Montgomery County Fire and Rescue Service Performance Review

Richard Bowers, Fire Chief

13 November 2012

CountyStat

CountyStat Principles

- **Require Data-Driven Performance**
- **Promote Strategic Governance**
- **Increase Government Transparency**
- **Foster a Culture of Accountability**

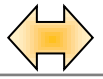
Agenda

- Welcome and Introductions
- Detailed Analysis of Incident Response Time
- Proposal for Conversion Of Response Time Goals To Two-tiered System
- Annual Headline Measure Performance Update

Tracking Our Progress

- **Meeting Goals:**
  - Determine the impact of MCFRS programs and activities on headline measures and establish new performance expectations and goals
  - Review ongoing departmental data collection efforts and discuss future projects that will further incorporate data into the decision making process
- **How will we measure success**
  - Updated performance plan is finalized and published to the web
  - Ongoing monitoring of performance through Montgomery County Performance Dashboard

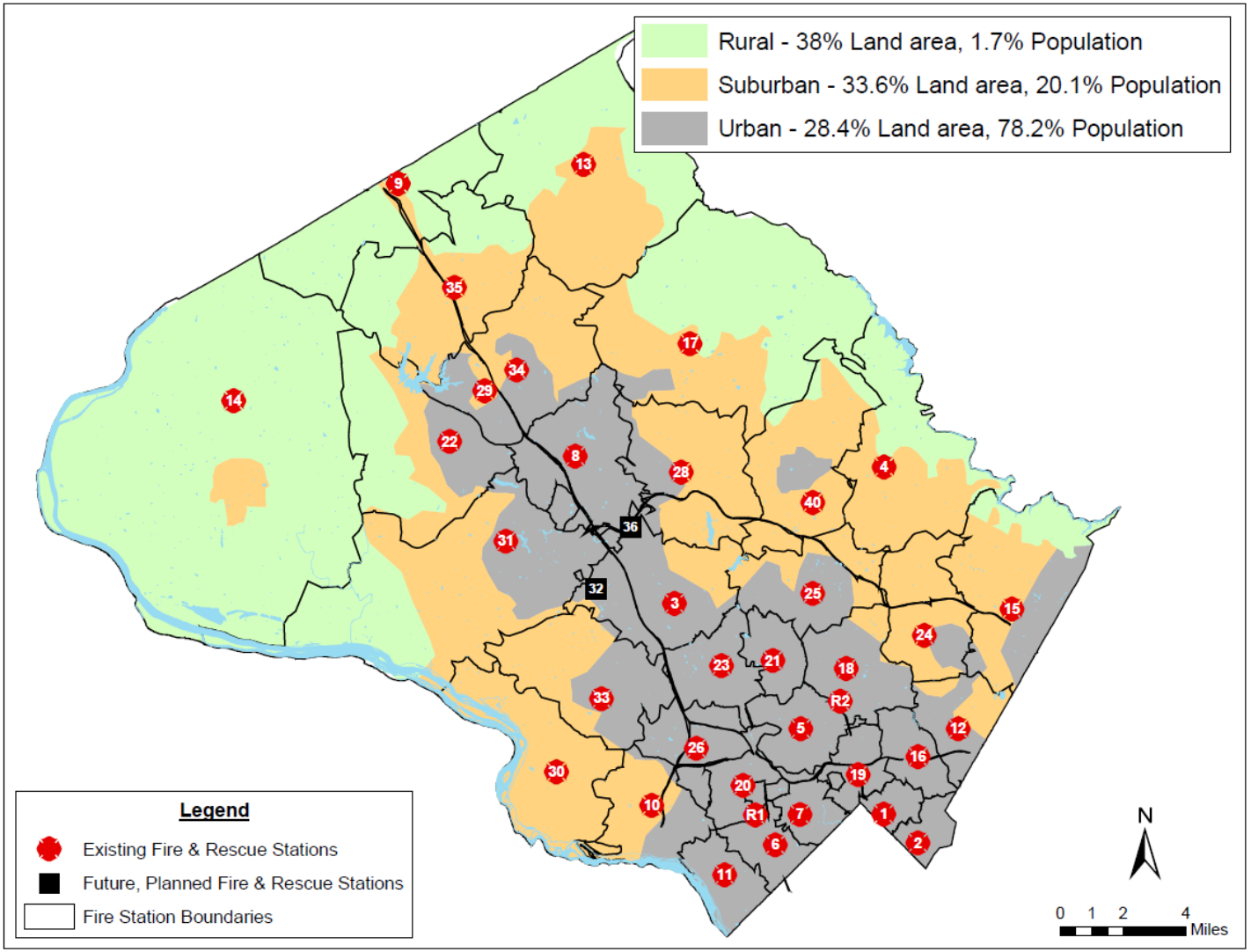
Overview of FY12 MCFRS Headline Measure Performance

Headline Performance Measure	2011 Results	2012 Results	Performance Change
1) Percent Of Residential Structure Fires Confined To The Room Of Origin	82%	82%	
2) Cardiac Care: Percent Of STEMI Patients With Door To Balloon Time <90 Min	85.9%	93.7%	
3) Fire And Injury Prevention Through Community Outreach	Under Construction		
4) Number Of Residential Fire Deaths Per 100,000 Population	0.2	0.4	
5) Number Of Residential Fire Injuries Per 100,000 Population	2.8	2.6	
6) Percentage Of Advanced Life Support Responses Within 8 Minutes: Rural	21%	26%	
7) Percentage Of Advanced Life Support Responses Within 8 Minutes: Suburban	48%	51%	
8) Percentage Of Advanced Life Support Responses Within 8 Minutes: Urban	57%	62%	
9) Percent Of Commission On Fire Accreditation International Strategic Recommendations Addressed	75%	80%	
10) Percentage Of Structure Fire Responses Within 6 Minutes: Rural	29%	10%	
11) Percentage Of Structure Fire Responses Within 6 Minutes: Suburban	33%	33%	
12) Percentage Of Structure Fire Responses Within 6 Minutes: Urban	55%	56%	

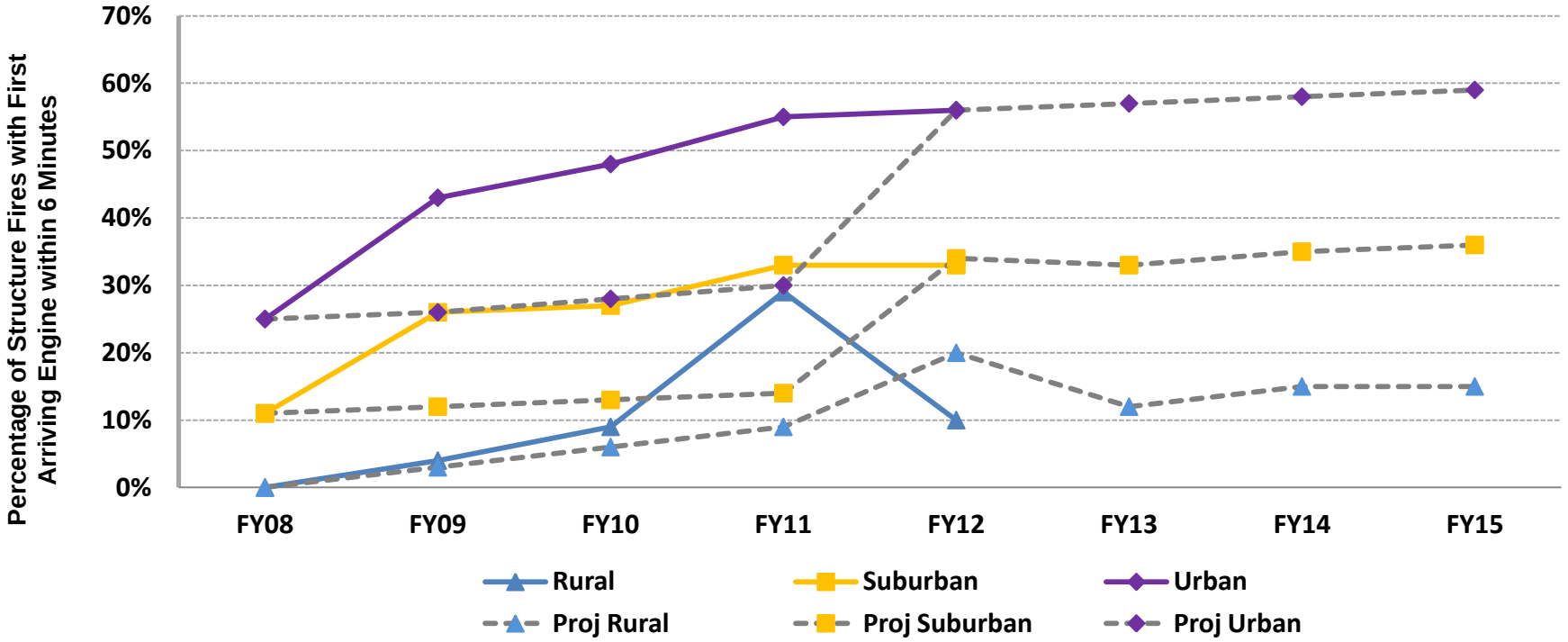
Performance Focus Areas for CountyStat Review

This year, CountyStat analysis of MCFRS Headline Measure Performance focuses on response times

MCFRS Regional Zones

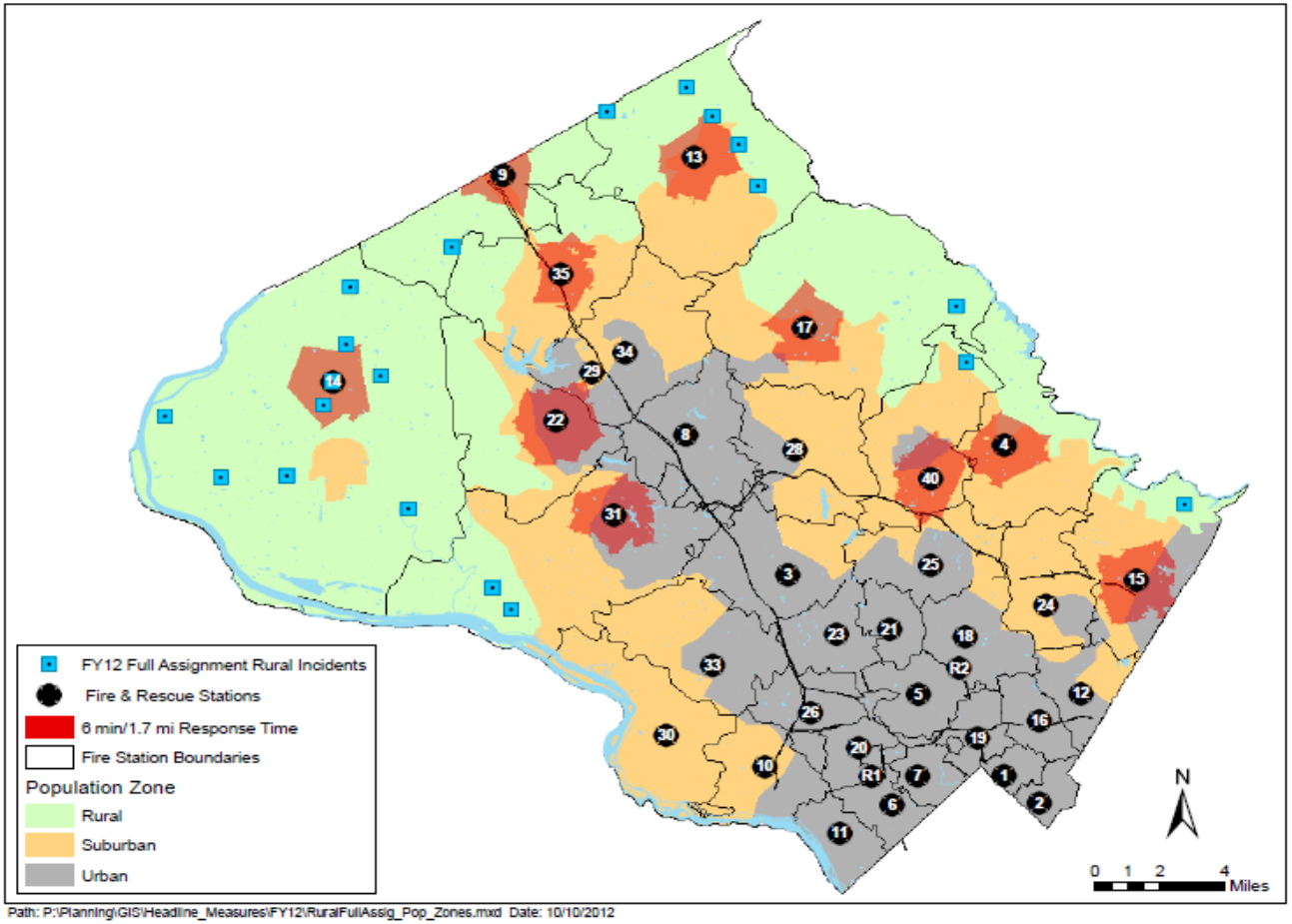


Headline Measure #2: Response Time to Critical Calls:
Percentage of Structure Fires with First Arriving Engine within 6 Minutes



	FY08	FY09	FY10	FY11	FY12	FY13 Projection	FY14 Projection	FY15 Projection
Urban	25%	43%	48%	55%	56%	57%	58%	59%
Suburban	11%	26%	27%	33%	33%	33%	35%	36%
Rural	0%	4%	9%	29%	10%	12%	15%	15%

Headline Measure #2: Response Time to Critical Calls:
Percentage of Structure Fires with First Arriving Engine within 6 Minutes



In FY12, only 4 of 20 full assignment incidents (blue boxes) within rural density zones (green area) were located within a 6 minute radius (red area) of an MCFRS unit.

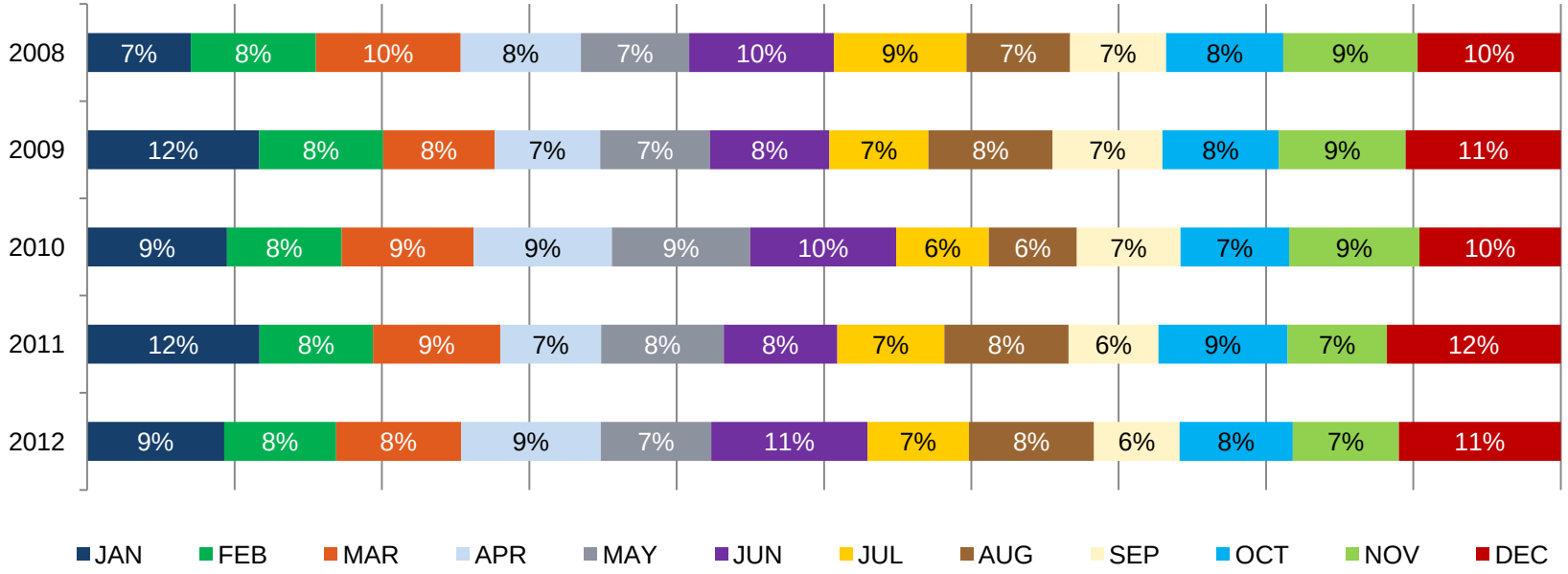
Headline Measure #2: Response Time to Critical Calls:
Percentage of Structure Fires with First Arriving Engine within 6 Minutes

