



Regional Consolidated Dispatch November 2014 Report

Office of Regional Communications and Technology

Executive Summary

It is the goal of Broward County's Regional Consolidated Communications System to provide the highest level of professional service to the public and to our Participating Agencies. Towards that goal, we strive to foster a culture of continuous process improvement, which relies in part upon the improvement opportunities brought forth by users of the System. All recommendations for improvement opportunities submitted by the Participating Agencies are reviewed and evaluated for inclusion in our Standard Operating Procedures. With participant consensus, recommendations that enhance the efficiency and effectiveness of the system will be implemented.

Broward Consolidated Communications Committee

This committee is being reactivated as a means of communicating the success and challenges facing the system. Members of this committee include city and county law enforcement and fire professionals, city and county elected officials and the business community. The first meeting of this committee is scheduled for February 12, 2015. While the detail elements of the system will be managed by the operational subgroups, this committee is expected to assure the community the system continues to move in the right direction.

Analysis and Problem Solving Support

A successful system requires tracking real time performance and data center activity. The County has hired three Communications Managers, one assigned to each of the dispatch centers, to assist the operator with data and information necessary to calibrate system performance. These individuals will be tasked with managing process controls to ensure adherence and compliance to established regional protocols and quality service delivery. They will also provide management oversight of performance standards and expedite reports from incidents submitted through the tracking system. All three will be on board January 19, 2015.

Incident Tracking

An incident tracking system is in place to address concerns and unintended consequences related to consolidation. As each center completed its transition, small teams were assembled at each center to meet and review issues as they arise. As more cities came onto the system, it became apparent that a formal system was needed to track issues and concerns and to determine the root cause of the reported incident. Each municipality was asked to assign four individuals with responsibility for capturing and transmitting problems as they arise. As depicted in the chart on page 21, the number of incidents submitted through the system is declining.

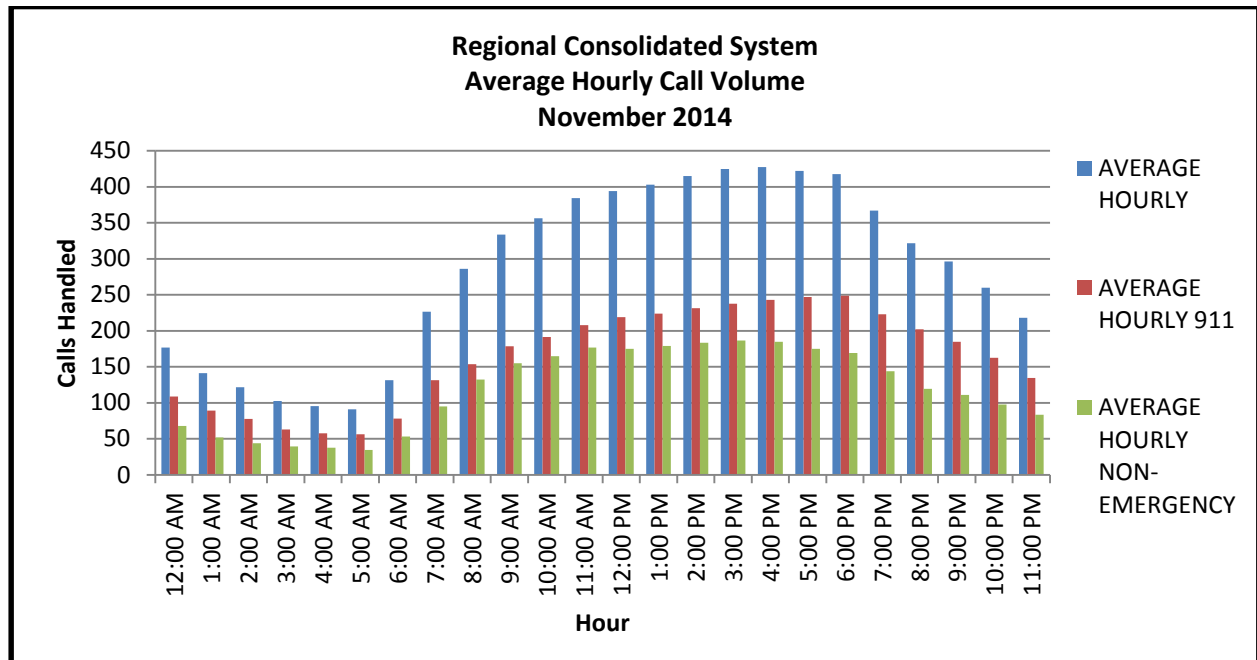
Call Transfers

Pre-Consolidated PSAPs vs. Consolidated PSAPs				
911 Transfer Calls				
	2013 Pre-Consolidated 10/1/13 to 12/31/13	2014 Consolidated 10/01/14 to 12/31/14	Difference	
	TOTALS	TOTALS	Delta	Delta %
911 Transfers	40,351	23,877	(16,474)	-40.8%

One of the goals, as well as a major benefit of the consolidation initiative, was the anticipated reduction in the number of 911 callers who had to be transferred between dispatch centers. Callers are no longer transferred between the Regional Dispatch Centers; however there is still a need to transfer some callers from the Regional Dispatch Centers to the City of Plantation and Coral Springs Dispatch Centers. Similarly both Plantation and Coral Springs must transfer some callers into the Regional Dispatch Center.

The chart above provides a view of call transfers over a similar time period for pre and post consolidation. Over the same time period, the system realized a 40% reduction in call transfers.

Call Volume



In November 2014, the Regional Consolidated System handled a total of 240,444 incoming calls consisting of 114,224 emergency 911 calls; 117,022 non-emergency calls and 9,198 alarm calls. It is important to note that call arrival is consistent from center to center when comparing volume by hour. This is an important factor in determining workload to personnel resources, which is critical data needed for scheduling.

Also, for this month, the Centers handled 139,937 calls for service inclusive of both Law Enforcement and Fire Rescue, which is distinguished from the calls stated above in that a call for service equates to a dispatch of Law Enforcement or Fire Rescue personnel. Of this amount, 23,251 were Fire Rescue calls, which were received on either the E911 lines or non-emergency number. It is important to note that of the 23,251 Fire Rescue calls for service, only 13,478 are included in the P2/P3 performance calculation. This is due to the lack of caller information when a call is received on the non-emergency line; specifically the time stamp. This information will be helpful in crafting future campaigns to educate the public in the proper use of E911 versus the non-emergency telephone number.

Performance Measures

	GOAL	NORTH	CENTRAL	SOUTH
P1 Call Answer Time - Busy Hour (911) 90% Within 10 Secs.	90%	77.22%	82.81%	68.97%
P1 Call Answer Time - All Calls (911) 95% Within 20 Secs.	95%	96.85%	98.01%	95.40%
P1 Call Answer Time - Alarm Calls (911) 95% in 15 Secs.	95%	100%	100%	100%
P1 Call Answer Time - Alarm Calls (911) 99% in 40 Secs.	99%	100%	100%	100%
P2/P3 Fire Rescue Call For Service Processing Time 90% in 90 Secs.	90%	90.24%	83.81%	88.23%
P2/P3 Fire Rescue Call For Service Processing Time 99% in 120 Secs.	99%	94.51%	91.85%	94.09%
P2/P3 Fire Rescue Call For Service Processing Time 80% in 60 Secs.	80%	68%	61.56%	63.38%
P2/P3 Fire Rescue Call For Service Processing Time 95% in 106 Secs.	95%	84%	78.55%	81.62%

Note:

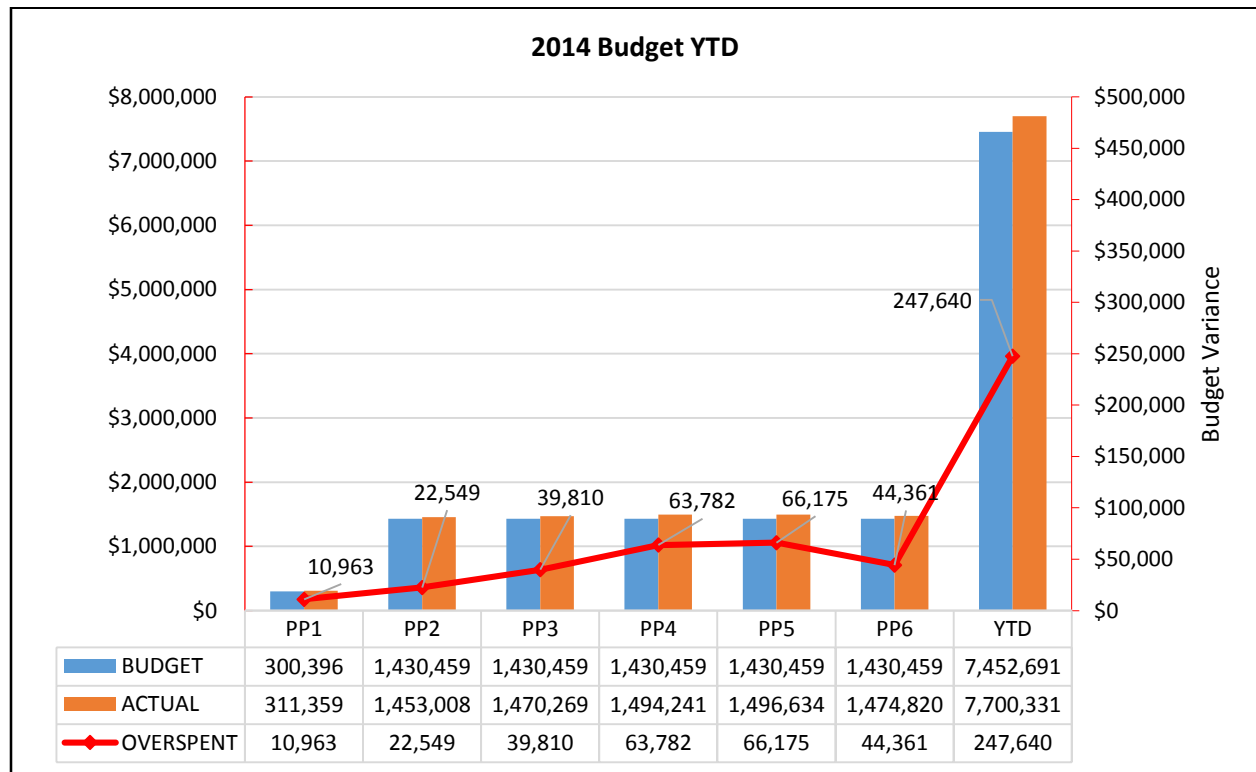
- 1- P2/P3 Law Call for Service Indicator not reported as it is not applicable at this time. This indicator is driven by PD Agency having Jurisdiction.
- 2- Financial Reports Cost/Call is an annual measurement

