Thomasville Fire Rescue
Four Year Report
2014-2017
Standards of Cover
2014-2017

This four year report provides a Community Risk Assessment (CRA) and Standards of Cover (SOC) document and assists Thomasville Fire Rescue (TFR) with a deployment of resources and performance capabilities analysis.

Four Year Report
Prepared by
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Dated July 2018

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Introduction

The TFR four year report serves as a Community Risk Assessment (CRA) and a Standards of Cover (SOC) document. The Commission on Fire Accreditation International (CFAI) defines the process, known as “risk assessment” and “deployment analysis,” as a written document that identifies the risk/hazards of a community and the distribution and concentration of fixed and mobile resources of an organization. The purpose for completing such a document is to assist the agency in ensuring a safe and effective response force (ERF) for fire suppression, emergency medical services, hazardous materials, and specialty response situations (technical rescue).

The CRA and SOC process began in 2014 and included a review of the deployment of resources. It was a data and information driven process for identifying the level of performance capabilities and emergency event outcomes. Significant contributions to the planning process were provided by utilizing the Center for Public Safety Excellence (CPSE) Commission on Fire Accreditation International (CFAI) Standards of Cover Manual 6th addition and the CFAI Fire And Emergency Services Self-Assessment Manual (FESSAM) 9th addition.

Creating a CRA and SOC requires that a number of areas be researched, studied, and evaluated. The following report will begin with a description of the community served and the services provided by TFR. The report will provide information on community risk, service level objectives, performance capabilities, distribution and concentration of resources, historical performance, growth management, response studies and analysis reports.
The CRA identified risk levels and target hazards to include an Occupancy Vulnerability Assessment Profile (OVAP) of all commercial structures. The OVAP score is a way to analyze and categorize the risk present in a particular occupancy.

The SOC process assisted with assessing community fire and non-fire risks and defining baseline and benchmark emergency response performance standards. It provided strategic planning information that has revealed ideal station response locations; apparatus and staffing; and current performance capabilities and service delivery.

The key elements in the developing of the Department’s SOC included:
- A Baseline & Benchmark Analysis.
- A Comprehensive Assessment and Planning Process (CAPP) process.
- An analysis of the current response capability.
- A strategic planning recommendation describing how the Department should allocate and deploy resources to maximize emergency response effectiveness.

Some of the findings included:
- Geographic areas remain uncovered with a 5 minute and 20 second first-in turn-out and travel time from City Fire Stations.
- TFR averaged 12.9 firefighters on scene falling short of the National Fire Protection Association (NFPA) minimum standard of 17 firefighters to complete the necessary tasks for a residential structure fire.
- There is a real need to add apparatus and personnel to meet minimum fire service standards.
- Unit availability and reliability impacts the emergency incident delivery system.
- Opportunities exist to utilize technology, fire alarm systems, sprinklered building requirements in the business district, and modern fire attack to improve response capabilities.
- The Northern portion of the city shows a need for fire coverage. A need for a fire station exists that would require adding a fire company of three to four personnel.
- The Department’s current response time performance does not meet benchmark performance objectives for the first-in unit to building fires at the 90th percentile compared to nationally recognized standards, benchmarks, and best practices. The entire effective response force is impacted by distribution and a higher demand for service from the southwest to the northern portions of the city.
- Opportunities exist to improve a timely cascade of events.
- Opportunities exist to improve response plans.
- Opportunities exist to improve turnout and travel times.
Service recommendations include:

- **Safety.** Align Moderate Risk response to meet or exceed NFPA 1710 recommendations and ensure a minimum of 17 personnel to implement job tasks in a safe and timely manner.
- **Safety.** Re-define the Department’s ERF to include all four identified categories of community risk.
- **Professionalism.** City Management and Council adoption of the Department’s SOC.
- **Efficiency.** Re-evaluate currently adopted response performance objectives to ensure the level of service expected of the Department is reasonable and appropriate for the identified community risks/hazards.
- **Efficiency.** Create performance measures that identify time expectations once an ERF arrives on scene.
- **Professional Courtesy.** Work with Thomas County 9-1-1 Communications to help create a model of continuous improvement for total response times.
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Executive Summary

Many departments face serious challenges when trying to create a culture of change, improve performance, and implement best practices and industry standards. Though often daunting, it is important to remember that industry standards are an essential component contributing to firefighter life safety. As part of our overall mission, TFR continually strives to improve structural fire protection capabilities to help reduce fire-related property losses, injuries, and fatalities. Measuring effectiveness, maximizing resources, and obtaining additional resources all play an important role in attaining an effective response force and meeting the demands for service.