- **Departmental Explanation for FY12 Performance:**
  - Performance in Urban and Suburban areas remained equal to that achieved in FY11 due to no change in fire suppression resources
  - Performance in Rural area declined due to unfavorable proximity of fire incidents to rural fire stations (related to randomness of incident locations and limited number of stations) combined with a very small sample size (only 20 incidents in FY12)
  - Greatest response time challenge occurs when multiple structure fire incidents occur concurrently in the same geographic area of the county; thus requiring response of distant suppression units to the 2nd and 3rd incidents

- **Departmental Explanation for FY13-FY15 Projections:**
  - Assuming no County budget reductions impacting fire-rescue operations, performance expected to:
  - Improve in Urban area by FY15, due to greater number of engines having 4-person staffing, assuming SAFER grant funding to continue build out of 4-person staffing
  - Improve in Suburban area by FY15 due to:
    - Service provided by Engine 732 from new Travilah Fire Station
    - Greater number of engines having 4-person staffing, assuming SAFER grant funding
  - Improve in Rural area by FY15 due to more favorable proximity of fire incidents to stations

Structure Fire Dispatches: Snapshot Of Montgomery County Frequency

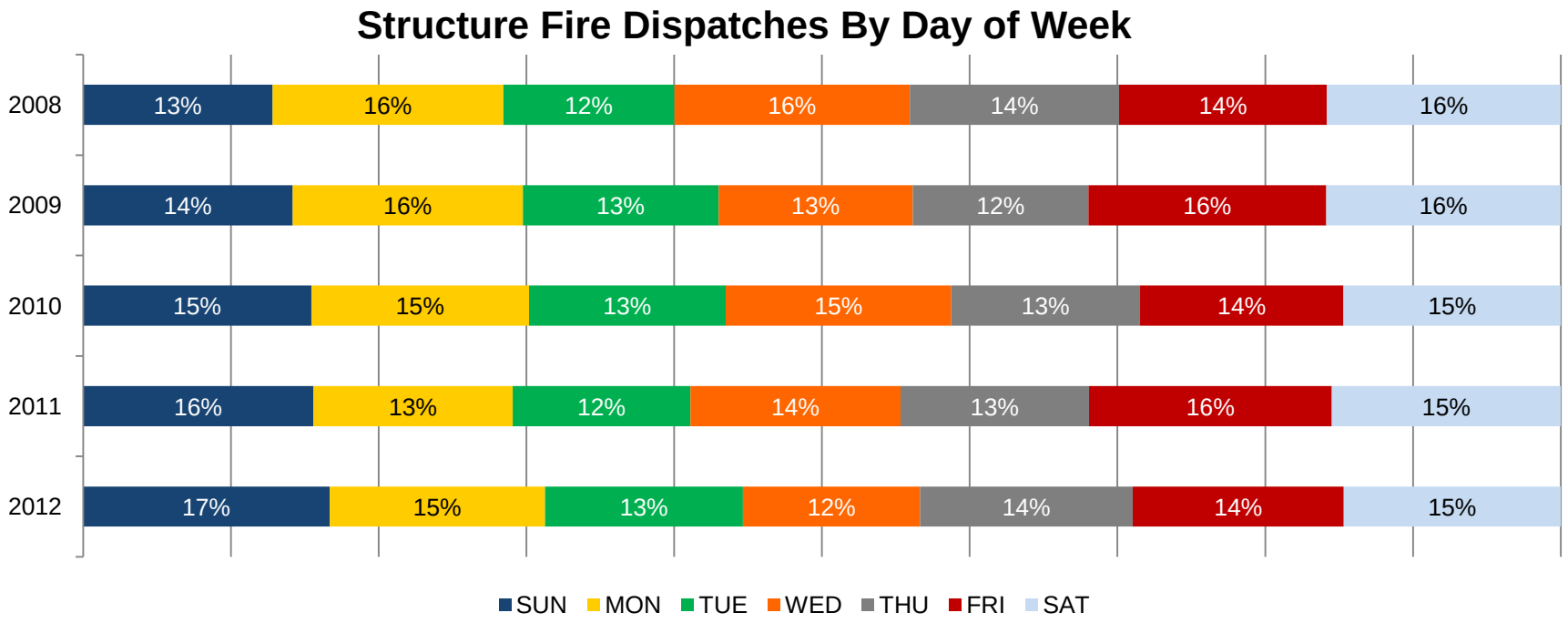
Structure Fire Dispatches By Month



Structural Fire Incidents Dispatched by Fiscal Year

FY08	FY09	FY10	FY11	FY12	Average
967	951	938	949	1,001	961

Structure Fire Dispatches: Snapshot Of Montgomery County Frequency

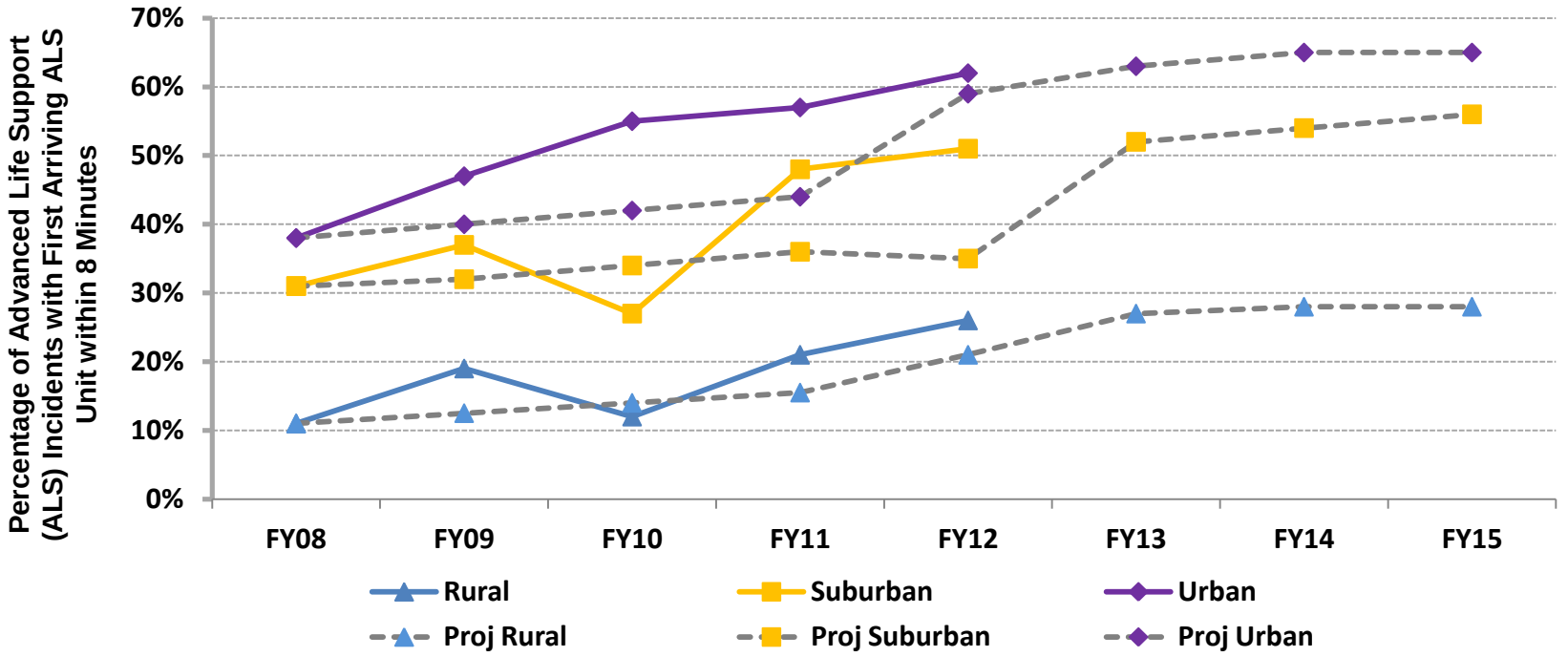


The distribution of Fire dispatches over months of the year and days of the week are consistent from year to year.

Higher percentages of dispatches tend to occur around the weekends, and in June, December, and January.

Headline Measure #2: Response Time to Critical Calls:

Percentage of Advanced Life Support (ALS) Incidents with First Arriving ALS Unit within 8 Minutes



	FY08	FY09	FY10	FY11	FY12	FY13 Projection	FY14 Projection	FY15 Projection
Urban	38%	47%	55%	57%	62%	63%	65%	65%
Suburban	31%	37%	27%	48%	51%	52%	54%	56%
Rural	11%	19%	12%	21%	26%	27%	28%	28%

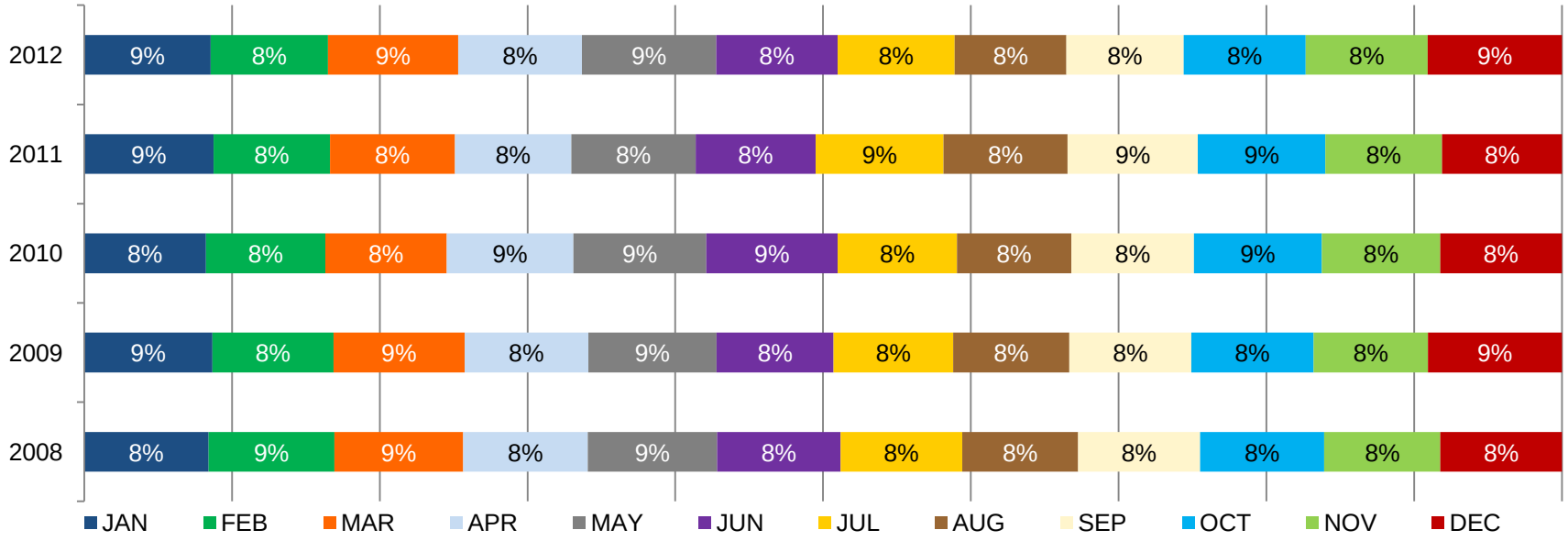
Headline Measure #2: Response Time to Critical Calls:

Percentage of Advanced Life Support (ALS) Incidents with First Arriving ALS Unit within 8 Minutes

- **Departmental Explanation for FY12 Performance:**
  - Improvements attributed to:
    - Greater availability of ALS providers on paramedic engines
    - Improved phone-to-dispatch times, including time reduction impact of EMD protocol adjustments for the most critical ALS call types
    - Improved turnout times for ALS incidents
  - Greatest response time challenge occurs when multiple ALS incidents occur concurrently in the same station response area; thus requiring response of distant ALS resources to the 2nd and 3rd incidents
- **Departmental Explanation for FY13-FY15 Projections:**
  - Assuming no County budget reductions impacting fire-rescue operations, performance expected to:
    - Improve in Urban area by FY15 due to greater number of 4-person paramedic engines, assuming SAFER grant funding to continue build out of 4-person staffing
    - Improve in Suburban area by FY15 due to:
      - Service provided by ALS units at new Station 32 (M732, E732-AFRA)
      - Greater number of 4-person paramedic engines, assuming SAFER grant funding
    - Improve in Rural area by FY15 due to greater number of 4-person paramedic engines, assuming SAFER grant funding
  - With implementation of EMS reimbursement, there is an opportunity for improved performance with enhanced EMS resources – e.g., more EMS Officers, ALS transport units, and ALS engines

Advanced Life Support Dispatches: Snapshot Of Montgomery County Frequency

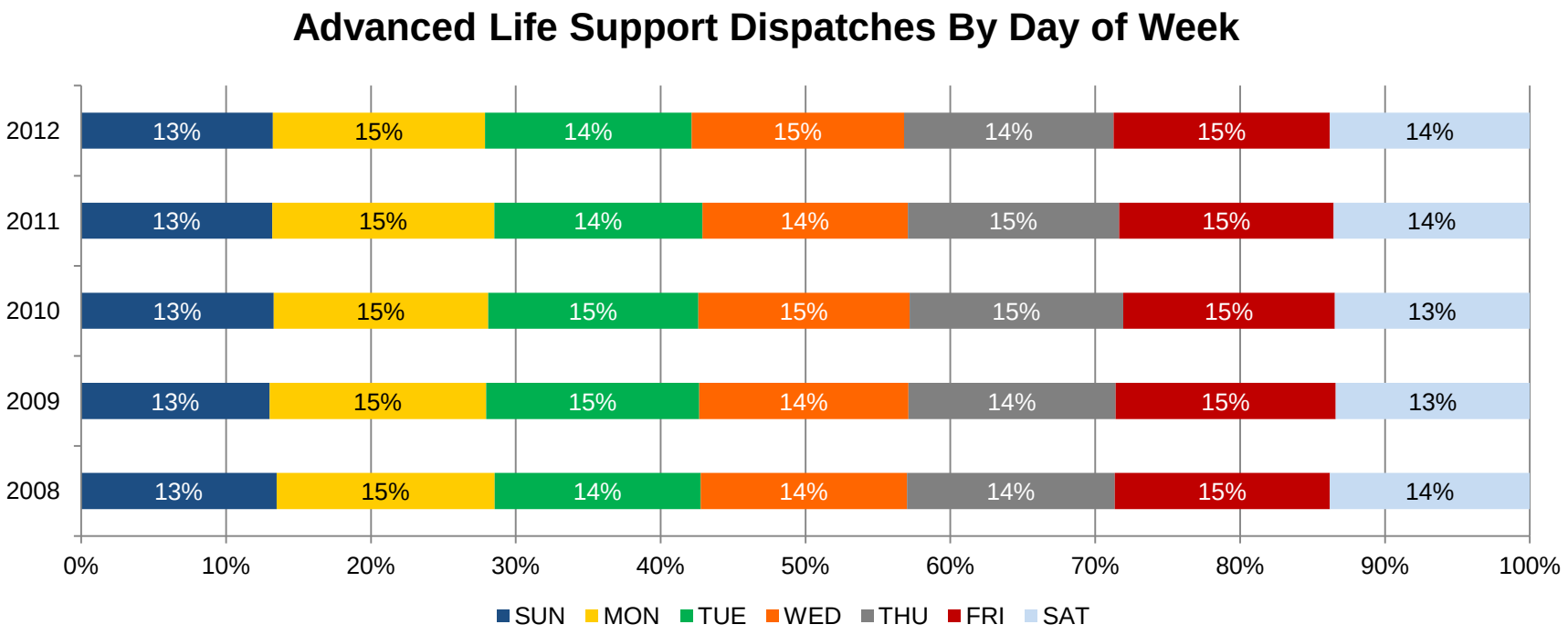
Advanced Life Support Dispatches By Month



Advanced Life Support Incidents Dispatched by Fiscal Year

FY08	FY09	FY10	FY11	FY12	Average
32,763	32,585	32,172	31,859	32,424	32,361

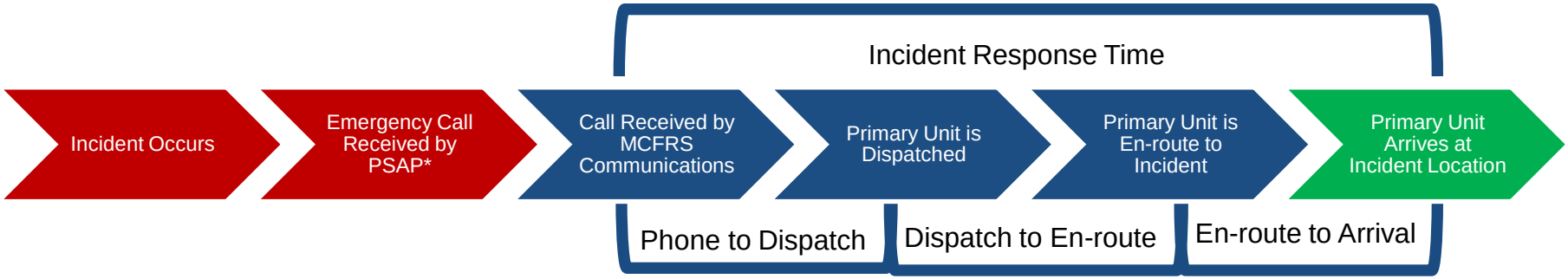
Advanced Life Support Dispatches: Snapshot Of Montgomery County Frequency



ALS dispatches are distributed evenly across months of the year. In terms of day of week, there are slightly fewer dispatches over the weekend.

