

**Fourth Biannual Certification of EMS Response Time Performance
Mayor's Task Force on Emergency Medical Services, Recommendation 4 (a)**

On September 27, 2007, the Task Force on Emergency Medical Services issued its *Report and Recommendations*. Among these recommendations was:

4 (a): *The Mayor shall establish a goal of providing ALS response times according to the National Fire Protection Association Standard 1710, 100% of the time, as well as a goal of providing transport responses within 13 minutes, 100% of the time. The Department shall conduct quality improvement review of those calls where the goal is not achieved. No later than March 20, 2008, and every six months thereafter, the Mayor shall certify that the District of Columbia has met this goal, or announce what steps are being taken to achieve this goal.*

National Fire Protection Association (NFPA) 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*, 2004 edition, states:

4.1.2.1 *The fire department shall establish the following time objectives: Eight minutes (480 seconds) or less for the arrival of an advanced life support unit at an emergency medical incident, where this service is provided by the fire department.*

4.1.2.2 *The fire department shall establish a performance objective of not less than 90 percent for the achievement of each response time¹ objective specified in **4.1.2.1**.*

For Fiscal Year 2010 (October 2009—September 2010):

- The percent of critical medical calls with first Advanced Life Support (ALS) (any unit) arriving within eight minutes (480 seconds) or less, measured according to the NFPA 1710 standard (en route-to-scene), was 88.47%.
- The percent of critical medical calls with first transport unit arrival within 13 minutes (780 seconds) or less, measured dispatch-to-scene, was 92.04%.

For FY 2010 (October 2009 through September 2010), the Department delivered first Advanced Life Support (ALS) to 56,188 out of 65,675 critical medical calls within 8:00 minutes or less, dispatch-to-scene, achieving performance of 85.6% against the 90% performance target, with 9,487 calls out of the target zone.

For Fiscal Year 2008, DC Fire & EMS internal performance target for transport unit arrival was changed from 13 minutes or less, 90% of the time, to the more rigorous 12 minutes or less, 90% of the time, since the agency was significantly exceeding the 12 minute target goal during Fiscal Year 2007. For Fiscal Year 2010, DC Fire & EMS delivered a transport unit to critical medical calls within 12 minutes or less, measured dispatch-to-scene, 89.97% of the time. The agency is not meeting its performance goal for ALS arrival within eight minutes or less, measured dispatch-to-scene, doing so 85.55% of the time.

¹ NFPA 1710 defines response time as: “*The travel time that begins when units are en route to the emergency incident and ends when units arrive at the scene*” (in DC Fire & EMS, this interval is referred to as “en route-to-scene”). This is a less stringent definition than that used by the DC Fire & EMS, which calculates its response time statistics from dispatch-to-scene when measuring the performance of Fire & EMS units, and from call-to-scene when measuring system response time from the patient’s perspective.

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FY 2010 monthly statistics, calls in and out of desired response time target range:

| FY 2010 MONTH BY MONTH | oct '09 | oct '09 | oct '09 | nov '09 | nov '09 | nov '09 | dec '09 | dec '09 | dec '09 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Critical Medical Calls: Dispatch-to-Scene | IN | OUT | ALL | IN | OUT | ALL | IN | OUT | ALL |
| FIRST ALS ≤ 8:00 MIN | 5009 | 638 | 5647 | 4511 | 511 | 5022 | 4306 | 676 | 4982 |
| FIRST TRANSPORT ≤ 12:00 MIN | 5265 | 381 | 5646 | 4765 | 268 | 5033 | 4662 | 370 | 5032 |
| FIRST EMT ≤ 6:30 MIN | 5333 | 537 | 5870 | 4729 | 471 | 5200 | 4479 | 725 | 5204 |

