2012 Annual Report

TOWN OF WILKESBORO

FIRE DEPARTMENT

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Message from Chief of Department

It is my pleasure to submit to you the Town of Wilkesboro Fire Department 2012 year-end report. The report includes an in-depth analysis of all aspects of the department. Below is a brief synopsis of the report. Two significant purchases include acquiring the 2006 Sutphen Fire Engine in April of 2012. The fire engine was a badly needed item and is performing well since putting it in service. The other significant purchase was a "Cloud" based information management system called ACS Firehouse. The software allows us to store and maintain records dealing with personnel information, training, incident reporting, pre-incident surveys, fire inspections, hydrant, and water supply. The software also allows us to analyze information such as response patterns and times, personnel response, etc. The town was divided into eight (8) zones to track incident types, number of incidents, response times, and property loss in specific geographic areas of the town. The obtained information will give us the ability to make sound decisions based on historical data, when regarding the department.

This message continues and touches on the following aspects of the department: Membership performance, Public Education / prevention programs, and Incident responses.

Regarding membership performance, we processed approximately twenty (20) applications and obtained eleven (11) new members while losing four (4) members for various reasons, including relocation and loss of interest. In October, Matt Guffey was hired to serve as Recruitment / Retention Coordinator for the department. Mr. Guffey has been working to develop programs and secure items to assist with recruitment efforts.

For the year 2012, members obtained a total of 6,468.25 hours of training. The total training hours consisted of 2,679.25 hours of daily shift training for full-time and duty-time personnel and 3,789 hours of Thursday night departmental training, out-of-town schools and conferences, and other agency / department provided training. The average member obtained 140.61 hours of training.

On March 1, 2012, we began a duty-time program consisting of day, evening, and night coverage. The program is funded through the 2011 FEMA SAFER – Recruitment / Retention grant. The program was designed to have three shifts consisting of a Day Shift from 8 a.m. to 6 p.m., Evening Shift from 6 p.m. to 10 p.m., and Night Shift from 10 p.m. to 8 a.m. The use of duty time personnel has allowed the members to better understand and be included in the day-to-day activities consisting of daily and weekly apparatus inspections, daily facilities cleaning and maintenance, hydrant testing, hose testing, public education programs, and many other activities. The engineers can then conduct fire inspections while day to day activities are performed by the duty-time personnel. Along with the importance of day-to-day activities, the duty-time personnel have the opportunity to spend valuable time training and responding to incidents. After the daily and weekly apparatus inspection, a variety of activities begin. Items such as fire hydrant testing are conducted twice a year for 385 town-owned fire hydrants. Fire hose testing of 15,425 feet of various sizes of fire hose is also conducted at least once a year.

Regarding public education / prevention, on-duty staff and retired members conducted a total of nineteen (19) public education programs to various age groups. We reached 2,263 people by hands-on educational classes or materials given away. After extensive research, we determined the Town has approximately 579 different fire inspections to be conducted at various times. During 2012, the staff spent a total of 145.33 hours conducting 155 fire inspections. The hours do not count research done on fire code violations, re-inspection trips, and records entry.

Regarding incident responses, the average "emergency mode" response time to incidents located in the town limits was 4 minutes-2 seconds (4:02). Response time was decreased by one minute-five seconds (1:05) while incident volume increased by approximately 53% over the 2006 - 2008 averages. Incident types we responded to consisted of 773 incidents lasting a combined 381 hours. It is important to note that 73% of our responses were to businesses / government entities / health-care providers / not-for-profit organizations. Five hundred forty-five (545), or 70%, were medical in nature, sixty-four (64), or 8%,were motor vehicle accidents with or without injuries / general cleanup, and one hundred sixty-four 164, or 22%, were fire-related calls. The number one fire-related incident was fire alarm activation with a total of fifty-seven (57) reports. We responded to a total of thirteen (13) structural-related fires. The average member responded to 17.79% of 164 incidents.

Fire loss is one measure of our performance. We responded to eight (8) incidents in which property damage was reported: one (1) house fire, three (3) vehicle fires, two (2) mobile home fires, one (1) building fire, and one (1) apartment fire. The total value of these properties is $747,460. We recorded a total loss of $86,800. We saved approximately 88% of the property to which we responded. Upon investigation of the seven (7) structural-related fire incidents inside the town limits, improper cooking was identified as the number one cause. Other causes included arson, debris burning, power lines arcing, and smoking in bed.

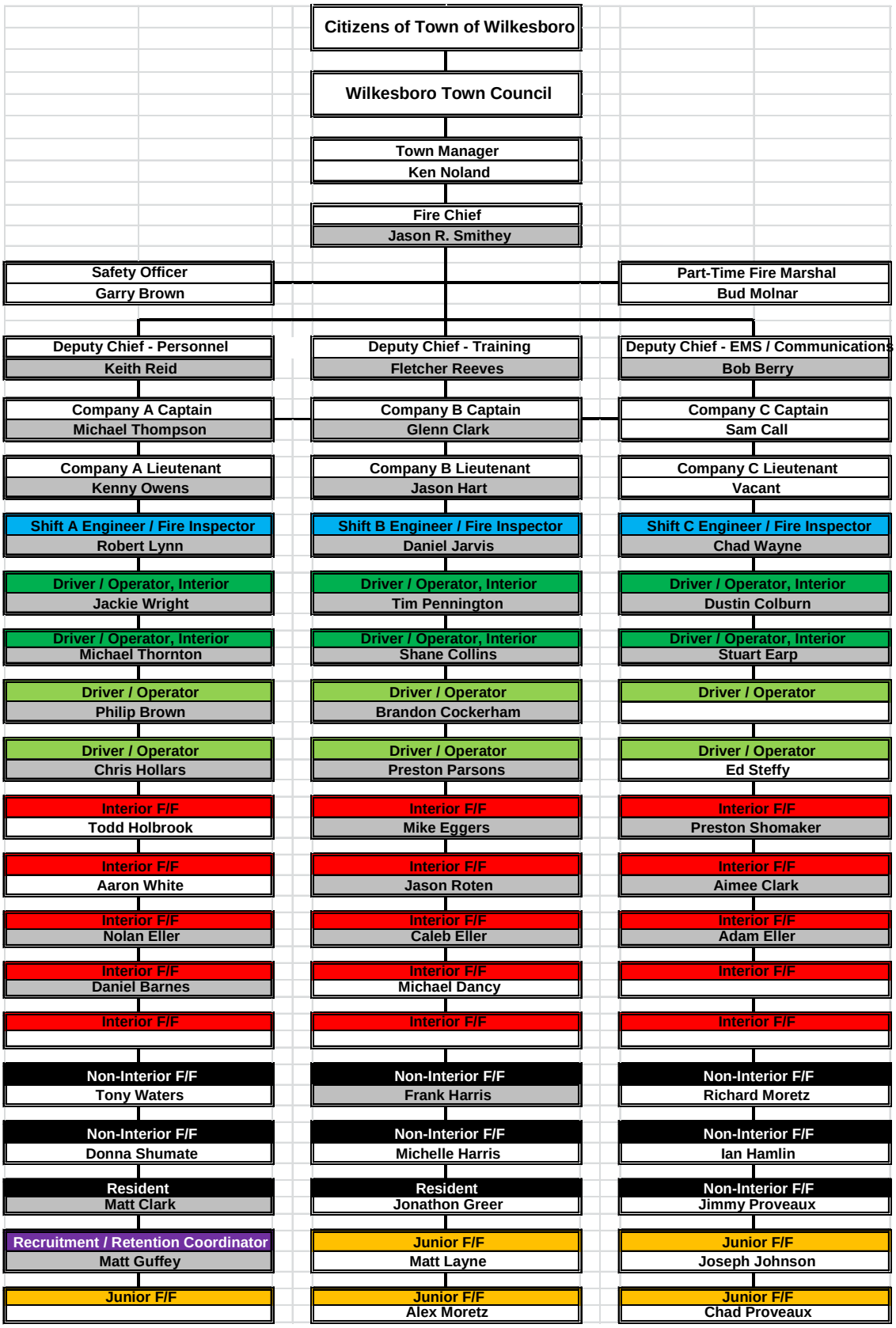
I encourage you to continue to further read the report for an in-depth analysis of the department. Lastly, I would like to say thank you for your dedication to the department and the communities it serves. I consider it a great privilege to be able to serve the firefighters, officers, town manager, town council and citizens of the Town of Wilkesboro.