MCFRS Response Time Analysis

- MCFRS' headline measures focus on total response time. However, response time can also be broken down into three components which the department measures:
  1. Phone to Dispatch (call processing time)
  2. Dispatch to En route (turnout time)
  3. En-route to Arrival (travel time)



- Of the three components, en route-to-arrival (travel time) is the most challenging for the department to control because travel can be affected by a variety of encountered factors such as traffic, weather, traffic-calming devices, and distance

By looking more closely at phone-to-dispatch and dispatch-to-en route times, the department can adjust resources to improve total response times.

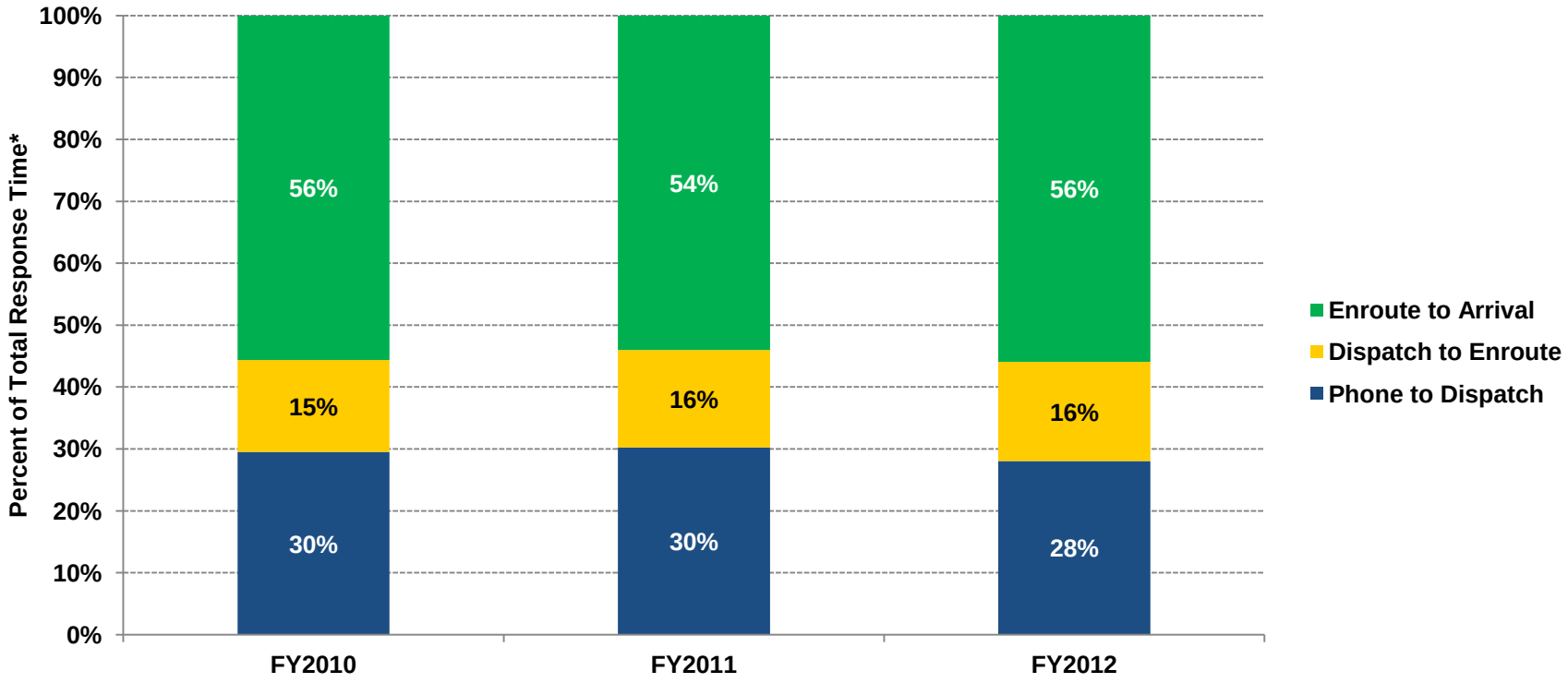
**PSAP = Public Safety Answering Point*

Methodology: Data Analysis

- CountyStat looked at MCFRS incident response data from the last 3 fiscal years (FY10-12)
- MCFRS provided a data download from the CAD system, which included incident number, responding unit code, date, day of week, phone time, dispatch time, en route time, arrival time, clear time, call type, call description, call type category (1-3), and GIS location
- Based on the data, CountyStat calculated phone-to-dispatch, dispatch-to-en route, and en route-to-arrival times. CountyStat also identified unit type (engine, ambulance, etc.) based on responding unit code.
- CountyStat removed from the data all incomplete records (missing any time or date), records of incidents with total response time of more than 30 minutes, mutual aid/assistance incidents, and non-primary unit times, based on the assumption that data for some of these records are inaccurate or incomplete and some data was beyond the scope of this specific analysis.

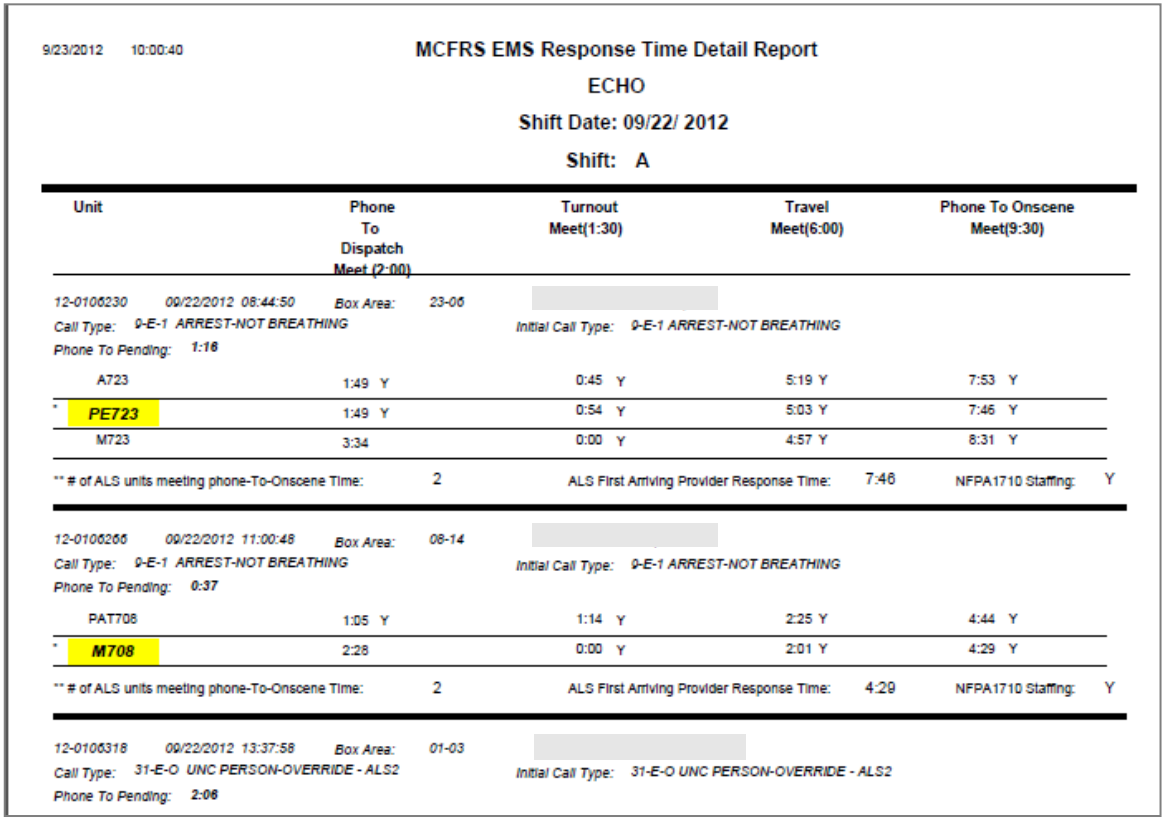
Because CountyStat only looked at incidents with complete data sets, call volume reflected in the following slides does not reflect the department's true call volume.

MCFRS Response Time Analysis



Travel time accounts for about 55% of total response time for MCFRS emergency calls. The rest of total response time is accounted for by time elapsed between the phone call and when the unit is en-route to the call.

MCFRS Response Time Analysis: Using Data to Improve Daily Operations



9/23/2012 10:00:40

MCFRS EMS Response Time Detail Report

ECHO

Shift Date: 09/22/ 2012

Shift: A

Unit	Phone To Dispatch Meet (2:00)	Turnout Meet(1:30)	Travel Meet(6:00)	Phone To Onscene Meet(9:30)
12-0106230 09/22/2012 08:44:50 Box Area: 23-06				
Call Type: 9-E-1 ARREST-NOT BREATHING		*Initial Call Type: 9-E-1 ARREST-NOT BREATHING*		
Phone To Pending: 1:16				
A723	1:49 Y	0:45 Y	5:19 Y	7:53 Y
* **PE723**	1:49 Y	0:54 Y	5:03 Y	7:46 Y
M723	3:34	0:00 Y	4:57 Y	8:31 Y
** # of ALS units meeting phone-To-Onscene Time:	2	ALS First Arriving Provider Response Time:	7:46	NFPA1710 Staffing: Y
12-0106266 09/22/2012 11:00:48 Box Area: 08-14				
Call Type: 9-E-1 ARREST-NOT BREATHING		*Initial Call Type: 9-E-1 ARREST-NOT BREATHING*		
Phone To Pending: 0:37				
PAT708	1:05 Y	1:14 Y	2:25 Y	4:44 Y
* **M708**	2:28	0:00 Y	2:01 Y	4:29 Y
** # of ALS units meeting phone-To-Onscene Time:	2	ALS First Arriving Provider Response Time:	4:29	NFPA1710 Staffing: Y
12-0106318 09/22/2012 13:37:58 Box Area: 01-03				
Call Type: 31-E-O UNC PERSON-OVERRIDE - ALS2		*Initial Call Type: 31-E-O UNC PERSON-OVERRIDE - ALS2*		
Phone To Pending: 2:06				

MCFRS currently runs daily reports to evaluate response time performance. Battalion Chiefs use the data to achieve improvements in daily operations.

Factors Affecting Response Time

There are several factors (controllable and un-controllable) which affect phone-to-dispatch and dispatch-to-en route times.

- **Phone to Dispatch**
  - Time elapsed between when MCFRS communications receives call from PSAP and when the unit is dispatched
  - Affected by standardized call-taking process, call volume, type of call, available units, language barriers

- **Dispatch to En route**
  - Time elapsed between when unit is dispatched and when it is en route to the incident
  - Affected by unit readiness, unit location, and expediency of responder to transmit the en route status.

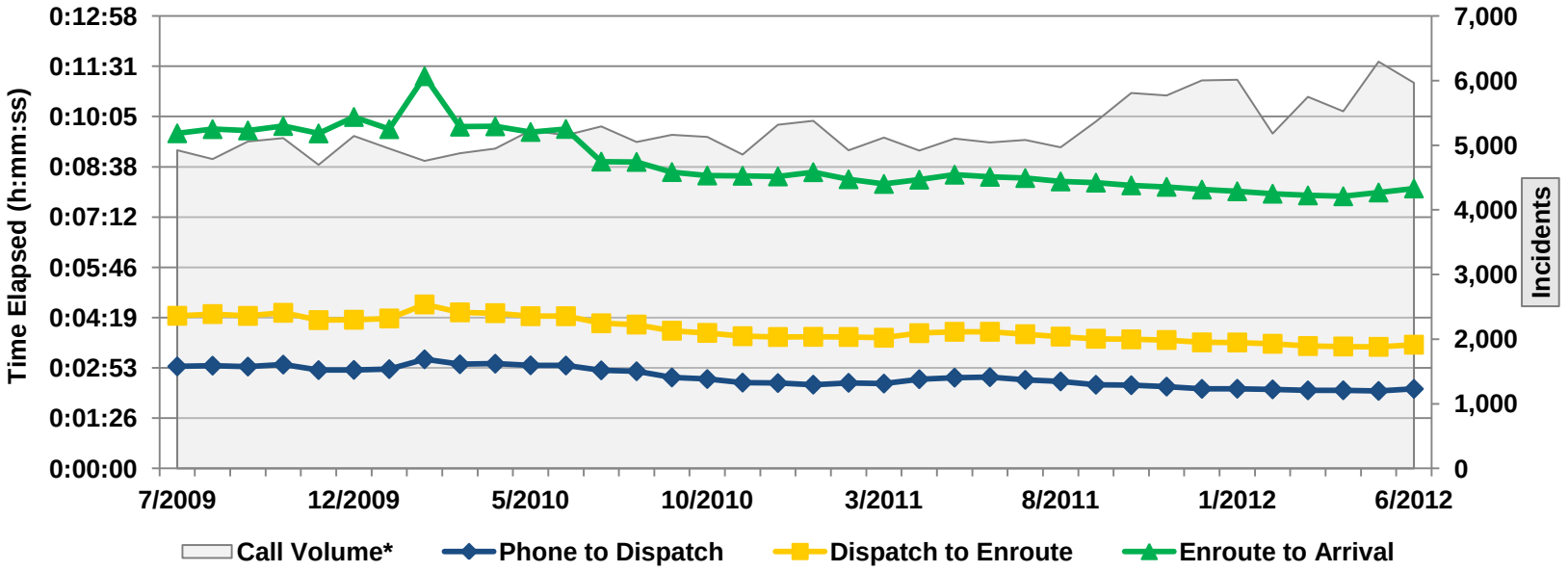
Montgomery County Public Safety agencies have already undergone a third party evaluation of their phone to dispatch process and are working to implement the recommendations

Methodology: Call Types

Category 1	Category 2	Category 3	Description/Example
EMS	ALS	ALS1	Advanced Life Support incident requiring the response of one ALS provider (e.g., patient w/ decreased level of consciousness)
		ALS2	Advanced Life Support incident requiring the response of two ALS providers (e.g., patient in cardiac arrest)
	BLS	BLS	Basic Life Support incident (e.g., injured person from fall)
FIRE	FIRE	FULL ASSIGNMENT	Fire with full apparatus response based on level of risk (e.g., single-family house fire w/dispatch of 5 engines, 2 aerial units, rescue squad, EMS unit, and 2 command officers)
		HAZMAT	Incident involving hazardous materials (e.g., leaking railroad tank car)
		NON FULL ASSIGNMENT	Fire incident with adaptive response (e.g., dumpster fire w/dispatch of one engine)
		RESCUE	Rescue from water, confined space, building collapse, trench, rock face, rough trail, utility pole, scaffolding, etc. (e.g., occupied auto stranded in rising flood waters)
Non-Fire/ EMS (Other)	OTHER	SERVICE CALL	Emergency or non-emergency call for service not covered under other categories above (e.g., downed wires with no fire present; broken pipe flooding basement)

Response Time: All EMS Incidents

EMS incidents include advanced life support (ALS1, ALS2) and basic life support (BLS) responses.