| FY 2010 MONTH BY MONTH | jan '10 | jan '10 | jan '10 | feb '10 | feb '10 | feb '10 | mar '10 | mar '10 | mar '10 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Critical Medical Calls: Dispatch-to-Scene | IN | OUT | ALL | IN | OUT | ALL | IN | OUT | ALL |
| FIRST ALS ≤ 8:00 MIN | 4491 | 623 | 5114 | 3675 | 1192 | 4867 | 4642 | 815 | 5457 |
| FIRST TRANSPORT ≤ 12:00 MIN | 4787 | 335 | 5122 | 4167 | 766 | 4933 | 5029 | 485 | 5514 |
| FIRST EMT ≤ 6:30 MIN | 4681 | 631 | 5312 | 3900 | 1240 | 5140 | 4920 | 766 | 5686 |

| FY 2010 MONTH BY MONTH | apr '10 | apr '10 | apr '10 | may '10 | may '10 | may '10 | jun '10 | jun '10 | jun '10 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Critical Medical Calls: Dispatch-to-Scene | IN | OUT | ALL | IN | OUT | ALL | IN | OUT | ALL |
| FIRST ALS ≤ 8:00 MIN | 4654 | 849 | 5503 | 5230 | 810 | 6040 | 5049 | 819 | 5868 |
| FIRST TRANSPORT ≤ 12:00 MIN | 4866 | 664 | 5530 | 5346 | 669 | 6015 | 5188 | 684 | 5872 |
| FIRST EMT ≤ 6:30 MIN | 4931 | 840 | 5571 | 5530 | 784 | 6314 | 5335 | 781 | 6116 |

| FY 2010 MONTH BY MONTH | Jul '10 | Jul '10 | Jul '10 | Aug '10 | Aug '10 | Aug '10 | Sep '10 | Sep '10 | Sep '10 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Critical Medical Calls: Dispatch-to-Scene | IN | OUT | ALL | IN | OUT | ALL | IN | OUT | ALL |
| FIRST ALS ≤ 8:00 MIN | 5207 | 902 | 6109 | 4735 | 802 | 5537 | 4679 | 850 | 5529 |
| FIRST TRANSPORT ≤ 12:00 MIN | 5397 | 731 | 6128 | 4869 | 636 | 5505 | 4930 | 620 | 5550 |
| FIRST EMT ≤ 6:30 MIN | 5491 | 913 | 6404 | 5007 | 766 | 5773 | 4965 | 843 | 5808 |

The D.C. Fire & EMS Department has set a national benchmark for transparent and comprehensive reporting of EMS response time. Any interested stakeholder can visit the Department's website and find statistics showing detailed response time statistics for arrival of first EMT, first paramedic, and first transport unit. These statistics are reported using two primary methods: measured call-to-scene, and measured dispatch-to-scene. Call-to-scene response time reporting includes the dispatch interval and most closely mirrors response time from the patient's perspective. Dispatch-to-scene measures the component of response time that D.C. Fire & EMS is accountable for, and allows stakeholders to analyze the Department's performance independent of call-processing time at the Office of Unified Communications.

Factors influencing response time performance in FY 2010:

The primary factors affecting response time performance in FY 2010 were:

- The historic blizzard of 2010 severely slowed vehicle travel times during February and March 2010.
- The firehouse renovation and consequent relocation of Engine Company 10 during FY 2010 caused increased travel times in one of our highest EMS demand service areas.
- Increased road repair and other major capital projects city-wide caused increased vehicle travel time.

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- Increased emphasis on quality of care, particularly the issuance of the Department's new Non-Transport Policy and Patient Care Documentation Policy in March 2010 have significantly increased "time-on-task" or average incident duration, reducing unit availability and thus increasing travel times.
- Continued increases in EMS demand and a record number of patient transports, including temporal surges during peak load and during the 2010 summer heatwaves, reduced unit availability and thus increased travel times.