Sincerely,

Jason R. Smithey

Jason R. Smithey, Chief

2012 Organizational Chart



In 2012, the department began with a total strength of thirty-four (34) paid-on-call firefighters, four (4) full-time staff, one (1) resident firefighter, and four (4) junior firefighters for a total strength of forty-three (43) firefighters. Once we determined the amount of membership needed to implement our SAFER – Recruitment / Retention grant objectives, we began a word-of-mouth campaign meet the objectives we had established. The department formed a new application five-step process consisting of a town application, physical ability test, background investigation, interview, and membership offer. During the year, we processed approximately twenty (20) applications and obtained eleven (11) new members. Eight (8) of the eleven (11) members had already obtained their firefighter and emergency medical technician certifications. During the year, the department lost four (4) members for various reasons, including relocation and loss of interest. The end of year brought a total strength of forty (40) paid-on-call firefighters, four (4) full-time staff, two (2) resident firefighters, and four (4) junior firefighters for a total strength of fifty (50) firefighters.

In October, Matt Guffey was hired to serve as Recruitment / Retention Coordinator for the department. Mr. Guffey has been working to secure items to assist recruitment efforts. In 2013, we are campaigning to acquire firefighters that live in town as well as those that will reside in the fire station. We will utilize door-to-door campaigns, information booths at the Open Air Market, various community events, and partnering with Wilkes Community and other surrounding colleges.

NEW MEMBERS PICTURED BELOW

Jonathon Greer serves as a resident firefighter. Firefighter Greer came to the department as a non-certified firefighter.

Michael Dancy serves as a firefighter. Firefighter Dancy came to the department as a non-certified firefighter.

Shane Collins serves as a firefighter / EMT. Firefighter Collins came to the department as a certified firefighter, emergency medical technician, and rescue technician.

Matt Guffey serves as a recruitment / retention coordinator. Firefighter Guffey came to the department as a certified firefighter, emergency medical technician, and fire investigator.

Adam Eller serves as a firefighter / EMT. Firefighter Eller came to the department as a certified firefighter and emergency medical technician.

Caleb Eller serves as a firefighter / EMT. Firefighter Eller came to the department as a certified firefighter and emergency medical technician.

Daniel Barnes serves as a firefighter / EMT. Firefighter Barnes came to the department as a non-certified firefighter and emergency medical technician.

Nolan Eller serves as a firefighter / EMT. Firefighter Eller came to the department as a certified firefighter, emergency medical technician, and rescue technician.

Michael Thornton serves as a firefighter / EMT. Firefighter Thornton came to the department as a certified firefighter, emergency medical technician, and rescue technician.

Jason Roten serves as a firefighter / EMT. Firefighter Roten came to the department as a certified firefighter and emergency medical technician.

TRAINING

A quality training program prepares us to provide service in a safe and efficient manner. Our training program is led by Deputy Chief Fletcher Reeves. Wilkesboro FD places great emphasis on two things: (1) being trained to do the job you are performing and (2) staying current with new methods. We do this with a mix of certification-based training and in-house practical drills. We emphasize nationally recognized training standards that are developed through research committees of the National Fire Protection Agency (NFPA). Our current emphasis includes areas of medical response, Firefighter I & II, Interior Firefighter, Rescue Technician, and Driver / Operator training.

Our current training standard is seventy-two (72) hours to maintain membership. For the year 2012, members obtained a total of 6,468.25 hours of training. The total training hours consisted of 2,679.25 hours of daily shift training for full-time and duty-time personnel and 3,789 hours of Thursday night departmental training, out-of-town schools and conferences, and other agency / department provided training. The average member obtained 140.61 hours of training. Eighteen (18) members of the department obtained more than the average number of training hours: eight (8) members with more than 200 hours; one (1) member with more than 300 hours, and one (1) member with more than 400 hours of training.

During 2012, our members worked hard to obtain a mix of certifications. The following members obtained the following certifications this past year:

Firefighter I & II - *Aimee Clark, Todd Holbrook, Kenny Owens, Preston Shomaker, Jackie Wright*

Emergency Medical Technician - *Aimee Clark, Jonathon Greer, Kenny Owens, Jackie Wright*

Medical Responder - *Mike Eggers, Frank Harris, Fletcher Reeves, Michael Thompson*

RescueTechnician - *Shane Collins*

Members are participating in a joint-training exercise at LP Roaring River. Participants included Roaring River VFD, Wilkes EMS, and Wilkes Rescue Squad.

Wilkesboro Fire Department Training Certifications

Position	Last	First	Medical	Interior	Firefighter 1 & 2	Rescue Technician	Fire Instructor	Fire Officer
Probationary FF	Barnes	Daniel	EMT - B					
Deputy Chief	Berry Jr.	Robert	EMT - B					
Safety Officer	Brown	Garry						
Non-Interior FF	Brown	Phillip	EMT - B					
Captain	Call	Sam						
Interior FF	Clark	Aimee	EMT - B					
Captain	Clark	Glenn	EMT - B					
Interior FF	Clark	Matthew	EMT - B					
Non-Interior FF	Cockerham	Brandon	EMT - B					
Interior FF	Colburn	Dustin	EMT - B					
Probationary FF	Collins	Shane	EMT - B					
Probationary FF	Dancy	Michael						
Interior FF	Earp	Thomas	County First Resp.					
Interior FF	Eggers	Michael	Medical Resp.					
Probationary FF	Eller	Adam	EMT - B					
Probationary FF	Eller	Caleb	EMT - B					
Probationary FF	Eller	Nolan	EMT - B					
Probationary FF	Greer	Jonathon						
Recruitment	Guffey	Matthew	EMT - B					
Non-Interior FF	Hamlin	Charles						
Non-Interior FF	Harris	Frank	Medical Resp.					
Non-Interior FF	Harris	Michelle						
Lieutenant	Hart	Jason	EMT - B					
Interior FF	Holbrook	Todd						
Non-Interior FF	Hollars	Chris	EMT - P					
FT Engineer	Jarvis	Daniel	EMT - B					
FT Engineer	Lynn, Jr	Robert	EMT - B					
Non-Interior FF	Moretz	Richard						
Lieutenant	Owens	Kenneth	EMT - B					
Non-Interior FF	Parsons	Preston	EMT - B					
Interior FF	Pennington	Timothy	EMT - P					
Non-Interior FF	Proveaux	Jimmy						
Deputy Chief	Reeves	George	Medical Resp.					
Deputy Chief	Reid	Keith	Medical Resp.					
Probationary FF	Roten	Jason	EMT - B					
Interior FF	Shomaker	Preston	EMT - B					
Non-Interior FF	Shumate	Donna						
Chief	Smithey	Jason	EMT - B					
Non-Interior FF	Steffy	Edward						
Captain	Thompson	Michael	Medical Resp.					
Probationary FF	Thornton	Michael	EMT - P					
Non-Interior FF	Waters	Tony						
FT Engineer	Wayne	Michael	Medical Resp.					
Interior FF	White	James						
Interior FF	Wright	Jacqueline	EMT - B					
		Total	32	29	25	7	6	1

INCIDENT MANPOWER RESPONSE

Manpower response reflects our ability to respond in a timely manner with the appropriate amount of manpower for the incident type. In 2012, we had an overall in-town emergency response time of 4.02 minutes. Response times will be further discussed later in the report. However, with a great response, comes the need for the appropriate amount of manpower to effectively mitigate the incident.

The statistics presented are a reflection of fire-related incidents only. Medical calls do not require a full departmental response. Therefore, the stats are for fire-related incidents only. In 2012, we had 164 fire-related incidents.