As depicted, the P1 and P2/P3 performance indicators for November fell short of the systems goal in a few areas. Commensurate with the provision of Exhibit D of the Operator agreement, a Notice of Non-Compliance was issued to the Operator. There are a number of contributing factors associated with the missed indicators, such as an incident generating an inordinate amount of calls, staff scheduling, call taker availability; hence the importance of evaluating the root cause. As depicted in average hourly chart on page 4, this occurs quite frequently around the same time of day, leading the County to believe that this relates to a misalignment of staff to calls or an inadequate staff to call ratio. The operator has been asked to provide the requisite staffing data to allow for an overlay of calls by hour. It is important to note that the Operator advises that changes in scheduling will occur in January to allow for a better staff-to-all ratio.

As the goal is for continuous improvement, the County and Operator recognize there are available opportunities to change and improve upon certain aspects of the system to increase both efficiency and effectiveness. Towards that aim, we have established a Quality Improvement Team. This will be a cross-functional team consisting of members from the Federation of Public Employees (FOPE), Broward Sheriff's Office (BSO) and Broward County Office of Regional Communications & Technology (ORCAT), tasked with identifying and better defining system deficiencies linked with appropriate solutions to ensure success in meeting performance objectives. A timeline for this activity is included on page 9.

Financial Management

Financial data provided by BSO shows the Operator personnel expenditures are in excess of the budget for the first two months in the amount of \$247,640. The County is closely monitoring the situation and the Operator advises that a plan is being devised to bring the expenditures in line prior to the end of the year.



Conclusion

In conclusion, data related to the first two months of the system, provides information that suggests opportunities for improvements to the system remain. Fortunately, the number of reported incidents is declining and those that remain offer insight into corrective actions such as training, schedule optimization or equipment that can enhance system performance. To that end, a methodical process to collect and evaluate data has been designed, which will provide guidance in the process of implementing the prescribed countermeasures to ensure our processes, people and systems are operating at or above the prescribed levels.

APPENDIX

Quality Improvement Team Activities

Regional Consolidated Dispatch Action Plan - P1				
Goal:		Increase the efficiency and effectiveness of Dispatch Center Processes		
Objective:		Reduce P1 Process Error Rate		
Implementation Steps	Responsible Party	Completion Timeline	Deliverable	
Establish Quality Improvement Team	ORCAT	Jan. 7, 2015	Establish Quality Improvement Team	
Define goal for improvement	QI Team	Jan. 9, 2015	Define goal in measurable terms	
Formulate data plan	QI Team	Jan. 23, 2015	1.) Stratify data sets	
		Jan. 23, 2015	2.) Create Pareto Chart	
		Jan. 23, 2015	2.) Create frequency plot	
		Jan. 23, 2015	3.) Develop process map	
Conduct assessment and root cause analysis	QI Team	Jan. 29, 2015	1.) Analyze current process	
		Jan. 29, 2015	2.) Conduct process observation	
		Jan. 29, 2015	3.) Evaluate current process	
		Jan. 29, 2015	4.) Create cause & effect diagram	
		Jan. 29, 2015	5.) Summarize assessment	
		Feb. 5, 2015	6.) Present Assessment to Operational Review Committee	
Implement countermeasures	ORCAT	Feb. 3, 2015	1.) Define implementation strategy	
		Feb. 3, 2015	2.) Define communications plan	
		Feb. 5, 2015	3.) Present findings to Operational Review Committee	
Monitor improvement	ORCAT/ Operational Review Committee	Feb. 16, 2015	1.) Monitor, measure, report and modify as necessary	

Figure 1

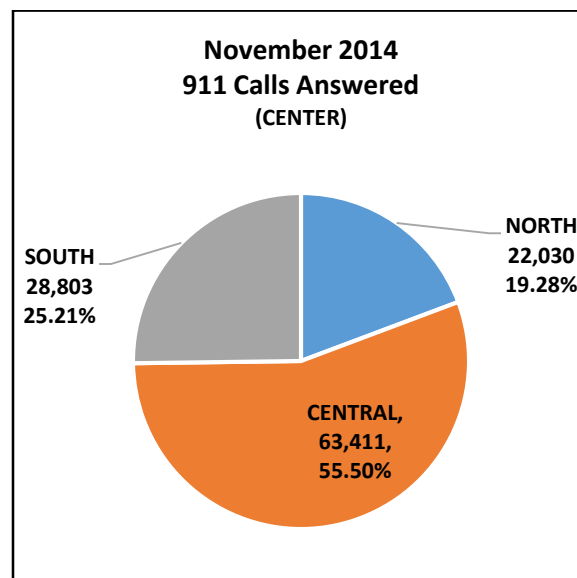
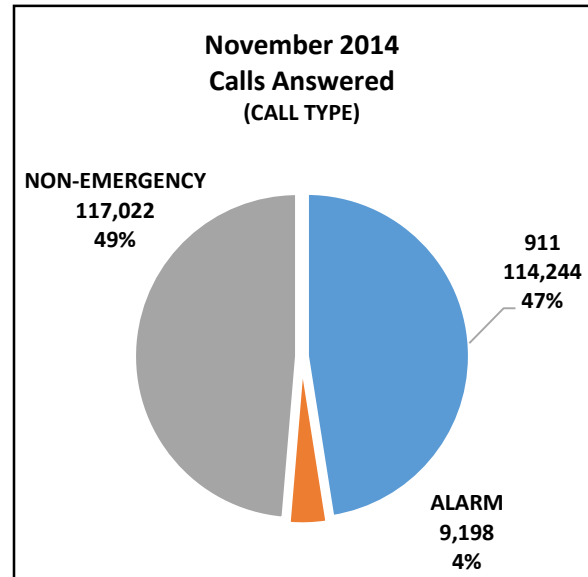
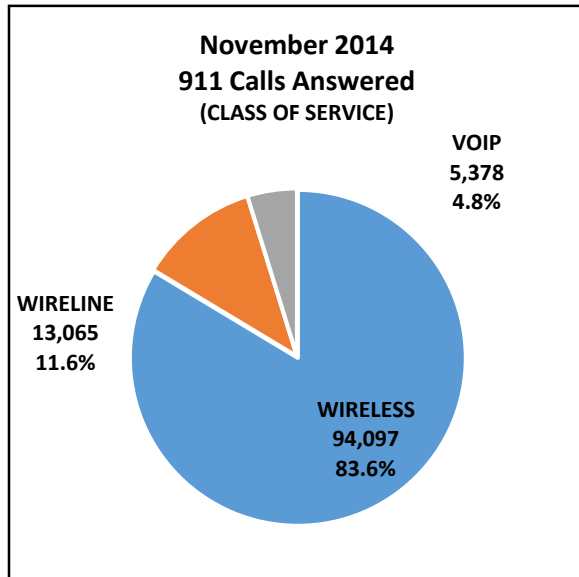
Regional Consolidated Dispatch Action Plan - P2/ P3				
Goal:		Increase the efficiency and effectiveness of Dispatch Center Processes		
Objective:		Reduce P2/P3 Process Error Rate		
Implementation Steps	Responsible Party	Completion Timeline	Deliverable	
Establish Quality Improvement Team	ORCAT	Jan. 7, 2015	Establish Quality Improvement Team	
Define goal for improvement	QI Team	Jan. 9, 2015	Define goal in measurable terms	
Formulate data plan	QI Team	Jan. 23, 2015	1.) Stratify data sets	
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Monitor improvement	ORCAT/ Operational Review Committee	Feb. 16, 2015	1.) Monitor, measure, report and modify as necessary	

Figure 2

Monthly Call Volume

The Regional Consolidated System handled 240,444 incoming calls in November. The call category breakdown is represented below:

