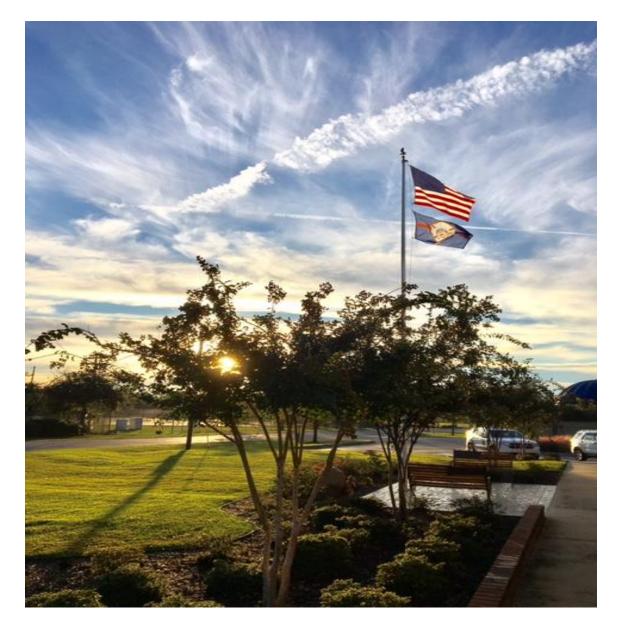
Lexington County Fire Service FY '18-'19 Annual Report



"SERVICE EXCELLENCE"

2018-2019 Annual Report Page1

A MESSAGE FROM THE FIRE CHIEF

Thank you for taking the time to learn more about the Lexington County Fire Service. It is our honor to serve the citizens of Lexington County. The Annual Report you are about to read depicts the services and accomplishments of our department during Fiscal Year 2018/2019. Our personnel, career and volunteers, work hard each day to accomplish our mission of "Service Excellence".

This is a strong and progressive organization comprised of dedicated and professional individuals who are truly here to serve and protect the citizens of Lexington County. Since 2011 the department has improved its Insurance Services Office (ISO) rating from a Class 7 to a Class 3. Classification improvements such as these do not occur without the diligent effort of an entire organization as call volumes have increased from 9,603 calls in the FY 2012-2013 to 15,092 calls in the FY 2018-2019 (+57%).



The department utilizes a five (5) year strategic plan to guide our operations towards the ultimate vision of an ISO Class 1 designation and International Accredited Agency status. Our strategic plan is updated each year based upon employee feedback, and Department of Emergency Services and County Council priorities. Obtaining and maintaining an accredited agency status will ensure that our department continuously assesses our performance and implements measures to address any deficiencies. In addition, the men and women of the department train conscientiously every day to improve their skills so that they are prepared for any emergency they may face.

The Lexington County Fire Service has established a rich history of service and exemplary performance. This year is no exception. The residents of Lexington County can be very proud of their fire department and count on the men and women of the department to be there for them in their time of need. We sincerely appreciate the support that we have from County Administration, our elected officials and the community we serve.

Respectfully,

Mark Davis Fire Chief

LAYING IT ON THE LINE

24 HOURS A DAY, 365 DAYS A YEAR

Every 3 hours 29 minutes a Every 35 minutes Fire/Fire Alarm Is Reported

a call is answered

41.35 Calls per day

16.91 Hours on scene per day

A Medical Emergency Every 71 Minutes

Typical daily responses: 7 Fires/Fire Alarms 20 Medical Emergencies 1 Haz Mat Event 13 Good Intent Calls/public assist

All in an average days work



A Year in Review



August 2018 – Recruit Class 18-01 Graduated

October 2018 – Recruit Class 18-02 Graduated

February 2019 - Recruit Class 18-03 Graduated

June 2019 – Recruit Class 19-01 Graduated

The Lexington County Fire Service demand for service includes:

15,092 total responses, which includes mutual and automatic aid. (+5%)

25,699 individual unit responses (+6%)

1,285 fires; a decrease of 6% from 2017-2018

A total incident loss of \$9,426,145; a 17% increase from '17-'18. Total saved \$48,316,049

Analysis of fire incidents:

There were 1,285 fires in Lexington County Fire Service area.

37.35% were structure fire responses (+15.42%)

17.59% were outside rubbish fire responses (-19.86%)

25.06% were natural vegetation responses (-29.85%)

15.10% were mobile property responses (+12.14%)

4.90% were special outside fires

Residential structure fires represented 19% of all fires and 81% of all structure fires

As a result of fire, there were:

11 Civilian injuries and 3 deaths

11 Firefighter injuries (+38%)

There were 480 structure fire responses and 194 vehicle fire responses

The number of structure fires increased by 16%

Operations Branch



The Operations Branch includes the Emergency Operations Division and the Special Operations Division. These divisions are managed by a Deputy Chief who answers directly to the Fire Chief and is a member of the senior staff. This Branch head is responsible for managing and directing the emergency service delivery system, including all line activities involved with emergency response to fire, medical, rescue, technical rescue, hazardous materials, false alarms and good intent calls.

The Operations Division of the Lexington County Fire Service is divided into two geographic operational battalions, each under the command of a Battalion Chief. The battalions are divided into four response areas in the North and three response areas in the South, under the command of Captains. Within these two battalions, there are twenty five fire stations that provide emergency response to all fires, medical calls, rescues, hazardous materials incidents and other miscellaneous emergencies.

Apparatus assigned to the Operations Branch are designed to address a wide spectrum of emergency responses:

20 - Engine companies charged with fire extinguishment and also designated as a primary Basic Life Support (BLS) units.

