
 - Eastern Wake EMS funded to convert 24-hour unit to 12-hour unit.

Accomplishments in prior fiscal year:

- The EMS System has continued to adapt to the growth in Wake County and the current economic environment. The specific initiatives are listed below:
- Clinical Care:
 - The EMS System has continued to enjoy a very high survival rate from out-of-hospital cardiac arrest, saving 60 lives in calendar year 2009.
 - Our nearly 40% survival for adult victims of ventricular fibrillation arrests remains among the best in the nation. Additionally, the Wake EMS System has maintained an average scene time for victims of major trauma of less than 10 minutes for two years, a testament to the interagency cooperation between fire and EMS, as well as to the dedication of our EMS System to the traumatically injured patient.
 - In addition to our continued national recognition for cardiac arrest patients, the care for heart attack victims who need to go emergently for cardiac catheterization has also been recognized at the national level.
 - In addition to cardiac arrest care, we monitor our care on a broad array of clinical conditions including heart attacks, trauma, seizures, asthma, and congestive heart failure.
- Advanced Practice Paramedics (APP):
 - This unique program has enjoyed many successes in the short time it has been active.
 - While it is too early to provide statistically meaningful analysis, the experience on the street strongly suggests that the citizens of and visitors to Wake County are benefiting from this program.
 - Over 125 individuals are already enrolled in the “well-person check” program, a component of the APP delivery model whereby patients with chronic conditions such as diabetes receive a phone call or home visit while they are well to hopefully prevent an emergency before it happens.
 - The APPs have responded to many high acuity patient encounters and provided assistance.
 - Finally, in cooperation with Wake County Human Services, patients with substance abuse and/or mental health emergencies have been referred directly from their homes to clinics and other services rather than to an emergency department.
- Operational:
 - The Department of EMS continues to maximize efficiencies in the areas of mergers, consolidations, and billing practices.
 - In this current fiscal year, we complete the second full year of operation after the mergers of Garner and Holly Springs into the Wake EMS Division.
 - These mergers have been seamless for the patients and providers, with outstanding partnerships with Garner Fire Department and Holly Springs Fire Department allowing us to co-locate our response units with lower capital costs.
 - We are also completing our first fiscal year after two additional changes in our EMS System.
 - First, the merger of Six Forks EMS into the Wake EMS Division is now complete with plans to utilize Bay Leaf Fire Station #3 at Lynn and Leadmine Roads as a primary EMS station after the completion of the new Bay Leaf Fire Department Headquarters Station.
 - Second, we are now operating as a single billing entity, with all revenues being collected by the County and each agency funded on an approved budget.
- Health Information Exchange:
 - The EMS System remains committed to participation in broader care for our patients, including data exchange.
 - Reliable data exchange allows not only for outstanding patient care but allows the EMS System to study our interventions and continually improve patient care.
 - We have entered into the final stages of real time data exchange with WakeMed Health and Hospitals and believe we will have such data exchange with Rex and Duke in the next year.
 - Additionally, we are trialing our first public-private partnership with a private physician group as it relates to data exchange for the patients EMS and their practice have in common.
- Source: WCAB.

2013

July 1, 2013

Annual budget (FY13-14) notes:

- \$33,590,244 budgeted expenses, increased 11.7% from prior year.
- \$22,996,418 projected revenues.
- 246 full-time employees.
- Funding for shifting five 24-hour units to 12-hour units.
 - All 5 of these units are above the 40 percent utilization level considered to be the threshold to convert units from 24 hours to 12 hours. Several years ago this threshold was established after a study determined that safety levels were improved when units were converted at 40 percent.
- Funding to establish two peak-load ambulances.
- Second budget process following transition to centralized revenue model.
 - The contract agencies continued to use the EMS System Budget Manual as the primary basis for their individual submissions.
 - Overall, the budget process worked well with all agencies actively participating.
 - Contract agencies have received the following expansions:
 - Eastern Wake EMS has received funds to purchase power stretchers to improve safety of patients and employees during the transport process.
 - Apex EMS has received funding to convert part time and temporary position funding to 2 full time positions.
 - Cary EMS will benefit from a project designed to allow the Wake County CAD system interface better with the Town of Cary CAD system.
 - The 3 EMS agencies have received funding for a 2.75 percent merit increase. This amount is \$99,941 and matches the percentage that has been provided to County departments.
- One reduction item:
 - Financial review indicated that it would cost less for the Wake EMS Division to provide services in the Apex area. Apex EMS requires additional funding for administrative positions that Wake EMS Division would not require. This funding amount of \$155,626 has been reduced from the overall EMS budget for this reason.