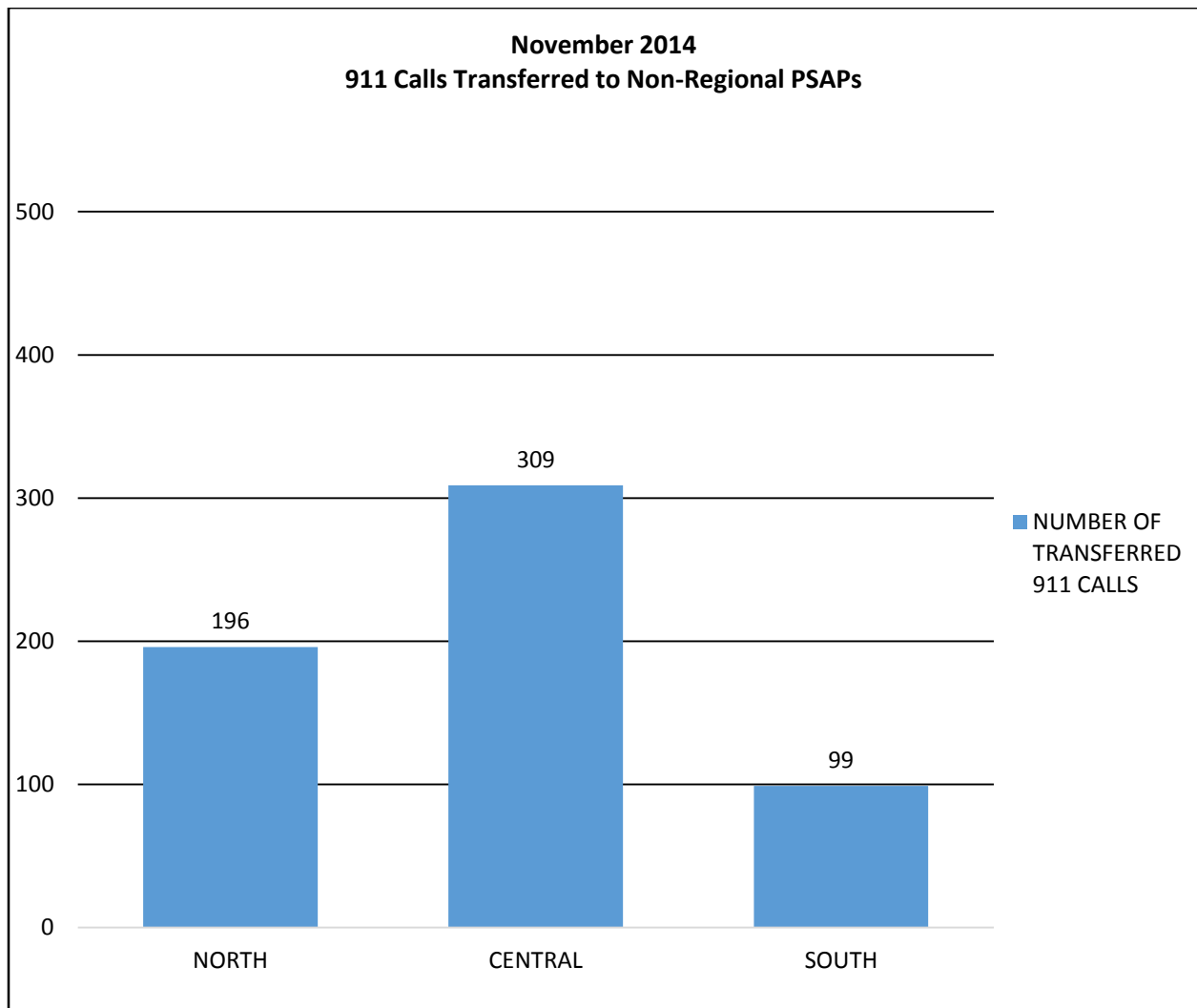
- 911 Calls - 114,224
- Alarm Calls - 9,198
- Non-Emergency Calls - 117,022



Call Transfers (From Regional Centers)

A total of 604 E911 calls were transferred from the Regional Dispatch Centers to Planation and Coral Springs' non-regional PSAPs. The quantity of calls transferred by each Regional Center is represented below:

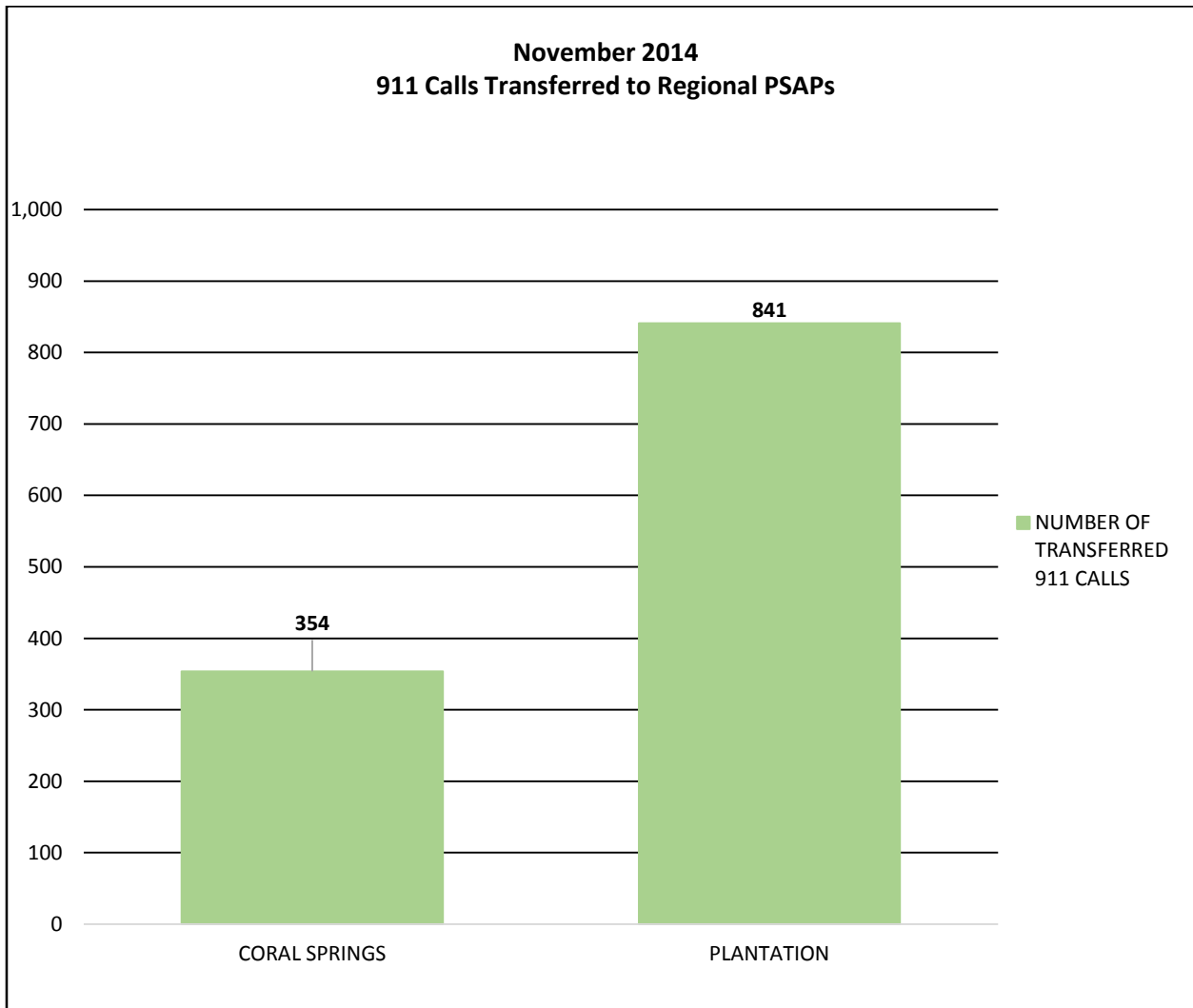
- North Dispatch Center = 196 (Represents 0.89% of Center's 911 call volume)
- Central Dispatch Center = 309 (Represents 0.49% of Center's 911 call volume)
- South Dispatch Center = 99 (Represents 0.34% of Center's 911 call volume)



Call Transfers (To Regional Centers)