The average member responded to 17.79% of 164 incidents. We had thirteen (13) members who responded above the average response and 18 below the average.

The chart below contains the average number of firefighters responding to structural-related fire incidents and medical incidents. Incident manpower levels should be closely monitored not only for the above stated reasons but also for compliance to various National Fire Protection Agency (NFPA) and OSHA operational standards. NFPA 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments* states that a minimum of ten (10) firefighters must respond within 10 minutes, 80% of the time, for all structural fire –related responses. In 2012, we met the requirement 71% of the time; therefore, we are not in compliance with NFPA 1720.

A minimum of four (4) firefighters are required to begin fire suppression operations, a two-man entry team with a two-man standby team. NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program* and OSHA 1910.134 *Respiratory Protection Standard* addresses this issue. In 2012, we met the requirement 100% of the time; therefore, we met NFPA 1500 and OSHA.

North Carolina Office of State Fire Marshal Rural Response System requires a minimum of four (4) firefighters to respond to all structural-related incidents and fire alarm activations. Failure to meet this stated requirement can result in the loss of our Class 5 insurance rating. In 2012, we met the requirement 100% of the time.

(65) All Structural Related Fires	**Average of 14.29 Firefighters**
(4) Building Fires - In Town	*Average of 15.25 Firefighters*
(2) Mobile Home Fires - In Town	*Average of 14 Firefighters*
(1) Cooking Fire - In Town	*Average of 11 Firefighters*
(57) Fire Alarm Activations	*Average of 9 Firefighters*
(545) Medical Responses	**Average of 4.67 Firefighters**

Fire loss is one measure of our performance. We responded to eight (8) incidents in which property damage was reported: one (1) house fire, three (3) vehicle fires, two (2) mobile home fires, one (1) building fire, and one (1) apartment fire. The total value of these properties is $747,460. We recorded a total loss of $86,800. We saved approximately 88% of the property to which we responded.

Duty Time Program

On March 1, 2012, we began a duty-time program consisting of day, evening, and night coverage. The program is funded through the 2011 FEMA SAFER – Recruitment / Retention grant. The program was designed to have three shifts consisting of a Day Shift from 8 a.m. to 6 p.m., Evening Shift from 6 p.m. to 10 p.m., and Night Shift from 10 p.m. to 8 a.m. Day and Evening Shifts have three openings, each for persons wanting to do duty-time work. Night Shift has two openings, one for a duty-time firefighter and one for a resident firefighter. Currently, we have approximately 23 of the 50 members participating in various amounts of hours. Members are held to 80 hours per month with most working between 50 to 80 hours monthly.

The program has been very successful in providing opportunities for personnel to accumulate duty-time hours in the fire station. It has allowed us to create a pool of capable personnel to cover for the full-time engineers when they are on vacation or sick. This is beneficial by allowing the Town to reduce payroll expense for overtime pay for the engineers. The use of duty time personnel has allowed the members to better understand and be included in the day-to-day activities consisting of daily and weekly apparatus inspections, daily facilities cleaning and maintenance, hydrant testing, hose testing, public education programs, and many other activities. The engineers can then conduct fire inspections while day to day activities are performed by the duty-time personnel. Along with the importance of day-to-day activities, the duty-time personnel have the opportunity to spend valuable time training and responding to incidents.

The concept is a good use of funds from the financial aspect. The use of a set number of personnel to conduct day to day activities limits the amount of times we need the entire department to participate in an activity. In the past, annual hose testing would involve the entire department over a three to four night period. [4 nights x 3 hours x $7.50/hour x 25 firefighters = $2,250 vs. 4 days x 10 hours x $9.00/hour x 4 firefighters = $1,440] It takes four (4) shift personnel longer to complete the hose testing but they are performing other daily activities. They are also available for incident responses for the entire shift, and we gain valuable insurance grading points to help maintain or lower the current insurance grade (ISO). The same example could be applied to training. Approximately one-half (½) of the training time logged for personnel participating in the duty-time program was conducted while on shift; therefore, this greatly increased their knowledge base while not having to pay for the training as an individual activity.

FEBRUARY 2013 PART-TIME & NIGHT TIME MEDICAL SCHEDULE

					Friday	Saturday
					1	2
					Chad Wayne	Robert Lynn
					Frank Harris	Aimee Clark
					Chris Hollars	Jason Roten
					Michael Thornton	
					Jonathon Greer	Jason Roten
					Caleb Eller	Jonathon Greer
						Aimee Clark
					Jonathon Greer	
					Caleb Eller	Jonathon Greer

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3	4	5	6	7	8	9
Chad Wayne	Robert Lynn	Daniel Jarvis	Chad Wayne	Robert Lynn	Daniel Jarvis	Chad Wayne
Jason Hart	Michael Thornton	Preston Parsons	Shane Collins	Jackie Wright	Preston Parsons	Jason Roten
Daniel Barnes	Adam Eller	Jackie Wright	Nolan Eller	Adam Eller	Chris Hollars	Caleb Eller
Jason Roten	Matt Clark	Shane Collins	Daniel Barnes	Michael Thornton	Shane Collins	Ian Hamlin
Jason Hart	Fletcher Reeves	Stuart Earp	Dustin Colburn	Stuart Earp	Michael Dancy	Kenny Owens
Daniel Barnes	Aaron White	Preston Shomaker	Jonathon Greer	Aaron White	Preston Shomaker	Jonathon Greer
Jason Roten	Aimee Clark	Matt Clark	Kenny Owens		Matt Clark	
Jonathon Greer		Matt Clark	Jonathon Greer		Matt Clark	Jonathon Greer
Todd Holbrook	Fletcher Reeves	Glenn Clark	Dustin Colburn	Jason Hart	Michael Dancy	Kenny Owens

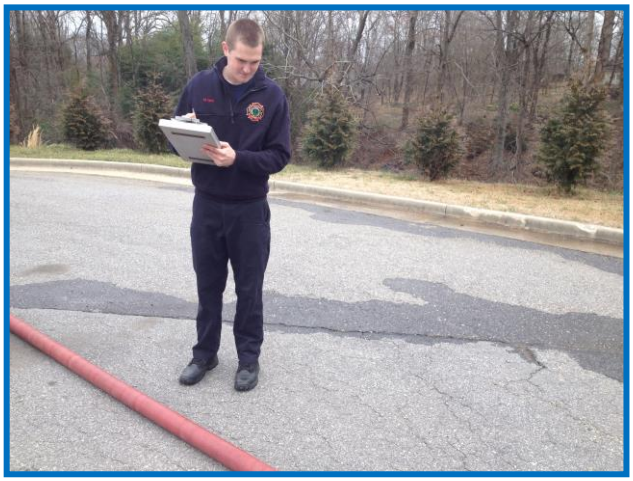
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Satuday
10	11	12	13	14	15	16
Daniel Jarvis	Chad Wayne	Robert Lynn	Daniel Jarvis	Chad Wayne	Robert Lynn	Daniel Jarvis
Daniel Barnes	Preston Shomaker	Jackie Wright	Preston Parsons	Preston Shomaker	Frank Harris	Glenn Clark
Jason Roten	Chris Hollars	Shane Collins	Michael Thornton	Jackie Wright	Shane Collins	Aimee Clark
Caleb Eller	Adam Eller	Adam Eller	Nolan Eller	Shane Collins	Michael Dancy	
Daniel Barnes	Fletcher Reeves	Stuart Earp	Kenny Owens	Preston Shomaker	Aimee Clark	Glenn Clark
Jason Roten	Preston Shomaker		Dustin Colburn	Aaron White	Frank Harris	Matt Clark
Matt Clark	Jonathon Greer		Matt Clark		Michael Dancy	Caleb Eller
Matt Clark	Jonathon Greer		Matt Clark	Jonathon Greer		Matt Clark
Todd Holbrook	Fletcher Reeves	Glenn Clark	Dustin Colburn	Jason Hart	Michael Dancy	Caleb Eller