Accomplishments in prior fiscal year:

- Clinical Care:
 - The EMS System has continued to enjoy a very high survival rate from out-of-hospital cardiac arrest, saving over 90 lives in calendar year 2012.
 - Our over 40% survival for adult victims of ventricular fibrillation arrests remains among the best in the nation.
 - Additionally, the Wake EMS System has maintained an average scene time for victims of major trauma of less than 10 minutes, a testament to the interagency cooperation between fire and EMS, as well as to the dedication of our EMS System to the traumatically injured patient.
 - In addition to our continued national recognition for cardiac arrest patients, the care for heart attack victims who need to go emergently for cardiac catheterization has also been recognized at the national level.
 - In addition to cardiac arrest care, we monitor our care on a broad array of clinical conditions including heart attacks, trauma, seizures, asthma, and congestive heart failure.
- Advanced Practice Paramedics (APP):
 - This program has received national attention and continues to achieve successes.
 - Over 225 patients have been evaluated and successfully referred directly for mental health evaluation rather than to the emergency department.
 - This allows the patient to receive the right care at the right place the first time while preserving emergency department beds for those with acute medical or traumatic issues.
 - Additionally, in partnership with Doctors Making House calls, the APP program is evaluating patients in assisted living facilities, allowing some patients to remain in the facility and be evaluated rapidly by their primary care physician while others who are in need of emergency department evaluation are transported in the traditional fashion.
- Operational:
 - The Department of EMS continues to maximize efficiencies in the areas of mergers, consolidations, and billing practices.
 - We are entering into our third year of a centralized revenue model, a move which has improved our revenue and allows for more precise budget planning going forward.
 - Additionally, in response to growth, we will be converting EMS units with a unit-hour-utilization above 40% from 24-hour shifts to 12-hour shifts as well as adding two peak load resources.
- Health Information Exchange:
 - The EMS System remains committed to participation in broader care for our patients, including data exchange.
 - We have established bidirectional data exchange with all hospitals in the WakeMed System and hope to incorporate Rex Hospital in the next fiscal year.
- Source: WCAB.

2014

February 13, 2014 – EMS thanks citizens who assisted a neighbor having a medical emergency during a snow storm.

Press release:

Wake County Emergency Medical Services (EMS) would like to offer its thanks to the more than 20 community members who assisted a neighbor having a medical emergency yesterday.

EMS was transporting a patient who had suffered cardiac arrest in the street during the snow storm. As EMS workers moved through Van Dyke Av. off Hillsborough St. the ambulance was not able to quickly climb the steep hill due to the rapid accumulation while on scene.

Supervisors with 4-wheel drive response units were called to the scene to transfer the patient to the hospital. That's when approximately about 30 citizens jumped into action by assisting EMS staff to physically carry the patient to the top of the hill to meet the waiting EMS vehicle.

Not only did the same citizens assist in carrying the patient to the waiting vehicle, but they also assisted EMS in transferring EMS equipment from the relief vehicle in order to assure there was adequate space for the safe transport of the patient.

"Wake County EMS would like to offer our sincerest thank you to those that helped us on Van Dyke, and all over Wake County through the storm," said Jeffrey Hammerstein, District Chief with Wake County EMS.

"We often hear words of thanks from residents for being out working during severe weather, but we truly could not do our jobs without the support of those around us in the community."

As paramedics proceeded to Rex Hospital with the resuscitated victim, those same citizens worked together with shovels and kitty litter to help free the ambulance and get them on their way.

EMS officials are aware that someone may have recorded video of the rescue and would like to obtain a copy, so that they may be able to identify those who unselfishly assisted paramedics.

2015

April 30, 2015 - **Chris Colangelo** named Interim Director. Serves until November.

November 30, 2015 – Dr. **Jose Cabanas** hired as Director/Medical Director.

Dr. Cabanas currently serves as the Deputy Medical Director of the Travis County Emergency Medical Services System in Austin, Texas and the Texas State Department of Public Safety. There, he provides medical oversight for an urban EMS system of 2,500 providers and leads quality assurance and performance improvement efforts. Prior to moving to Texas, Dr. Cabanas served as Wake County's Deputy Medical Director.