In 2013 a self-assessment of TFR was conducted by the newly appointed Fire Chief, Chris Bowman. The assessment resulted in a 2014 report that was presented to the City of Thomasville Public Safety Committee (TPSC). The TPSC approval and the Departments execution of action since that report has raised the demonstrated performance of firefighters to a new level of safety and professionalism.

Command Staff strategic planning meetings created the vision and strategies to help accomplish the mission for the City of Thomasville fire and rescue service. This included leadership setting high expectations for the department workforce that created a customer service focus. Our customers are the ultimate judge of our performance and quality of our delivered services.

Thomasville Fire Rescue is an all-hazards preparedness fire and rescue service. Services include fire prevention, life safety, public education, fire investigation, hazard risk reduction, emergency medical response, rescuing trapped or endangered persons from any life-endangering cause, and protecting the community from the hazards associated with fires and uncontrolled releases of hazardous and toxic materials.

Service is based on responding to the needs of the community, arriving in a timely manner, properly mitigating the emergency, and providing quality service. These needs are evaluated against industry best practices and NFPA standards.
Mission -

♦ We create and deliver exceptional service to our community through a culture of safety, courtesy, professionalism, and efficiency.

TFR is committed to providing exceptional public safety services for our community as reflected in the City of Thomasville Mission Statement. We are dedicated to providing a work environment that will enable the Department to reach its commitment to excellence.

TFR has adopted the 16 Firefighter Life Safety Initiatives supported and implemented through the efforts of the National Fallen Firefighters Foundation. The Initiatives have helped to promote a strong culture of safety in the US fire service. The Initiatives address the need to create a culture of change through accountability, risk management, and training and certification to ensure that “everyone goes home” at the end of each shift.

Vision -

♦ An innovative organization exceeding community expectations.

TFR’s vision includes to be immediately recognized by Thomasville residents and the fire service industry as a premier, professional, progressive fire rescue department that consistently delivers the highest quality services possible, maintains public trust, improves people's quality of life by ensuring a fire safe environment, and serve as an exemplary model fire service delivery agency.

TFR provides fire emergency and non-emergency response service, emergency medical first responder service, hazardous materials response service, and technical rescue services. TFR also provides enforcement of the state fire code, fire investigations, pre-incident planning, and public fire and injury prevention education programs for at-risk groups and businesses.
Operating Priorities

Safety   Teamwork   Innovation   Excellent Service   Efficiency   Continuous Improvement

Organizational Core Values

Tradition   Dedication   Sacrifice   Integrity   Honesty

Major Accomplishments

❖ **Fires have fallen by over 35% since 2014**, and are at an all-time low, which can be attributed to an excellent Fire Prevention Program. The Community Outreach Programs include free smoke alarm placement for residents and replacement, pre-incident fire planning and annual fire inspections for businesses. Since 2014 Building Fires are down by over 40%, other Fires (outside, rubbish, grass…) are down by 50%, and Vehicle Fires have remained approximately the same.

❖ **TFR has a customer satisfaction rating of 100%** since 2014

❖ **Class 2 Fire Department**. In the top 2% nationally. Raised the current Class 2 score from 81.24 to 89.08

❖ **Created a recruitment team**. Workforce Diversity increase from 14% to 21% since 2014. Hired 100% of all minorities that completed the hiring process since 2013.

❖ Answering the call to over 5000 emergency responses annually.

❖ Firefighters since 2014 have successfully graduated from the Georgia Fire Academy completing their FF1 and FF2 certifications.
- **Improved equipment/apparatus safety.** 2014 new HME Ahrens Fox Fire Engine and Rescue Vehicle. Two new Fire Support Vehicles. Two sets of Fire Fighting gear for all personnel, and a new washer extractor for cleaning firefighting gear.

- 2014 began a smoke detector placement program campaign, “Every Home, Every Life”. Placed or replaced smoke detectors and batteries in over 2000 homes in the community.

- 2014 Began standard for all **Firefighter Training/Certifications 100% compliant** with NFPA, Insurance Services Offices (ISO) Public Protection Classification (PPC), and the Occupational Safety & Health Administration (OSHA).

