

COUNTY OF ROANOKE FIRE DEPARTMENT STAFFING

Board of Supervisors Work Session
October 25, 2016

Work Session Agenda

- Current Fire Department Staffing
- Factors Impacting Minimum Staffing Levels
- Minimum Staffing Requirements
- Long Range Planning and Potential Solutions
- Fiscal Analysis of Budgetary Impact

Overview of Current Staffing Issues

- Increase in Calls for Fire and Rescue Services
- Decline in Number of Volunteers
- Career Staffing not at Minimum Levels
- Increase in Over-Time Costs
- Equipment Taken Out of Service

Current Approved Staffing Levels

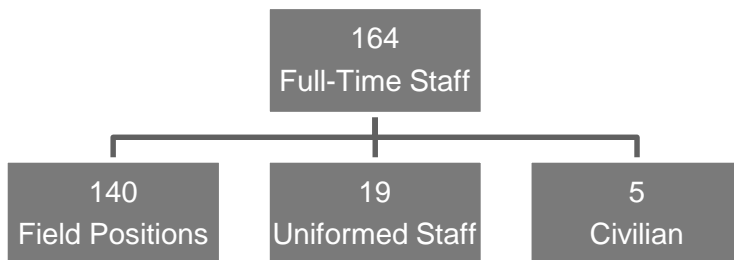
Department Utilizes Two Shifts:

12 Hour, Monday-Friday: 6AM-6PM

- Requires 56 FT Field Positions for:
 - 8 Fire Engines
 - 4 Ladder Trucks
 - 10 ALS Ambulances

24 Hours, 7 Days a Week

- Requires 36 FT Field Positions for
 - 5 Fire Engines
 - 1 Ladder Truck
 - 9 ALS Ambulances



Station	Current Staff
#1 North County	18
#2 Vinton ¹	22
#3 Cave Spring	14
#4 Catawba	3
#5 Hollins	27
#6 Mount Pleasant	6
# 7 Clearbrook	18
#8 Bent Mountain	3
#9 Fort Lewis	17
#10 Masons Cove	11
#11 Back Creek	12
#12 Read Mountain	PT

¹ Vinton Station is staffed jointly by 11 Roanoke County Field positions and 11 Town of Vinton positions.

Minimum Staffing Issues

Current approved staffing levels do not meet minimum staffing level requirements.

- Requirements are determined by staff needed to operate each apparatus.
- Field personnel on leave for various reasons including FMLA, Military Leave, Worker's Compensation, and FLP.
- Positions added in the past did not meet minimum staffing levels.
- Both Fire and Rescue incidents have steadily increased.

Minimum Staffing Issues Equipment Taken Out of Service

- Placing two Ladder Trucks out of service allowed officials to avoid making daily decisions of which equipment to staff.
- Ladder trucks at Cave Spring and Hollins were out of service between March and May 2016.
- After recruits completed the academy, the Fire Department had enough staff to place the equipment back in service.

Local Media Coverage:

- *“Firefighter Staffing Issues Present Challenges to Operating Vehicle Units in Roanoke County”*, **Roanoke Times**, April 5, 2016
- *“Roanoke County Ladder Trucks Return to Service with New Hires”*, **Roanoke Times**, May 31, 2016

Current Minimum Service Level Requirements

Department needs 11 (10.4) positions to fully staff all apparatuses in use.

- 9 Firefighter/Paramedic on 24 HR Shift
- 2 Firefighter/Paramedic on 12 HR Shift

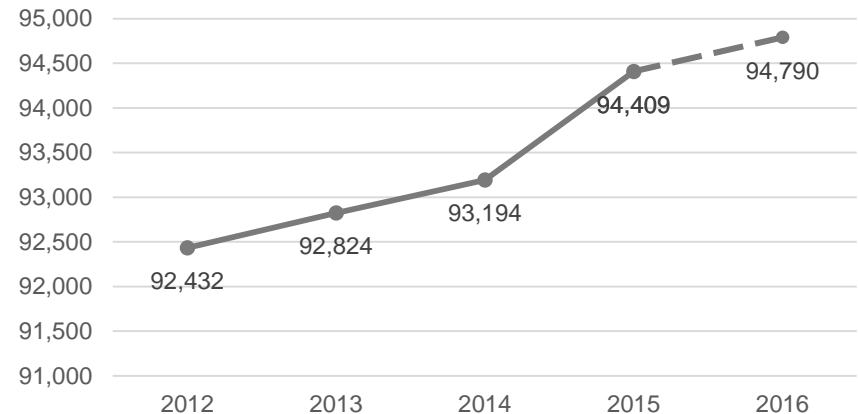
Station	12 HR Ambulance	12 HR Engine	12 HR Ladder	24 HR Ambulance	24 HR Engine	24 HR Ladder	Total FTE
1 - North County				7.25	10.87		18.12
2 - Vinton	Staffed from Ladder		4.73	7.25	10.87		22.85
3 - Cave Spring		4.73	4.73	7.25			16.35
4 - Catawba	2.91						2.91
5 - Hollins				7.25	10.87	10.87	28.99
6 - Mt. Pleasant				7.25			7.25
7 - Clearbrook				7.25	10.87		18.12
8 - Bent Mountain	Staffed from #11						0
9 - Fort Lewis		4.73	4.73	7.25			16.71
10 - Masons Cove		4.73		7.25			11.98
11 - Back Creek				7.25	10.87		18.12
12 - Read Mountain				Co-Staffed with Botetourt			0
Total Minimum Required							161.4
Approved Field FTE							151
Minimum Staffing Shortage							10.4