The Fire & EMS department will be challenged to meet its operational process performance goals in the face of increasing demand. The District of Columbia continues to have one of the highest per-capita rates of EMS usage of any jurisdiction in the United States. For the recently concluded Fiscal Year 2010, the Department achieved an historic high of 94,039 EMS transports, this is equivalent to 157 transports for every 1,000 residents and 1,532 transports per square mile, and is significantly higher than the benchmarked performance in previous years. Overall, the number of EMS transports has increased by 29% over the past 13 years, while EMS demand has increased by 32% over the same time period. It is unclear whether this rate of increase has reached its theoretical peak or will continue to rise. The FY 2011 statistics will be a key indicator. Overall EMS demand was down slightly in FY 2010 versus FY 2009, dropping from 134,997 incidents to 130,878. However this drop was offset by an increase in the transport ratio from 64% to 72%, resulting in an overall increase in total transports despite the decrease in total incidents. If total EMS incidents and transports fail to plateau, and continue to rise at their historical rate of increase, the capacity of the EMS system in all of its components, both resource availability and ED throughput capacity, will be severely challenged.

Strategies for Performance Improvement:

The D.C. Fire & EMS Department continues to examine response time performance outliers utilizing Geographic Information Systems (GIS) and utilizes these findings to improve performance. The Department has identified several specific neighborhoods where it is not achieving the desired level of response time reliability. Root cause analysis has determined that the underlying factor influencing longer response times in these neighborhoods is prolonged travel time due to fire/EMS stations that are not optimally located. These findings have led to Capital Budget proposals to relocate Engine Company 22, 5760 Georgia Ave., NW, further north, to the campus of Walter Reed Army Medical Center; and to relocate Engine Company 26, 1340 Rhode Island Avenue, NE, further east along the Rhode Island Ave. corridor.

With respect to the Task Force recommendation that the Department conduct quality improvement review of those calls where the goal is not achieved, DC Fire & EMS currently tracks response time outliers through several means, including retrospective exception reporting, and monitoring by the agency officers stationed at the Office of Unified Communications. Calls where response time is flagged for investigation are examined in detail through a variety of tools, including the use of satellites to track vehicle travel routes and speed. The findings are then referred to the appropriate office for operational review and action.

Due to hiring freezes, DC Fire & EMS has not been able to fill the operational analyst position that was designated to perform detailed analysis of geographic and temporal performance trends. The Department did conduct an ad-hoc analysis of response time outliers in April 2009. During that month 23 transport unit responses that appeared to fall outside of an acceptable performance range were examined for root cause analysis. 14 of the 23 proved to be electronic data issues, and the unit was determined to have actually arrived within an acceptable time frame. Only two responses were found where the root cause was determined to be possibly due to individual provider navigation error. These incidents were referred to the appropriate supervisor for follow-up.

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| | | |
|--|-----------|-----|
| Total number of calls out of range | 23 | |
| Unit Did Not Status On-scene & Halo Did Not Activate; Unit Arrived Within Acceptable Time Frame | 7 | 30% |
| Navigation Error | 2 | 9% |
| Additional Resource Added to Event at a Later Time; Unit Arrived Within Acceptable Time Frame | 3 | 13% |
| Unit Not Connected to I/Mobile and Dispatcher Did Not Place Unit on Scene; Unit Arrived Within Acceptable Time Frame | 2 | 9% |
| Distance contributed to not meeting 8-minute response from DP to AR | 4 | 17% |
| Rush Hour May Have Contributed to Slower Response Time | 1 | 4% |
| Incorrect Status Button Sequence Skewed Data; Unit Arrived Within Acceptable Time Frame | 2 | 9% |
| Additional Resource Added to Event at a Later Time; Unit Did Not Arrive Within Acceptable Time Frame | 2 | 9% |

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DC Fire & EMS is committed to transparent reporting of its EMS response time performance and posts a monthly performance report on its website at <http://fems.dc.gov> The end of year performance report for FY 2010 follows:

***EMS Response Time Performance: September 2010
and
Fiscal Year 2010 Year-to Date Report
(October 2009—September 2010)***

Number of EMS Incidents:

| | Current Month (September 2010) | Prior month (August 2010) | FY 2010 Year-to-Date | FY 2009 Year-end Total | One Year Ago (September 2009) |
|---------------------------------|-----------------------------------|------------------------------|-------------------------|------------------------------|-------------------------------------|
| Total Medical Incidents | 11,143 | 11,184 | 130,878 | 134,997 | 11,508 |
| Critical Medical Dispatches | 5,876 | 5,846 | 69,456 | 72,213 | 5,982 |
| Non-Critical Medical Dispatches | 5,267 | 5,338 | 61,422 | 62,784 | 5,526 |