- TFR was the **first Fire Department in the State of Georgia to teach the curriculum for Fire Inspector Level 1 outside of the Academy.** Increasing certified fire inspectors from one State Inspector in 2014, to 20 State Fire Inspectors in 2015. There are now 25 in 2017.

- **2015 Annual Fire Inspection Program** -100% of Fire Inspections completed annually. State of Georgia Fire Inspectors increased from 1 to 25.

- In 2015 TFR began a **Firefighter Annual Physical Program** compliant with the International Association of Fire Chiefs (IAFC), the International Association of Fire Fighters (IAFF), NFPA, ISO-PPC, and OSHA. Today all firefighters receive annual firefighter physicals

- **2015 Created the first and only certified Incident Command Training Center in the State of Georgia.** 1 of only 200 worldwide. All TFR Officers have completed Incident Command Certifications. Blue Card Incident Command certifications are endorsed by the IAFC, The International Society of Fire Service Instructors, The IAFC Safety, Health & Survival Section, the Center for Public Safety Excellence, and the Fire Department Safety Officers Association.
The TFR Succession Planning Program that began in 2015 to include officer training and fire service credentialing has yielded National & International Fire Service Credentialing Designations: 2 -Chief Fire Officer (CFO), 2 -Fire Officer (FO), 1 Fire Marshal (FM), and 2 Fire Administration BS Degrees. Five personnel are currently enrolled in college educational degree programs.

2015 Beginning of Technical Rope Rescue Team for Tower Rescues.
Since 2016, 10 personnel have attended the National Fire Academy in Emmitsburg, Maryland.

2016 New Fire Explorer program for community outreach to participants 14-21 yrs. old.

2017 Fire Training Tower and Firefighting burn building repaired and refurbished.

2017 Fire Training grounds were repaved to include adding a vehicle extrication area.

Fire Prevention Programs Annually reach over 2000 children and adults.

Chief of Training Craig Dukes named Training Officer of the Year 2017 for the State of Georgia.

2017 TFR Fire Marshal Tim Connell sworn in as a Deputy Fire Marshal for State of Georgia.

2017 Thomasville Fire Rescue begins its first Fire Department Honor Guard. TFR Firefighters (2) graduate from the National Honor Guard Academy.
Major Accomplishments in Demonstrated Performance

Thomasville firefighters are:

♦ Meeting firefighter national minimum standards and industry best practices of NFPA 1001, Standard for Fire Fighter Professional Qualifications. This is the foundational training and certification for all fire service professionals.

♦ Meeting the requirements of NPQ Firefighter 1 - up from 14% in 2014 to 100%.

♦ Meeting the requirements of NPQ Firefighter 2 - up from 2% in 2014 to 100%.

♦ Exceeding the minimum training requirements of ISO-PPC. In 2012, ISO-PPC, the agency which determines fire insurance ratings through overall community preparedness, issued new guidelines for fire departments nationwide. These guidelines state that firefighter’s initial training should be in accordance with the general criteria of NFPA 1001, Standard for Fire Fighter Professional Qualifications 2013 Edition. ISO-PPC gives credit for the completion of Firefighter I and Firefighter II training/certification (in accordance with the general criteria of NFPA 1001).

♦ Graduating from the Georgia Fire Academy. Up from 0% to 100% of all new hires since 2014.

♦ Meeting the certification requirements of the Georgia Firefighter Standards and Training Council (GFSTC). The GFSTC provides certification standards for all firefighters, fire inspectors, fire investigators and fire & life safety educators in the state of Georgia.

♦ Meeting the certification requirements of Driver Operator. 0% NPQ Driver Operators in 2014, to all officers, drivers and step up drivers to 100% NPQ Driver Operator/ Pumper Certified.

♦ Meeting the certification requirements of Driver Operator. 0% Aerial trained in 2014, to all officers, drivers and step up drivers to 100% Driver Operator/Aerial certified.

♦ Meeting the minimum training requirements for Company Officers for 100% all Officers.

♦ Meeting the minimum training requirements for Incident Command. 0% Incident Command Training and Certifications in 2014 to 100% for all Commanders, Captains, and Lieutenants. Engineers will receive this training in 2018/19.
Strategic Plan -

If any organization is to improve in its continuous drive for excellence, it must determine the organizational direction for excellence and develop a strategy for getting there. A properly developed strategic plan steers an organization from “business as usual” towards attainment of excellence by tackling areas needing improvement.