4 - Quint/Ladder companies and 1 - Tower/Platform are designated to preform search and rescue, forcible entry, victim rescue, and ventilation. Quint/Ladder companies also perform engine company duties.

2 - Squad companies that support the functions of the ladder companies.

3 - Hazardous Material companies mitigate material releases including decontamination of victims and responders at large and small incidents.

2 - Special Operation companies that are charged with handling technical rescue (High Level, Structural Collapse, Trench Rescue and Swift Water rescue).

Training Division

The Training Division operates under the direction of the Fire Chief to include recruit training, in-service training, testing, promotional processes, and personnel development. The Training Division is managed by an Assistant Chief and supported by a highly trained team of teaching professionals, including a Captain, and three part time fire instructors.

The Lexington County Fire Service continues to make training one of the top priorities throughout the year. Training consists of ongoing education to satisfy many licensure requirements, as well as new training to enhance the knowledge base of firefighters. These lead to higher certifications and better service to citizens and those who pass through the County. The 2018-2019 fiscal year resulted in a total of 72,367 training hours (+19% '17-'18). Of the total hours, 20,141 were company drills.





Administrative Services Branch



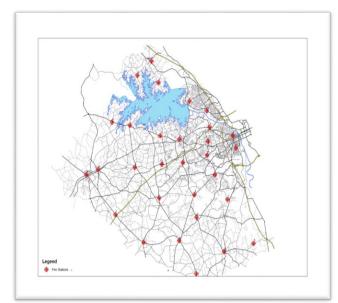
The Administrative Services Branch includes the Administrative Division, Planning and Research Division, and Logistics Division. The Administrative Services Branch provides support to all branches and Divisions of the Lexington County Fire Service. The Administrative Services Branch is headed by a Deputy Chief who reports directly to the Fire Chief and is a member of senior staff. The Deputy Chief manages the Battalion Chief of Planning, Logistics Officer, Breathing Air Technician, and Administrative Assistants and coordinates all facility maintenance, repairs, design and construction, human resources, payroll, fleet maintenance, budget, and information requests from citizens and departmental personnel.



Planning and Research Division

The Planning and Research Division develops and implements strategies to advance the deployment of resources of the Lexington County Fire Service to the citizens in need. The key goals of this responsibility include analyzing fire service standard of coverage, conducting community risk analysis, and feasibility studies; preparing contracts; preparing automatic aid, mutual aid and initial action agreements with other fire agencies; gathering data and assuring quality control by developing standard and specialized report queries that are analyzed daily, weekly, and monthly by the division. On a whole, these functions blend together so that the Division may continue to support the fire service in meeting the needs of the growing population of the County and provide the most skillful and cost-effective fire and first responder services in the communities served.

The Lexington County Fire Service is continuing the process to apply for accreditation by the Commission on Fire Accreditation International (CFAI). Accreditation requires that the Department continually and objectively examine services, programs, and management functions. This self-assessment provides the Department with the knowledge needed to design, deploy, and manage services in the best interest of the citizens and the Department, and in a manner consistent with that expected of a modern and creditable fire service organization. The Planning Division also provides support in managing the department's Insurance Services Office (ISO) rating in discovering the needs and planning for the placement of additional fire stations, which would extend services, accommodate future growth, and strive for the highest rating of ISO (1). The current ISO rating for the County is Class 3. The ISO rating reflects the resources of the Lexington County Fire Service, Lexington Communications and the water districts in the County. The task of meeting ISO rating requirements relies on GIS analysis to calculate travel distances for fire stations and response vehicles.





Logistics Division

The Logistics Division provides uniforms, turnout gear, nozzles, hose, and other mission critical equipment and is responsible for the systematic coordination of selection, acquisition, warehousing, procurement and distribution of supplies and services for the fire service. Its mission is to support and provide personnel with unmatched safety through purchasing the best materials, supplies, and equipment available at the greatest value.

In FY '18-'19, The Logistics Division was tasked with pump testing 40 trucks, testing 68,000 feet of fire hose (12.9 miles), testing 2,333 feet of ladders and inspecting 244 fire extinguishers, washing and inspecting 390 individual pieces of personal protective equipment. The division oversaw the fitting of duty uniforms, PPE and dress uniforms for recruit classes 18-02, 18-03 and 19-01. The division also completed the 2nd round of updates for our Hurst tool equipment (Jaws of Life).





Breathing Air Division

The Breathing Air Division is assigned to Administration. The breathing air technician's responsibility, first and foremost, is for the readiness and safe operations of our Self Contained Breathing Apparatus (SCBA) at an emergency scene. Inventory is constantly reviewed regarding the status of our SCBA's and air cylinders as they require repair, hydrostatic testing or retirement.

In '18-'19, quarterly air samples and semi-annual servicing of 5 breathing air compressors were completed; 8 DOT cylinders; 297 SCBA'S, 337 face pieces were tested and cleaned; 490 personnel from Lexington County Fire Service, Irmo Fire Department, West Columbia Fire Department, Columbia Metropolitan Airport Fire Department and 2 Technical Schools received face fittings this year. The breathing air tech and SCBA maintenance facility located at fire services headquarters are SCBA certified thru Mine Safety Appliance (MSA). Oversaw the installation of the new 800 MHZ radio paging systems in all of the stations to include the new Station 33. Installed new speaker and amplification systems in all of the remediated stations.