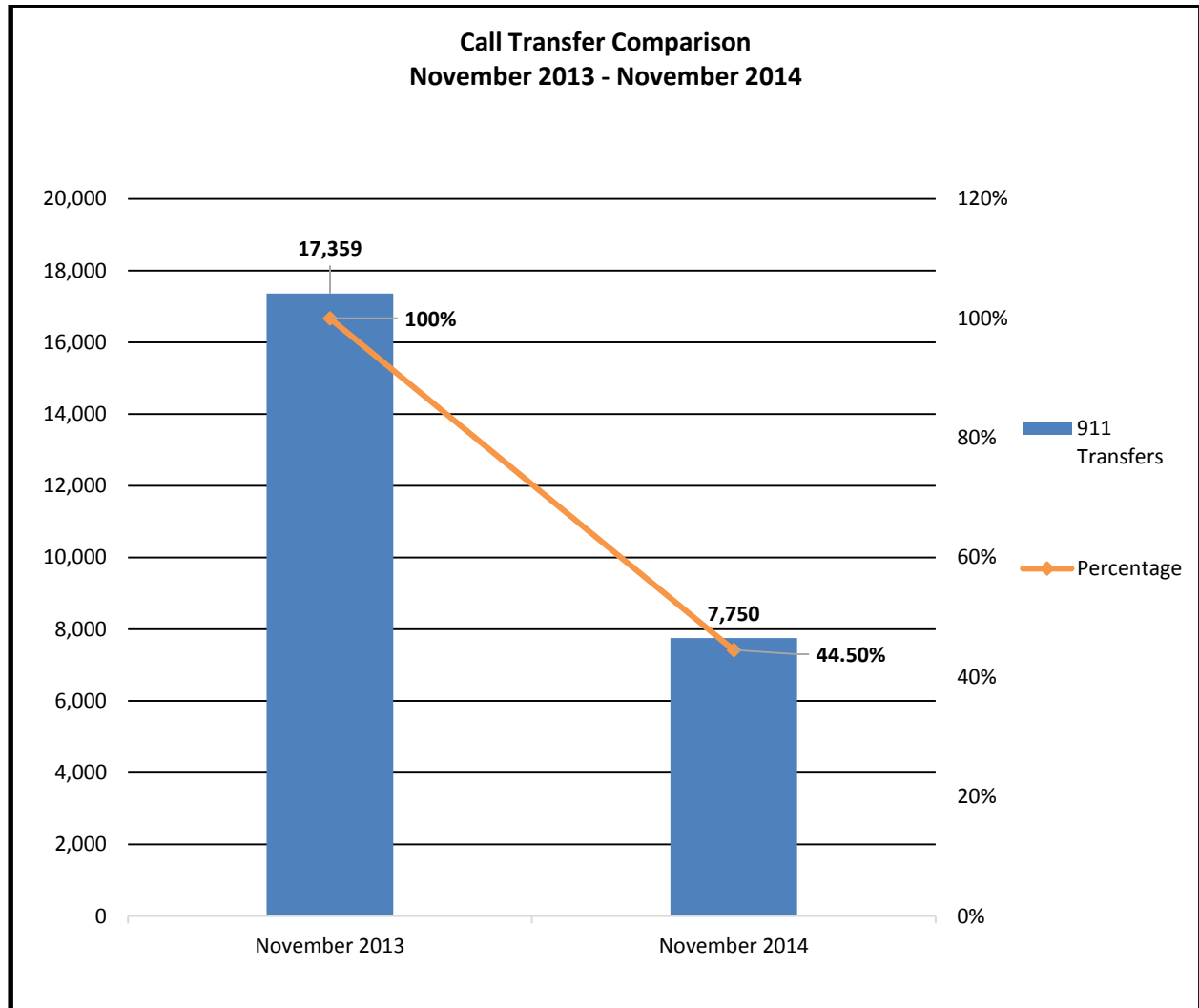
A total of 1,195 E911 calls were transferred from Plantation and Coral Springs' non-regional PSAPs to the Regional Dispatch System.

- Coral Springs = 354 (Represents 6.48% of Coral Springs 911 call volume)
- Plantation = 841 (Represents 15.42% of Plantation 911 call volume)



Call Transfers (Comparative)

There was a 55.5% percent reduction in call transfers in November 2014 as compared to November 2013. This data includes ALL 911 transfers:



Calls For Service (CFS)

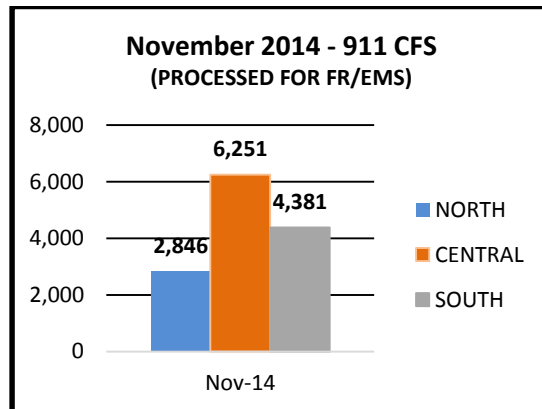
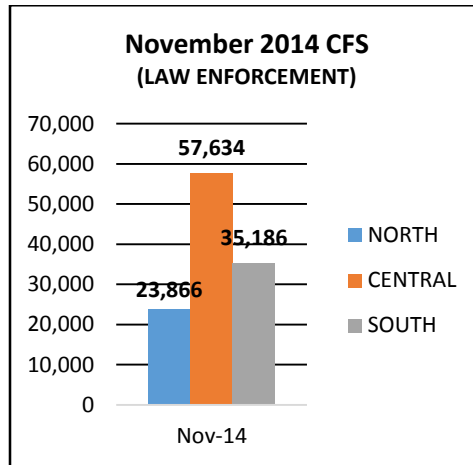
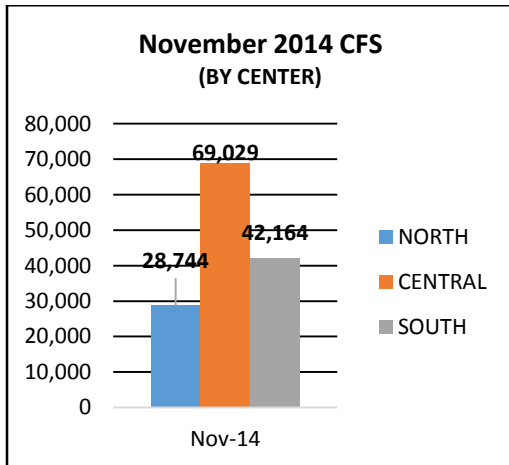
The Regional Consolidated System processed 139,937 calls for service in November. The call quantity by discipline is outlined below.

Law Enforcement Calls = 116,686
 North = 23,866
 Central = 57,634
 South = 35,186

Fire Rescue Calls - 23,251
 North = 4,878
 Central = 11,395
 South = 6,978

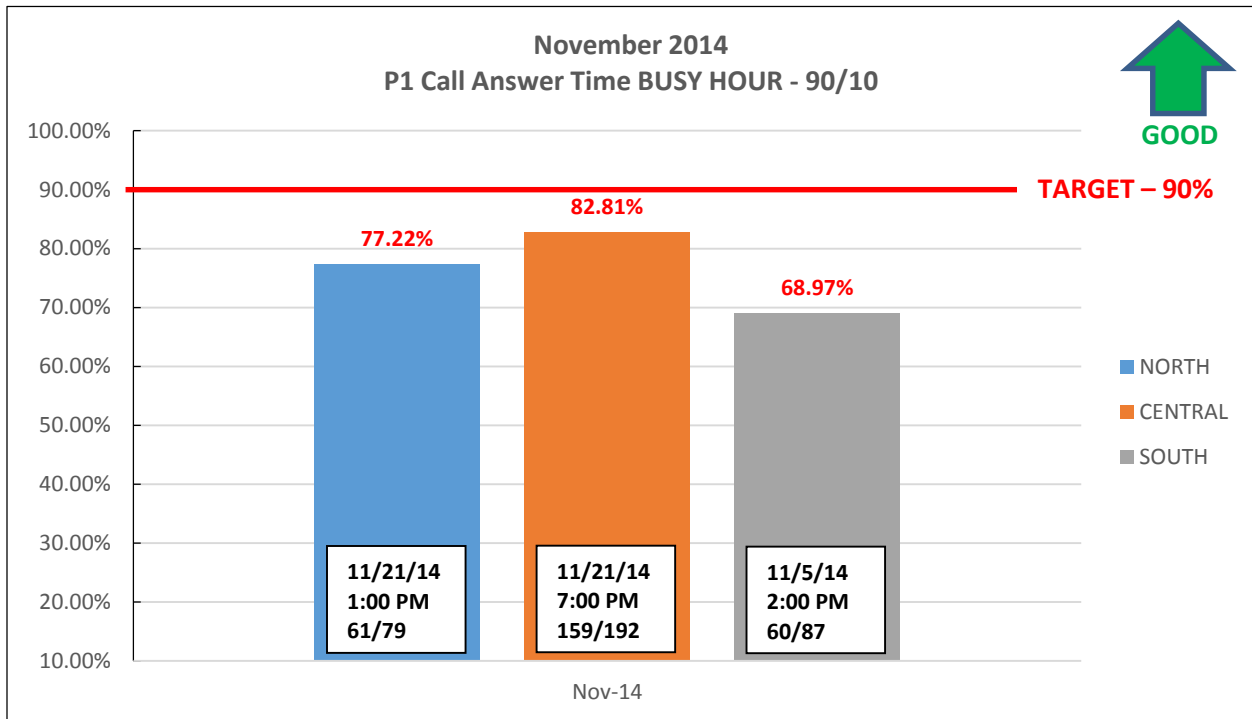
911 Calls For Service Processed for Fire Rescue* - 13,478
 North = 2,846
 Central = 6,251
 South = 4,381

**Calls for Service based upon E-911; only these calls are included in the P2/P3 indicator*



P1 Call Answer Time (As measured during busiest hour of the month)

P1 measures the time it takes for a Call Taker to answer an incoming E911 call.