Factors Impacting Minimum Staffing

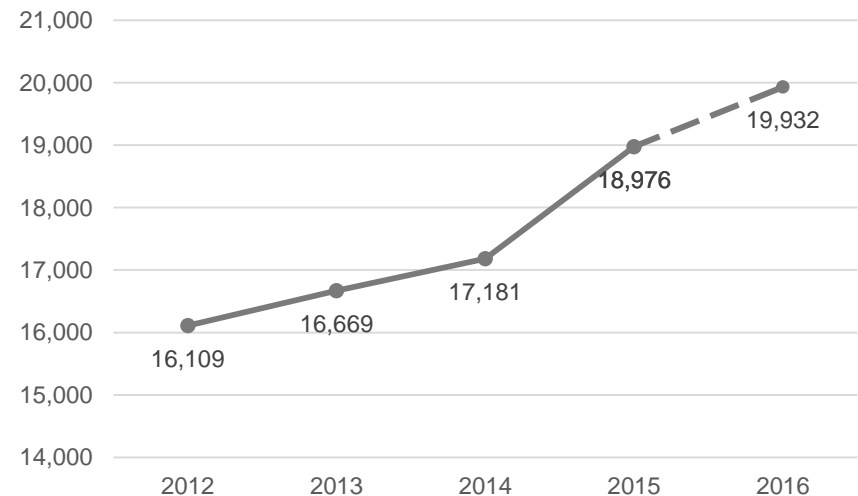
Population Changes in Roanoke County

- Overall population in Roanoke County has increased by 2.1% since 2012.
- Population over the age of 65 in the County has increased by 17.8% since 2012 and is expected to rise.
- National data shows 38.3% of all ambulance transports are for patients 65 and over.

Roanoke County Population



Roanoke County Population over 65



Population Sources:

<http://www.yesroanoke.com/index.aspx?nid=203>

<http://www.census.gov/quickfacts/table/PST045215/51161>

Ambulance Transports Source:

<http://www.cdc.gov/nchs/products/databriefs/db130.htm>

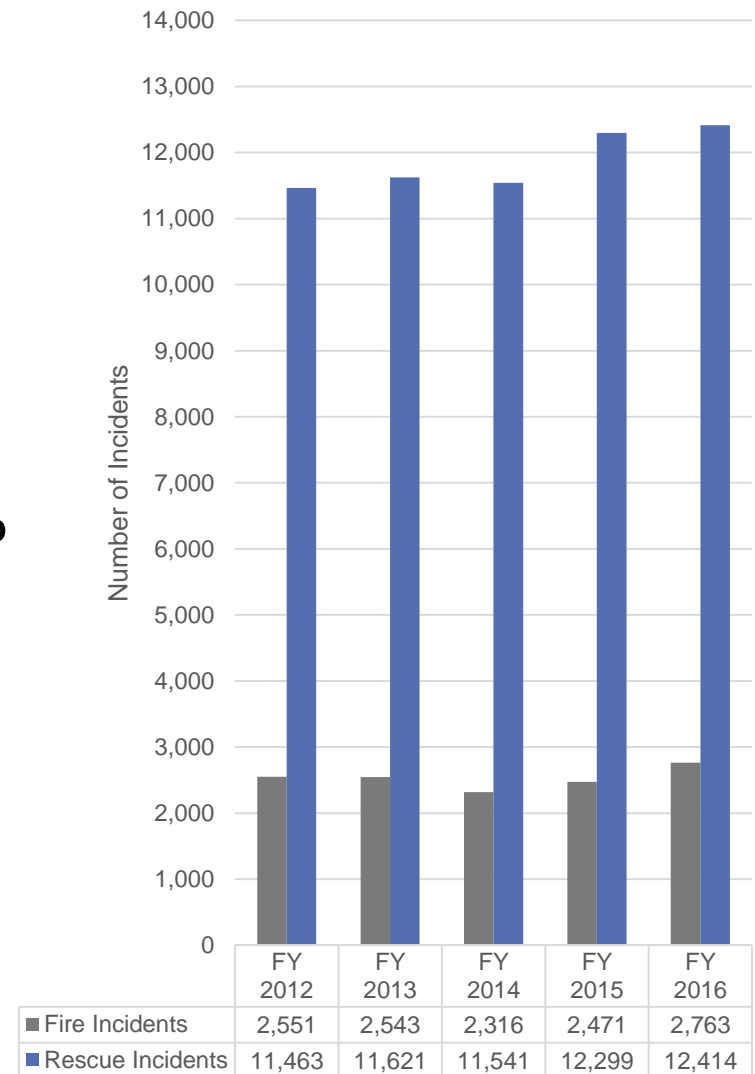
2016 Projections are based on the average difference between prior years.