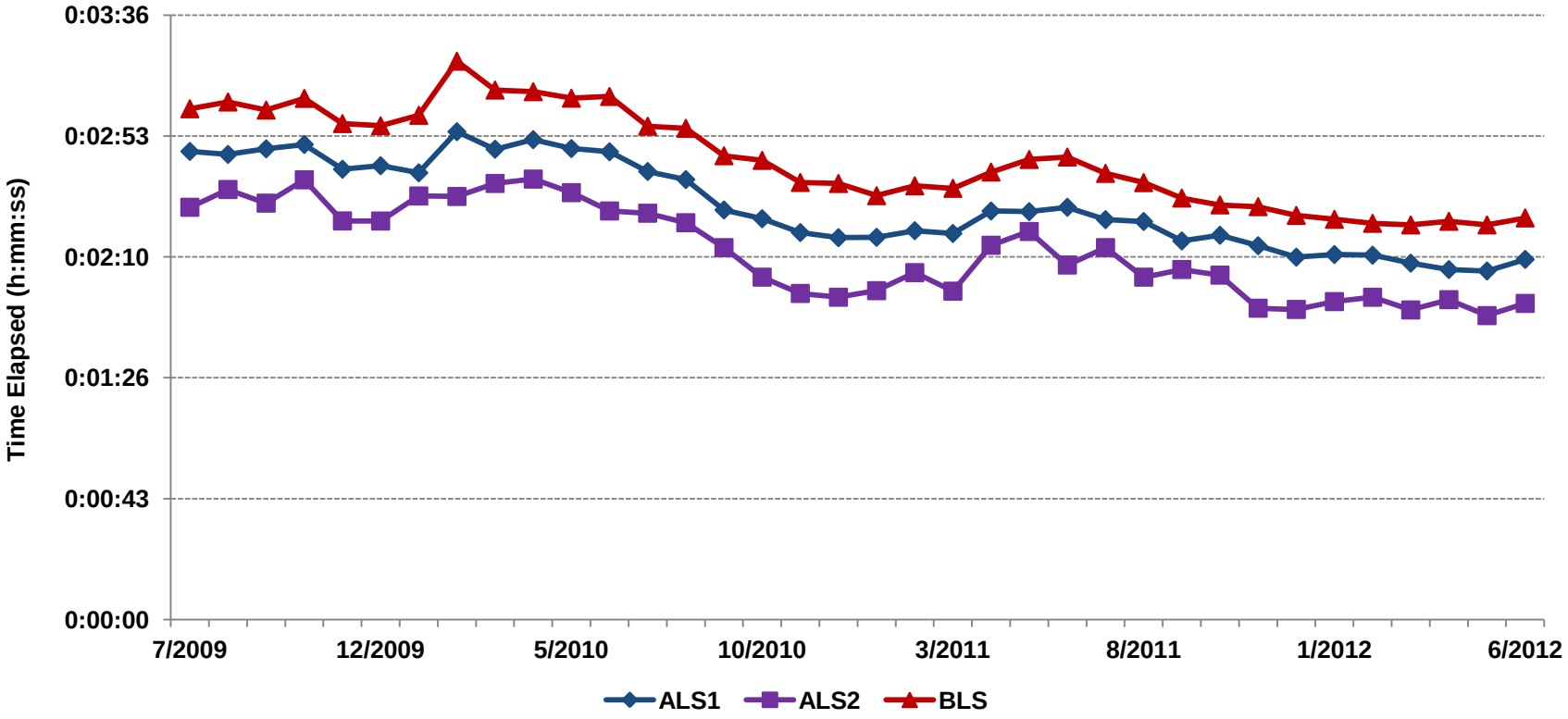


Change in Average Response Time (FY10-FY12)	
Phone to Dispatch	-0:00:37
Dispatch to En-route	-0:00:10
En-route to Arrival	-0:01:04

Average response time for EMS incidents is down since FY10, with the biggest drops coming in phone to dispatch and en-route to arrival (travel) time.

**Call Volume only includes incidents for which complete response-time data was available. This does not reflect a total call volume.*

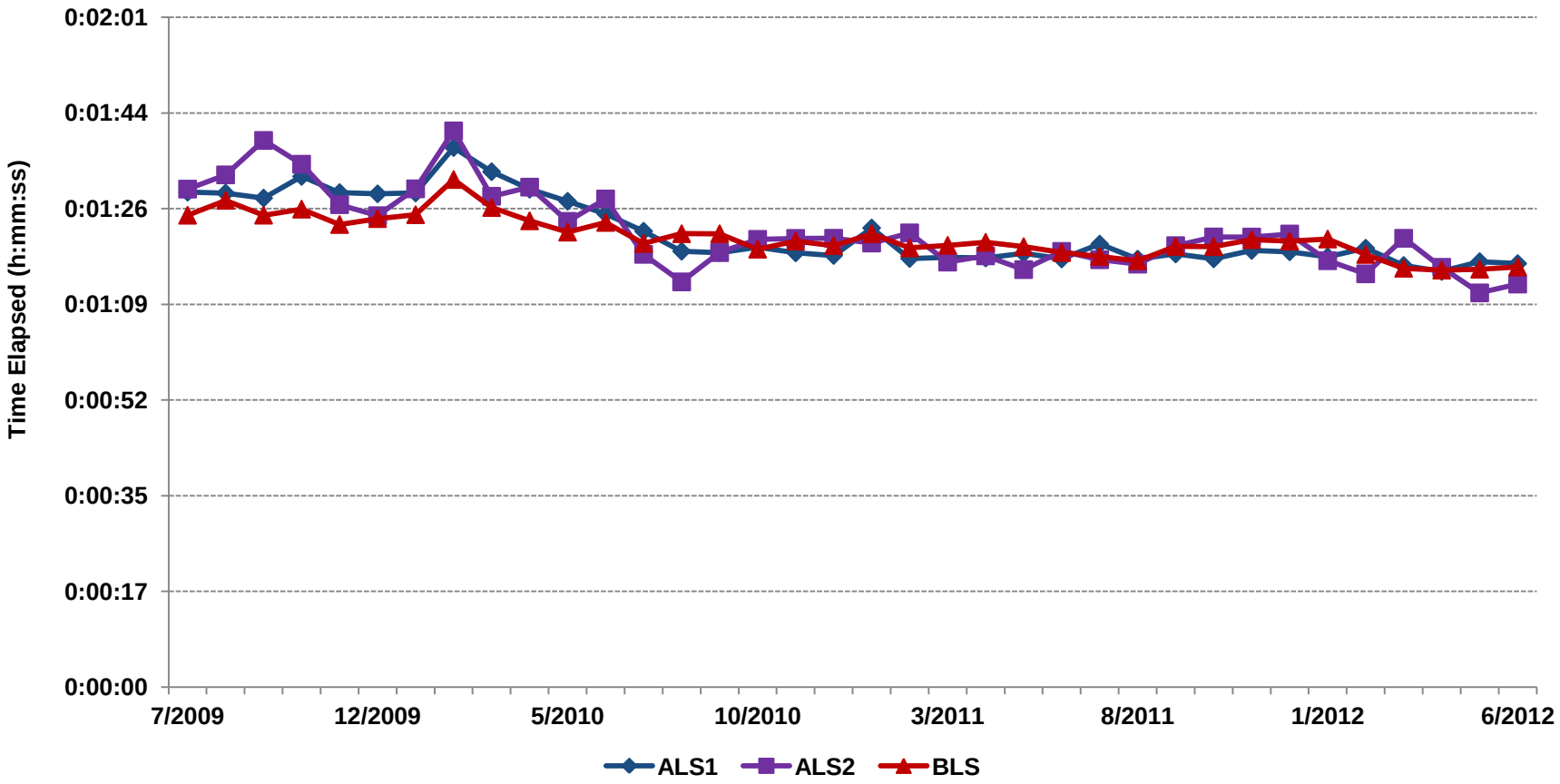
EMS Incidents: Phone to Dispatch Time



Phone to dispatch times have decreased by more than half a minute for all types of EMS calls.

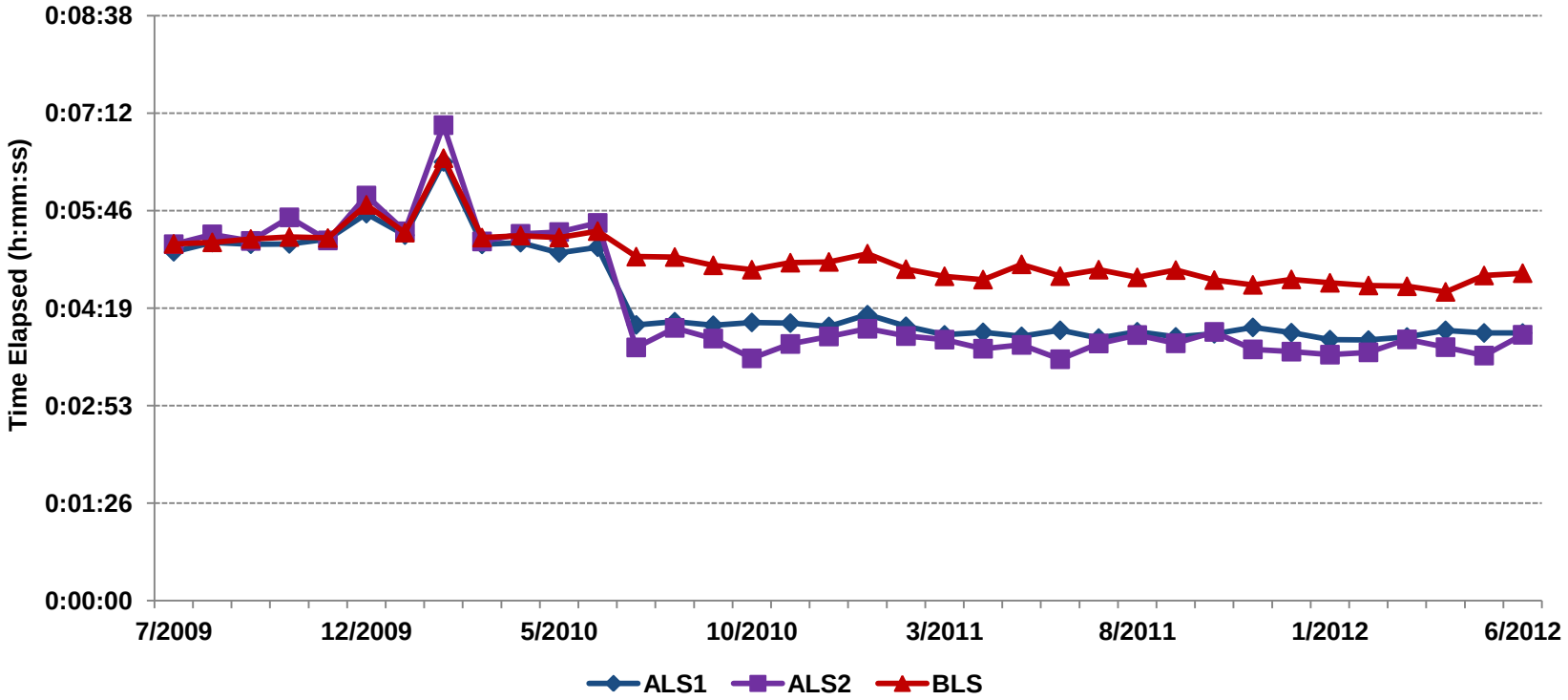
The difference between ALS1, ALS2, and BLS phone to dispatch times is reflective of the priority levels of the respective call types (ALS2 are the most severe EMS emergency calls).

EMS Incidents: Dispatch to En route Time (Turnout Time)



Dispatch to en route times for all types of EMS incidents are very similar, and have decreased slightly since FY10.

EMS Incidents: En route to Arrival Time (Travel Time)

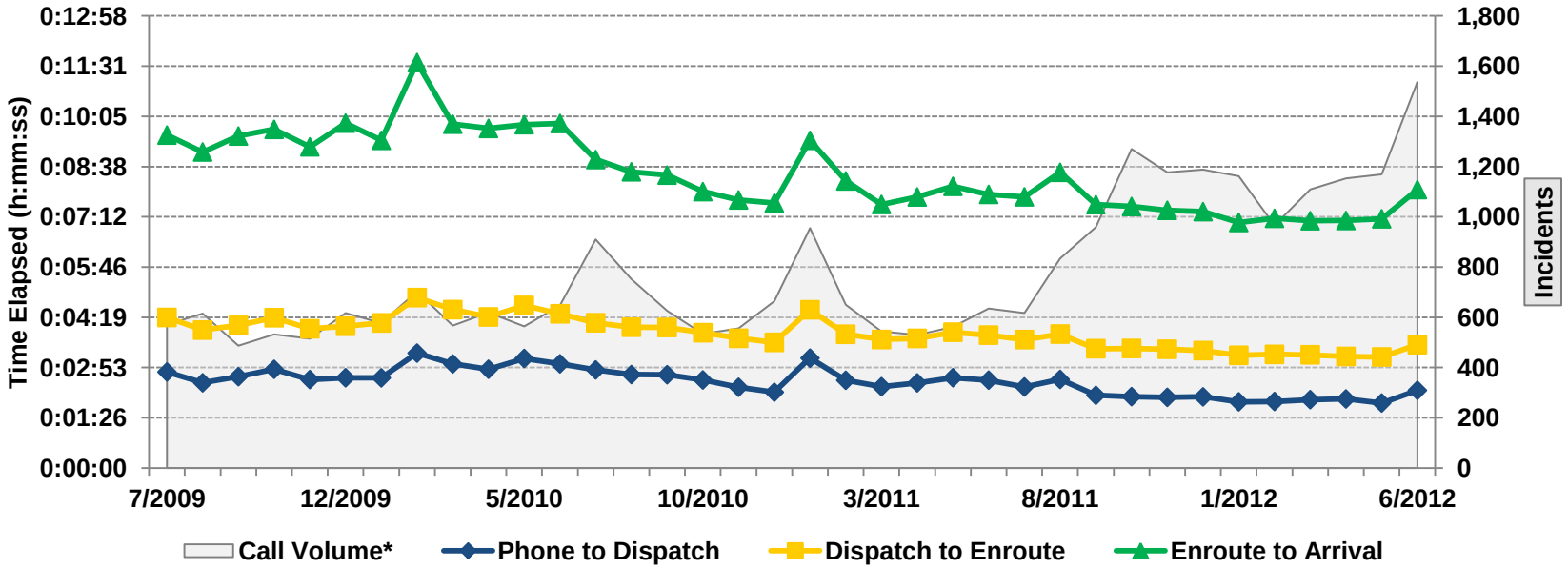


The improvement in travel time for ALS calls over the last two years can be partially attributed to an increase in the number of ALS units.

MCFRS added 4 ALS First Responder Apparatus (AFRA) units in FY10 and 2 more in FY12. There are now 26 AFRA units.

Response Time: All Fire Incidents

Fire incidents include full assignment (structure fire), non full assignment (adaptive response), hazmat, and rescue responses.