Advanced Life Support (ALS) Response Time Performance:

Percent of Critical Medical Dispatches Receiving First Advanced Life Support (ALS) Arrival Within 8:00 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 8:00 | FY 2010 Year-to-Date (cumulative) | Monthly Average ALS Response Time (minutes: seconds) | FY 2010 Year-to-date Average ALS Response Time |
|---------------|----------------|---|---|---|
| October 2009 | 88.765% | 88.765% | 05:12 | 05:12 |
| November 2009 | 89.841% | 89.271% | 05:09 | 05:11 |
| December 2009 | 86.483% | 88.384% | 05:30 | 05:17 |
| January 2010 | 87.886% | 88.261% | 05:18 | 05:17 |
| February 2010 | 75.742% | 85.889% | 06:31 | 05:32 |
| March 2010 | 85.081% | 85.747% | 05:37 | 05:33 |
| April 2010 | 84.711% | 85.591% | 05:44 | 05:34 |
| May 2010 | 86.604% | 85.735% | 05:27 | 05:34 |
| June 2010 | 86.038% | 85.771% | 05:31 | 05:33 |

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| Month | Percent ≤ 8:00 | FY 2010 Year-to-Date (cumulative) | Monthly Average ALS Response Time (minutes: seconds) | FY 2010 Year-to-date Average ALS Response Time |
|----------------|----------------|-----------------------------------|--|--|
| July 2010 | 85.277% | 85.716% | 05:38 | 05:34 |
| August 2010 | 85.577% | 85.703% | 05:33 | 05:34 |
| September 2010 | 84.688% | 85.618% | 05:38 | 05:34 |

Transport Unit Response Time Performance:

Percent of Critical Medical Dispatches Receiving First Transport Unit Arrival Within 12:00 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 12:00 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|-----------------|---|
| October 2009 | 93.3% | 6:30 |
| November 2009 | 94.7% | 6:16 |
| December 2009 | 92.6% | 6:37 |
| January 2010 | 93.5% | 6:32 |
| February 2010 | 84.5% | 8:05 |
| March 2010 | 91.2% | 6:53 |
| April 2010 | 88.0% | 7:23 |
| May 2010 | 88.9% | 7:11 |
| June 2010 | 88.4% | 7:22 |
| July 2010 | 88.1% | 7:26 |
| August 2010 | 88.4% | 7:22 |
| September 2010 | 88.8% | 7:19 |

Percent of Non-Critical Medical Dispatches Receiving First Transport Unit Arrival Within 12:00 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 12:00 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|---------------|-----------------|---|
| October 2009 | 94.3% | 6:21 |
| November 2009 | 94.5% | 6:17 |
| December 2009 | 94.1% | 6:26 |
| January 2010 | 93.2% | 6:37 |
| February 2010 | 85.8% | 7:48 |
| March 2010 | 90.7% | 7:02 |
| April 2010 | 87.6% | 7:30 |

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| Month | Percent ≤ 12:00 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|-----------------|---|
| May 2010 | 88.1% | 7:20 |
| June 2010 | 87.7% | 7:28 |
| July 2010 | 88.5% | 7:31 |
| August 2010 | 87.4% | 7:39 |
| September 2010 | 87.5% | 7:35 |

Percent of All Medical Dispatches Receiving First Transport Unit Arrival Within 12:00 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 12:00 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|-----------------|---|
| October 2009 | 93.7% | 6:26 |
| November 2009 | 94.6% | 6:17 |
| December 2009 | 93.3% | 6:32 |
| January 2010 | 93.4% | 6:34 |
| February 2010 | 85.1% | 7:57 |
| March 2010 | 91.0% | 6:57 |
| April 2010 | 87.8% | 7:26 |
| May 2010 | 88.5% | 7:15 |
| June 2010 | 88.1% | 7:25 |
| July 2010 | 88.2% | 7:28 |
| August 2010 | 87.9% | 7:30 |
| September 2010 | 88.2% | 7:26 |