Factors Impacting Minimum Staffing

Fire & Rescue Incidents

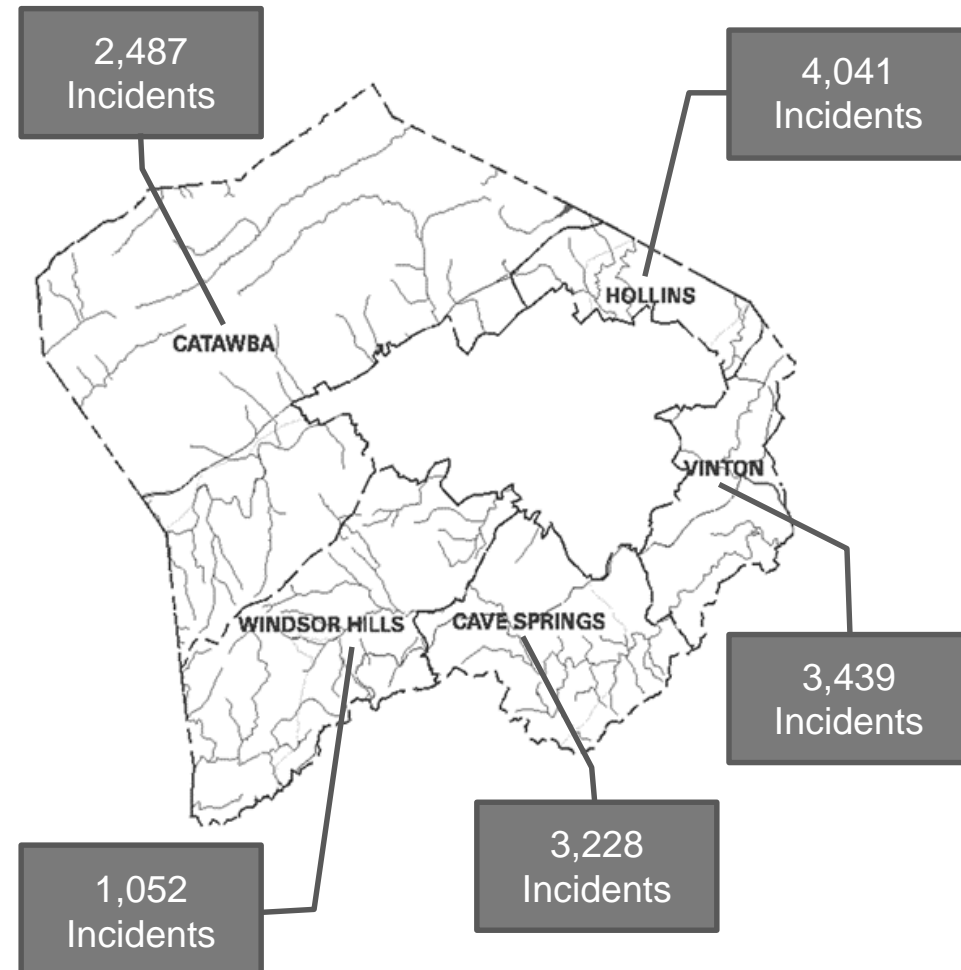
- Incidents increased by 8.3% in the past 5 years.
- Three stations responded to 51.3% of incidents.
- Five stations responded to 75.5% of incidents.