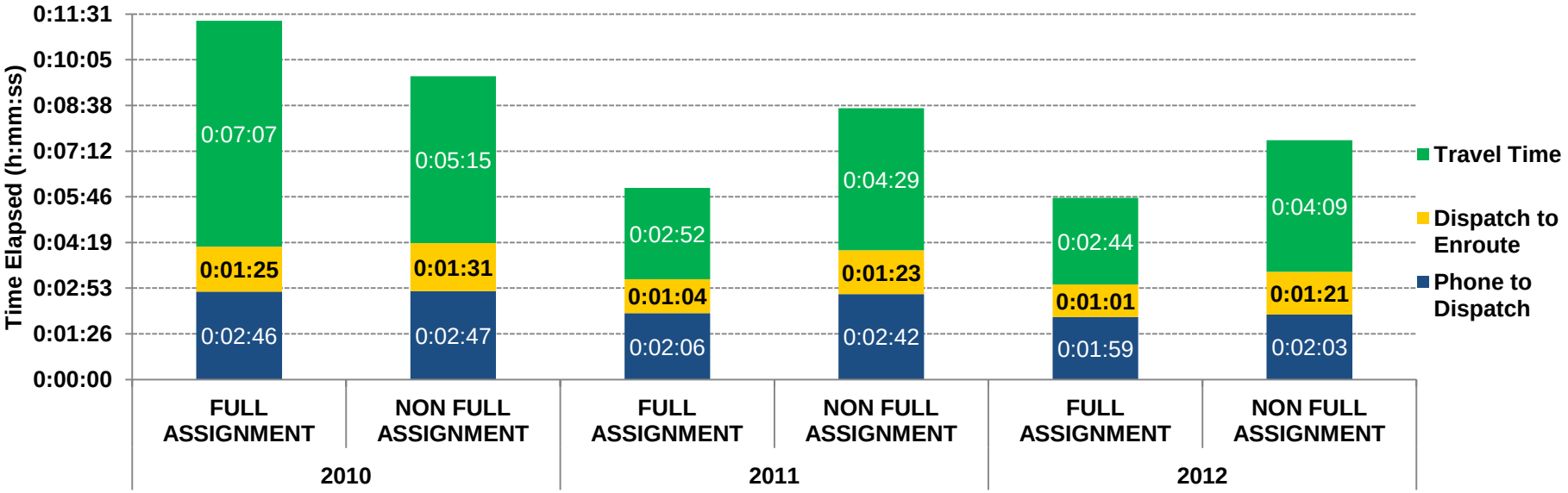


Change in Average Response Time (FY10-FY12)	
Phone to Dispatch	-0:00:45
Dispatch to En-route	-0:00:11
En-route to Arrival	-0:01:26

More so than with EMS response times, Fire response times tend to reflect increases in call volume.

**Call Volume only includes incidents for which complete response-time data was available. This does not reflect a total call volume.*

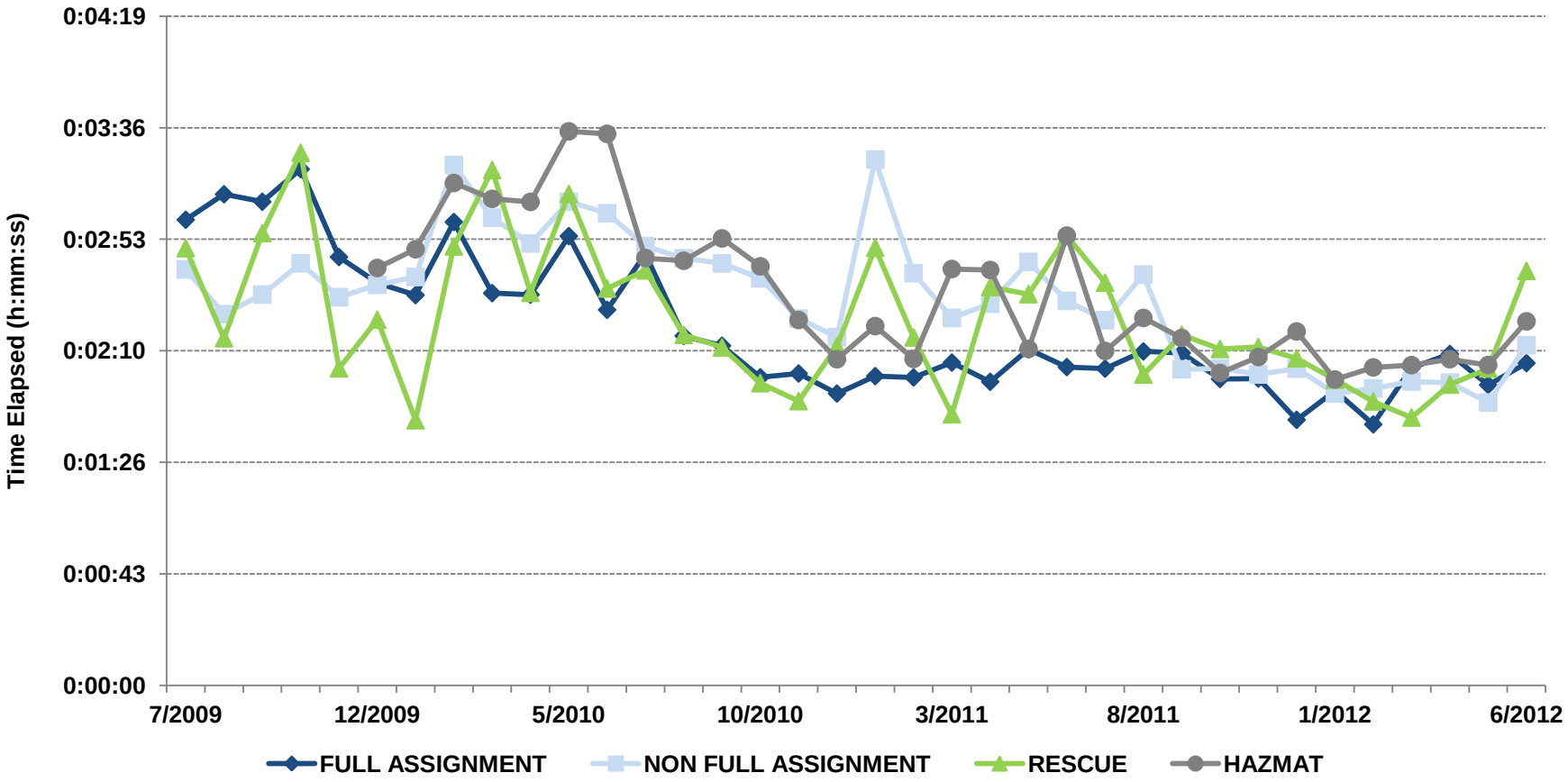
Response Time: Full vs Non-Full Assignment



Call Type	Description
Full Assignment Incident	Fire with full apparatus response based on level of risk (e.g., single-family house fire w/dispatch of 5 engines, 2 aerial units, rescue squad, EMS unit, and 2 command officers)
Non-Full Assignment Incident	Fire incident with adaptive response (e.g., dumpster fire w/dispatch of one engine)

In FY11 & 12, total response time for full assignment (structure) fires has been significantly shorter compared to response time for non full assignment incidents. The most significant differences come in phone to dispatch and en-route to arrival times.

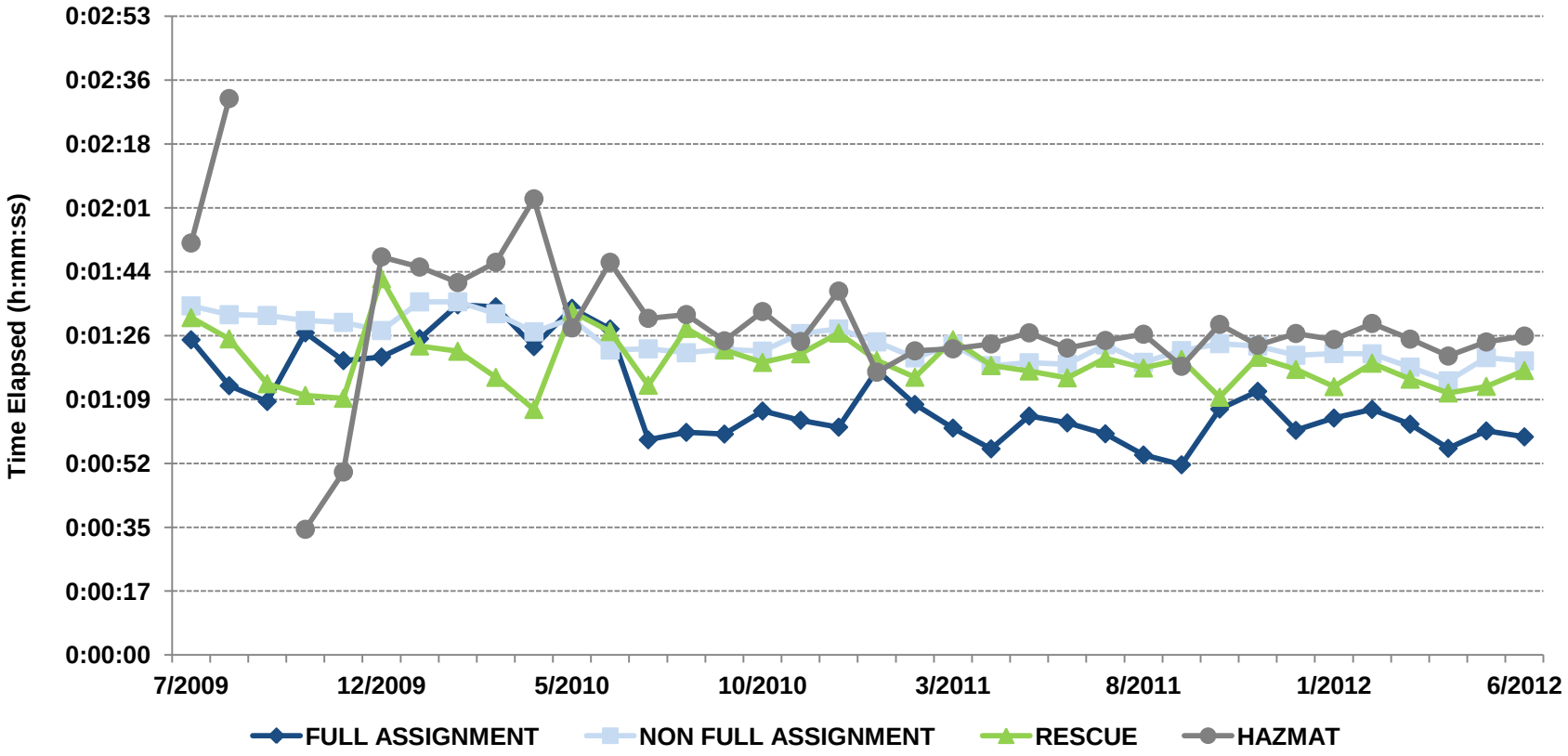
Fire Incidents: Phone to Dispatch Time



Phone to dispatch times for all categories of Fire incidents have decreased.

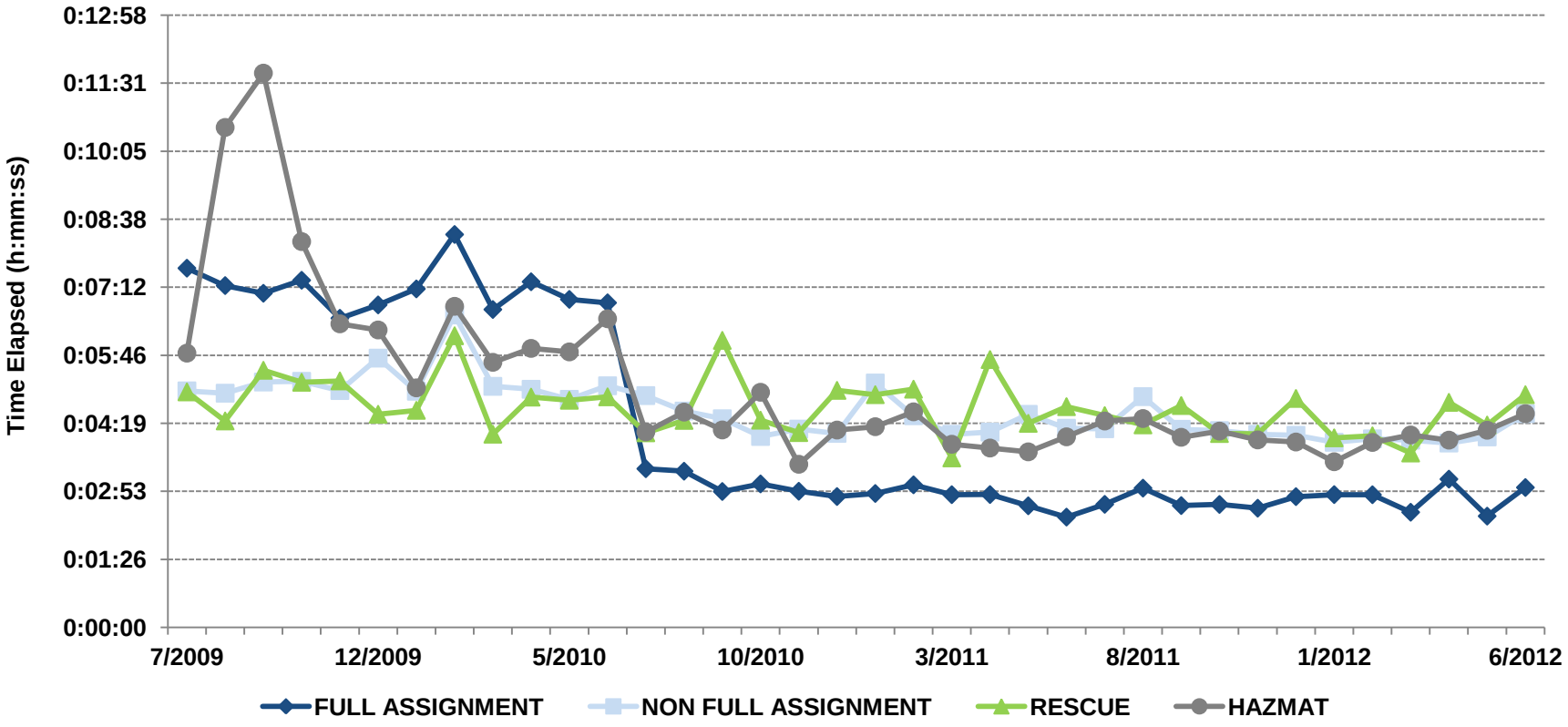
**Hazmat call times from 7-11/2009 were removed due to insufficient volume of incident response data*

Fire Incidents: Dispatch to En-route Time (Turnout Time)



On average, dispatch to en-route times for full assignment calls were 15 seconds faster than non-full assignment over the last 3 years, but all dispatch to en-route times are down overall.

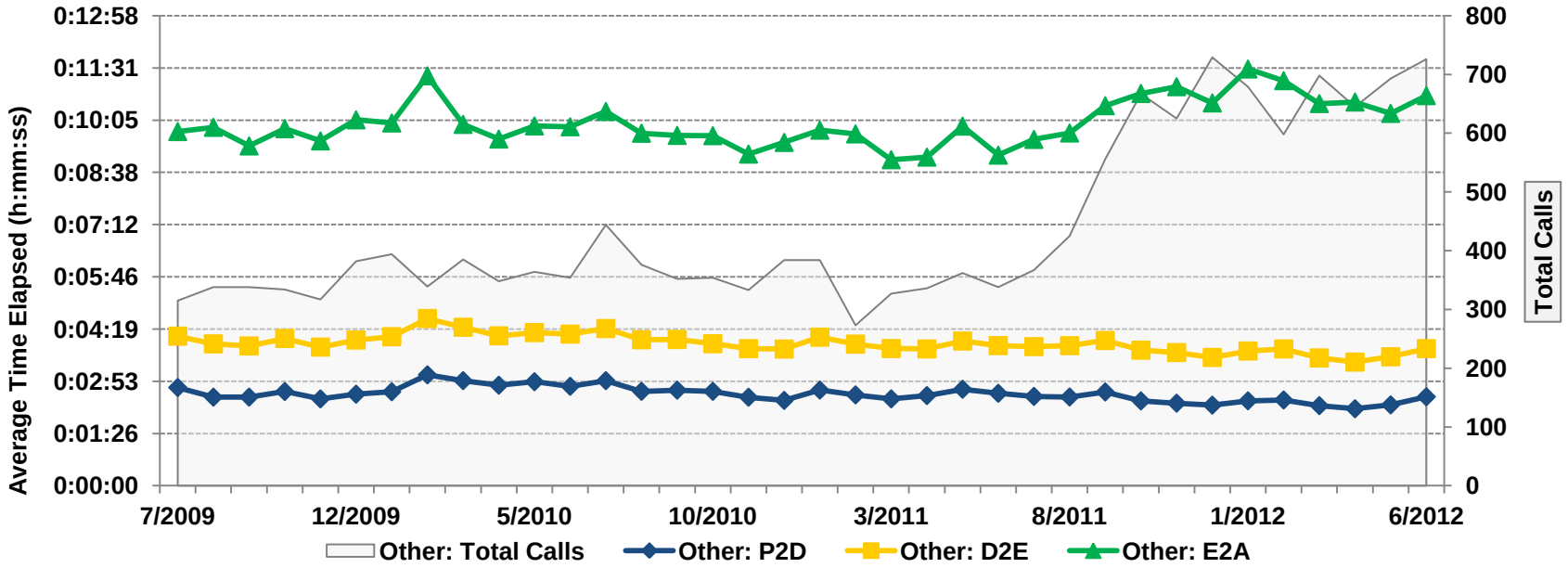
Fire Incidents: En-route to Arrival Time (Travel Time)



Travel time for full assignment responses dropped significantly in the Fall of 2010, while travel time for other Fire incident types remained relatively stable over the same time period.