Dr. Cabanas is a Fellow of the American College of Emergency Physicians and American Academy of Emergency Medicine. He holds a Bachelor's degree in Biology from Sacred Heart University, a Master's degree in Public Health from the University of North Carolina at Chapel Hill and a Medical degree from Ross University.

Dr. Jeff Williams will continue serving as the Interim Medical Director until Dr. Cabanas begins his role in early December. At that time, Dr. Williams will transition into a new, fulltime position as Wake County's Deputy Medical Director.

2016

February 2016 - Wake County EMS unveils a special "retro ambulance," with green over white colors and vintage graphics to commemorate their 40th anniversary.

- The ambulance was unveiled at a special ceremony at Station 1.
- Among the speakers were original Director Russell Capps.

- The 2016 Chevrolet/Trauma Hawk ambulance was built by American Emergency Vehicles, which is located in Ashe County.
- The ambulance cost about \$230,000, which includes supplies, equipment, computers, and radios.
- The graphics will remain for the life of the truck, and were applied as the same cost as other units.
- It would be placed in service in about two months.
- It was one of seven being delivered over the next few weeks, and part of the county's regular purchase cycle to replace aging units.
- An average of eight are purchased each year.
- The truck will have a service life of four years, and answer an expected 8,000 calls.
- Source: Legeros blog.

2017

- Emergency Services training center and new warehouse opens on South Rogers Lane.

2018

January 31, 2018 – Last regularly scheduled 24-hour shift starts. Completes transition to all twelve-hour shifts. First twelve-hour shifts were added in the 1990s.

May 22, 2018 – District 1 relocated to Station 8.

June 15, 2018 - Shift commander placed in service. Designated Chief 200. New position with Assistant Chief rank, who oversees operations 24/, and supervises the District Chiefs, and assumes many of the DC administrative duties, and allows the DCs to have more time in the field. Housed at Station 1, using bay and office space vacated by District 1.

Sources

- MJL – Mike Legeros
- N&O – News & Observer
- OH – Oral history
- WCAR – Wake County Annual Report
- WCB – Wake County Budget

Appendix – Memories of Station 1

Fred Loy:

- Station 1 used to be a garage with gas pumps outside.
- When we took [over] the building, we used the whole building. There was an elevator that ran to the basement. We had supplies in a caged area. We had an area where we put on "rain tires," and also we changed our own oil and filters.
- We asked the county for paint and we painted the bay area, both during work and off duty. We had a basketball court in the rear and a cascade system for the county fire departments to fill there oxygen tanks. This was 24 hours a day.
- The county then built us a kitchen and day room area. Before that we ate in the bay area. Then they built Diane a work area along with an office for Joseph Zalkin. It was crowded.
- Up front was Russell Capp's office and Mrs Wood's office.
- In the back was one bedroom with five beds, a bedroom for the Captain and an office.
- Inside the bay on the right was Russell's car, EMS 1 and EMS 4, and EMS 101. That place was full. And the 25 men did 50% of the work.
- We had no money, just a dream!

Jeff Hammerstein:

- Mike Poole had his wife and baby son visit one day. Changed his diaper in the sleeping quarters. Took a clean diaper and put a mashed up oatmeal cookie from the Lance machine in the clean diaper and set it on Pat Griffin's bed. She found it and threw it at him. He opened it and ate the cookie.
- The McDowell St. door could open manually, but we never used it in my day. Only time was when the fuel tanks were being pulled from the front lot. We went in and out the side then. Circa 89.

Joseph Zalkin:

- Old Dodge dealership. Yellow Cab (I think) then us. We did some "additions" by David D. Pease, the Cancer Society stored hospital beds in the basement and the crews would load and unload the beds as needed. Shortly after I arrived, they stopped changing the oil and doing tune-ups in the bay. Think it was the right thing to do. The basement was a little scary. Huge boiler downstairs with a coal chute in the side ally.
- The bedroom maxed to 3 sets of bunk beds for the then three frontline units. Close quarters - especially with that crowd of pranksters. The smoke bomb rolling into the bathroom or strategic use of saran wrap - times have changed...somewhat.
- The only door I recall operating was a single metal door (lefthand side). The wooden door was fixed in place. Others may recall different. The side roll-up was where Gerald and I parked - it was open on occasion - it was manual only (I think).
- The first assigned crews were EMS 1 and EMS 4 along with the Shift Captain (Supervisor). There was a business office for ambulance billing and a directors office and secretary. I got added in '81 and the County Coordinated Transportation manager was added to the department. (Later moved to Human Services). We added an assistant training officer Steve Gardner) and the rest is history.