For an organization to grow, it must be stretched. For an organization to stretch, it must take on critical issues and service gaps. In order to legitimately identify critical issues and service gaps, it must have accurate intelligence, and in order to have accurate intelligence, it must understand the expectations and concerns of its members (internal stakeholders) and of the community served (external stakeholders). -CFAI: Fire & Emergency Service Self-Assessment manual 3rd Addition
TFR Strategic Plan - Goals and Objectives

1. Services - Maintaining a high level of emergency services city-wide
   - TFR has adopted a SOC or level of care that is expected to be delivered to residents. The SOC is focused on overall response time to emergency calls for service and is based upon national standards according to hazards and risks, improving cardiac survival rates, and confining fires to the room of origin. Federal law also regulates certain staffing requirements for structural firefighting.
   - TFR shall maintain and update its SOC to ensure:
     1. Financial resources are allocated appropriately to support the established organizational mission, the stated long-term plan, and goals and objectives, and to maintain the quality of programs and services.
     2. TFR operates an adequate, effective, and efficient program directed toward fire prevention, life safety, hazard risk reduction, the detection, reporting, and control of fires and other emergencies, the provision of occupant safety and exiting, and the provisions for first aid firefighting equipment.
     3. A public education program is in place and directed toward identifying and reducing specific risks in a manner consistent with the agency's mission.
     4. TFR operates an adequate, effective and efficient program directed toward origin and cause investigation and determination for fires, explosions, and other emergency situations that endanger life or property.
     5. TFR operates an adequate, effective, and efficient fire suppression program directed toward controlling and/or extinguishing fires for the purposes of protecting people from injury or death, and reducing property loss.
     6. TFR operates an EMS program that provides the community with a designated level of out-of-hospital emergency medical care.
     7. TFR operates an adequate, effective, and efficient program directed toward rescuing trapped or endangered persons from any life-endangering cause.
     8. TFR operates an adequate, effective, and efficient hazardous materials program directed toward protecting the community from the hazards associated with fires and uncontrolled releases of hazardous and toxic materials.
     9. TFR strives to provide the same level of emergency services to all city residents.
2. Physical Resources. Delivery of the level of services that TFR provides requires solid infrastructure, including facilities, equipment and technology. TFR currently has two fire stations and a five acre training facility. TFR also utilizes an apparatus bay at Fire Station 15 in Thomas County.

Key components of emergency response is to ensure that TFR must consistently maintain a strong fleet of modern, safe and efficient fire apparatus and equipment in order to provide firefighters the tools necessary to do their jobs.

To maximize fire fighter capabilities in using fire apparatus and minimize risk of injuries, it is important that fire apparatus be equipped with the latest safety features and operating capabilities. A scheduled apparatus replacement plan improves the process of vehicle replacement and allows for planning of funding sources. It is a generally accepted fact that fire apparatus, like all types of mechanical devices, have a finite life. The length of that life depends on many factors, including age, vehicle mileage and engine hours, the quality of the preventative maintenance program, and the overall condition of the vehicle.

Some of the most fundamentally important documents at our disposal in the fire service are the consensus standards published by NFPA. NFPA 1901: Standard for Automotive Fire Apparatus is one of our more important governing documents because it addresses the one thing that every fire department has: fire apparatus.
NFPA 1901 has several companion standards that are equally important for the safe, effective and efficient operation of fire apparatus:

- NFPA 1911: Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus.