Response Time: Non-Fire/EMS Incidents

Non Fire/EMS Incidents include emergency or non-emergency calls for service (e.g., downed wires with no fire present; broken pipe flooding basement) not covered under the Fire or EMS categories



Change in Average Response Time (FY10-FY12)	
Phone to Dispatch	-0:00:21
Dispatch to En-route	-0:00:05
En-route to Arrival	+0:01:09

Response times for Non-Fire/EMS incidents are up since FY10, mostly due to an increase in travel times.

**Call Volume only includes incidents for which complete response-time data was available. This does not reflect a total call volume.*

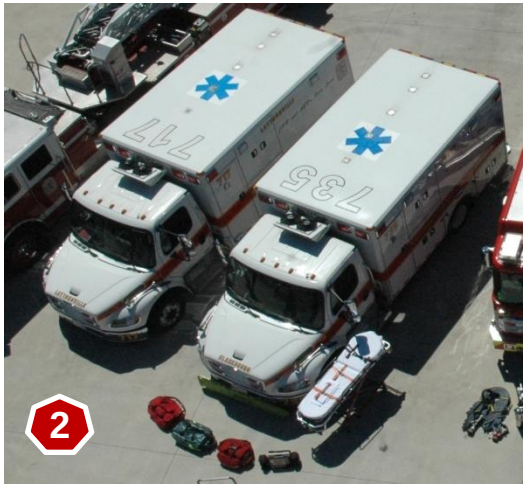
Response Time Analysis: Unit Types (1 of 2)

MCFRS uses a wide variety of vehicles and equipment for emergency response. The unit types below were those most commonly found in this data set.

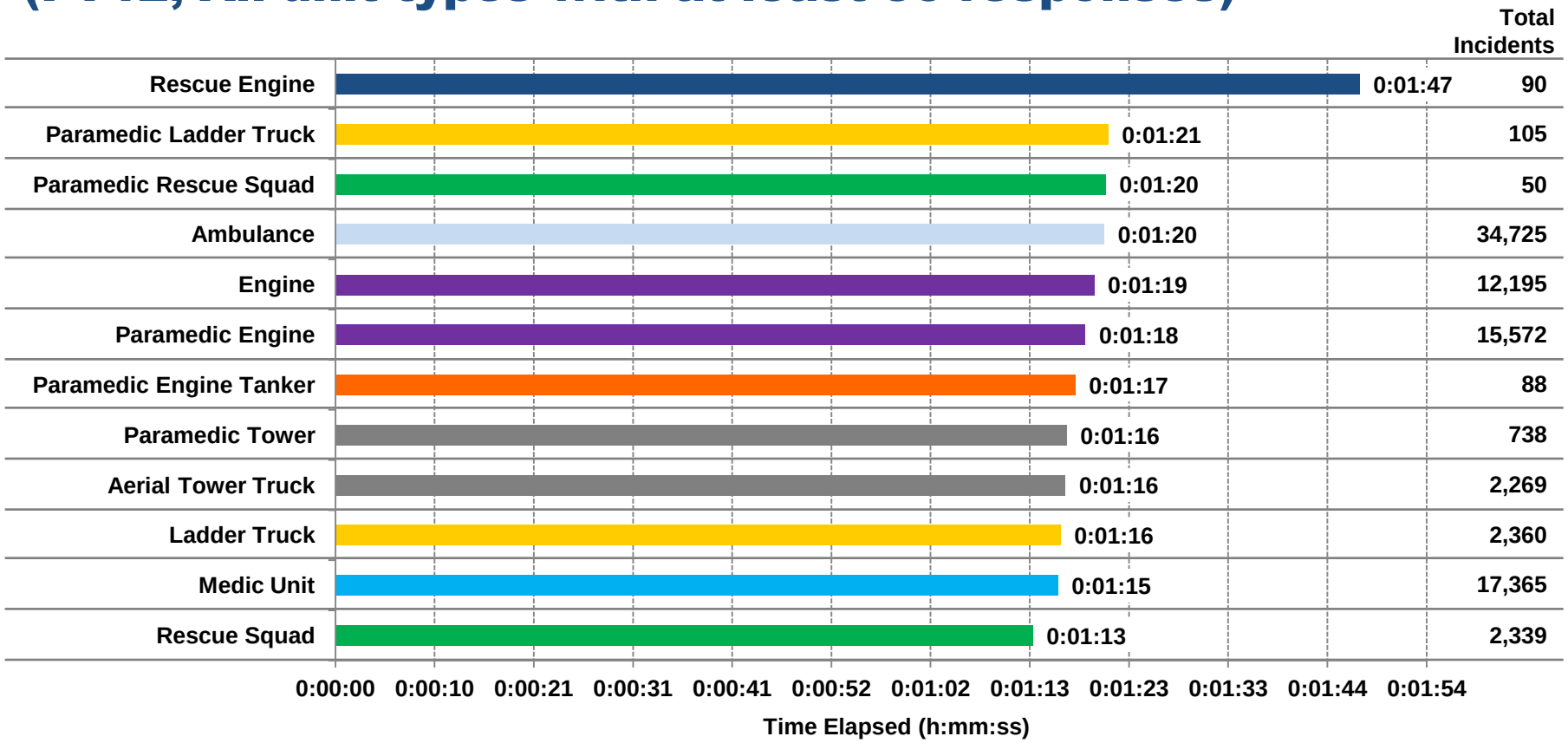
Unit Type	Description
1 Aerial Tower*	Ladder truck with aerial platform
2 Ambulance	BLS transport unit
3 Engine*	Pumper
4 Medic Unit	ALS transport unit
5 Rescue Engine*	Engine w/hydraulic rescue tools
6 Rescue Squad*	Heavy rescue unit
7 Ladder Truck*	Ladder truck without aerial platform (e.g., tractor drawn w/tiller; rear-mount)
8 Tanker*	Tanker w/3500 gal water tank

**Indicates that unit regularly or occasionally has a paramedic on board and can respond as an ALS First Responder Apparatus (AFRA)*

Response Time Analysis: Unit Types (2 of 2)



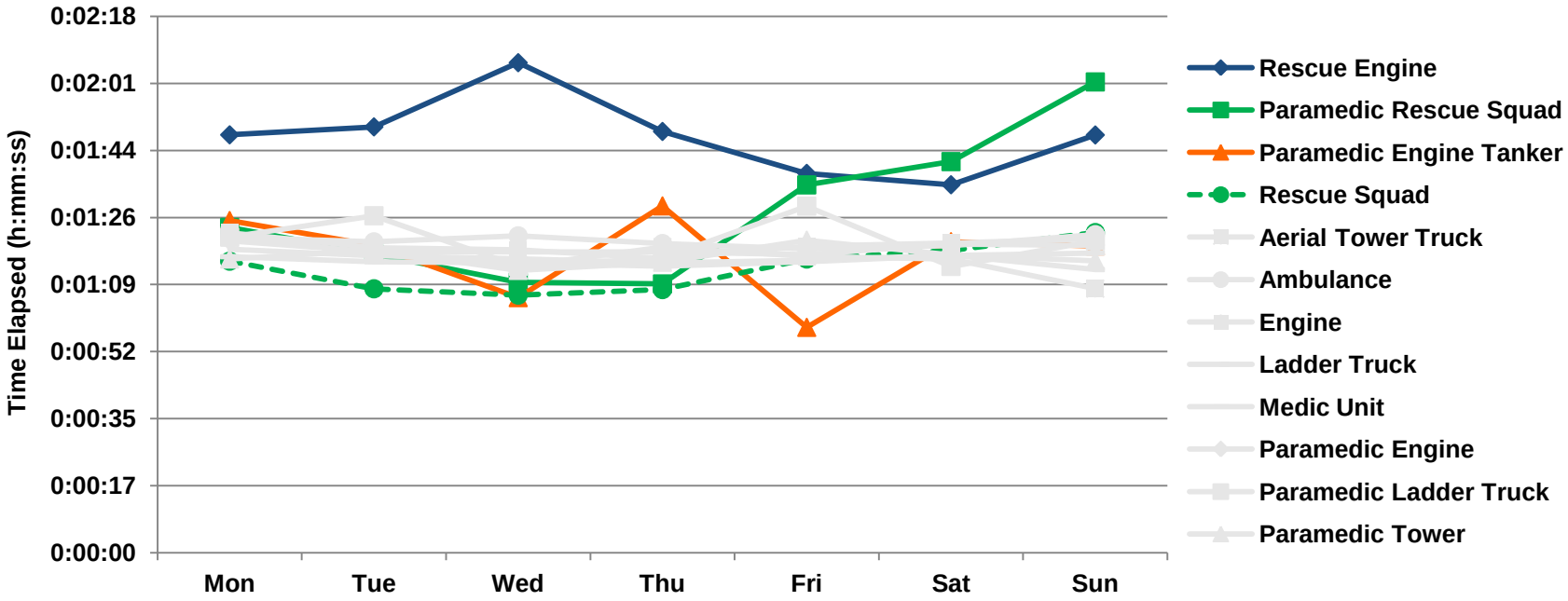
Response Time: Dispatch to En-route by Unit Type
(FY12; All unit types with at least 50 responses)



Dispatch to en-route time (time between unit being notified of incident and when they begin traveling to the scene), is relatively stable with the exception of rescue engines.

**Color coding indicates equivalent traditional and paramedic unit-types.*

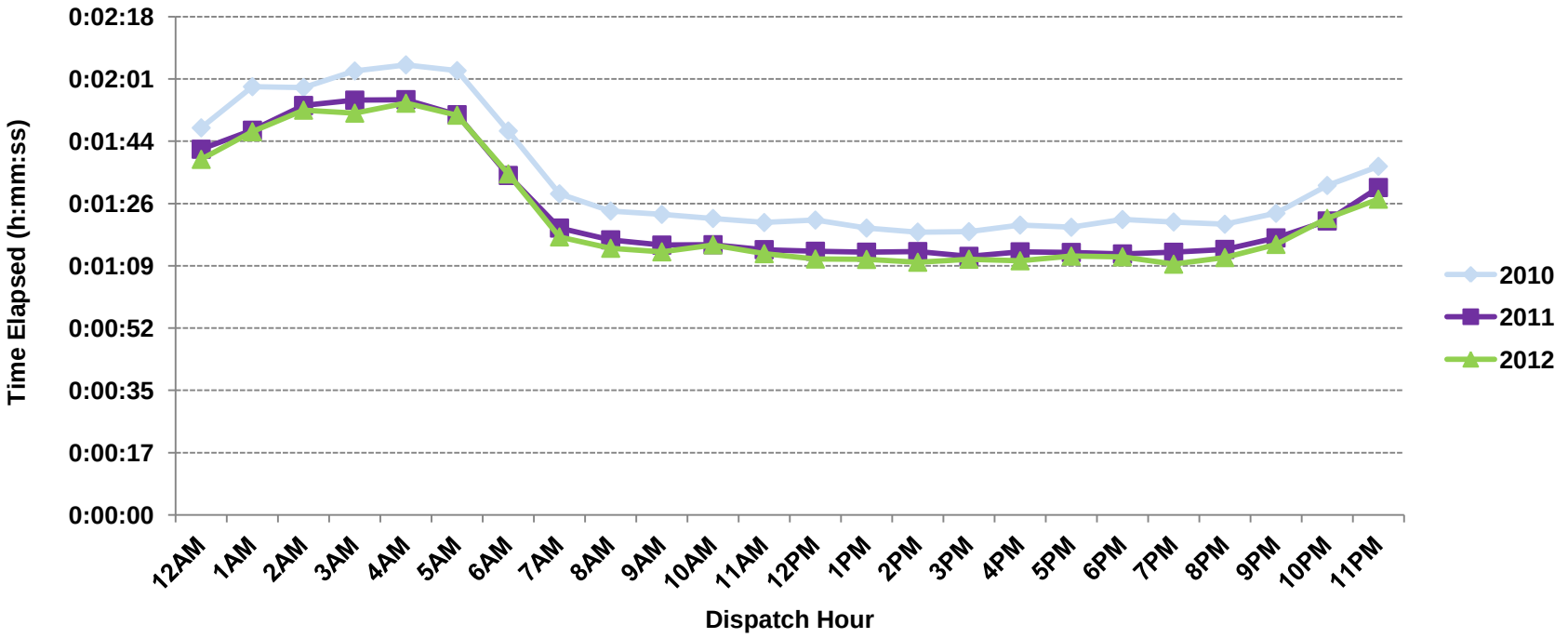
Response Time: Dispatch to En-route by Unit Type
(FY12; All unit types with at least 50 responses)



With the exception of rescue engines, paramedic rescue squads, paramedic engine tankers, and rescue squads, dispatch to en-route times do not vary by day of the week for different unit types.

While response time for paramedic rescue squads is the highest during weekends, this is the time of week with the lower ALS call volume.

Response Time: Dispatch to En-route (By Time of Day; All Incident Types)



The highest dispatch to en-route times occur between the hours of 9PM and 7AM. This pattern has been consistent over the last three years

Response Time Analysis: Future Areas of Focus and Inquiry

- Determine an explanation for:
  - The decrease in ALS travel times but not BLS times
  - The decrease in full assignment turnout or travel times around June 2010
  - The increase in travel times for “Other” calls from FY10-12
  - The variation in response times by day of week for the highlighted unit types
  - Spikes in response times during particular months during the three year period
  - Why response time for paramedic rescue squads is the highest during weekends

- Use this analysis to :
  - Guide and refine operational decision making
  - Inform the creation of targeted approaches to decrease response times
  - Justify requests for additional resources
  - Further understand the dynamic nature of calls for service