- We used to have EMS Dinners in the bay, Gerald would call square dances. There is a side story of the county manager's wife falling through a hand me down chair and the next week we had commercial furniture. Most of the goods were surplus from Wake Med.

Alan Foster:

- Used the working freight elevator to move linen and supply shipments to the basement...a dark and eerie place. A stray cat birthed a litter of kittens down there that eventually ended up on the Anderson Baker farm.
- In 86 or 87, additional concrete had to be poured on the bay floor to support the weight of 3 ambulances. EMS 4, parked in the middle, had to back in on a 6" concrete platform.
- And, I'm still the ping pong champ of Wake EMS history!! Even had the nerve to defeat Director Gerald Brown...the second best ping pong player. He crushes me on the golf course though.

Deane Hodde:

- Pretty interesting card games with the homeless during those days.....'84. My kids visited one time and a homeless man came up to those gas pumps. They asked how I knew his name. I told them I spent more time with that guy then I did at home with them! Of course, they didn't get it, and frankly sometimes I didn't either.
- Steve Gardner was my first partner in Raleigh-wood.
- I remember working the shift out of that station when the tornadoes hit Raleigh. Busy day all day, then heavy storms and rain that night. Bennie Collins and I were dropping off a patient at Rex when a call came in for collapsed building. Another unit was closer but we decided to roll that way. It was 0130 and raining so hard you couldn't see out the window. We turned at the super K-mart, but it was gone, but that wasn't where we were going. First unit on the scene was farther up the road at an apartment complex. When we pulled in Jerry Brown told us to set up triage...and we did, among all the wondering people wearing whatever they wore or didn't wear to bed. Sparks and water and buildings cut in half like doll houses. Back-up would be difficult because tornadoes had touched down all over the city and the surrounding communities. We worked until 0530 when we were told to return to base until daylight. New crews came in and took over at daylight. It was a hard day for closure not having been able to return, but we understood, just didn't like it.

Christie Malcolm:

- We used to ride downtown for MICN clinical time . One afternoon I came in and Eddie Raines had bought a banana box of baby quail which he planned to raise . Unfortunately they did not survive , so they were frying when I got there. !

Roger Lane:

- Us guys that were EMS employees built most of the "new" lounge. Most of it on our days off. Gene Barry (RIP) fell on some ice one day in 1976 or 7, totally disabled from EMS work with an elbow injury. Gene got another job within Wake County. As a result, he gave us training on Geiger counters. Those 70' were great --- what I remember

David Pease:

- In 78 or 79, not sure, Billy Tew and myself were getting ready to get off 24hr shift. Tramp was working part time for the oncoming shift, (We were A shift) and he brought and parked his new Harley Davidson inside the station. He was out on a call so we decided to have a little fun. Billy poured a little bit of oil under the engine and on the engine itself. (We did our own oil changes back then, so we had plenty of it) Then we left for the day. Upon our return the next morning we were told that Tramp had already left for the Harley dealer and was pissed. He had already called them about the bike and he left before we could tell him what the deal was. There were no cell phones to call him either. Once he got there they checked it out and told him there was nothing wrong and somebody was messing with him. We didn't tell him for the longest time. We did find some old Civil Defense boxes in the basement from the 50's and ate the hard candy over time...they were the good ole days.....

Appendix – Accidents Involving Wake County EMS

Moved to separate document.

Help Wanted!

This document is part of a project to research and record the history of rescue squads and EMS providers in Wake County.

You can help in any number of ways, including:

- Read this document and visit the project web site, www.legeros.com/history/ems
 - What's good about what we're doing?
 - What could be improved?
 - What haven't we thought of?
- Proofread this document as casually or extensively as desired:
 - Misspelled names?
 - Wrong makes or models of vehicles?
 - General timeframes that seem off?
 - Etc.
- Supplement this document with things that you remember, or stories you've heard.
 - Jot your thoughts in an e-mail.
 - Send a long, detailed e-mail.
 - Write things down on paper and send via postal mail.
 - Talk to the project organizers in person, at your convenience.

- Etc.
- Share any scrapbooks, newspaper clippings, old photos, or old documents that you have, or can find.
 - Want some blasts from the past, to help you remember?
 - Visit <https://www.facebook.com/WakeEMSHistory>
- Suggest particular people that we can contact, for more information.

Contact Mike Legeros or Jeff Hammerstein at any time. Thank you in advance!