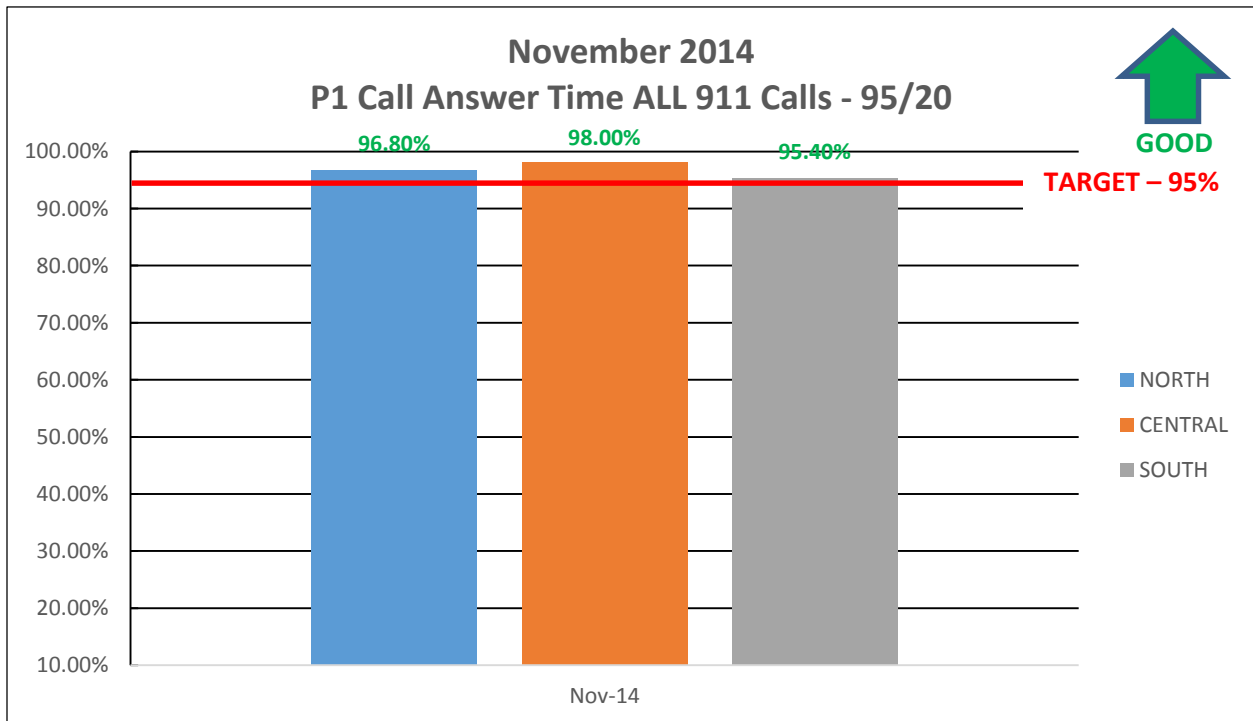
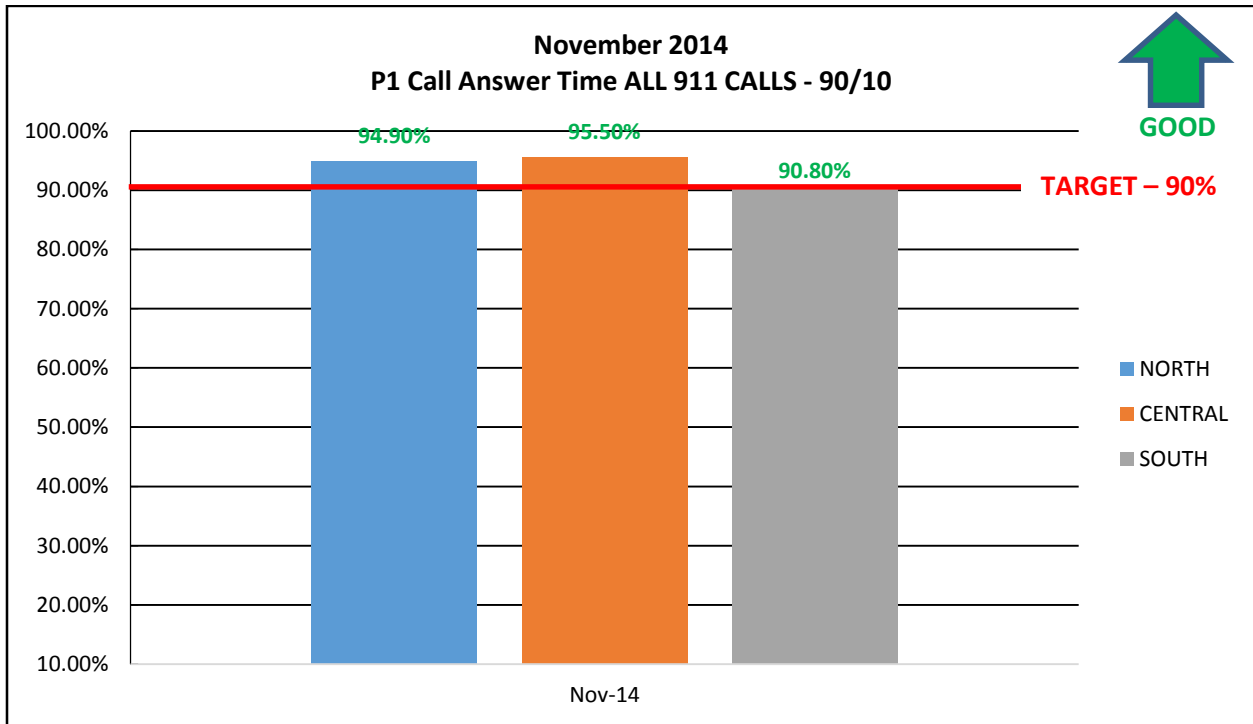


November 2014 North Regional Center Daily Busy Hour									
DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL	DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL
11/1/2014	3:00 PM	60	61	P	11/16/2014	7:00 PM	45	45	P
11/2/2014	1:00 PM	39	40	P	11/17/2014	4:00 PM	61	65	P
11/3/2014	3:00 PM	55	63	F	11/18/2014	12:00 PM	42	45	P
11/4/2014	5:00 PM	66	66	P	11/19/2014	6:00 PM	46	47	P
11/5/2014	9:00 AM	49	54	P	11/20/2014	6:00 PM	60	65	P
11/6/2014	6:00 PM	54	56	P	11/21/2014	1:00 PM	61	79	F
11/7/2014	11:00 AM	65	66	P	11/22/2014	11:00 AM	43	60	F
11/8/2014	2:00 PM	51	52	P	11/23/2014	4:00 PM	56	63	F
11/9/2014	6:00 PM	51	61	F	11/24/2014	5:00 PM	51	71	F
11/10/2014	3:00 PM	48	52	P	11/25/2014	2:00 PM	59	60	P
11/11/2014	5:00 PM	57	58	P	11/26/2014	4:00 PM	61	64	P
11/12/2014	5:00 PM	47	49	P	11/27/2014	8:00 PM	46	55	F
11/13/2014	8:00 PM	49	49	P	11/28/2014	6:00 PM	45	49	P
11/14/2014	5:00 PM	53	62	F	11/29/2014	1:00 PM	49	50	P
11/15/2014	7:00 PM	49	50	P	11/30/2014	3:00 PM	55	55	P
PERCENTAGE OF DAYS PASSING					73%				

November 2014 Central Regional Center Daily Busy Hour									
DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL	DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL
11/1/2014	2:00 PM	154	163	P	11/16/2014	7:00 PM	135	140	P
11/2/2014	3:00 PM	126	160	F	11/17/2014	4:00 PM	136	143	P
11/3/2014	5:00 PM	160	174	P	11/18/2014	7:00 PM	122	158	F
11/4/2014	2:00 PM	127	148	F	11/19/2014	7:00 PM	128	136	P
11/5/2014	6:00 PM	135	147	P	11/20/2014	2:00 PM	155	157	P
11/6/2014	4:00 PM	124	147	F	11/21/2014	7:00 PM	159	192	F
11/7/2014	3:00 PM	166	174	P	11/22/2014	4:00 PM	149	163	P
11/8/2014	2:00 PM	122	145	F	11/23/2014	4:00 PM	131	133	P
11/9/2014	10:00 AM	126	122	P	11/24/2014	5:00 PM	130	169	F
11/10/2014	6:00 PM	121	138	F	11/25/2014	3:00 PM	142	146	P
11/11/2014	3:00 PM	126	139	P	11/26/2014	10:00 AM	136	147	P
11/12/2014	5:00 PM	108	145	P	11/27/2014	8:00 PM	125	131	P
11/13/2014	5:00 PM	132	159	P	11/28/2014	12:00 PM	122	138	F
11/14/2014	4:00 PM	134	169	F	11/29/2014	6:00 PM	141	145	P
11/15/2014	2:00 PM	133	138	P	11/30/2014	11:00 AM	123	124	P
PERCENTAGE OF DAYS PASSING					67%				