Along with the breathing air responsibilities, support staff continues to provide staffing on the Department of Emergency Services radio programming committee that updates and programs 800 MHZ radio's for County Departments to include Administration, Solid Waste, Solicitors Office, Public Works, Sheriff's Department, EMS, Fire Service, Fleet Services, Building Services, and the Coroner's office. As part of the radio committee, radios were programed for the following municipal departments: South Congaree, Springdale, Gaston, Pineridge, Pelion, Swansea, Irmo, Chapin and Lexington Police Departments and Airport Public Safety.

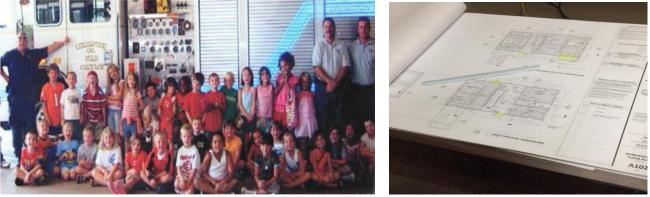


Fire Prevention and Life Safety Branch

Fire prevention is the number one goal of the fire service and the Fire Prevention and Life Safety Branch focuses on educating the community about the benefits of proper safety practices and identifying and eliminating all types of hazardous conditions, which pose a threat to life, the environment and property. The Lexington County Fire Service offers several fire and life safety services ranging from Public Education to Plans Review to Code Enforcement to Fire Investigation.

This Division is under the command of an Assistant Fire Chief designated as the Department's Fire Marshal and reports directly to the Fire Chief. The Assistant Chief manages three Deputy Fire Marshals that are assigned to three geographic areas and a part time fire investigator. These personnel are charged with enforcing State and local laws; ensuring that the required safety systems are installed in all buildings and that installation complies with applicable standards; carrying out public education; and accurately and efficiently identifying the causes of all fires, whether they are accidental or incendiary. The Fire Service covers a diverse and unique area of responsibilities as related to Fire Prevention and education. The widespread and diverse activities of commercial and industrial development and operations are reviewed and inspected, citizens are educated and all this information entered into the records management system to update and improve the safety of the community and department personnel.

In '18-'19, 2,590 inspections were completed with July 2018 being the busiest month at 269 inspections. 274 plan reviews were completed with October 2018 and March 2019 being the busiest with 34 reviews. 301 permits were issued ranging from construction, sprinkler, and fireworks permits to paint booth suppression and kitchen hood suppression systems. 235 public education activities were held with an estimated 13,384 children and 7,240 adults attending. 393 Smoke alarms, 265 smoke alarm batteries and 15 carbon monoxide alarms were also installed.





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Lexington County Fire Service

Community and Public Service Events

- Raised \$44,616 for the Muscular Dystrophy Association
- Raised \$52,354 for the Jeffery Vaden Chavis House at the Southeastern Burn Center.
- Lexington County Fire Service participated in the following Community Events: United Way, Jeff Chavis Memorial Golf Tournament, American Heart Association Heart Walk, Steven Stiller Tunnel to Tower Run, the American Lung Association Fight for Air Stair Climb, American Cancer Association Relay for Life, Make a Wish Foundation Battle of the Badges, Red Cross Blood Drive and the Memorial Day Murph Challenge



Lexington County Fire Service

Statistical Report

Vision Statement

BECOME AN INTERNATIONALLY ACCREDITED AGENCY AND OBTAIN A CLASS ONE FIRE DEPARTMENT DESIGNATION FROM THE INSURANCE SERVICES OFFICE.



Mission Statement

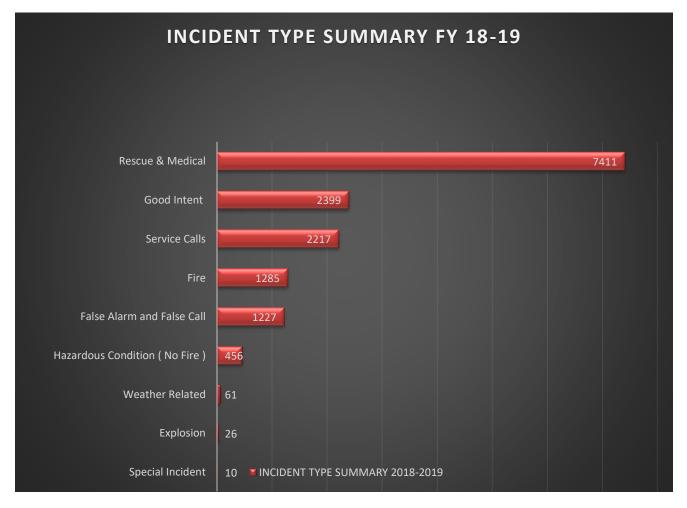
"SERVICE EXCELLENCE"