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
17	18	19	20	21	22	23
Robert Lynn	Daniel Jarvis	Chad Wayne	Robert Lynn	Daniel Jarvis	Chad Wayne	Robert Lynn
Jason Hart	Preston Parsons	Preston Shomaker	Jackie Wright	Jackie Wright	Daniel Barnes	Aimee Clark
Daniel Barnes	Jackie Wright	Chris Hollars	Michael Thornton	Adam Eller	Chris Hollars	Michael Dancy
Jason Roten	Michael Dancy	Nolan Eller	Shane Collins	Michael Dancy	Adam Eller	
Jason Hart	Fletcher Reeves	Stuart Earp	Dustin Colburn	Kenny Owens	Jonathon Greer	Kenny Owens
Daniel Barnes	Aimee Clark	Preston Shomaker		Stuart Earp	Caleb Eller	Aimee Clark
Jason Roten	Matt Clark	Chris Hollars		Aaron White		Michael Dancy
	Matt Clark	Jonathon Greer		Matt Clark	Jonathon Greer	
Todd Holbrook	Fletcher Reeves	Glenn Clark	Dustin Colburn	Jason Hart	Caleb Eller	Kenny Owens

Sunday	Monday	Tuesday	Wednesday	Thursday		
24	25	26	27	28		
Chad Wayne	Robert Lynn	Daniel Jarvis	Chad Wayne	Robert Lynn		
Daniel Barnes	Jackie Wright	Preston Shomaker	Preston Parsons	Michael Thornton		
Jason Roten	Michael Thornton	Jackie Wright	Nolan Eller	Adam Eller		
Michael Dancy	Matt Clark	Chris Hollars	Shane Collins	Tim Pennington		
Daniel Barnes	Fletcher Reeves	Stuart Earp	Dustin Colburn	Kenny Owens		
Jason Roten	Aaron White	Preston Shomaker	Jonathon Greer	Stuart Earp		
Jonathon Greer		Matt Clark		Aaron White		
Jonathon Greer		Matt Clark	Jonathon Greer			
Todd Holbrook	Fletcher Reeves	Glenn Clark	Dustin Colburn	Jason Hart		

Daily Activities

In 2012, the duty-time and full-time staff spent the majority of their time doing things such as daily apparatus inspections, facilities maintenance, fire hydrant testing, fire hose testing, and public education delivery. All apparatus are inspected to ensure a minimum level of readiness every morning. Once a week, each truck is thoroughly inspected to ensure things such as: proper oil level, tire pressure, pumps, ladders, and portable equipment operate correctly, and a minimum inventory level of equipment is located on the respective truck. After the daily and weekly apparatus inspection, a variety of activities begin. Items such as fire hydrant testing are conducted twice a year for 385 town-owned fire hydrants. The test consists of measuring pressure and flow of each fire hydrant. The town sees many benefits from this project. The staff becomes more knowledgeable of the fire hydrant locations in times of emergencies, water lines are cleaned out more often, thereby improving water quality, and testing helps to maintain or improve our insurance rating (ISO). In 2013, we will continue our testing and add painting and color-coding to signify the gallons-per-minute flow. Fire hose testing of 15,425 feet of various sizes of fire hose is also conducted at least once a year. The test is conducted to ensure our fire hose can withstand a minimum pressure and is in good working order. Also, this helps to maintain or improve our insurance rating (ISO). In 2013, duty time staff will start conducting pre-incident surveys on all commercial and high hazard facilities / locations inside the town limits. Staff will be gathering information such as: after-hours contacts, building dimensions, construction types, occupant loads, special hazards, types of hazardous materials stored and locations, fire hydrant locations, and they will draw a detailed floor plan and site plan of each location. The drawing will contain locations of street approaches, fire hydrants, fire alarm panels, sprinkler system equipment, building and room layouts, attic access, hazardous materials locations, and any high hazard items. This information is kept in a notebook on our first-out fire engine and will later be loaded into an onboard computer.



Above left: Firefighter Chris Hollars checks oil level during a weekly apparatus inspection. **Middle right:** Firefighter Daniel Barnes conducts a fire hydrant flow test. **Below left:** Firefighter Matt Clark records inventory numbers during fire hose testing.

Information Management & Technology

The need to manage information in today's fire service has become critical. Numerous technologies are currently available to assist firefighters in safety, strategic planning, tactical operations, command and control, accountability, and management. These tools dramatically enhance the capability needed in the profession today.

This past June we began using a "Cloud" based information management software system called ACS Firehouse. The software allows us to store and maintain records dealing with personnel information, training, incident reporting, pre-incident surveys, fire inspections, hydrant, and water supply. The software also allows us to analyze information such as response patterns and times, personnel response, etc. The software allows us to have critical building information on the scene of incidents. We store building contacts, call history, construction type, hazardous materials stored, hydrant locations, drawings of sprinkler systems, floor plans, site plans, and videos showing procedures to shut down utilities.

Illustration of Lowe's CSC site plan with location of sprinkler risers, exits, fire alarm panels, and hydrant locations.

Fire Cause & Determination

North Carolina state statutes require all fires to be investigated for a cause. Wilkesboro Fire Department conducts all investigations into any incident that resulted in fire damage. Outside assistance may be utilized from the Wilkesboro Police Department, Wilkes County Fire Marshal's Office, North Carolina State Bureau of Investigation, and various state and federal agencies, if needed. Upon investigation of the seven (7) structural-related fire incidents inside the town limits, improper cooking was identified as the number one cause. Other causes included arson, debris burning, power lines arcing, and smoking in bed.

Chief Berry and Chief Reeves investigate the fire cause at an apartment fire.

Public Education Programs

Along with our inspection activities, public education programs are some of the most important services we can provide. Time and money spent educating the public are the most effective resources we can use to prevent fires. In 2012, on-duty staff and retired members conducted a total of nineteen (19) public education programs to various age groups. We reached 2,263 people by hands-on educational classes or materials given away. In 2013, we will continue our education programs and try to expand into new age groups by partnering with our local schools and churches. We will have a presence at the Open Air Market events to provide materials relating to prevention education, departmental membership recruitment, and general department information.

Audience	Date	Location	# of programs	Total # of attendees	Type of Program	Children (0-4 years)	Juvenile (5-17 years)	Adult (18-64 years)	Older Adults (65+ years)
WCHS Special Education	3/28/2012	Wilkesboro FD	1	20	General Fire Prevention / Safety		15	5	
Seth Teague Bike Rodeo	5/5/2012	West Park	1	1350	Injury Prevention	250	750	250	100
Wilkesboro Open Air Market	7/20/2012	Main Street Park	1	45	General Fire Prevention / Safety	25	10	10	
U.S. Chemicals	8/30/2012	Rivers Street Plant	1	20	Fire Extinguisher Training			20	
Wilkes Developmental Day Care	8/31/2012	Welborn Avenue	1	35	General Fire Prevention / Safety	25		10	
Tyson Food Lab	10/4/2012	Rivers Street	1	40	Fire Extinguisher Training			40	
Wilkesboro Elementary School	10/4/2012	Wilkesboro FD	1	95	General Fire Prevention / Safety		75	20	
Iglesia Dios Bethel Church	10/4/2012	Walnut CIR	1	30	Fire Watch Drill			20	10
Georgina Thompson	10/7/2012	Woodland Blvd.	1	2	Home Fire Inspection			2	
Wilkesboro Baptist Church Pre-School	10/17/2012	Wilkesboro Baptist Church	1	75	General Fire Prevention / Safety	65		10	
Wilkesboro Baptist Church Pre-School	10/18/2012	Wilkesboro Baptist Church	1	18	General Fire Prevention / Safety	15		3	
Mountain View Elementary School	10/19/2012	Wilkesboro FD	1	115	General Fire Prevention / Safety		105	10	
WCHS Special Education	10/24/2012	Wilkesboro FD	1	16	General Fire Prevention / Safety		13	3	
Heritage Museum Zombie Walk	10/27/2012	Heritage Museum	1	50	General Fire Prevention / Safety		25	25	
Cub Scouts	10/29/2012	Wilkesboro FD	1	30	General Fire Prevention / Safety		15	15	
Wilkesboro Baptist Church Fall Festival	10/31/2012	Wilkesboro Baptist Church	1	135	General Fire Prevention / Safety	40	35	40	10
Traphill Elementary School	11/8/2012	Wilkesboro FD	1	32	General Fire Prevention / Safety		28	4	
Chick Fil-A Night Out	11/12/2012	Chick Fil-A	1	80	General Fire Prevention / Safety	40	40	30	
Christmas Cheer Project	12/22/2012	Heritage Museum	1	75	General Fire Prevention / Safety	25	25	25	
			19	**2263**		**485**	**1136**	**542**	**120**