### Thomasville Fire Rescue Apparatus Inventory

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<th>Year/Make</th>
<th>Apparatus Type</th>
<th>NFPA Recommends</th>
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<td>Engine 1</td>
<td>2008 Sutphen</td>
<td>Class A Pumper/Rescue</td>
<td>2028-Reserve 2033-End of life</td>
</tr>
<tr>
<td>Ladder 1</td>
<td>2001 Sutphen</td>
<td>Quint/Aerial/Ladder</td>
<td>2021-Reserve 2026-End of Life</td>
</tr>
<tr>
<td>Rescue 1</td>
<td>2014 Ford 250</td>
<td>Class A Pumper/Rescue</td>
<td>2034-Reserve 2039-End of Life</td>
</tr>
<tr>
<td>Engine 2</td>
<td>2014 HME</td>
<td>Class A Pumper/Rescue</td>
<td>2034-Reserve 2039-End of Life</td>
</tr>
<tr>
<td>Rescue 2</td>
<td>2014 Ford 550</td>
<td>Class A Pumper/Rescue</td>
<td>2034-Reserve 2039-End of Life</td>
</tr>
<tr>
<td>Engine 3</td>
<td>1995 Pierce</td>
<td>Reserve Class A Pumper</td>
<td>2015-Reserve 2020-End of Life</td>
</tr>
<tr>
<td>Engine 4</td>
<td>1998 Pierce</td>
<td>Class A Pumper/Service Truck</td>
<td>2018-Reserve 2023-End of Life</td>
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3. **Fire Service Culture** – Safety, succession, and preparing personnel for our future. The provision of fire and emergency services is very labor intensive and the core of everything that the Department does truly centers around the men and women serving in our community.

The Fire Service recognized the importance of personnel and in 2004 at a Firefighter Safety Summit in Tampa, FL the 16 Firefighter Life Safety Initiatives were jointly developed by representatives of the major fire service constituencies. At that time, the National Fallen Firefighters Foundation was tasked with promulgating the Initiatives throughout the fire service, and developing material to support their implementation.

“Since then, the Initiatives have deeply informed the emerging safety culture in the US fire service, and become the bedrock foundation for thousands of fire departments who have a desire to ensure that their firefighters and medics return home safely after every shift.”
In 2014, TFR leadership knew that the key to preparing for the department’s future meant defining and advocating for the need for a cultural change relating to safety, leadership, management, supervision, accountability, and personal responsibility.

“Nationwide, the firefighter’s personal protective ensemble, apparatus and equipment technology, available training and safety resources, and safety standards are at the highest, safest levels ever experienced in fire service history. However, United States Fire Administration statistics reveal a ten-year plateau of more than 100 firefighter line-of-duty deaths and approximately 10,000 serious line-of-duty injuries each year. To worsen matters, firefighters are being injured and killed on incidents at rates close to those of 20 years ago. Case analyses show that most of these line-of-duty deaths and injuries are preventable. Within the context of Everyone Goes Home® and the 16 Firefighter Life Safety Initiatives, no advocacy point carries more importance and potential than the need to change the culture of safety from within. Clearly, the fire service must change its attitudes, beliefs, and behaviors toward safety if reductions in firefighter injuries and fatalities are going to be reduced.” - National Fallen Firefighters Foundation

TFR adopted the culture of safety defined in the 16 Firefighter Life Safety Initiatives in 2014. This meant adopting industry standards that help to develop the culture of safety. Those adoptions resulted in the following accomplishments:

♦ Enhancing the personal and organizational accountability for health and safety by creating and implementing a firefighter wellness program to include annual firefighter physicals, core competencies, Self-Contained Breathing Apparatus (SCBA) mask fit testing, and annual SCBA air management drills.
Focusing greater attention on the integration of risk management with incident management at all emergency operations. This initiative incorporated a range of components that related to our ability to safely conduct emergency operations in a high-risk environment.

TFR created a state of the art Incident Command and Risk Management Center incorporating a nationally certified program. The "Blue Card" training program provided the Department with a training and certification system that defines the best “Standard Command Practices” for common, local, everyday Strategic and Tactical emergency operations.

The Incident Command Certification Program is designed to first instruct, train, and then evaluate and certify Department Officers who serve in the role of Incident Commander (IC) and who supervise and manage emergency and hazard zone operations.

The performance criteria to achieve the command certification are designed to help command officers establish and focus command in order to accomplish the tactical priorities of life safety, incident stabilization, and property conservation. The effective functioning of Fire Rescue units and personnel at operating incidents requires clear decisive action on the part of an IC.
Description of the Department & Community Served

This part of the report includes a description of the Department and the area served. Additionally this section includes the history leading to the current delivery system, legal basis for the existence of the Department, historical facts relating to the Department resources, and major accomplishments with respect to service delivery are addressed.