First-Arriving EMT Performance (First-arriving resource, staffed by EMT with automatic defibrillator minimum):

Percent of Critical Medical Dispatches Receiving First EMT Arrival Within 6:30 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 6:30 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|---------------|----------------|---|
| October 2009 | 90.9% | 4:15 |
| November 2009 | 90.9% | 4:15 |
| December 2009 | 86.1% | 4:36 |
| January 2010 | 88.1% | 4:25 |
| February 2010 | 75.9% | 5:23 |

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| Month | Percent ≤ 6:30 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|----------------|--|
| March 2010 | 86.5% | 4:32 |
| April 2010 | 85.4% | 4:35 |
| May 2010 | 87.6% | 4:28 |
| June 2010 | 87.2% | 4:30 |
| July 2010 | 85.7% | 4:35 |
| August 2010 | 86.7% | 4:30 |
| September 2010 | 85.5% | 4:36 |

First-Arriving EMT Performance, continued: (First-arriving resource, staffed by EMT with automatic defibrillator minimum):

Percent of Non-Critical Medical Dispatches Receiving First EMT Arrival Within 6:30 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 6:30 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|----------------|--|
| October 2009 | 77.1% | 5:07 |
| November 2009 | 77.3% | 5:09 |
| December 2009 | 73.9% | 5:20 |
| January 2010 | 72.7% | 5:27 |
| February 2010 | 62.9% | 6:23 |
| March 2010 | 72.5% | 5:28 |
| April 2010 | 71.5% | 5:32 |
| May 2010 | 72.1% | 5:28 |
| June 2010 | 70.0% | 5:40 |
| July 2010 | 70.0% | 5:40 |
| August 2010 | 69.3% | 5:48 |
| September 2010 | 69.8% | 5:42 |

Percent of All Medical Dispatches Receiving First EMT Arrival Within 6:30 Minutes or Less, Dispatch-to-Scene, FY 2010 YTD

| Month | Percent ≤ 6:30 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|---------------|----------------|--|
| October 2009 | 84.5% | 4:39 |
| November 2009 | 85.0% | 4:40 |
| December 2009 | 80.4% | 4:57 |

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| Month | Percent ≤ 6:30 | Monthly Average Transport Unit Response Time (minutes: seconds) |
|----------------|----------------|---|
| January 2010 | 81.0% | 4:53 |
| February 2010 | 69.9% | 5:51 |
| March 2010 | 80.0% | 4:57 |
| April 2010 | 79.0% | 5:02 |
| May 2010 | 80.5% | 4:55 |
| June 2010 | 79.3% | 5:03 |
| July 2010 | 78.6% | 5:05 |
| August 2010 | 78.5% | 5:07 |
| September 2010 | 78.2% | 5:06 |

Call-to-Scene Performance: (Response time from the patient’s perspective, measured from receipt of 911 call at the Office of Unified Communications to arrival on the scene by Fire/EMS.)

EMS Response Time, Call-to-Scene Performance by Interval, Critical Medical Dispatches, September 2010

| Average Response Time (minutes : seconds) | | | |
|---|-------------------|----------------------|--------------------|
| | Call-to-Dispatch* | Dispatch-to-Scene* * | Call-to-Scene* * * |
| First EMT | 2:34 | 4:34 | 7:08 |
| First Paramedic | 2:44 | 5:35 | 8:19 |
| First Transport Unit | 2:41 | 7:11 | 9:53 |