Fire Inspections & Code Enforcement

In response to a tragic factory fire in Hamlet, NC that killed 25 workers in 1991, the North Carolina Legislature mandated every structure, other than one and two family dwellings, must be inspected for fire code violations on a structured time line. All local jurisdictions were mandated by law to adopt the fire inspection schedule. Since then, all fire inspections in town were conducted by a day-shift fire inspector that also served as the town's Safety Director and Cemetery Manager. In 2010, the town hired a full-time Fire Chief and three Engineers also serving as fire inspectors. The Engineers work on a rotating basis, 24 hours at a time. Duties include driving departmental apparatus, departmental training, shift personnel management, records entry, and fire inspections. Currently, all three Engineers are probationary level-two fire inspectors. We have a part-time level-three fire inspector that works one day a week. Also, in 2013, the Fire Chief will be starting the course work to obtain a level-one fire inspector certification.

At the direction of the Town, in 2010, we began assessing a fee for fire inspections. After extensive research, we determined the Town has approximately 579 different fire inspections to be conducted at various times. Inspections are divided into three levels which are determined by the type of occupancy and hazards associated with the occupancy type. Currently, we have approximately (533) level one, (40) level two, and (5) level three inspections. The inspections can occur as often as every six months up to every 3 years. This is determined by the occupancy type and occupancy load. However, we follow the state fire code schedule and our inspections are scheduled based upon the following numbers: one (1) semi-annual inspection, sixty-two (62) annual inspections, thirteen (13) inspections every two years and five hundred two (502) inspections every three years.

The examples below illustrate the minimum frequency rate of inspections; however, it is not an all-inclusive list.

6 Month Inspections
Public Schools
1 Year Inspections
Assembly - Restaurants, clubs, gyms and places of entertainment, etc.
Hazardous - Hazardous materials, flammable liquids and explosives facilities,etc.
Institutional - Hospitals
Residential - Apartments, hotels, motels, dormitories, etc.
High-Rise Buildings - All use types.
2 Year Inspections
Factory / Industrial Facilities - Manufacturing and Assembly plants, etc.
Educational Facilities - Private schools, etc.
3 Year Inspections
Assembly - With an occupant load less than 100.
Businesses - Banks, barber & beauty shops, gas stations & self-service, educational occupancies above the 12th grade, printshops, professional service offices (architects, attorneys, dentists, physicians, engineers), etc.
Mercantile - Department stores, drug stores, markets, retail or wholesale stores, etc.
Storage Facilities - Warehouses, garages, hangers, etc.
Church and Synagogues
Miscellaneous - Tanks, silos, greenhouses, etc.

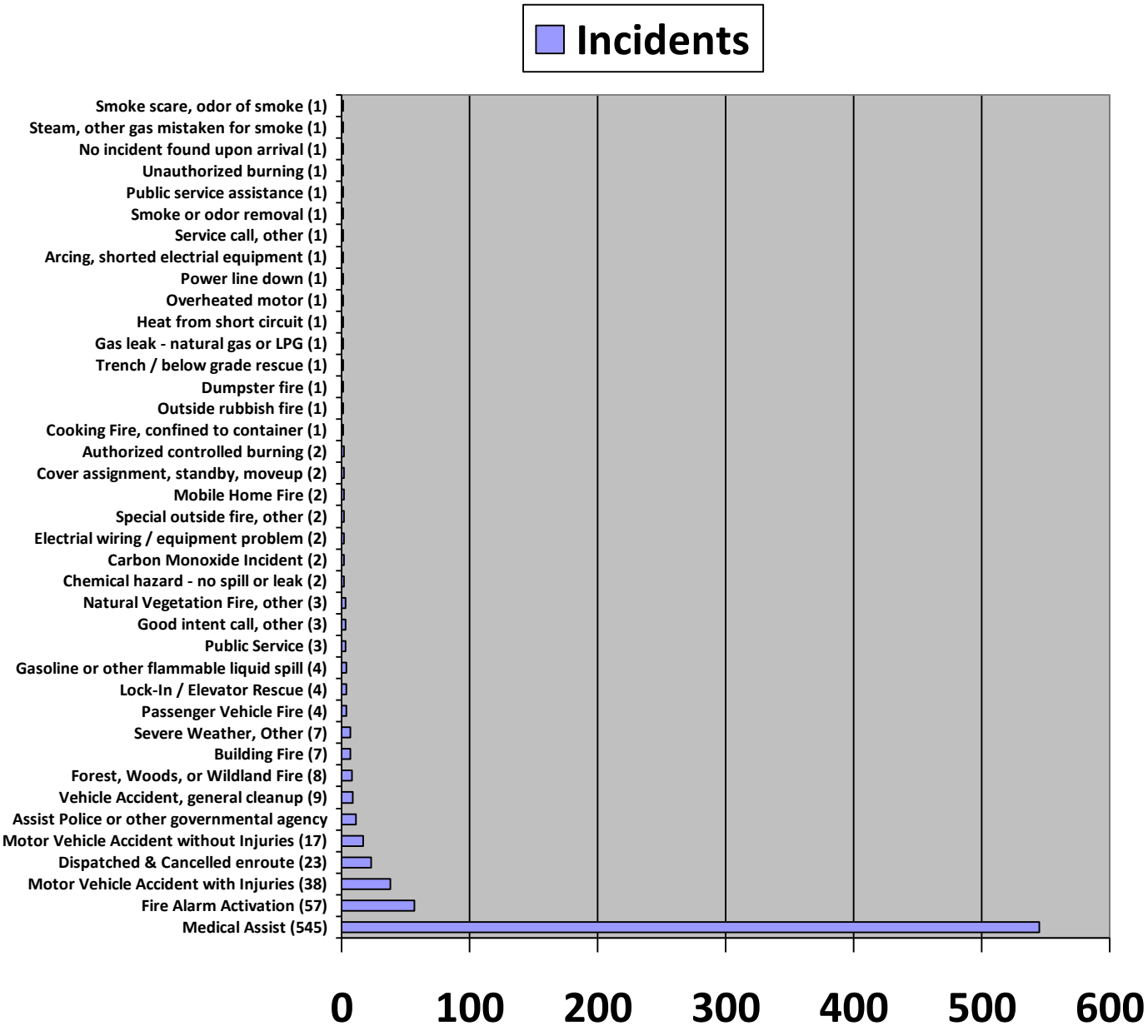
During 2012, the staff spent a total of 145.33 hours conducting 155 inspections. The hours do not count research done on fire code violations, re-inspection trips, and records entry. In 2013, our goal is to complete 240 inspections.

Incident Analysis

Incident analysis will look at four incident factors in 2012: (a) incident types, (b) incident locations, (c) incident time of day, and (d) incident response time. All these factors are important for a full analysis. Data gives us the ability to analyze the types of incidents we are responding to, locations, what times of the day we are responding, and how long it takes us to respond. The data can give us the ability to make modifications based on where we respond, the types of equipment needed, day-to-day work schedules and manpower needed, station locations, etc.