Station Name	FY 16 Incidents	Percentage of Total
Station #3 Cave Spring	3,135	20.7%
Station #2 Vinton	2,354	15.5%
Station #5 Hollins	2,290	15.1%
Station #9 Fort Lewis	1,920	12.7%
Station #1 North County	1,751	11.5%



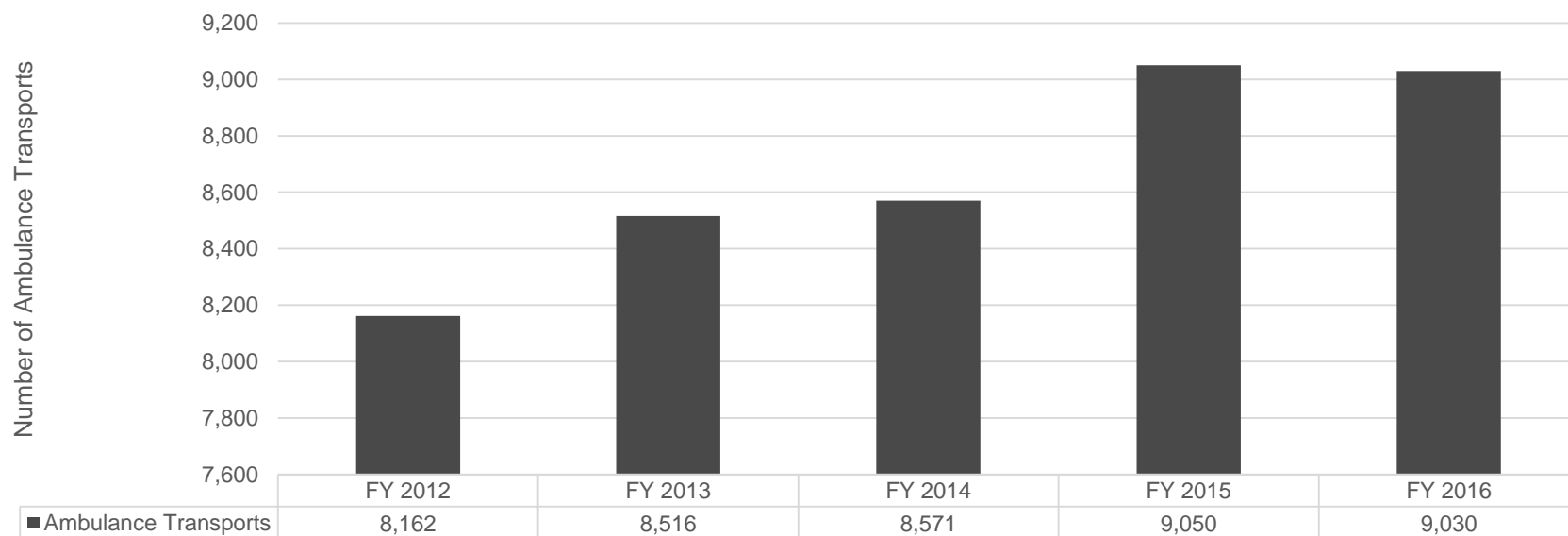
Factors Impacting Minimum Staffing Fire & Rescue Incidents and Districts

Station Name	FY2016 Incidents	Incident Percentage	Population Percentage
North County	1,751	11.54%	7.1%
Vinton	2,354	15.51%	14.5%
Cave Spring	3,135	20.66%	29.9%
Catawba	202	1.33%	1.5%
Hollins	2,290	15.09%	14.4%
Mount Pleasant	470	3.10%	4.2%
Clearbrook	739	4.87%	5.5%
Bent Mountain	142	0.94%	2.1%
Fort Lewis	1,920	12.65%	12.0%
Masons Cove	365	2.40%	1.9%
Back Creek	264	1.74%	0.9%
Read Mountain	615	4.05%	5.9%
Mutual Aid/ Out of County	930	6.13%	
Total	15,177	100%	100.0%



Factors Impacting Minimum Staffing Ambulance Transports

- Roanoke County ambulance transports increased by 9.6% since 2012.
- Nationally, transports increased by 55% between 2002 and 2011.¹