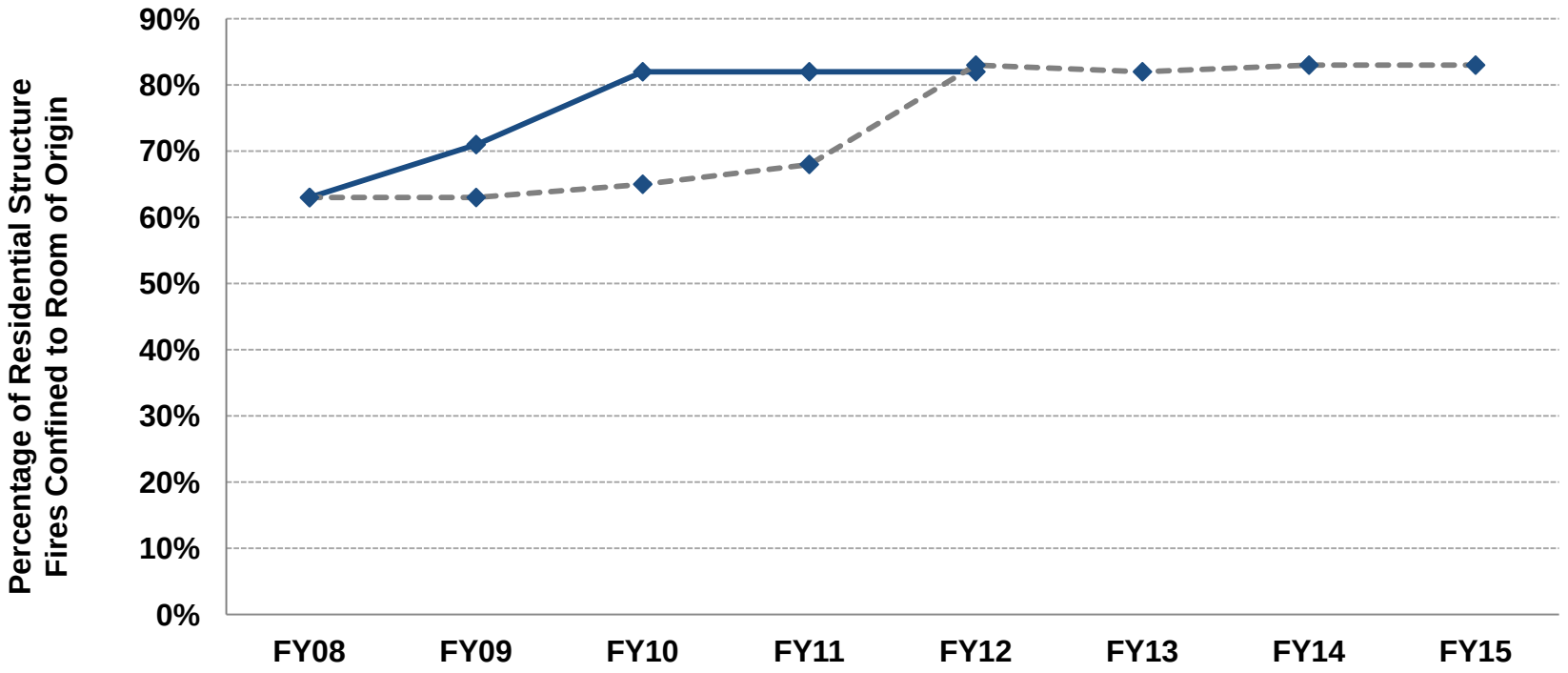
Wrap-Up

- **Follow-Up Items**

MCFRS Headline Performance Measure Detail

CountyStat

Headline Measure #1: Percent of Residential Structure Fires Confined to the Room of Origin



FY08	FY09	FY10	FY11	FY12	FY13 Projection	FY14 Projection	FY15 Projection
63%	71%	82%	82%	82%	82%	83%	83%

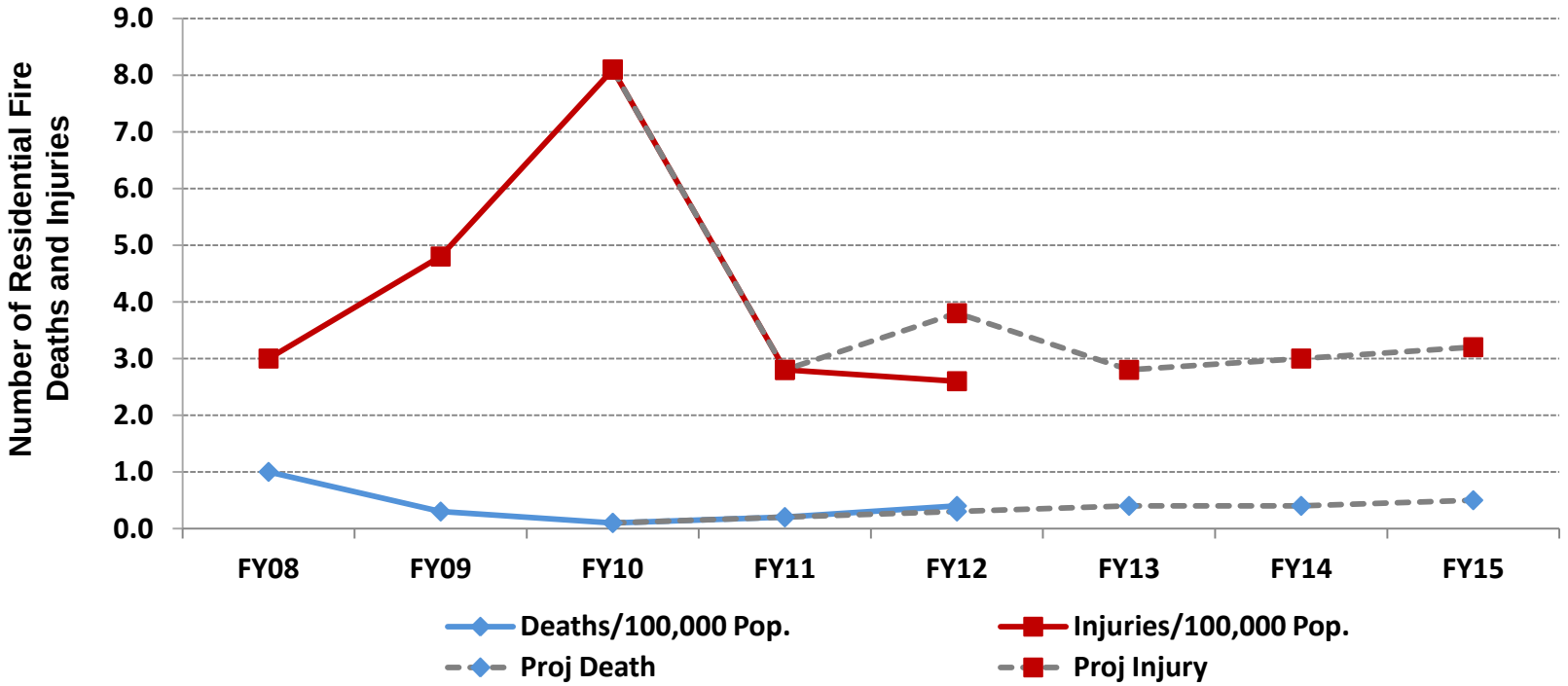
Headline Measure #1: Percent of Residential Structure Fires Confined to the Room of Origin

- **Departmental Explanation for FY12 Performance:**
  - Performance remained equal to that achieved in FY11 due to no increase in fire suppression resources and other contributing factors remaining the same
  - Maintaining the level of 4-person staffing has made this performance possible

- **Departmental Explanation for FY13-FY15 Projections:**
  - Anticipated improvement attributed to faster response time due to:
    - Additional engine to be placed in service – E732 at Travilah Station in FY14
    - Continued improvements in phone-to-dispatch times and turnout times
    - Continued implementation of universal call-takers and "PowerPhone" call-taking software resulting in fewer critical questions by call-takers prior to forwarding call to pending status
  - Improved accuracy/reliability of data

The decision to build out 4-person staffing has produced positive results and, when further implemented, will yield improved performance in the future

Headline Measure #3: Number of Civilian Residential Fire Deaths and Injuries per 100,000 Population



	FY08	FY09	FY10	FY11	FY12	FY13 Projection	FY14 Projection	FY15 Projection
Deaths	1.0	0.3	0.1	0.2	0.4	0.4	0.4	0.5
Injuries	3.0	4.8	8.1	2.8	2.6	2.8	3.0	3.2

Headline Measure #3: Number of Civilian Residential Fire Deaths and Injuries per 100,000 Population

- **Departmental Explanation for FY12 Performance:**
  - Two of four FY12 fatalities involved seniors (66 y.o. male; 67 y.o. female). In both cases, the smoke alarm was not working.
  - Other two fatalities: 56 y.o. female (smoking in bed) and 62 y.o. female (suicide by fire)
  - Despite an increase of one fatality over FY11, the rate (0.4/100,000 residents) was very low in comparison with other similar size jurisdictions due largely to community outreach efforts
  - The small decrease in the number and rate of fire injuries is attributed to:
    - Positive impact of risk reduction and fire safety outreach efforts
    - Occupants evacuating quickly and not attempting to fight the fire beforehand

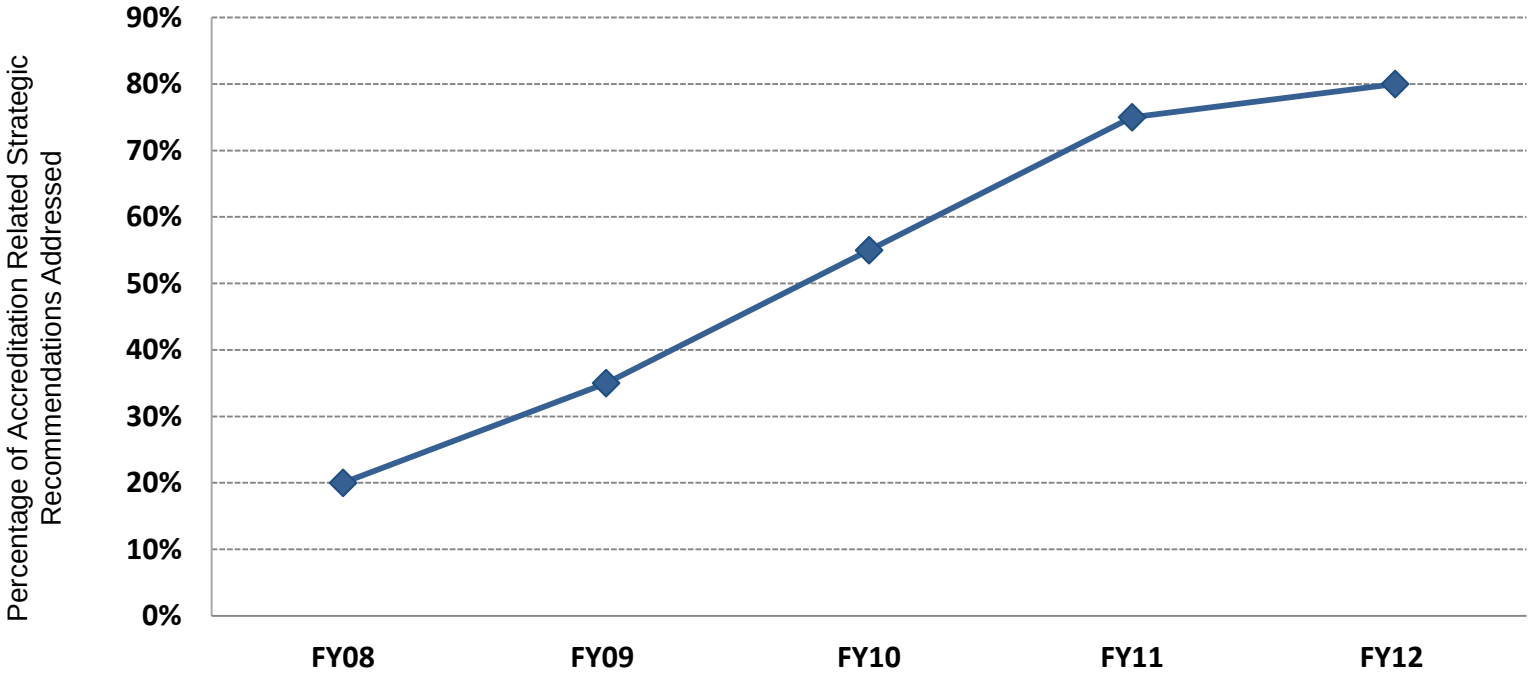
- **Departmental Explanation for FY13-FY15 Projections:**
  - Fatality rate is expected to rise due to growing senior and minority populations which have been involved in a disproportionately high number of residential fire fatalities over past 10 years
    - Community outreach efforts should help to keep this figure from rising even further
    - MCFRS will continue striving for a zero fire death rate regardless of projections
  - Injury rate is expected to rise due to:
    - Increasing senior and minority populations which have been involved in a disproportionately high number of residential fires over past 10 years
    - Community outreach efforts should help to keep this figure from rising even further

MCFRS Data: Benchmarking of Civilian Fire Deaths For Select Fire Departments

Jurisdiction	2010 Pop.	Fire Deaths									
		2007		2008		2009		2010		2011	
		#	Per/ 100K	#	Per/ 100K	#	Per/ 100K	#	Per/ 100K	#	Per/ 100K
Montgomery County	~ 972,000	11	1.2	10	1.1	3	0.3	1	0.1	4	0.4
Prince Georges County	~ 863,000	6	0.7	5	0.6	11	1.3	7	0.8	16	1.9
Howard County	~ 287,000	3	1.1	0	0	1	0.3	3	1.1	1	0.3
Baltimore County	~ 805,000	6	0.8	8	1	13	1.7	10	1.3	10	1.2
Anne Arundel County	~ 538,000	5	1	4	0.8	1	0.2	6	1.1	1	0.2
Frederick County	~ 233,000	1	0.4	2	0.9	4	1.7	2	0.9	2	0.9
Fairfax County	~ 1,081,000	6	0.6	8	0.8	5	0.5	7	0.7	0	0
Greensboro, NC	~ 274,000	5	2	3	1.2	1	0.4	4	1.5	1	0.4
Calgary, Canada	~ 1,072,000	3	0.3	3	0.3	7	0.7	5	0.5	3	0.3

Note: (#) = number/100,000 population, rounded to nearest tenth
Note: Data is a combination of CY and FY, depending upon the jurisdiction reporting

Headline Measure #5: Percentage of Accreditation Related Strategic Recommendations Addressed



FY08	FY09	FY10	FY11	FY12
20%	35%	55%	75%	80%

Headline Measure #5: Percentage of Accreditation Related Strategic Recommendations Addressed

- **Departmental Explanation for FY12 Performance:**
  - Achieved approximately 80% cumulative completion mark in addressing strategic recommendations provided by the CFAI Peer Assessment Team in April 2007
  - Hosted a site visit by a CFAI Peer Assessment Team in June 2012
  - Received "deferral status" from the CFAI Board of Directors in August 2012

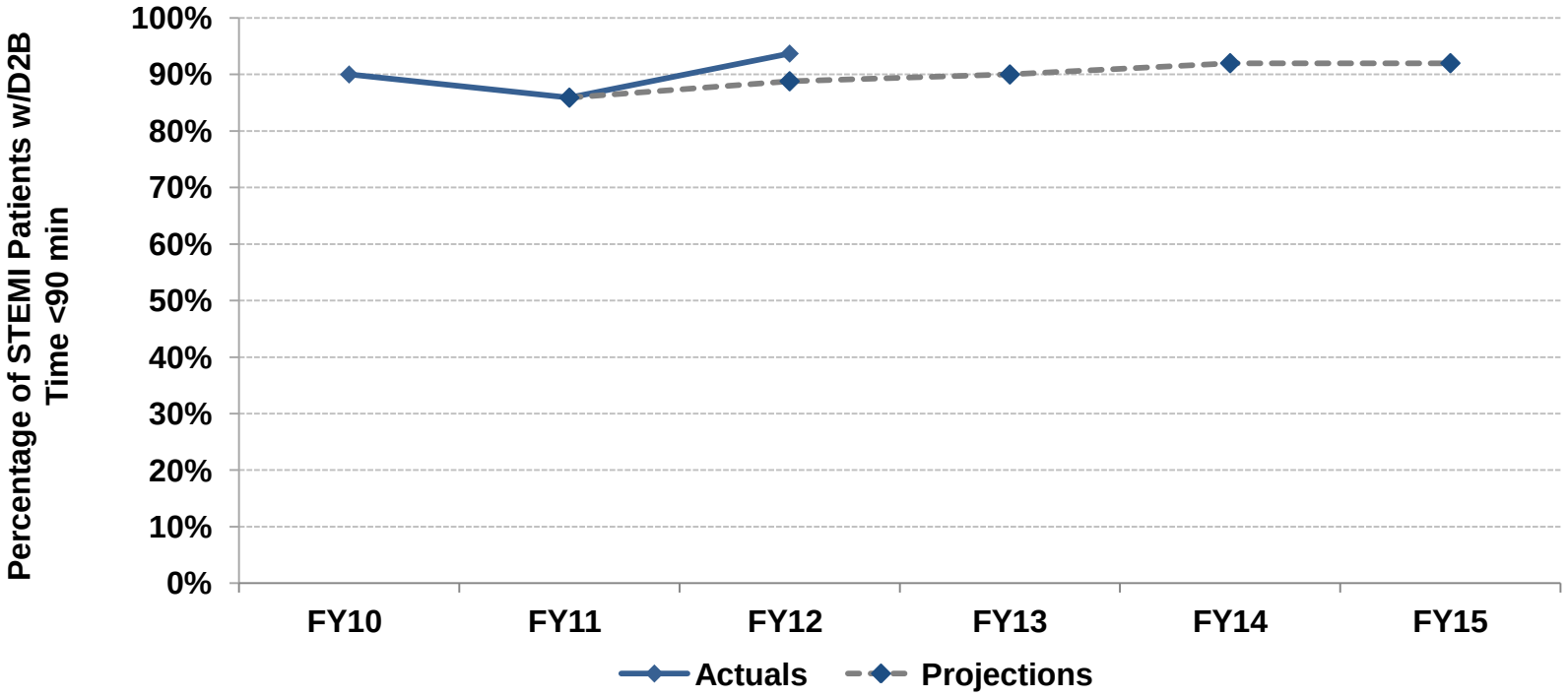
- **Departmental Explanation for FY13-FY15 Projections:**
  - By Aug 2013, MCFRS will have transitioned from deferral status to applicant status
  - Upon entering applicant status, MCFRS will have 18 months to achieve accreditation status (i.e., by Feb 2015)
  - Between Oct 2012 and Feb 2015, MCFRS will focus on:
    - Performing a comprehensive risk assessment, using risk management zones
    - Updating and revising:
      - Standards of Cover document
      - Self-assessment Manual
      - Fire-Rescue Master Plan

Headline Measure #6 EMS Cardiac Care

- **Headline Measure Description**
  - Percentage of STEMI patients (those having an ST elevation heart attack) who are in the cardiac catheterization lab receiving balloon catheterization within 90 minutes
  - Goal is 90% of patients in STEMI incidents receiving balloon catheterization within 90 minutes
  - This involves joint patient care between MCFRS and the 4 hospitals in Montgomery County that have primary PCI: Suburban, Holy Cross, Shady Grove, and Washington Adventist. These are hospitals having met the state-required criteria and are authorized to perform emergent cardiac catheterization.
- **Door to Balloon (D2B) versus EMS Activation to Balloon Time (E2B)**
  - Successful treatment of heart attack patients is extremely time dependent.
  - The quicker the heart vessel can be opened, the less permanent damage to the heart muscle.
  - In November 2006, the American College of Cardiology (ACC) launched a national "Door-to-Balloon" (D2B) initiative to help hospitals achieve the goal of performing angioplasty on heart attack patients within 90 minutes after their arrival at the ER.
  - Since 2011, the ACC is moving toward a more ambitious goal of challenging hospitals and EMS systems to partner together to attain an “EMS activation time to Balloon” (E2B) time of under 90 minutes.