LEXINGTON COUNTY FIRE SERVICE

STATISTICAL SUMMARY

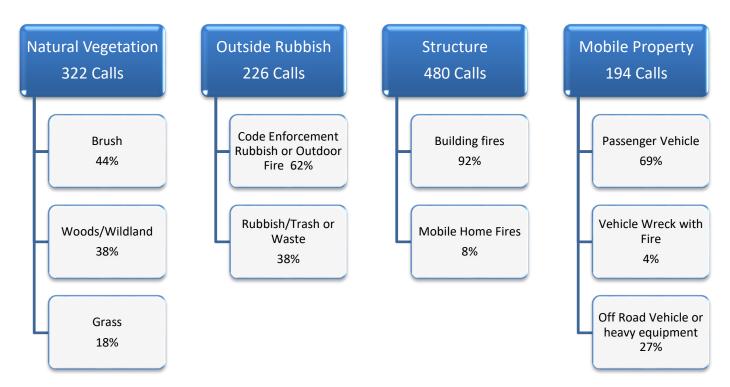
The Lexington County Fire Service responds to a variety of emergency and non-emergency situations. Often what is described to the dispatchers, does not reflect the actual incident; nevertheless, firefighters are trained and prepared to respond to a broad array of situations. To understand the full role the fire service plays in the community, this report profiles the fire service run activity as reflected in our Firehouse Reporting Data. The data collected through Firehouse Reporting is based on the National Fire Incident Reporting System (NFIRS) through the United States Fire Administration (USFA). The data is recorded in one of the following categories: (1) Fire, (2) Explosion, (3) Rescue & Medical, (4) Hazardous Condition, (5) Service Call, (6) Good Intent, (7) False Alarm, (8) Weather Related, (9) Special Incident.

While "fire" is part of the service name, less than 10% of total responses involved fire. Over 49% of all Lexington County Fire Service runs are categorized as Emergency Medical Services/First Responder and rescue responses.



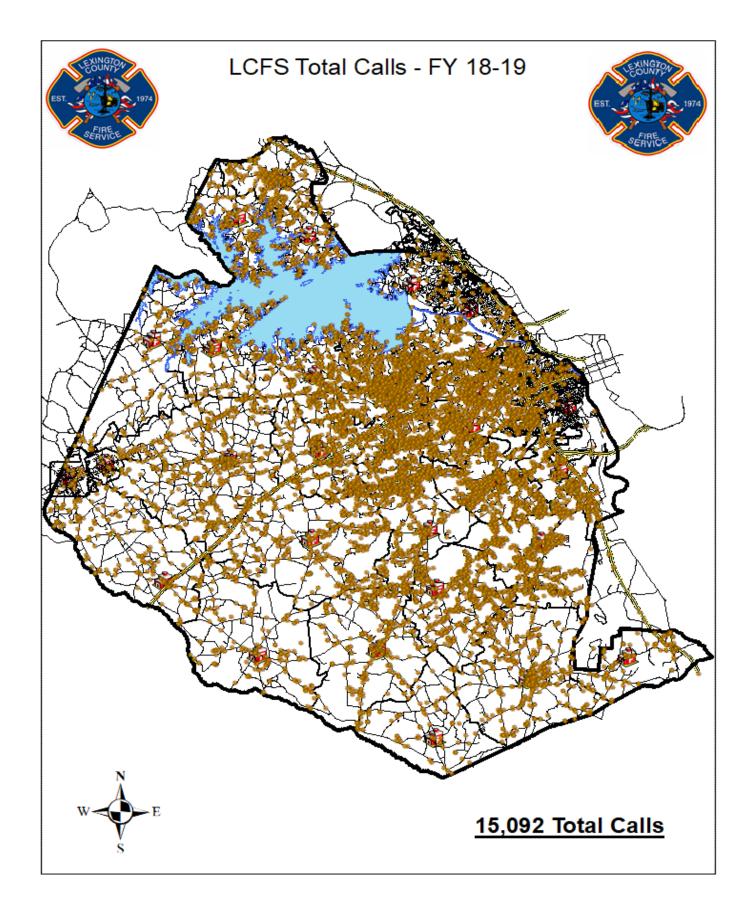
Total Calls – 15,092 ('17-'18 – 14,321)