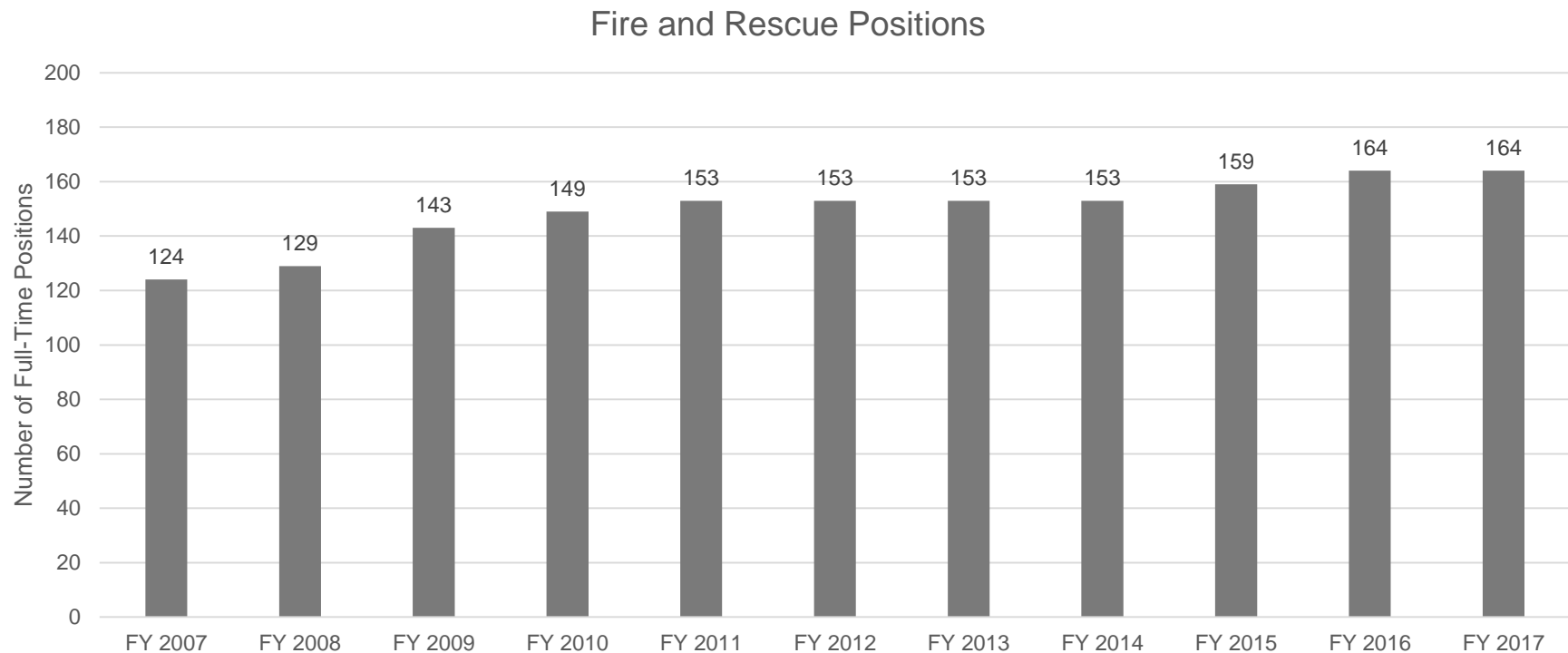


¹ Source: Office of the Inspector General, *Utilization of Medicare Ambulance Transports 2002-2011*, September 2013
<https://oig.hhs.gov/oei/reports/oei-09-12-00350.pdf>

Factors Impacting Minimum Staffing

Career Staffing Trends

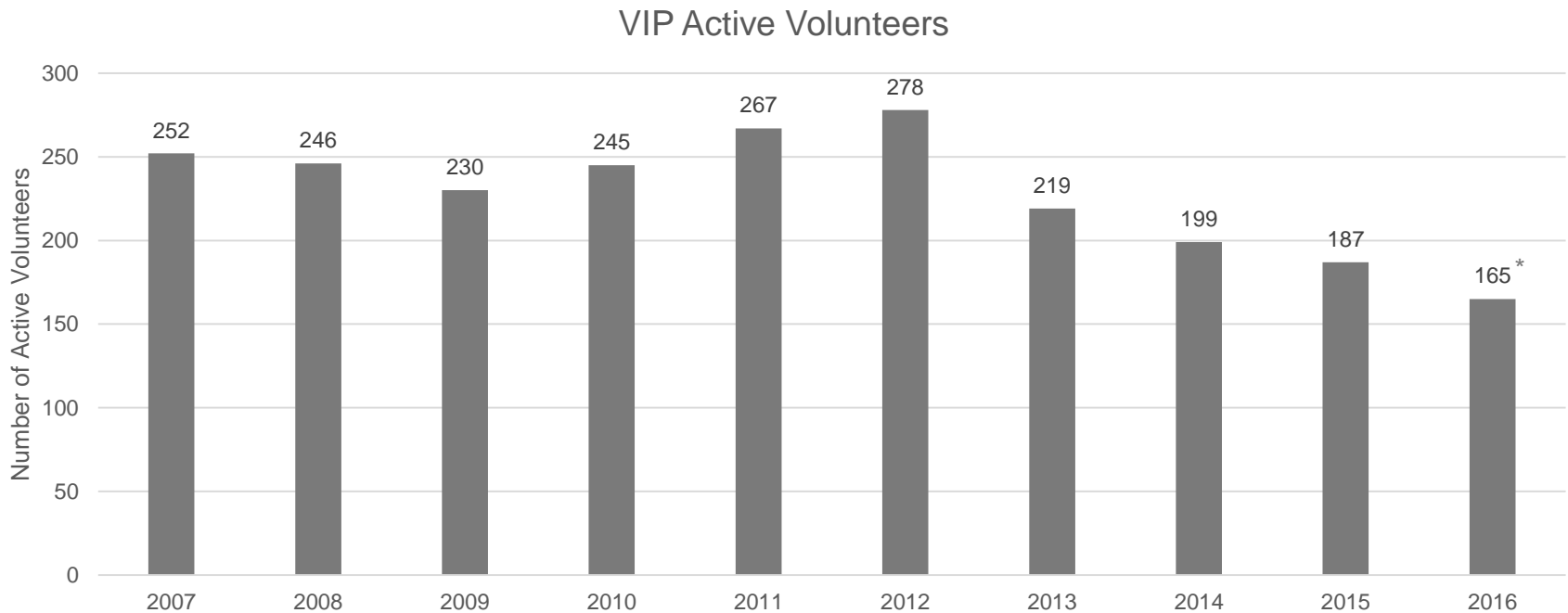
- Increased 23.4% between FY 2007 through FY 2011
- Increased **6.7%** between FY 2012 through FY 2017