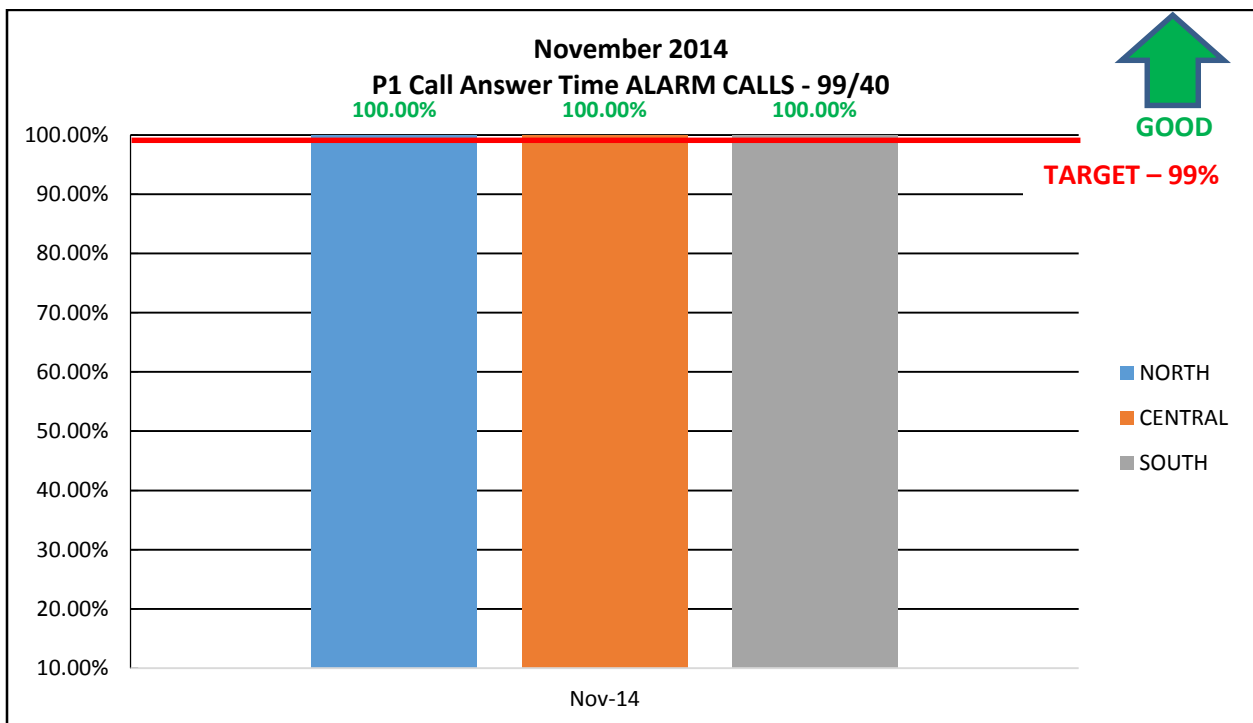
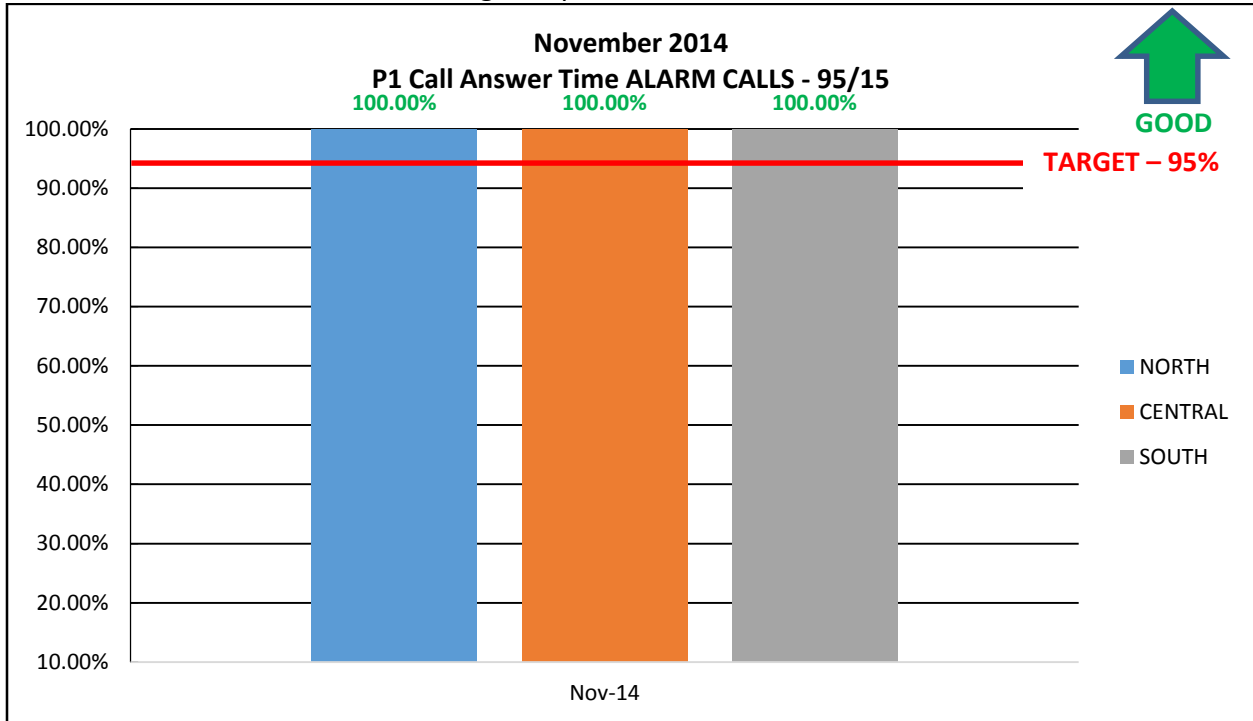
November 2014 South Regional Center Daily Busy Hour									
DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL	DATE	HOUR	Calls Answered within 10 Secs	Calls Handled	PASS/ FAIL
11/1/2014	5:00 PM	64	79	F	11/16/2014	6:00 PM	61	61	P
11/2/2014	12:00 PM	41	62	F	11/17/2014	8:00 PM	75	75	P
11/3/2014	12:00 PM	55	78	F	11/18/2014	2:00 PM	52	68	F
11/4/2014	2:00 PM	46	74	F	11/19/2014	5:00 PM	63	71	F
11/5/2014	2:00 PM	60	87	F	11/20/2014	3:00 PM	54	66	F
11/6/2014	6:00 PM	65	77	F	11/21/2014	2:00 PM	54	75	F
11/7/2014	5:00 PM	57	76	F	11/22/2014	12:00 PM	59	76	F
11/8/2014	1:00 PM	59	74	F	11/23/2014	6:00 PM	67	67	P
11/9/2014	1:00 PM	52	56	P	11/24/2014	6:00 PM	79	79	P
11/10/2014	7:00 PM	76	83	P	11/25/2014	2:00 PM	74	83	F
11/11/2014	5:00 PM	69	86	F	11/26/2014	5:00 PM	65	68	P
11/12/2014	4:00 PM	74	80	P	11/27/2014	1:00 PM	60	67	F
11/13/2014	6:00 PM	77	85	P	11/28/2014	2:00 PM	59	65	P
11/14/2014	7:00 AM	51	83	F	11/29/2014	12:00 PM	45	64	F
11/15/2014	2:00 PM	43	70	F	11/30/2014	4:00 PM	62	65	P
PERCENTAGE OF DAYS PASSING					37%				

P1 Call Answer Time (As measured for all E911 calls received during the month)

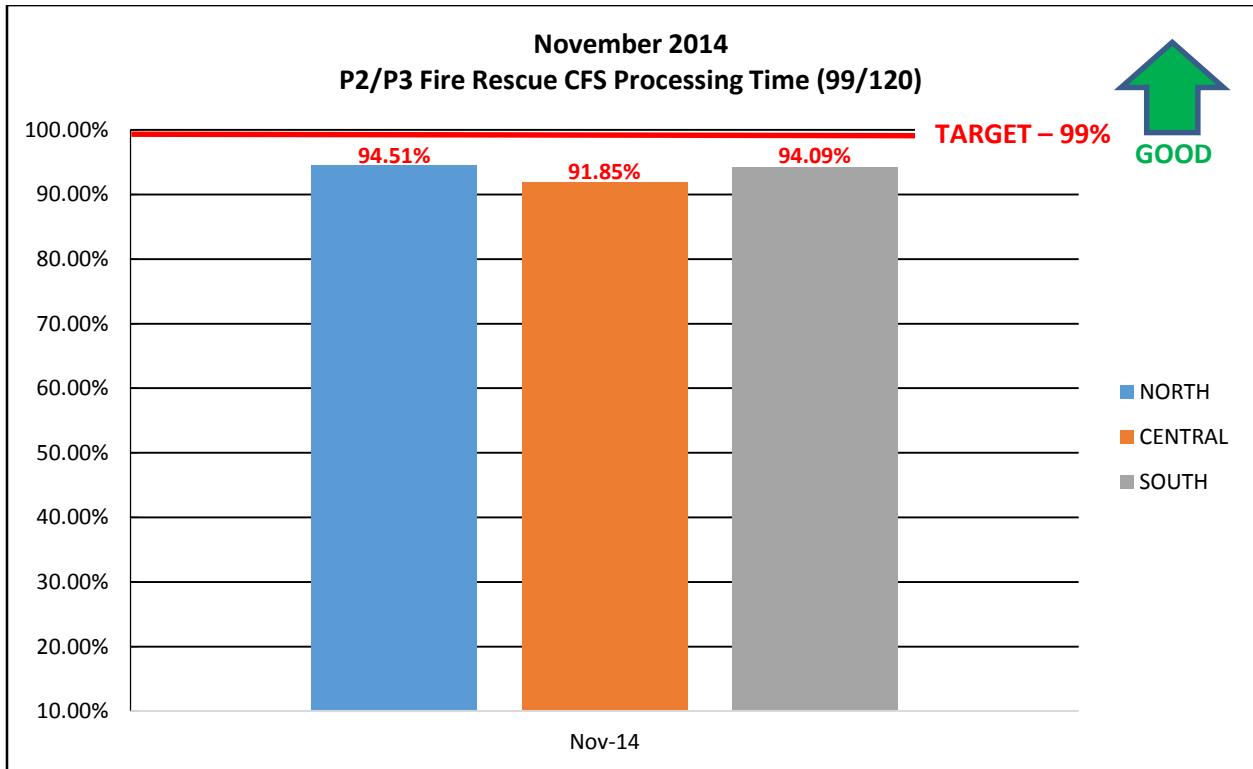
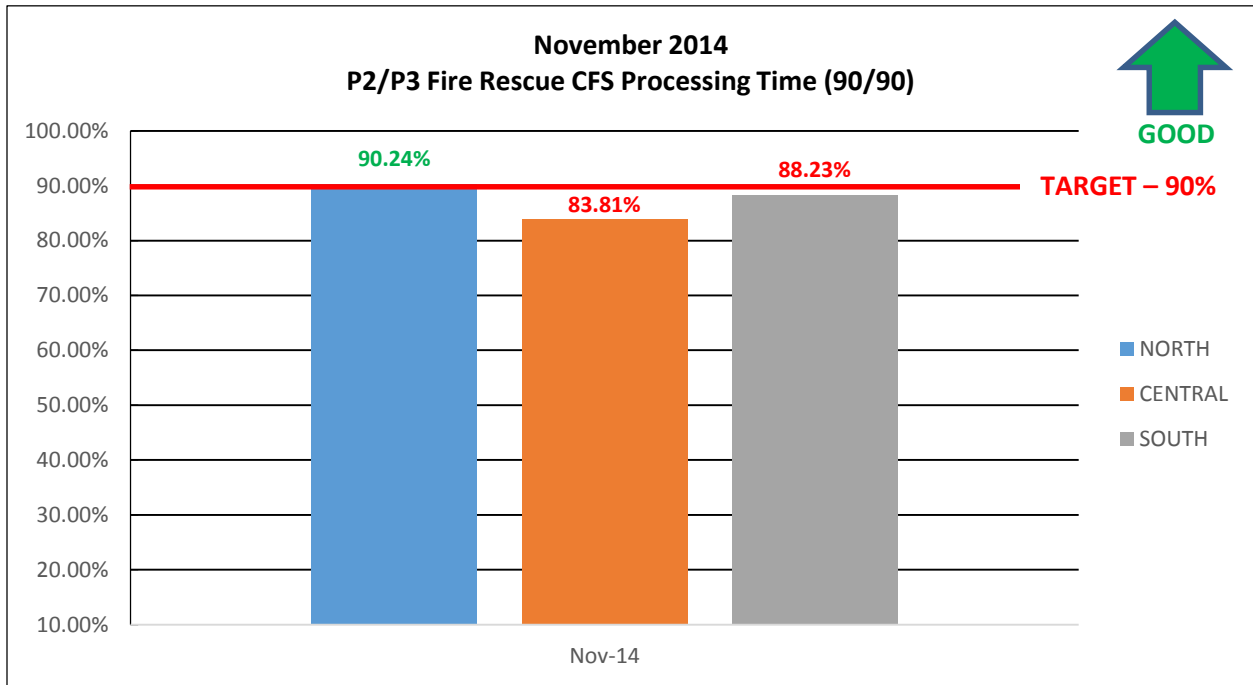