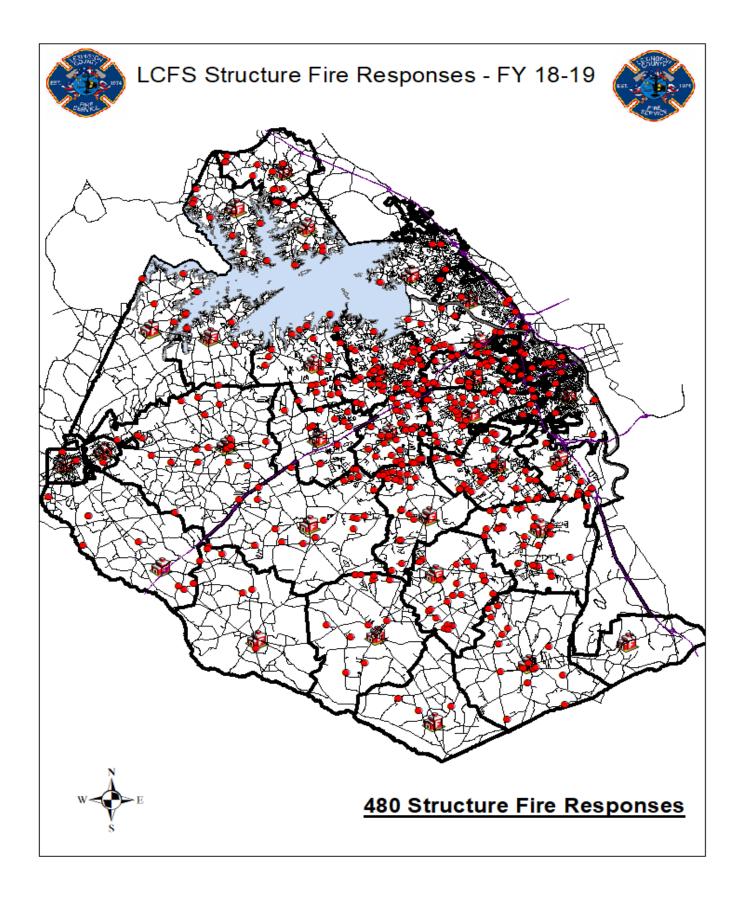
Most Common Fire Incident Types

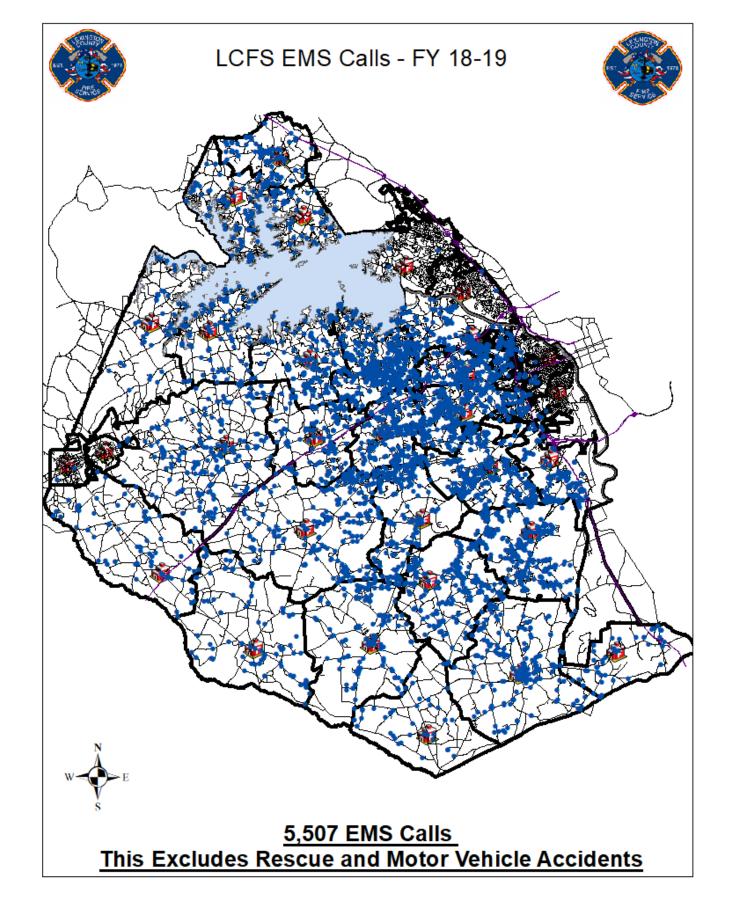


Rescue and EMS Incidents

EMS Call, excluding vehicle accident without injuries	5,507 Calls	75%
Motor Vehicle accident with injuries	1,125 Calls	15%
Medical Assist, Assist EMS	142 Calls	2%
Motor vehicle accident without injuries	387 Calls	5%
Overturned vehicle with or without injuries	156 Calls	2%
Special Rescue/ERT Response	94 Calls	1%
	7,411 Calls	100%







Staffing for	r Incident	Responses
Stalling IV.	menuent	I Copulses

	'17-'18	'18-'19
AVERAGE # OF CAREER PERSONNEL RESPONDING PER CALL	3.58	3.91
Average # of Volunteer Personnel Responding per Call	.05	.04
Average # of career and volunteer on scene / average # of units on scene	3.63/1.69	3.95/1.70

59,575 Personnel responded to all incidents throughout Lexington County with an overall average of 3.95 personnel per incident.

NFPA 1720 Standard: 3681 Personnel responded to 230 Structure Fires throughout Lexington County with an overall average of <u>16 personnel responding on 8 units</u>.

LCFS averaged 17 minutes 11 seconds to obtain the average of 15 personnel on scene.

In FY '17-'18, LCFS averaged 21 minutes and 14 seconds to obtain 15 personnel on scene.

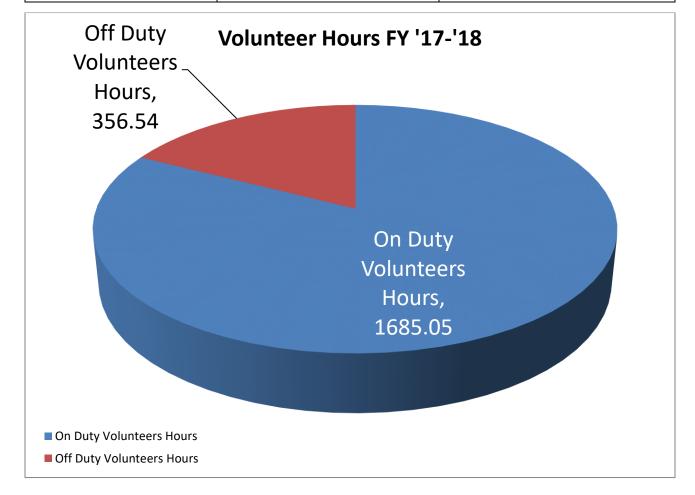
(Decrease due to Staffing)

Busiest Companies						
ENGINES	RESPONSES	LADDERS	RESPONSES	TANKERS	RESPONSES	
E9	1409	TWR10	1340	T28	128	
E12	1320	LDR30	1335	T13	100	
E19	1261	LDR5	1068	T4	90	
E24	1207	LDR11	490	T16	81	
E13	979			Т6	59	
E15	969			Т8	54	
BRUSH		SQUADS		BATTALIONS		
TRUCK						
BT24	201	10	1456	1	1038	
BT16	190	5	1253	2	866	
BT5	129					