Factors Impacting Minimum Staffing

Volunteer Staffing Trends

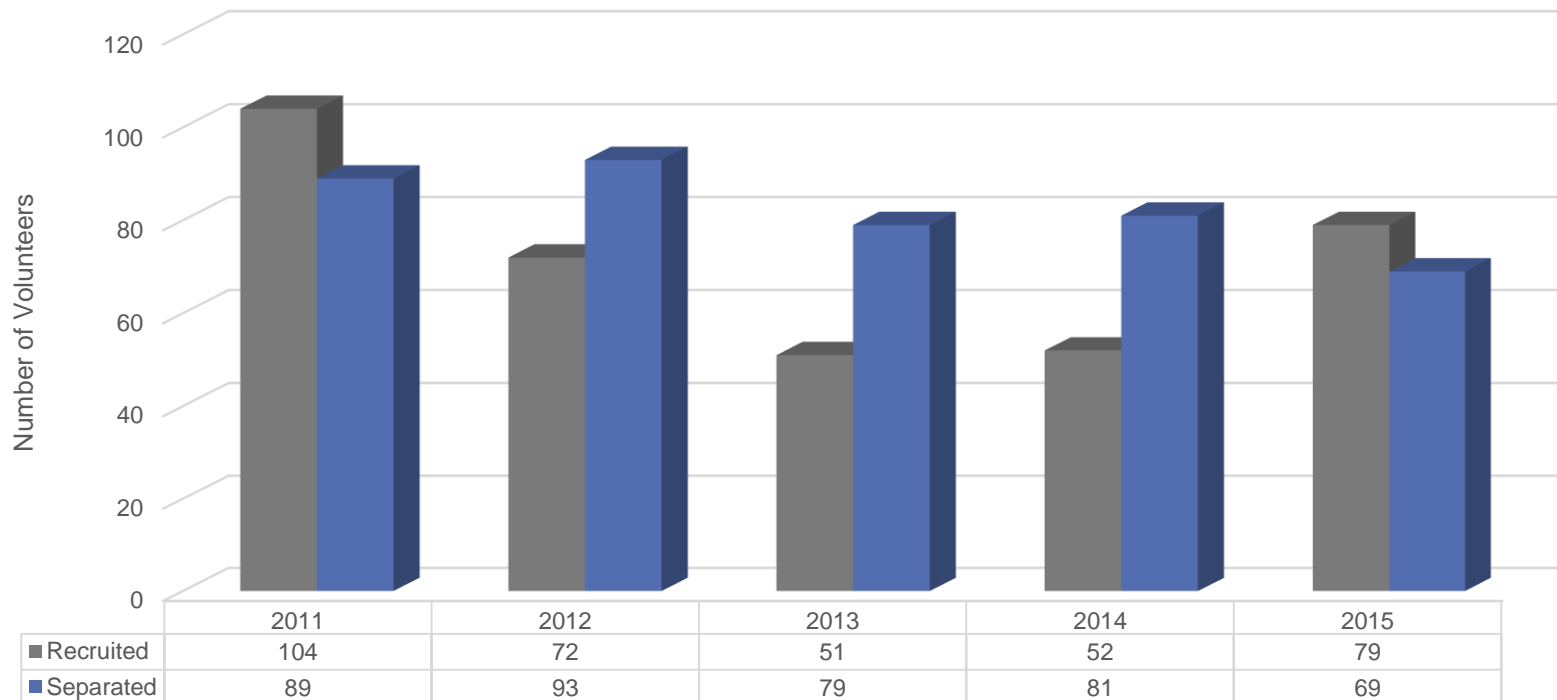
- Active Volunteers have Decreased 34.5% since 2007
 - 5.9% Increase between 2007 through 2011
 - **40.6%** Decrease between 2012 through 2017



*VIP Active Volunteers for 2016 is an estimate provided by the Fire Department since positions are counted by Calendar Year.