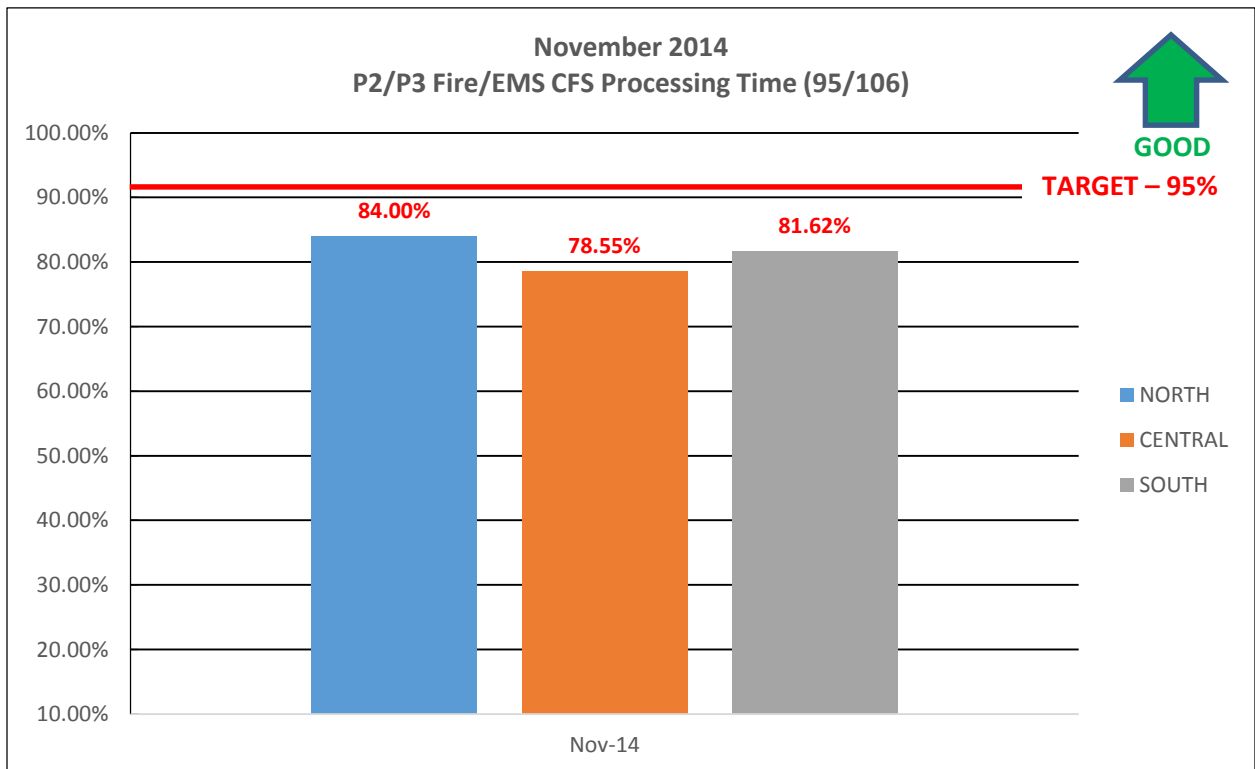
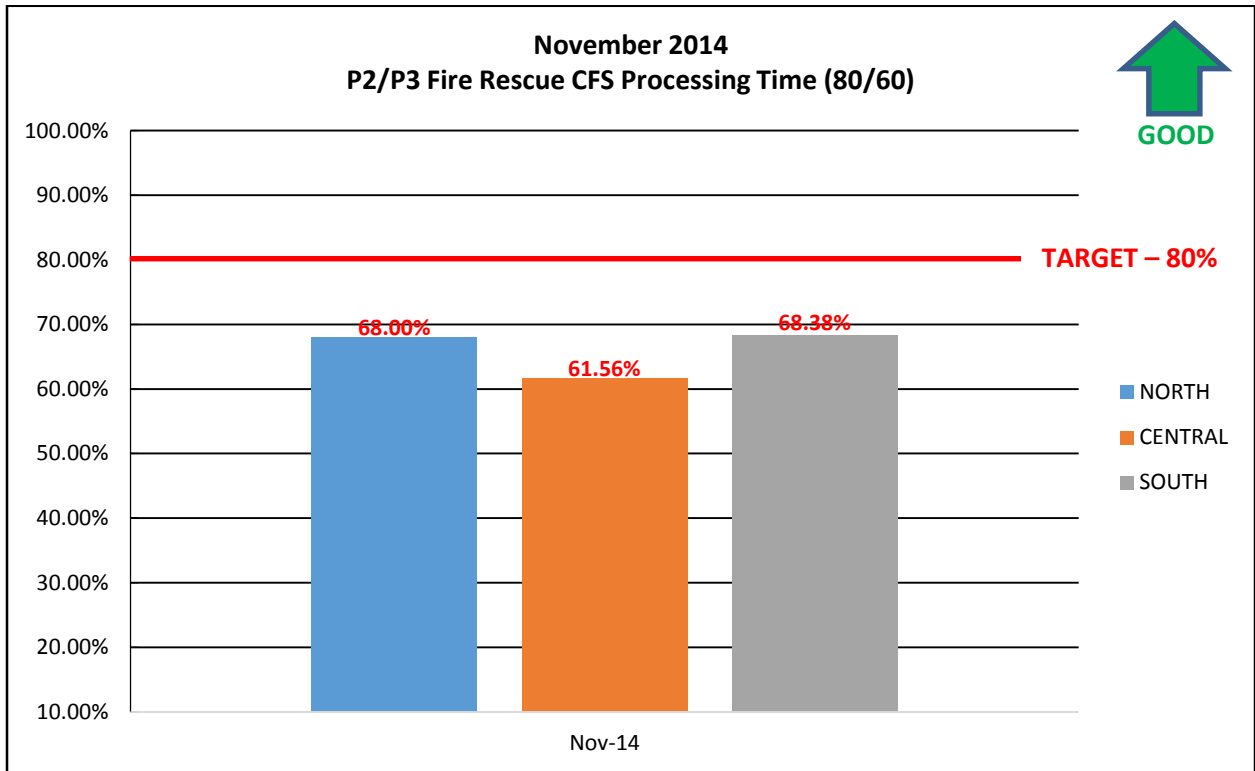
P1 Alarm Call Specific

Calls received from Alarm Monitoring Companies.