Duringt Companies

Volunteer Response Hours

Number of	42	
Volunteers		
	Hours	Equivalent to
On Duty Volunteers	1,685.05 Hours	.58 Full Time Equivalent
Off Duty Volunteers	356.54 Hours	.12 Full Time Equivalent
Total	2041.59 Hours	.70 Full Time Equivalent



Compared to FY '17-'18:

Number of Volunteers - 42 On Duty Volunteer – 1655.57 hours - .57 Full Time Equivalent Off Duty Volunteer – 407.34 hours - .14 Full Time Equivalent Total Hours – 2062.91 hours - .71 Full Time Equivalent

NFPA 1720 Staffing and Response Times Comparison Structure Fire Responses

NFPA Standard				
Demand Zone	Demographics	Min Staff	Response Time	Objective
Urban	>1000	15	9	90%
Suburban	500-999	10	10	80%
Rural	<500	6	14	80%

JULY 1, 2018 - JUNE 30, 2019

LCFS	Calls Calculated for NFPA 1720	Average Personnel	Response Time	Monthly Objective Met
Urban	38	8.35	9 min	5%
Suburban	31	6.97	10 min	29%
Rural	63	7.39	14 min	62%
*Totals				

*Total number based upon incidents requiring a full assignment after first unit arrival.

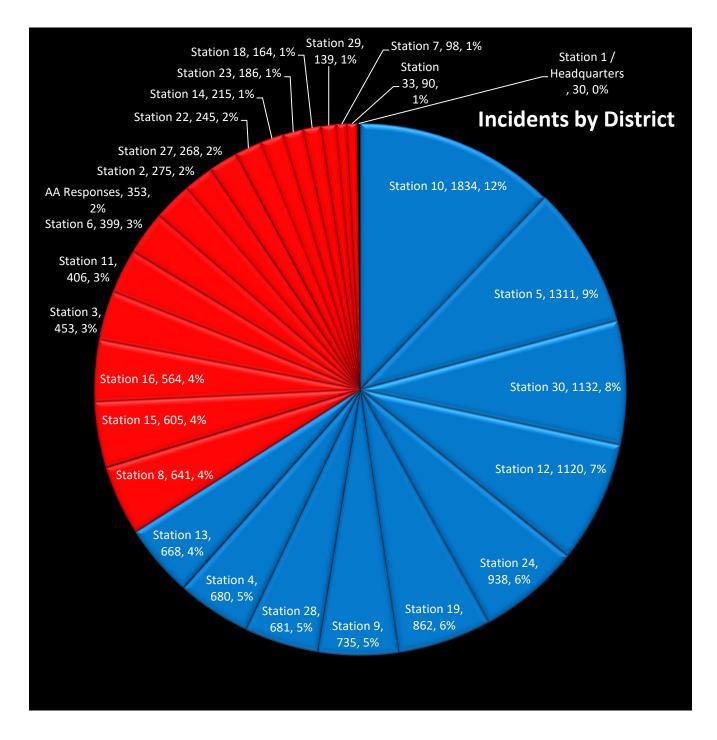
Average Response Time:

 1^{st} unit on scene-6 min. 57 sec. (Avg. Personnel = 2.2)

2nd unit on scene–9 min. 5 sec. (Avg. Personnel = 2.4)

Incidents by District

Lexington County, with an estimated population of 290,000, has a total area of 758 square miles of which 699 square miles is land and 59 square miles (7.74%) is water, primarily from Lake Murray. Lexington County Fire Service covers 674 square miles within the county. Approximately 99.7% of all property within Lexington County is within five miles of a fire station. There are 24 Fire Stations that provide protection for the citizens of Lexington County. Sixty-seven percent (67%) of all incidents occur in the urban/suburban areas of the county within the districts of ten (10) fire stations (Blue).

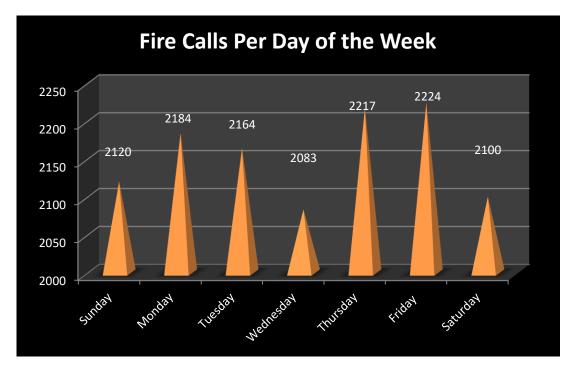


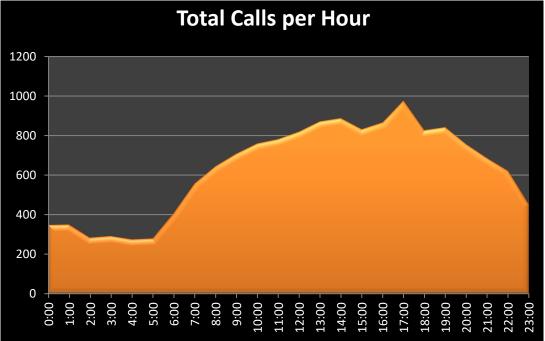
Mutual Aid/Automatic Aid

<u>Name of</u> <u>Department</u>	<u>Automatic Aid –</u> <u>Given(4)</u>	<u>Automatic Aid –</u> <u>Received(2)</u>	<u>Mutual Aid –</u> <u>Given(3)</u>	<u>Mutual Aid –</u> <u>Received(1)</u>
Batesburg /				
Leesville FD	27	93	27	5
West Columbia FD	39	16	20	9
Irmo Fire District	30	34	9	9
Columbia / Richland County	0	0	23	6
Sandy Run / Calhoun County	1	1	12	5
City Of Cayce	3	15	7	15
Columbia Airport Fire Department	1	0	2	1
Little Mountain Fire Department	0	0	2	3
Newberry County Fire Department	0	0	0	2
Ridge Spring Fire Department	0	0	1	0
Caw Caw Fire Department	Ū	Ū	-	Ū
New Holland Fire	1	0	0	0
Department Saluda County EMS	0	0	1	0
	0	0	1	0
Totals	102	159	105	55
%	+30.8%	-12.15%	+9.38%	-15.38%

When are Incidents likely to occur?