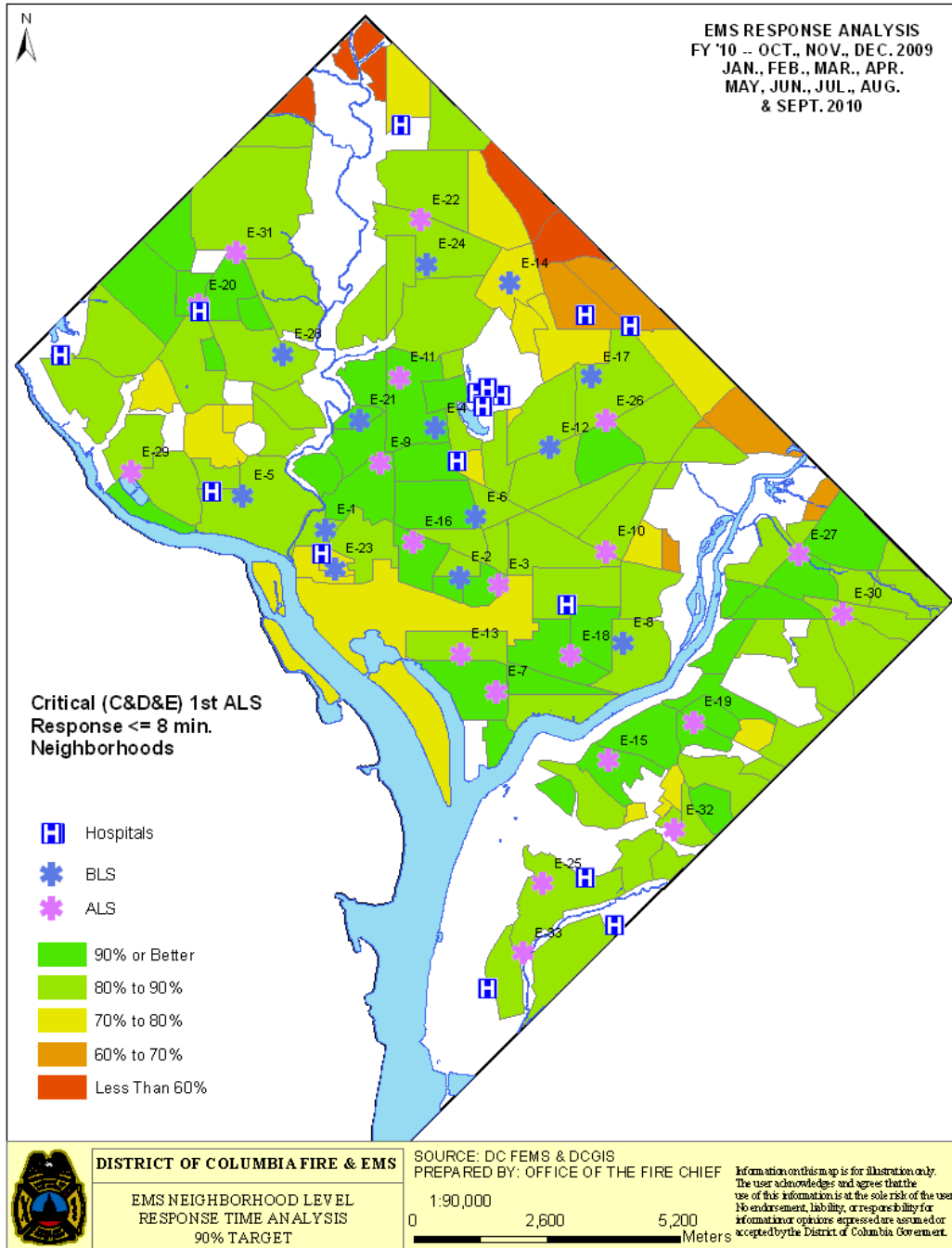
*Note: The Call-to-Dispatch interval is controlled by the Office of Unified Communications (OUC). This is the time it takes to process a 911 call. This interval begins with receipt of a 911 call at the Unified Communications Center (UCC) and ends with the beginning of dispatch of FEMS resources.

** The Dispatch-to-Scene interval is the component of response time that begins with the dispatch of FEMS resources by the OUC, and ends with the arrival of FEMS on the scene.