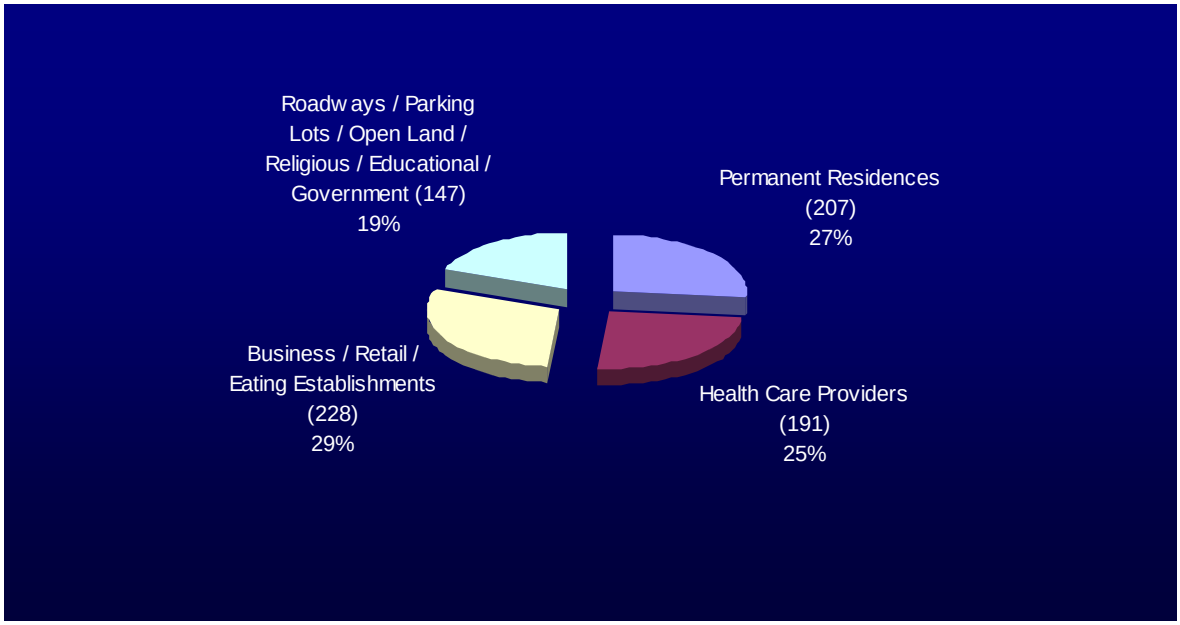
Incident Types

Incident types we responded to consisted of 773 incidents lasting a combined 381 hours. Five hundred forty-five (545), or 70%, were medical in nature, sixty-four (64), or 8%,were motor vehicle accidents with or without injuries / general cleanup, and one hundred sixty-four 164, or 22%, were fire-related calls. The number one fire-related incident was fire alarm activation with a total of fifty-seven (57) reports. We responded to a total of thirteen (13) structural-related fires.



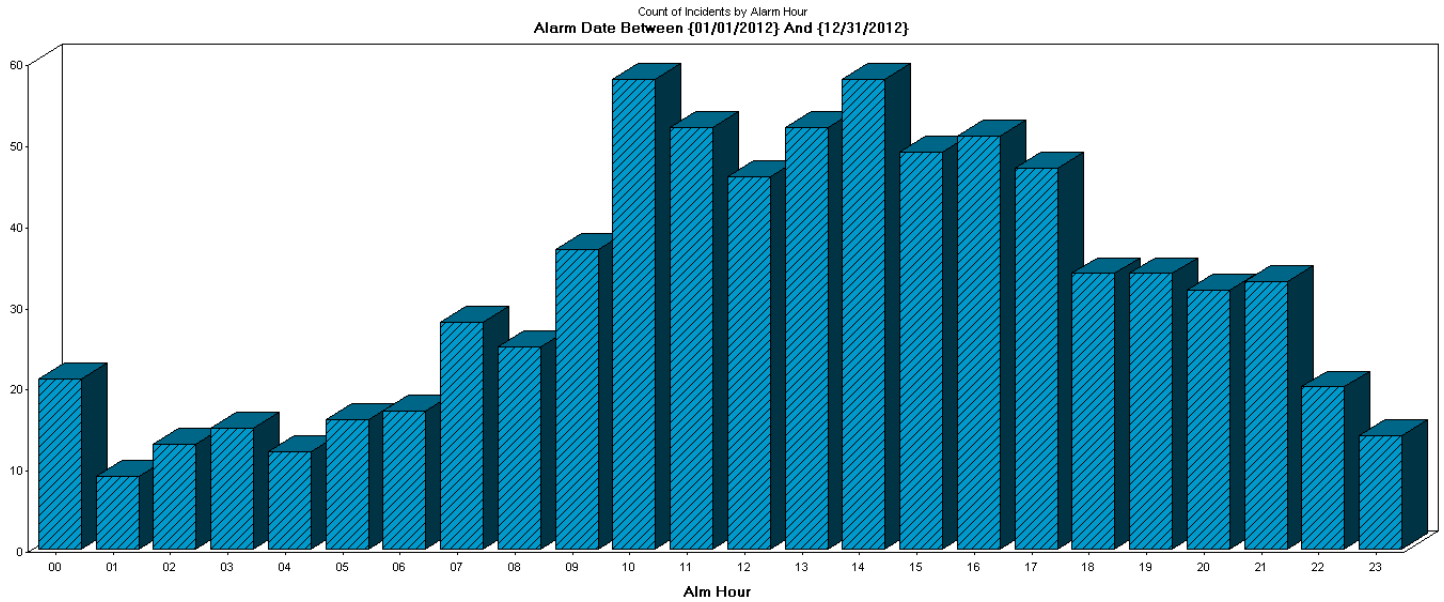
Incident Locations

Of the 773 incidents, 29% were to business / retail / eating establishments, 27% were to permanent (single and multi-family) residences, 25% were to health-care providers, and 19% were to other locations. It is important to note that 73% of our responses were to businesses / government entities / health-care providers / not-for-profit organizations.



Incident Time of Day

Incidents typically happen between the hours of 9 a.m. and 9 p.m. The data supports the fact that a large majority of our incidents occur during day-time hours. This data tells us when we need to adjust manpower levels to address incident response and day-to-day workloads.



Incident Response Time

The information below was obtained from the 2009 Wilkesboro Fire Department Needs Analysis Study conducted by Solutions for Local Government. The information addresses the importance of response time. In 2012, the average "emergency mode" response time to incidents located in the town limits was 4 minutes-2 seconds (4:02). Response time was decreased by one minute-five seconds (1:05) while incident volume increased by approximately 53% over the 2006 - 2008 averages.

The *average* total response time recorded for the WFD for 1,242 calls during the three year period of 2006-2008 was five minutes, seven seconds (5:07). This was one minute-seven seconds (1:07) greater than the four-minute (4:00) time standard recommended by NFPA and similar professional associations.

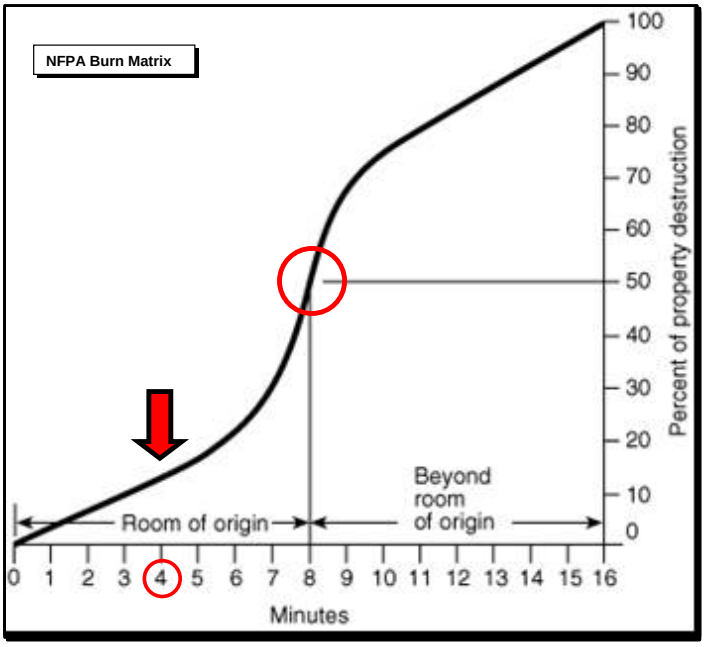
Obviously, many things happen between the time a resident dials 911 and the time that firefighters are on the scene of an active fire and involved in suppression activities. In this context, *"response time"* refers to the time interval between when notice is received *from the Communications Center by the Fire Department* to the time *WFD personnel have arrived on the scene of the incident.* Also per NFPA, in the event of a structure fire, ". . . no less than four (4) firefighters must be on scene and available to operate the apparatus and initiate fire suppression activities". In the case of a medical emergency, a single EMT certified firefighter *can* initiate treatment of the victim until advanced life support personnel arrive; however, as will be discussed, the same four-minute (4:00) standard applies.