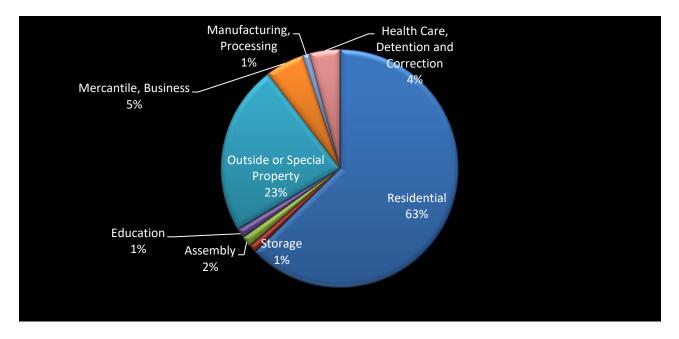
When is the most likely time for a call to occur? The top graph displays the Days of the Week, with Monday being the busiest day of the week. Friday is the second busiest day of the week. Although the day of the week which fires occur changes from year to year; the time of day stays around the mid-morning and evening hours of 9:00am-8:00pm.





Property Use Summary

The pie graph below indicates the property use where calls occur. As you can see our primary response is to residental structures, whether it's for fire, medical, fire alarm or service calls.



<u>Property Use</u>	<u>Total Losses</u>	<u>Percentage of Total</u> <u>Loss</u>
Other	<u>\$3,200</u>	<u>.03%</u>
Assembly	<u>\$13,400</u>	<u>0.14%</u>
Education	<u>\$200</u>	0.00%
Health Care, Detention, Correction	<u>\$2,500</u>	<u>.03%</u>
<u>Residential</u>	<u>*\$4,462,003</u>	<u>47.34%</u>
Mercantile, Business	<u>\$1,020,350</u>	<u>10.83%</u>
Manufacturing, Processing	<u>\$791,000</u>	<u>8.39%</u>
Industrial, Agriculture, Mining	<u>\$146,400</u>	<u>1.55%</u>
<u>Storage</u>	<u>\$869,650</u>	<u>9.23%</u>
Outside or Special	<u>\$2,117,442</u>	22.46%
<u>Total</u>	<u>\$9,426,145</u>	<u>100%</u>

2018-2019 Annual Report

Fire Cause Related to Fire Losses

<u>Cause of</u> Ignition	<u>Total Number</u> of Fire Related Incidents	<u>% of all Fires</u>	<u>Total Est. Loss</u>	<u>% of All Fire</u> Losses
Intentional/ Deliberate	68	7.70%	\$451,760	5.10%
Unintentional	286	32.42%	\$2,863,564	32.34%
Failure of equipment or heat source	68	7.70%	\$1,007,300	11.38%
Act of Nature	36	4.08%	\$372,042	4.20%
Cause Other	76	8.61%	\$521,200	5.89%
Cause under Investigation	36	4.08%	\$1,949,172	22.01%
Cause Undetermined after Investigation	312	35.37%	\$1,689,312	19.08%
Total	882	100%	\$8,854,350	100%

* 39.46% of fire calls with a loss of \$3,638,484 had No Determination.

Goal

<u>The LCFS shall ensure all members the healthiest and safest</u> <u>possible work environment.</u>

(Comparison)

<u>July 2017 -> June 2018</u>		<u>July 2018 -> June 2019</u>		<u>Year +/-</u>
Lost Time Due To Normal Sick or Work Related	Totals	Lost Time Due To Normal Sick or Work Related	Totals	
175 Personnel @ 24 Hrs. per shift	4,200	189 Personnel @ 24 Hrs. per shift	4,536	(+) 8 %
Average Hrs. Per Pay Period – Shift Personnel	112.00	Average Hrs. Per Pay Period – Shift Personnel	112.00	
Normal Sick / FMLA Leave	22,679 hrs. 2.60 FTE Loss/Day	Normal Sick / FMLA Leave	22,772 hrs. 2.61 FTE Loss/Day	(+).004%
Workers Comp. Light Duty	3,255 .37 FTE Loss/Day	Workers Comp. Light Duty	5,371 .63 FTE Loss/Day	(+) 65%
% Lost Time SICK/FMLA	4.45%	% Lost Time SICK/FMLA	3.98%	(-) .47 %
% Lost Time – Work Related	.74%	% Lost Time – Work Related	1%	(+) .26 %
Total % of Lost Time	5.19%	Total % of Lost Time	4.98%	(-).21%
	Total: 2.97/Day Personnel Loss		Total: 3.13/Day Personnel Loss	(+).21

*An average of 3.13 personnel were lost throughout the fiscal year due to injury and sick leave.