Factors Impacting Minimum Staffing Volunteers Recruited vs. Separated Volunteers

- Nationally, volunteer firefighters decreased since 2007.¹
- Department experiencing increases in retiring volunteers.
- Training and requirements can be difficult to maintain.

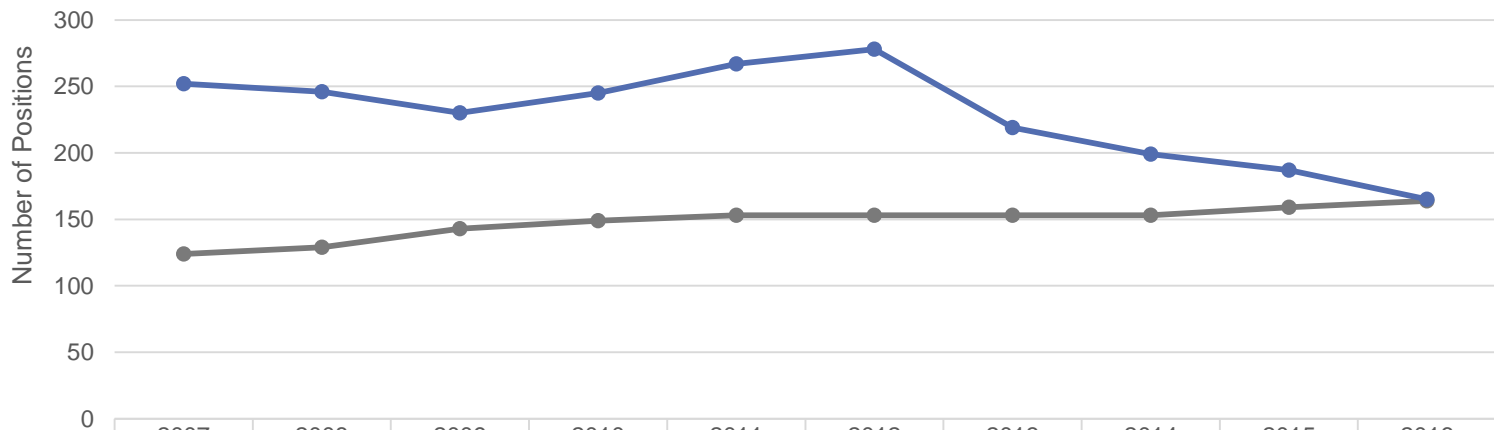


¹ Source: National Volunteer Fire Council, *Volunteer Fire Service Fact Sheet*, February 2016
<http://www.nvfc.org/wp-content/uploads/2016/02/2016-Fire-Service-Fact-Sheet.pdf>

Factors Impacting Minimum Staffing

Overall Staffing Trends

- Volunteers supplement career staff enabling more swift and aggressive responses to fire and rescue calls.
- With decreased active volunteers, more career staff are needed to proceed with advanced responses. ¹



—● Fire and Rescue Positions
 (By Fiscal Year)
—● VIP Active Volunteers
 (By Calendar Year)

¹ Sources: NFPA (National Fire Protection Association), *Fire Protection Handbook*, 2008, 20th Edition, (2:12), Quincy, Mass. USFA, FEMA, "Historical Overview," June 2008, usfa.dhs.gov/fireservice/fatalities/statistics/history.shtm/. International Association of Fire Chiefs, "IAFC 2005 Issues Assessment Survey," December 2005

Potential Solutions

Ways to Achieve Fire Department Minimum Staffing

Personnel & Funding Options

- Add funding for career staffing including considering multi-year phased approach
- Increase efforts to recruit and retain Volunteers
- Continue to apply for SAFER grants to offset position costs
- Adjust/increase ambulance fees to offset increased costs – dependent on Medicare increase
- Adjust/decrease service levels to meet staffing levels

Long Range Planning

- Increase of calls for certain stations will require expanding levels of service to meet demand.
- Expanding from 12 hour to 24 hour shifts will increase staffing required to operate various apparatuses.
- Experienced volunteers retire from service with no immediate replacements.