MCFRS will continue collecting E2B times which will eventually replace D2B times to better align performance with national standards

Headline Measure 6: Percentage of STEMI Patients with Door to Balloon Time <90 min



FY10	FY11	FY12	FY13 Projection	FY14 Projection	FY15 Projection
90.0%	85.9%	93.7%	90.0%	92.0%	92.0%

STEMI Example

STEMI Intervention Example (54 year old patient August 10, 2012):

- EMS arrived on scene at 4:40 p.m.
- First EKG completed at 4:45 p.m.
- Paramedic transmitted the EKG at 4:46 p.m.
- Patient arrived at hospital; transferred directly to Cath Lab at 4:56 p.m.
- Catheterization Lab activated 4:50 p.m.; staff in place at 4:52 p.m.
- Arterial Device placed at 5:17 p.m.

D2B time: 21 mins.
E2B time: 37 mins.
D2B/E2B goal: 90 mins.

STEMI Intervention Examples from FY12

Date	Qualifying EKG	Inflation Time	D2B	E2B	Area Density
7/11/2012	3:06 PM	4:34 PM	56	88	Urban
7/15/2012	2:04 AM	4:00 AM	88	116	Suburban
7/26/2012	3:40 PM	4:54 PM	54	77	Urban
8/2/2012	5:28 PM	6:40 PM	69	74	Urban
9/27/2012	6:12 PM	7:47 PM	73	95	Urban

Headline Measure #6 Percentage of STEMI Patients with Door to Balloon Time <90 min

- **Departmental Explanation for FY12 Performance:**
  - Achievement of the 93.7% level during FY12 can be primarily attributed to a high level of continuous training, use of 12-lead monitors, and effective execution of protocols.
  - While most quarters since this headline measure was initiated (FY09Q4) have been in the 83-94% range, there have been only a few exceptions: 100% in FY12Q3 and FY10Q4, 96% in FY12Q2, and 76% in FY11Q1. An occasional spike – upward or downward – can be expected.
  - The FY13Q1 performance was 95%. E2B times – made possible through use of "Lifenet" EKG transmission technology – had a very positive impact on this level of performance achieved.

- **Departmental Explanation for FY13-FY15 Projections:**
  - Projected outcomes using D2B are projected to remain above the 90% goal due to implementation of STEMI transmission from the field which began in May 2011.
  - Projected outcomes could decline; however, if the new measurement - E2B – were to be used instead of D2B, setting the onset of the clock back to EMS activation while maintaining the 90-minute goal.

Overview of MCFRS Prevention Outreach Data Collection

In FY12 home visits are up 69% from FY11 but remains 58% lower than FY10.

Home Visit Outreach

	FY10	FY11	FY12	Average
Home Visits	11,397	2,859	4,828	6,361
Smoke Alarms Installed	315	122	157	198
Batteries Installed	315	97	160	191

Web-Based Outreach

	FY09	FY10	FY11	FY12	Average
Twitter Followers	274	488	938	1400	775
MCFRS Blog Visits	3,263	8,798	27,527	20,504	15,023
Facebook Likes	1,019	1,396	1,383	700	1,125
MCFRS Blog Posts	50	106	178	207	135
Blog Talk Radio Listens	3,966	5,087	4,374	n/a	4,476
MCFRS YouTube Views	2,258	2,607	3,032	2,116	2,503
Scribd Views	n/a	n/a	n/a	8,368	8,368
Google + Followers	n/a	n/a	n/a	107	107

During this same period, MCFRS has continued to grow their presence in social media with over 1.5 million Facebook views in CY12.

MCFRS Overview of Social Media Integration

Facebook

- New Likes FY12: 700
- FY12 FB Views: 1,483,977 The number of people who have seen any content associated with your Page. (Unique Users). Facebook switched over to an entirely new Insights analytics tool and changed several of the metrics or how they are measured. The new system did not kick in until July 19, 2011 and MCFRS can not gain access to the old data and the previous 18 days. We estimate a conservative additional 30,000 viewed the page during that time meaning that well over 1.5 Million viewed during FY12.
- Also note that the over 2 Million total Facebook views of last CountyStat was based on CY and not FY.

Twitter

- Roughly 1,400 new FOLLOWERS for FY12
- Almost 9,000 clicks on tweets that had content (usually links or a video).

Blog Talk Radio

- Discontinued at this point due to loss of free use.

Google +

- 107 new Followers this FY.

MCFRS Blog

- 20,504 Blog Visits
- Down a little due to lack of significant storm activity over the winter. Winter storms really drove FY12 stats way up as people turned to the blog for the latest news and info related to the storms.
- Blog Posts: 207
- Of interest is the number of visitors who accessed the blog using mobile devices dropped for the first time in 3 years to 7.25%.

YouTube

- YouTube Views for FY12: 2,116
- A decrease in videos placed on Youtube page is direct result of lower views. As last year, more video content being pushed to blog and even Facebook. MCFRS is reexamining and may feature Youtube more this year.

Scribd

- 8,368 views of documents on site FY12

NEW*MCFRS Digital Newspaper site:

- http://paper.li/mcfrs/1301938705
- 4860 views since full use in July '12.

Additional Performance Related Data Appendix

CountyStat

MCFRS Conversion Of Response Time Goals To Two-tiered System

- MCFRS has implemented a two-tiered set of response time goals to replace its single set of Master Plan response time goals.
- The two-tiered approach brings MCFRS in alignment with the two-tiered model recommended by the Center for Fire Accreditation International.
- The two-tiered model consists of "baseline" and "benchmark" sets of goals:
  - **Baseline** goals are minimum goals to be met consistently by the department to provide an acceptable, but readily achievable, level of service to the community. Baseline goals should be revised annually based on the past year's results and anticipated budgetary, deployment, and related factors influencing performance in the upcoming year; therefore baseline goals could be set higher or lower annually.
  - **Benchmark** goals are more stringent goals the department should strive to meet to achieve the highest desirable level of service to the community. Benchmark goals will remain unchanged, as incremental progress will occur over several years to narrow the gap between baseline goals and benchmark goals (i.e., the "gold standard"). Benchmark goals would not be set at a higher level until the department gets close to achieving the existing set.

Advanced Life Support Dispatches: Snapshot Of Montgomery County Frequency

Advanced Life Support Dispatches By Month

Month	2008	2009	2010	2011	2012	Average
JAN	2,757	2,827	2,649	2,788	2,776	2,759
FEB	2,789	2,672	2,602	2,514	2,572	2,630
MAR	2,858	2,889	2,639	2,689	2,860	2,787
APR	2,760	2,728	2,762	2,514	2,715	2,696
MAY	2,867	2,830	2,893	2,678	2,946	2,843
JUN	2,742	2,579	2,859	2,585	2,660	2,685
JUL	2,695	2,635	2,598	2,760	2,572	2,652
AUG	2,570	2,564	2,491	2,675	2,452	2,550
SEP	2,701	2,689	2,668	2,808	2,570	2,687
OCT	2,754	2,694	2,785	2,749	2,676	2,732
NOV	2,575	2,525	2,576	2,517	2,683	2,575
DEC	2,695	2,953	2,650	2,582	2,942	2,764
Total	32,763	32,585	32,172	31,859	32,424	32,361

Advanced Life Support Dispatches By Day of Week

Day of Week	2008	2009	2010	2011	2012	Average
SUN	4,419	4,241	4,277	4,200	4,293	4,286
MON	4,931	4,869	4,761	4,887	4,746	4,839
TUE	4,660	4,794	4,668	4,573	4,626	4,664
WED	4,669	4,702	4,691	4,518	4,751	4,666
THU	4,695	4,662	4,745	4,649	4,691	4,688
FRI	4,868	4,951	4,696	4,719	4,841	4,815
SAT	4,521	4,366	4,334	4,313	4,476	4,402
Total	32,763	32,585	32,172	31,859	32,424	32,361

Dispatches for ALS incidents demonstrate lower totals during the weekends, particularly on Sunday

Structure Fire Dispatches: Snapshot Of Montgomery County Frequency

Structure Fire Dispatches By Month

Month	2008	2009	2010	2011	2012	Average
JAN	68	111	89	111	93	94
FEB	82	80	73	73	76	77
MAR	95	72	84	82	85	84
APR	79	68	88	65	95	79
MAY	71	71	88	79	75	77
JUN	95	77	93	73	106	89
JUL	87	64	59	69	69	70
AUG	68	80	56	80	85	74
SEP	63	71	66	58	58	63
OCT	77	75	69	83	77	76
NOV	88	82	83	64	72	78
DEC	94	100	90	112	110	101
TOTAL	967	951	938	949	1001	961

Structure Fire Dispatches By Day of Week

Day of Week	2008	2009	2010	2011	2012	Average
SUNDAY	124	135	145	148	167	144
MONDAY	151	148	138	128	146	142
TUESDAY	112	126	125	114	134	122
WEDNESDAY	154	125	143	135	120	135
THURSDAY	137	113	120	121	144	127
FRIDAY	136	153	129	156	143	143
SATURDAY	153	151	138	147	147	147
TOTAL	967	951	938	949	1001	961

Dispatches for structure fire incidents are consistent throughout the year except for an uptick during the winter months.

Comparison of ALS and Structure Fire Incident Response Times FY10-FY11

ALS	FY10 Calls	FY11 Calls	Change # Calls	FY10 % ≤8 min	FY11 % ≤8 min	Change ≤8 min	FY10 Avg Time (min)	FY11 Avg Time (min)	Avg Time Change
Rural	295	293	-2	11.9%	21.2%	9.3%	11.6	11.0	-0.6
Suburban	4,262	4,244	-18	35.3%	48.1%	12.8%	9.4	8.6	-0.8
Urban	18,451	19,110	659	54.8%	57.3%	2.5%	8.6	8.0	-0.6

ALS2 *	FY10 Calls	FY11 Calls	Change # Calls	FY10 % ≤8 min	FY11 % ≤8 min	Change ≤8 min	FY10 Avg Time (min)	FY11 Avg Time (min)	Avg Time Change
Rural	43	37	-6	23.3%	21.6%	-1.7%	11.0	10.7	-0.3
Suburban	524	533	9	41.2%	56.3%	15.1%	8.8	8.2	-0.6
Urban	2,469	2,387	-82	53.8%	62.5%	8.7%	8.2	7.6	-0.6

*** ALS2 calls are a portion of all ALS calls**

Fire	FY10 Calls	FY11 Calls	Change # Calls	FY10 % ≤6 min	FY11 % ≤6 min	Change ≤6 min	FY10 Avg Time (min)	FY11 Avg Time (min)	Avg Time Change
Rural	11	21	10	9.1%	28.6%	19.5%	10.6	8.8	-1.8
Suburban	126	131	5	27.0%	32.8%	5.8%	7.9	7.2	-0.7
Urban	569	607	38	47.6%	54.9%	7.3%	6.3	5.8	-0.5

Comparison of ALS and Structure Fire Incident Response Times FY11-FY12

ALS	FY11 Calls	FY12 Calls	Change # Calls	FY11 % ≤8 min	FY12 % ≤8 min	Change ≤8 min	FY11 Avg Time (min)	FY12 Avg Time (min)	Avg Time Change
Rural	293	346	53	21.2%	26.3%	5.1%	11	10.3	-0.7
Suburban	4,244	4,920	676	48.1%	51.2%	3.1%	8.6	8.3	-0.3
Urban	19,110	20,633	1,523	57.3%	62.3%	5.0%	8	7.6	-0.4

ALS2 *	FY11 Calls	FY12 Calls	Change # Calls	FY11 % ≤8 min	FY12 % ≤8 min	Change ≤8 min	FY11 Avg Time (min)	FY12 Avg Time (min)	Avg Time Change
Rural	37	40	3	21.6%	20.0%	-1.6%	10.7	10.7	0.0
Suburban	533	616	83	56.3%	55.0%	-1.3%	8.2	8.2	0.0
Urban	2,387	2,499	112	62.5%	67.2%	4.7%	7.6	7.3	-0.3

* ALS2 calls are a portion of all ALS calls

Fire	FY11 Calls	FY12 Calls	Change # Calls	FY11 % ≤6 min	FY12 % ≤6 min	Change ≤6 min	FY11 Avg Time (min)	FY12 Avg Time (min)	Avg Time Change
Rural	21	20	-1	28.6%	10.0%	-18.6%	8.8	10.4	1.6
Suburban	131	132	1	32.8%	33.3%	0.5%	7.2	6.8	-0.4
Urban	607	762	155	54.9%	56.3%	1.4%	5.8	5.9	0.1

Historical Budget Overview

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
MCFRS Operating Budget	$152,751,120	$178,021,060	$189,327,550	$191,678,360	$193,718,620	$182,625,430	$180,013,460	$205,077,088
MCFRS Budget as % of Total MCG Budget	11.5%	12.0%	12.0%	11.7%	11.9%	12.0%	11.3%	11.7%
MCFRS Workyears	1,155.20	1,235.60	1,334.70	1,353.00	1,351.20	1,235.00	1,243.00	1,253.80
MCFRS Workyears as % of Total MCG Workyears	12.7%	13.0%	13.5%	13.5%	13.9%	13.8%	13.8%	13.6%

This historical budget compares MCFRS to the Montgomery County Government Budget excluding Public Schools, Montgomery College, and Parks

Authorized MCFRS Uniformed Personnel Complement

Approved Positions	FY09	FY10	FY11	FY12	FY13	FY13 Percent of Total	Percent Change FY09 – 13
Firefighter III	650	656	642	641	616	53%	-5.2%
Master Firefighter	218	225	222	222	228	20%	4.6%
Lieutenant	111	109	108	108	123	11%	10.8%
Captain	130	141	141	141	142	12%	9.2%
Battalion Chief	28	27	24	24	25	2%	-10.7%
Assistant Chief	12	12	13	13	14	1%	16.7%
Division Chief	5	5	4	4	4	0.3%	-20.0%
TOTAL	1154	1175	1154	1153	1152		

In FY08 CountyStat reviewed the MCFRS uniformed personnel complement and found the structure top-heavy at the Captain level.

This remains the case in FY13 as Captains account for 12% of the total uniformed staff, an increase of 9% from FY09