Safety Objectives

- 1. Track lost work related time and it shall not exceed 1% (Actual 1%) of the total available work hours for the department.
- 2. The percentage of total workforce accumulating lost work time shall not exceed 5% (Actual 4.98 %) of the total workforce for each fiscal year.

Daily Staffing Analysis

Year to Date 2018 - 2019



• Authorized Staff Per Day –	76.00
• On Duty Per Day –	62.88**
• <u>Staff Vacancies –</u>	13.12
• Lost Time – Work Related –	0.63
• Normal Sick Time –	2.50
• <u>Annual Leave –</u>	2.36
• Military Leave -	2.59
• Other (Funeral, Jury, Voting) –	0.13

<u>Total FTE's Out per Day –</u>	8.21
FTE's Replaced by Callback –	9.46
Net Difference – (1.25)	

** Minimum Staffing is 67 personnel.

Training Division

- Manage the training program for all career and volunteer personnel.
- Coordinate with the fire academy to ensure that all personnel are meeting current standards and best practices.
- Provide skill based training to ensure individual and team competency in performing emergency operations.
- Provide firefighter safety and survival training.
- Career tracking and development committee.
- Develop and administer the hiring process for Firefighter Two certification as well as Recruit Firefighter.
- Oversee the Field Training Program.
- Update General Operating Guidelines for the Recruit Program.
- Develop and facilitate the promotional process for Apparatus Operator, Captain, and Battalion Chief's positions.
- Research continuing education opportunities of institutions of higher learning.
- Manage the training and increase involvement of the Emergency Response Team and as well as respond to Special Operations type calls.
- Coordinate Multi Company Drills for Fire Service Personnel to include EMS and Dispatch.

Training Summary:

Total Training for Lexington County Fire Service: 72,367 Hours.

Training Facility Drill Hours:

2,507 Hours of training across 46 drills.

625 Fire Service Participants

4 Hours/ Drill/ Student

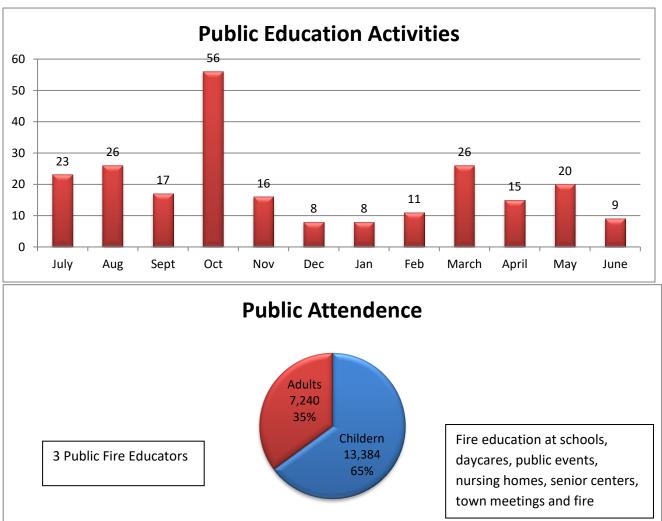


Fire Marshal Division

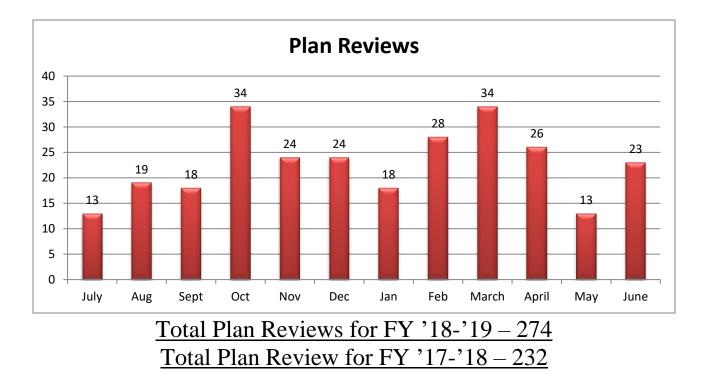
DUTIES:

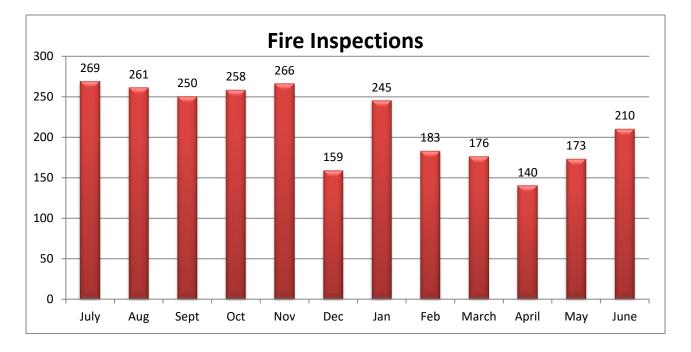
- Firehouse Entries
- Burn Ordinance
- Code Enforcement
- Fire Alarm Ordinance
- Inspections
- Wildland Firefighter Operations
- Fire Prevention
- Operational Plans
- Public Education
- Fire Service Web Site

- Plan Review
- Liaison to State Fire Marshal
- County Wildland FF Team
- Liaison to SC Forestry Commission
- State Firefighter Mobilization
- Weather and Emergency Preparedness Notifications
- Wildland Fire Investigations



STATS: Total 235 Events





Total Inspections for FY '18-'19 – 2,590 Total Inspections for FY '17-'18 – 3,018

HONOR, RESPECT, AND DEVOTION TO DUTY



"SERVICE EXCELLENCE"

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