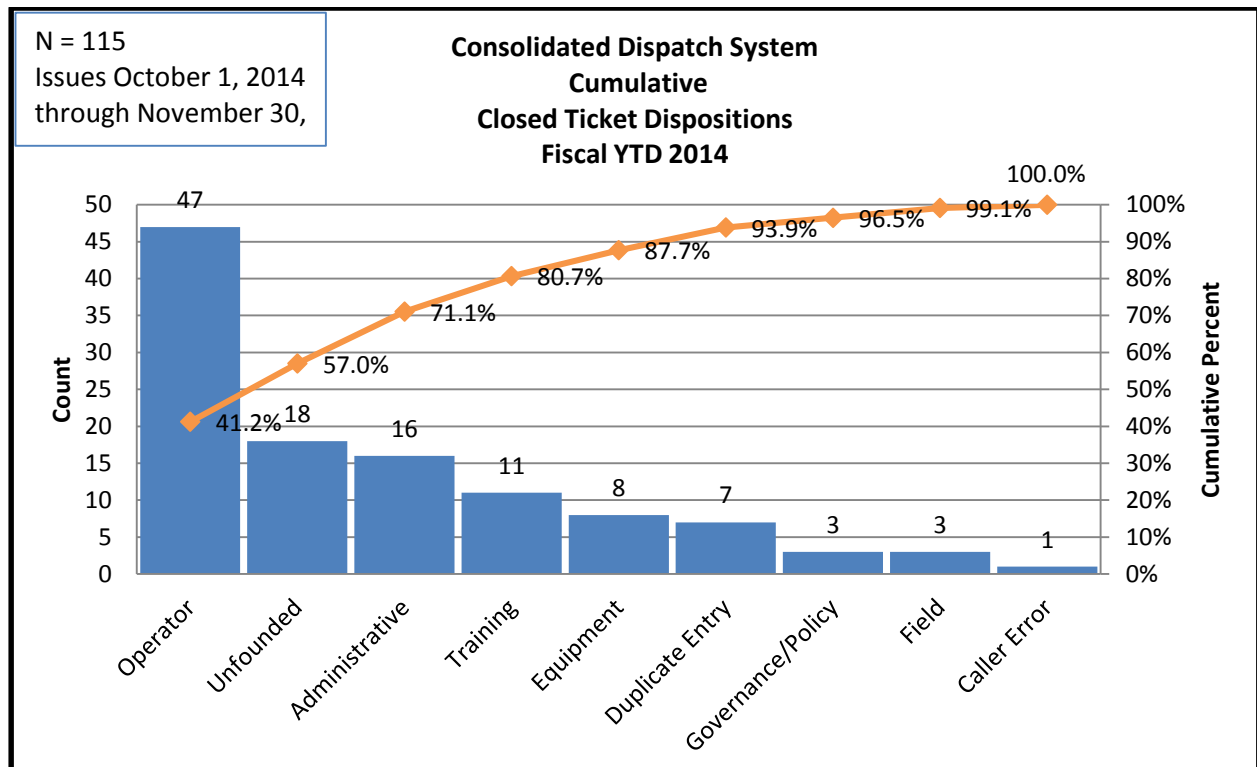
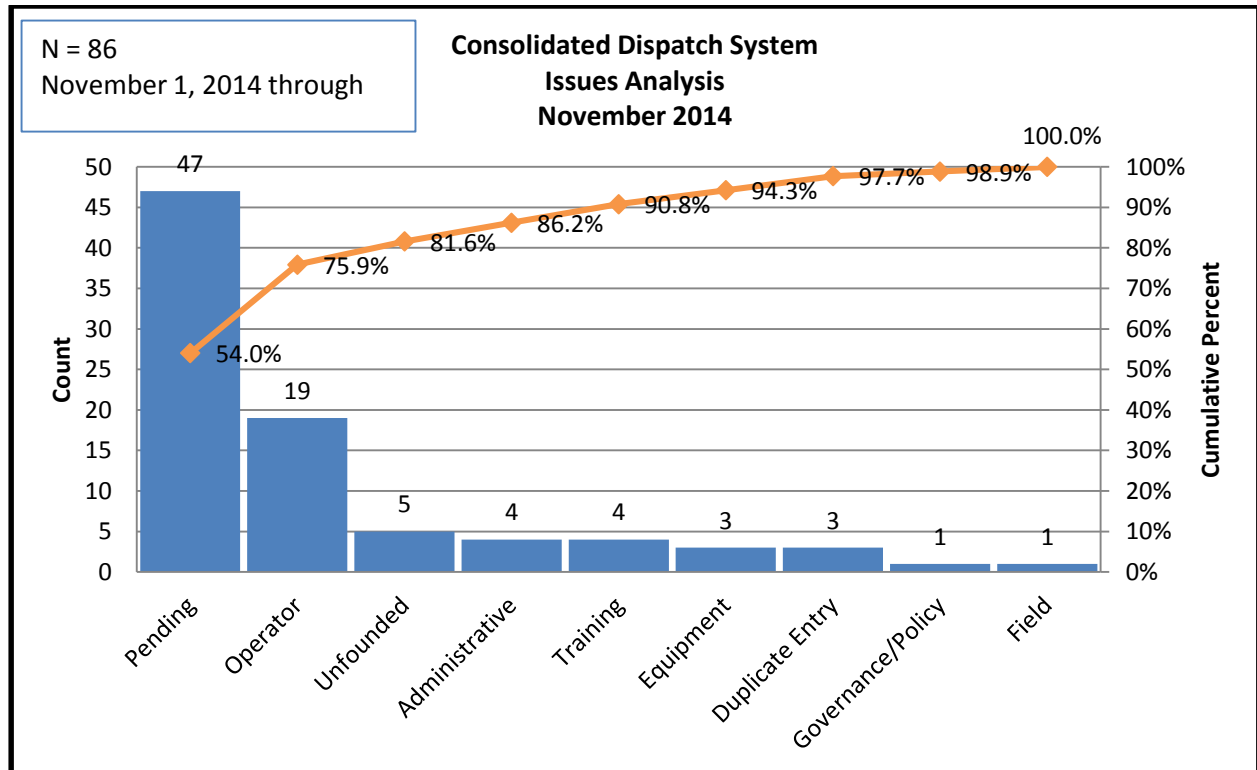


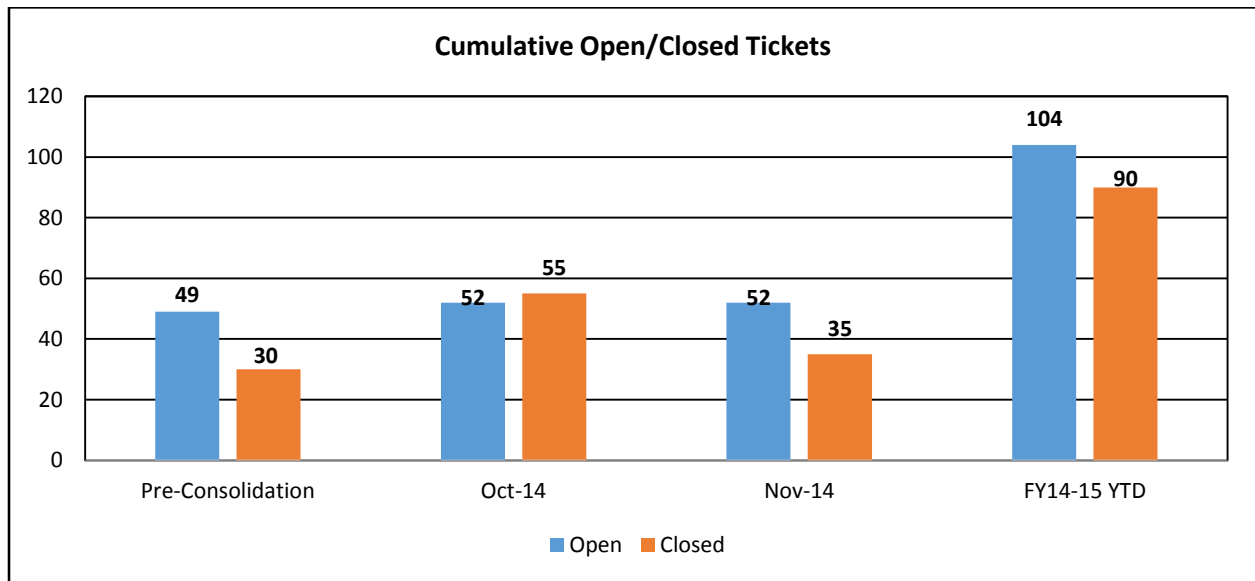
P2/P3 Fire Rescue CFS Processing Time - Calls received on E-911 lines only





Operator Reviews/Process Improvement/Opportunities





Dispositions:

- Pending - investigation still pending
- Operator - identified by ORCAT, BSO and submitting agency as an error made by a call taker/dispatcher
- Unfounded - identified by ORCAT, BSO and submitting agency as an unfounded concern
- Administrative - non-operational issue raised by BSO Regional Communications such as broken chairs, arm rests etc.
- Training - identified by ORCAT, BSO and submitting agency as a training opportunity for all call takers and/or dispatchers
- Equipment - identified by ORCAT, BSO and the submitting agency as a technical issue
- Duplicate Entry - incident submitted more than once
- Governance/Policy - issues raised by submitting agency that results in a potential change in governance and/or policies/procedures of the Regional Consolidated Communications System.
- Field - identified by ORCAT, BSO and the submitting agency as an error made by personnel in the field

- Caller Error: identified by ORCAT, BSO and the submitting agency as an error made by the individual calling the dispatch center

Glossary

Alarm call:	call received from alarm monitoring company
Busy Hour:	time frame indicating the hour during the month where the greatest number of calls were received in the dispatch center
Call for Service (CFS):	when fire rescue/law enforcement personnel are dispatched as the result of a call into the dispatch center.
Daily Busy Hour:	the hour each day that corresponds with the busiest hour in the month
Emergency Call:	call received on 911 trunk
Non-emergency call:	call received on County-wide non-emergency number 954-764-HELP (may result in a call for service request)
Public Safety Answering Point:	A facility in which 911 calls are received
VOIP call:	call received from an internet telephone provider such as Vonage
Wireless call:	call received from a cellular telephone
Wireline call:	call received from a landline telephone