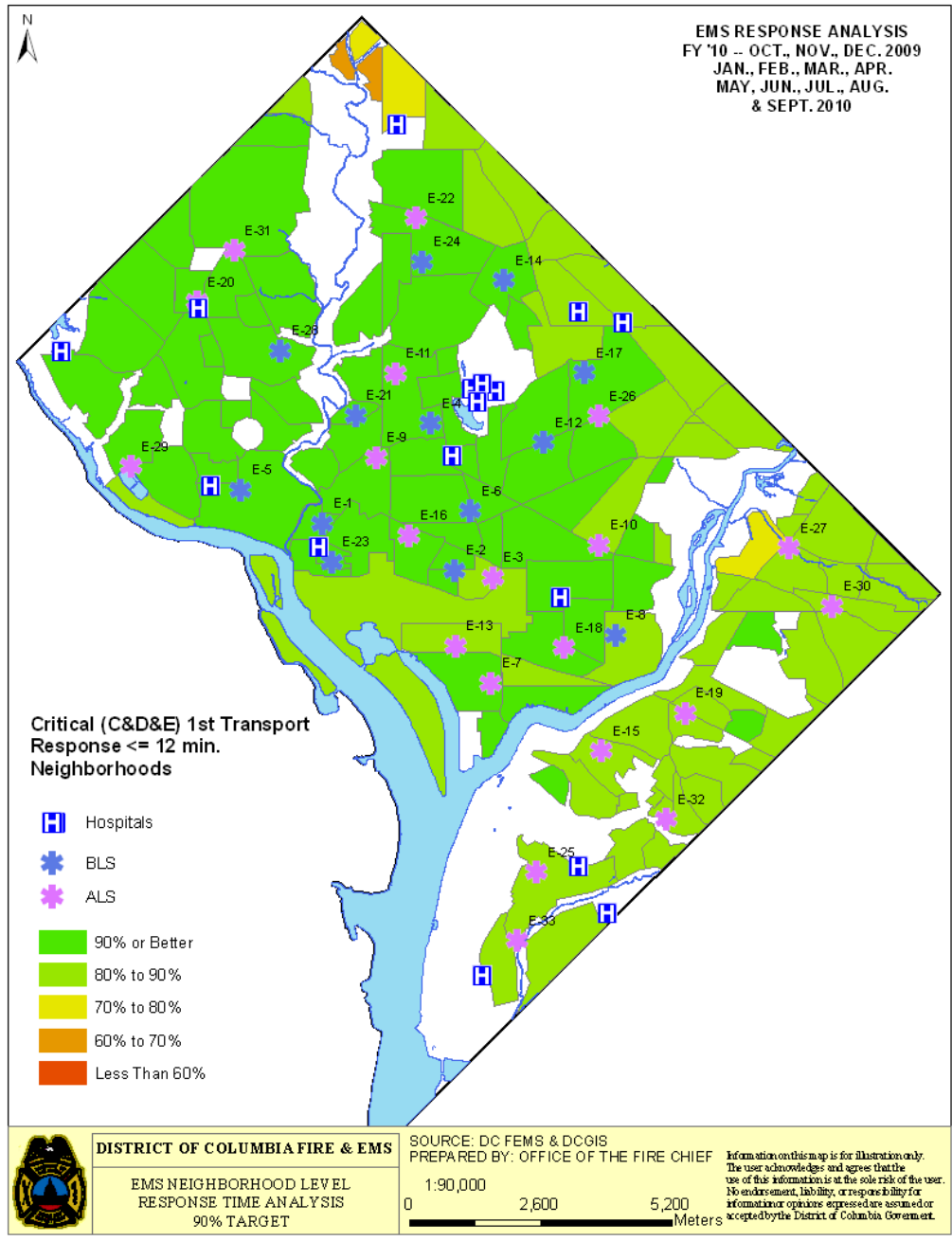
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DC Fire & EMS utilizes Geographic Information Systems (GIS) technology to measure performance by neighborhood. The attached maps illustrate FY 2010 cumulative fracture response time performance in each of the District's neighborhood clusters for three key response time indicators:

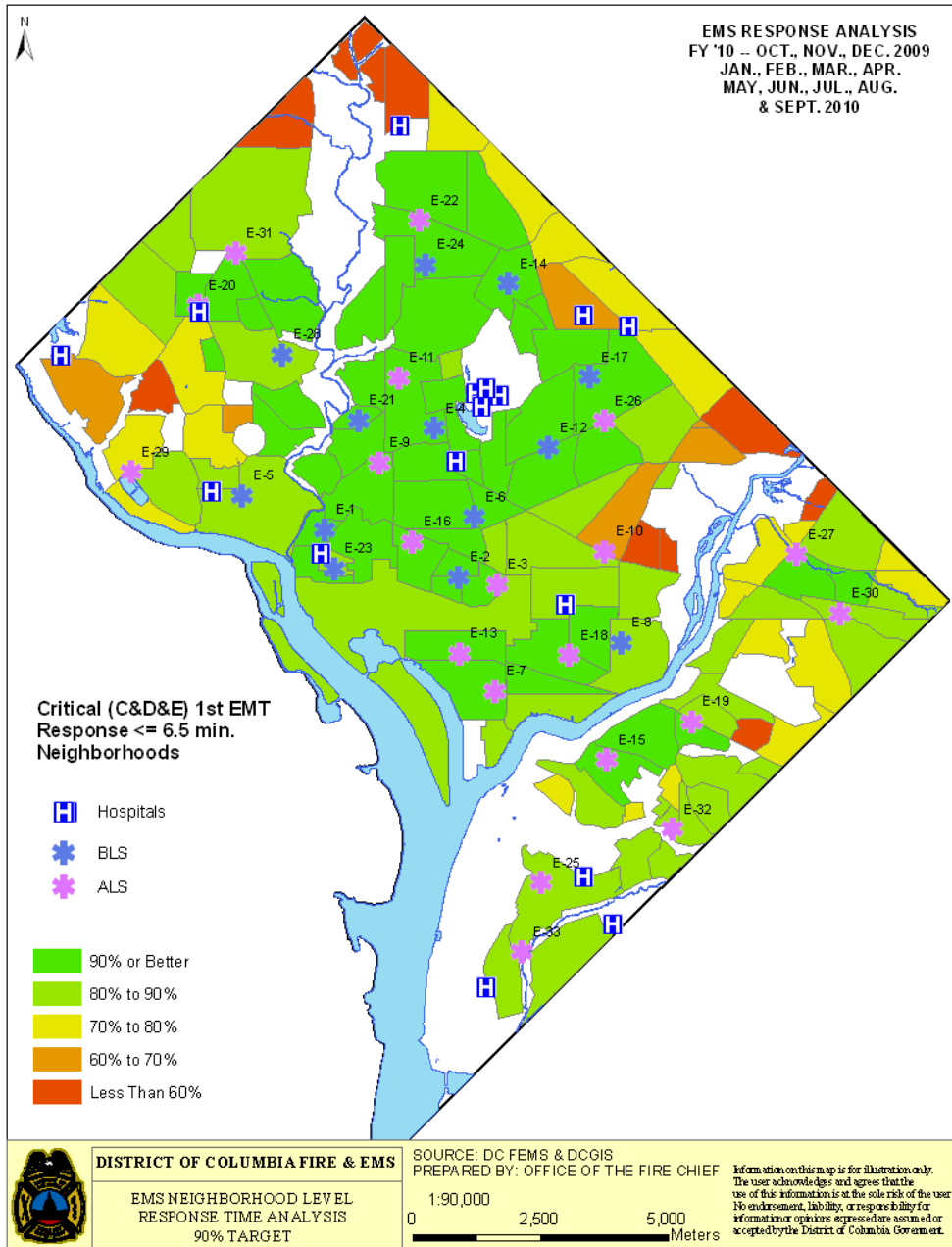
- First ALS to critical medical calls within 8:00 minutes, dispatch-to-scene
- First transport unit to critical medical calls within 12:00 minutes, dispatch-to-scene
- First EMT to critical medical within 6:30 minutes, dispatch-to-scene



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