Why is time important?

Notably, the most serious calls to which the Fire Department is dispatched are those involving a structure fire, hazardous material situation, a "non-breathing", "man-down" or similar medical emergency, and motor vehicle accidents. In other words, those incidents that involve the loss of property, serious injury, or death.

The diagram that follows illustrates the concern with regards to ***fire emergency*** response times based upon research conducted by various national associations and agencies that study the critical nature of firefighting and fire service response and have developed standards accordingly. Among them:

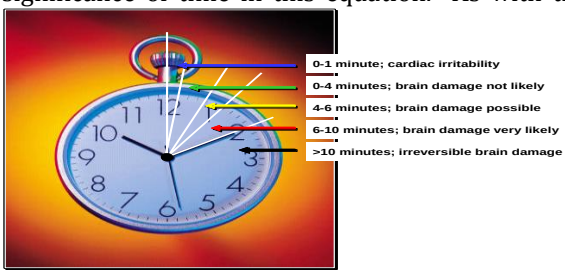
- *The National Fire Protection Association (NFPA) states that "if a fire is not suppressed in 8 to 10 minutes from the time of ignition, it will flashover, spreading outside the initial area or room of origin".*
- *"As a rule of thumb, first responders should arrive on the scene in less than five minutes, 90% of the time." (National Institutes of Health)*
- *"The fire department shall establish a response time objective of four minutes or less for the arrival of the first arriving engine company at a fire suppression incident, for not less than 90% of all incidents"; [NFPA Standard 1710 for the Organization and Deployment of Fire Suppression Operations; Section 4.1.3.1.1.].*



Approximately eight (8) minutes from initial ignition (appearance of flame), a fire will move from the room of origin into the remaining area or rooms of the structure. As this occurs, the likelihood of substantial damage and structural loss increases dramatically. After sixteen (16) minutes, it is conceivable that property damage could be total loss.

For example, were this graphic applied to a house fire, and the fire started (combusted) in the kitchen of the house at 4:00 a.m., the fire would begin to spread beyond the kitchen by 4:08 a.m. and, shortly thereafter, "flashover" into the next adjoining room; i.e. dining room, living room, etc. Then, were the fire to go unabated for another eight (8) minutes, the likelihood is very high that the home would be destroyed.

As for ***medical emergency*** response times to non-breathing or "downed" individuals, as well as motor vehicle accidents, wherein individuals may be seriously injured or trapped, by virtue of their proximity to the incidents to which they are called, fire departments are frequently closer than the nearest EMS/ALS unit. This being the case, those firefighters responding will arrive *before* the EMS unit and have the opportunity to initiate vital life-saving procedures. In these incidents, the issue of time has to do with the fact that the human body needs a constant supply of oxygen to survive. This figure illustrates the significance of time in this equation. As with the previously cited fire standards, the concern with regards to emergency medical response time is based on a number of significant findings of numerous professional and medical organizations. These include:



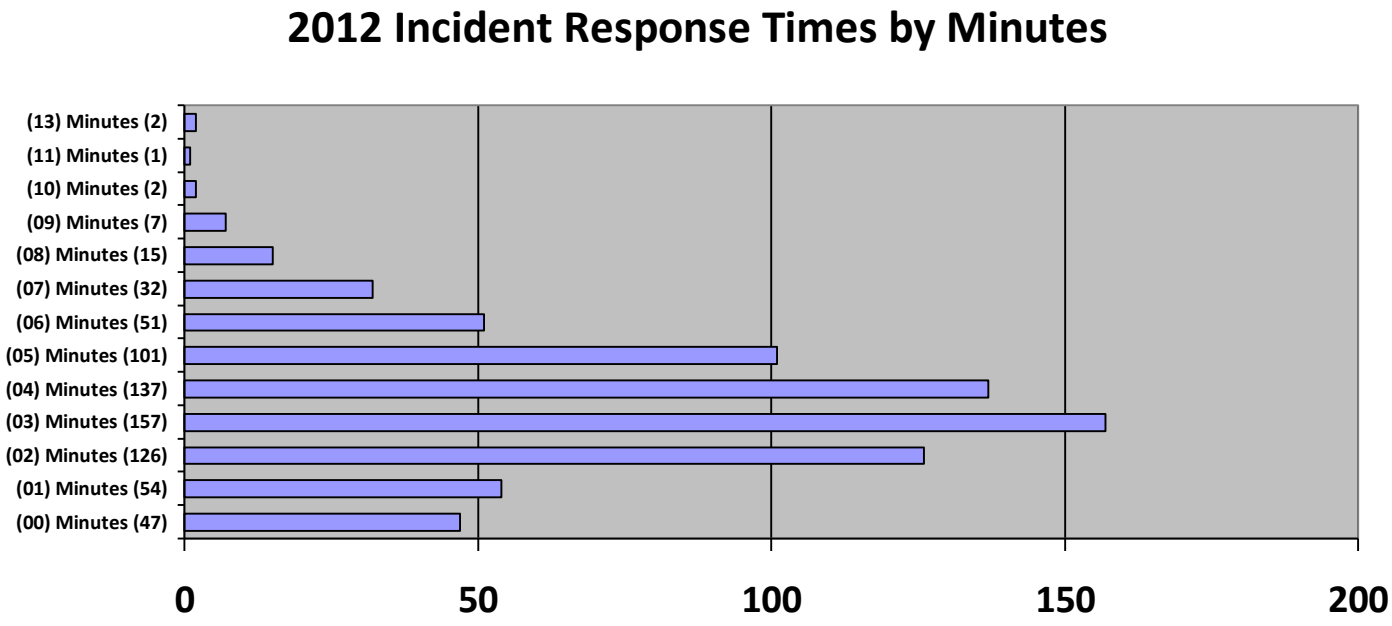
- *NFPA, which states in 1710, that "deployment for the first responder/AED level to arrive within four minutes for 90 % of all calls."*
- *"For cardiac arrest, the highest hospital discharge rate has been achieved in patients for whom CPR was initiated within 4 minutes of arrest and advanced cardiac life support within 8 minutes". (American Heart Association)*
- *"In an incident involving lack of oxygen, brain damage is very likely at 6 to 10 minutes; irreversible after 10 minutes". (American Association of Orthopedic Surgeons and source of illustration above)*