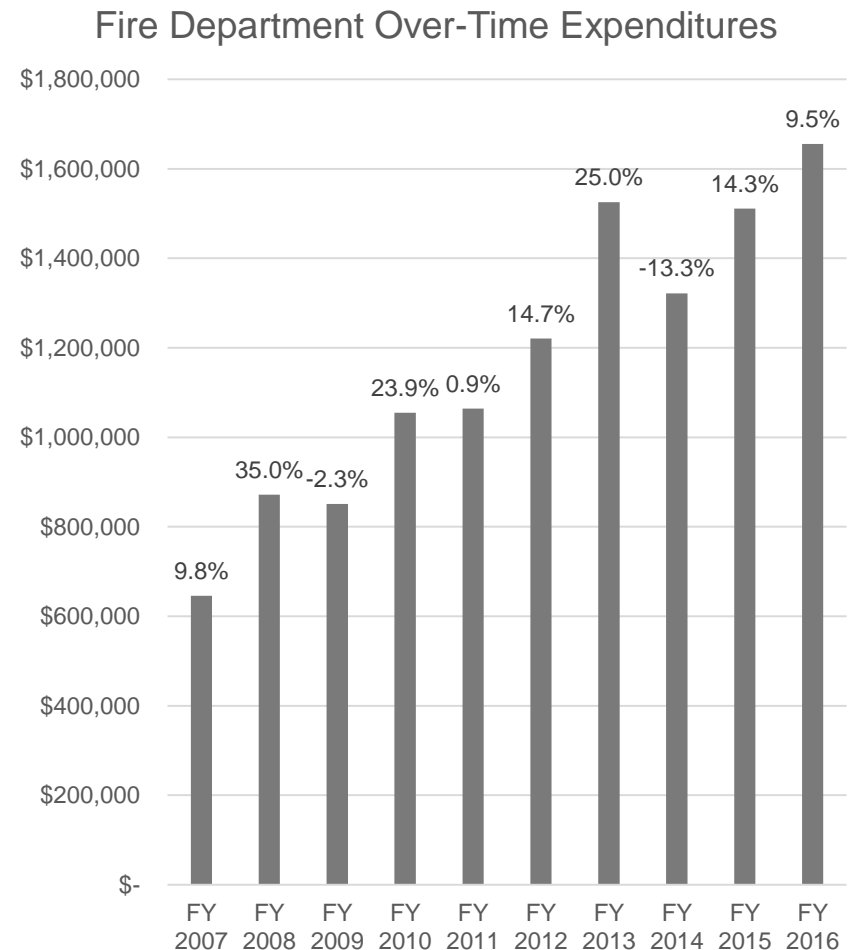
Future Needs:

Fiscal Year	Positions	Units Staffed	Stations
2018-2020	13	24/5 Engine	Cave Spring, Fort Lewis, Mt. Pleasant
2021-2023	14	24/7 Ladder 24/7 Engine	Vinton, Cave Spring Back Creek
2024-2026	12	24/7 Ladder 24/7 Engine	Fort Lewis, Masons Cove Cave Spring, Masons Cove

Fiscal Analysis

Over-Time Cost Trends

- Over-time costs have increased by **156.4%** since 2007.
- Staff are working more over-time to meet service level demands.
- Frequent overtime can cause stress and chronic fatigue and creates an increased risk of injury and illness.¹



¹ Source: Economic Policy Institute, 2002: "Time after Time: Mandatory Overtime in the US Economy"
http://www.epi.org/publication/briefingpapers_bp120/

Fiscal Analysis

Minimum Staffing Level Budget Impact

- Add 11 (10.4) Firefighter/Paramedic positions to meet minimum staffing needs.
- Addition of staff could reduce over-time significantly, yielding a lower financial impact.

First Year Cost per Firefighter/Paramedic	
Salary (Grade 23)	\$39,513
Benefits	\$14,583
Scheduled Over-Time	\$4,000
Medical Exams	\$800
Protective Clothing	\$3,500
TOTAL COST	\$62,396

	Year 1	Year 2	Year 3	Year 4	Year 5
Cost for 11 Firefighter/Paramedic Positions	\$686,356	\$653,487	\$666,524	\$679,822	\$693,385
Projected Over-Time Reduction	\$(411,111)	\$(419,333)	\$(427,720)	\$(436,274)	\$(445,000)
Net Position Cost	\$275,245	\$234,154	\$238,804	\$243,547	\$248,385

* Over-time reduction based on analysis completed by the Fire Department by reviewing over-time actuals.

Next Steps

- No Board Action is currently required.
- Fire Department Staffing Levels will be prioritized during the FY 2018 Budget Development Process.
- County Administrator to present Proposed FY 2017-2018 Operating Budget on March 14, 2016.

Questions and Comments