"Average" is no longer acceptable

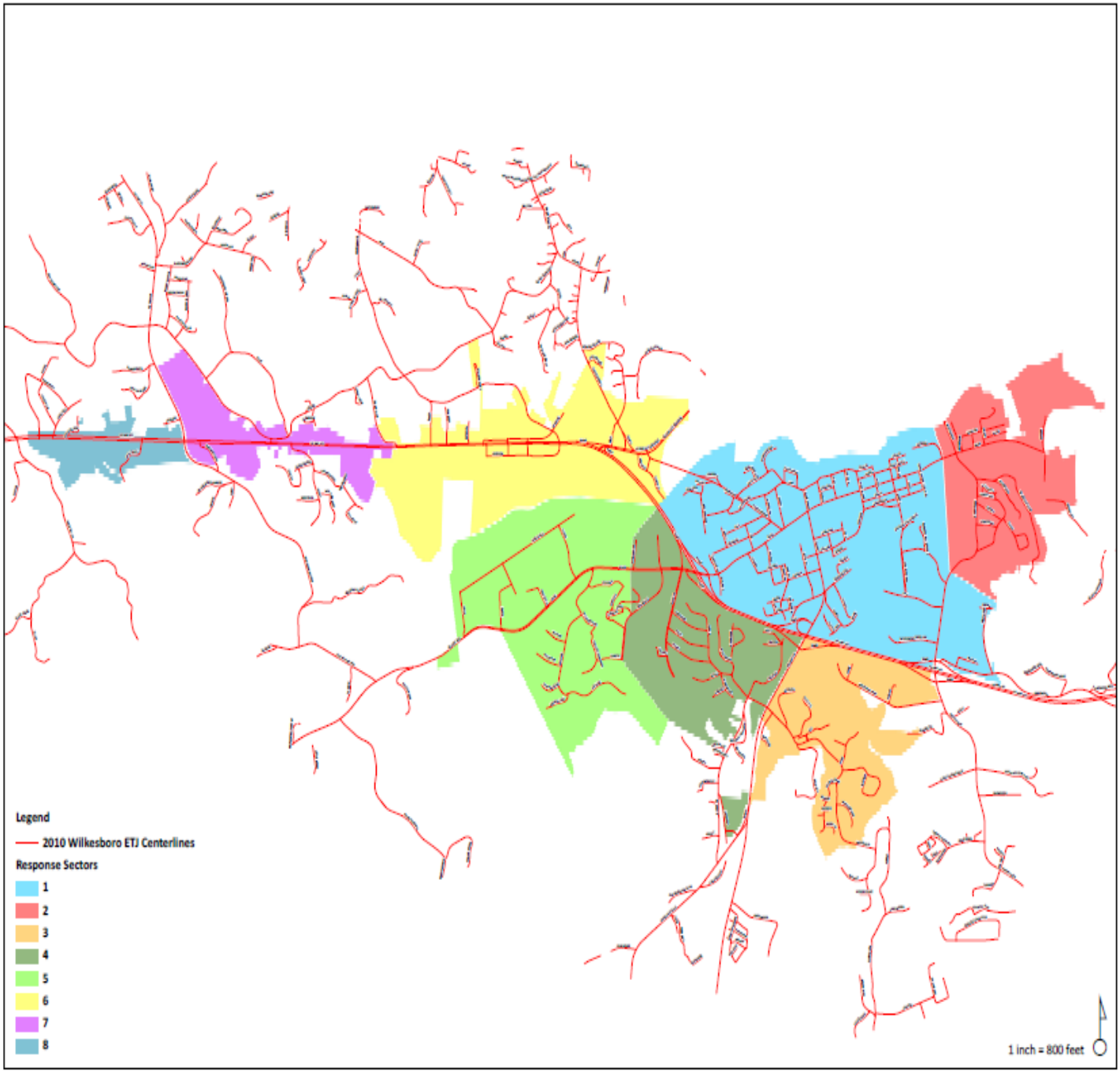
Recently published standards suggest that the *average* response time is no longer an adequate measure of performance in a life safety/emergency services response situation. Average response time is just that…"*average,"* which means that although any number of calls could have been responded to in *less than* (in WFD's case) the average time of 5 minutes-7 seconds (5:02), an almost equal number of calls were likely responded to in *greater or even much greater time* than the averages noted.

Professional organizations as well as those associations who publish what are considered the prevailing standards for the industry, NFPA, the American Heart Association, and the National Institutes of Health among them, have pushed for performance standards (i.e., response times that are to be met *at least 90 percent of the time)*.
For example, using NFPA's 4-minute response time standard for fire emergencies, rather than an average response time for 100 calls of 4-minutes (or less), the standard now suggests that no less than 90 of those 100 calls are responded to in 4-minutes or less.

The next graph shows the response time by minutes for all responses in the Town limits. Responses include non-emergency and emergency responses. The graph shows that 67% of responses are less than 4 minutes.



Wilkesboro Fire Department Zone Map



The map above was developed to track incident types, number of incidents, response times, and property loss in specific geographic areas of the town. The town was divided into eight zones to look at each area differently. The average town-wide response time for the first-arriving unit responding in "emergency" mode for 2012 was 4 minutes-2 seconds (4:02). The next chart has each zone broken down by the number of incidents, property loss, and average response time to each zone. Note that response times tracked higher the further we responded north in the 421 corridor. However, an exception would be in Zone 7 due to only one response in Zone 7.

of Incidents, Property Loss, & Average Response Times

Zone	Calls Per Zone	Emergency Calls	Non-Emergency Calls	% of Incidents	Incident Type	Value per Incident	Loss per Incident	Loss Estimates per zone	% of Total Losses	Injuries / Fatalities	Average Response Time of 1st arriving unit, per zone
1	321	295	26	41.39	House Fire	$74,700	$150	$75,750	86.27	0	3:35
					Building Fire	$125,810	$65,000			0	
					Mobile Home Fire	$15,000	$5,100			0	
					Vehicle Fire	$10,000	$250			0	
					Apartment Fire	$508,900	$5,250			0	
2	22	16	6	2.84	No Losses	$0.00	$0.00	$0	0	0	6:05
3	48	46	2	6.08	No Losses	$0.00	$0.00	$0	0	0	5:08
4	177	167	10	22.89	Mobile Home Fire	$5,500.00	$5,500.00	$5,500	7.4	0	3:50
5	32	29	3	4.13	No Losses	$0.00	$0.00	$0	0	0	4:34
6	143	122	21	18.49	Vehicle Fire	$5,050.00	$5,050.00	$5,550	6.32	0	4:26
					Vehicle Fire	$2,500.00	$500.00				
7	1	0	1	0.12	No Losses	$0.00	$0.00	$0	0	0	4:09
8	10	6	4	1.29			$0.00	$0	0	0	8:28
Mutual Aid Given Calls	19	18	1	2.71	N/A	N/A	N/A	N/A	N/A	0	N/A
Totals	773	699	74			Total Value of Property Saved $747,460	Total Value of Property Loss $86,800			No Injuries or Fatalities	Average in town "Emergency" Response Time 4 minutes, 2 seconds

ISO Grading

All Town departments provide needed services. However, the fire service is one that not only provides needed services but can save you money while doing so. Financial savings occur with reduced fire insurance premiums for maintaining a certain level of fire department readiness. The process of maintaining fire department readiness is determined by a grading process conducted by Insurance Services Organization (ISO). The grading schedule is divided into three parts: (1) Alarms & Communications, (2) Fire Department, and (3) Water Supply. The Alarms & Communications section grades the process of receiving reported fires and how they are relayed to the fire department. Many things are considered such as the number of dispatchers on duty and the number of emergency phone lines coming into a dispatch center. The Fire Department section grades the fire department itself based upon things such as the number of personnel responding to incidents, number of engine and ladder trucks needed based of the size buildings, location of the fire station, training of personnel, etc. The Water Supply section grades the ability to supply water for firefighting use and it is based upon things such as the number of fire hydrants, water main sizes, hydrant maintenance, water plant output, etc. All three areas are assigned points. The points are tallied and the fire department is assigned a class grade of 1 through 10, with 1 being the best and 10 being the worst. Insurance companies use the grade as part of the process to determine rates to be paid by the customer. Thus, maintaining a lower rating can affect the premium amounts paid by the insurance customer.

Currently, Wilkesboro Fire Department maintains a Class 5 insurance rating within 1,000 ft. of a fire hydrant. Fire insurance rates vary from company to company. However, below are examples of approximate costs of providing fire insurance for a $150,000 new construction, frame house:

$524.00/year in a Class 5 area (In town)

$961.00/year in an area with no fire department

A house valued at $150,000 costs approximately $600.00 in taxes at a 40-cent tax rate with approximately 7 of the 40 cents, or $135.00, being allocated to the fire department. By living inside the town limits, having a good water system, and a fire department, one can save approximately $437 per year in hazard insurance. Therefore, the average consumer can save approximately 45% in hazard insurance if the fire department has a Class 5 insurance rating.

As you can see all the money, time, and energy put into the department not only saves lives and property but also money.