The City Fire Service Begins
In December of 1866, Colonel Peter McGlashan, Mayor, was instrumental in the organization of the first fire company “The Neptunes”. The Neptune Fire Company was incorporated by the Superior Court of Thomas County as the “Neptune Fire Engine and Protection Company No. 1”. During this time, the Department was a volunteer organization as are many departments in smaller communities today.
In 1872, the first Fire Alarm System was provided by hanging a bell on the City Hall Building located at the time on Jackson Street. When a fire was discovered, the first person to clang the bell received one dollar at the next City Council meeting. The first Fire Chief during this era was George Jeffers, followed by Fire Chief Peter McGlashan who was later followed by Fire Chief James Watt.

In July of 1873, under Fire Chief K.T. McLean, twelve stores on Broad Street were destroyed. This was the City of Thomasville's most disastrous fire to date with a fire loss of eighty thousand dollars. Fire Chief McLean and Assistant Chief Hopkins would later resign after this fire amidst controversy and criticism from the aftermath of the fire.

In January of 1874 the new Fire Chief C.P. Hansell was appointed and the department started again with fresh new leadership. Two years later, in 1876, Fire Chief John Stark was appointed to only be replaced a year later was succeeded by Fire Chief James Watt in 1877. Chief Watts would only serve a year and was succeeded by Fire Chief E.O. Thompson in 1878.

In 1882 Fire Chief S.L. Hayes was appointed and shortly after taking over as Fire Chief of the Neptunes, he recommended to the City Council that a Steam Fire Engine be purchased. The first Steam Fire Engine was purchased in August of 1883.
Thirty years after their incorporation in 1896, the Neptune Fire Engine and Protection Company disbanded and requested that they be allowed to turn their Steam Engine and Carriage over to the City.

The first paid Fire Department was first organized in 1897 and the first Fire Station was built at a cost of $980.

Today the Department's primary mission is to prevent fires, provide education to the community, and to provide fire, medical, hazardous material, technical rescue response, and first responder medical support within the geographic boundaries of the City and beyond. Fire protection is currently provided by 42 uniformed personnel and 1 civilian operating out of 2 city fire stations, and one unit placed in Thomas County Station 15. The fire suppression arsenal includes 2 engine companies, 1 ladder company, 1 Command vehicle, a medium rescue pumper company, and necessary support equipment and personnel. TFR responds to fire, medical, technical rescue, and hazardous material emergency calls for help that occur in Thomasville and seeks to stabilize emergency situations and to minimize any adverse impacts.
**Demographic Information**

The City of Thomasville, Georgia was incorporated on January 1, 1826. The City of Thomasville is located in Southwest Georgia, midway between Valdosta, Georgia to the east and Bainbridge, Georgia to the west. It is the largest city in Thomas County with a population of 18,826 and is the county seat of Thomas County. Thomasville presently covers a land area of 14.96 square miles, with land use 56% residential, 35% commercial/industry, and 9.5 agricultural/open.

Daytime population is estimated to be 25,752 persons with a daytime population estimate change of plus 7,339 or a total of 26,165. The Department protects areas which have population density of 1253 persons per square mile. (2016 U.S. Census)
Department Demographics

TFR utilizes five fire response companies operating out of 3 fire stations staffed with 42 uniformed men and women. Annually, the demand for service includes more than 4,500 emergency calls.

Type of Department: Paid Career, 42 Uniformed Personnel, 1 Civilian

Staffing Per Shift: 13

Minimum Staffing Per Unit:
- Engine 1 - 4 personnel
- Engine 2 - 3 personnel
- Ladder 1 - 3 personnel
- Rescue 2 - 2 personnel
- Battalion Commander - 1

Individual Company Average Incidents:
- Engine 1 - 1,700 calls per year
- Engine 2 - 1,000 calls per year
- Ladder 1 - 500 calls per year
- Rescue 2 - 1,000 calls per year
- Rescue 1 - 700 calls per year

Property Types in Department's Jurisdiction: Residential, Urban, Suburban, Commercial, Light Industry, Heavy Industry, and Medical

Work Schedule utilized by the Department for Operation/Line Personnel 56 hours per week average

Shift Schedule 24 Hours On, 48 Hours Off

Number of Stations in Jurisdiction: 2 City Fire Stations

Rescue 2 is housed in Thomas County Fire Station 15

Total Average Department Budget Annually: 3.5 million

Level of EMS the Department Provides

Emergency Medical Technician (EMT)/First Responder/Basic Life Support

The Department does not Transport Patients.
Demand for Service

While “fire” is part of the Department name, less than 2% of total responses involved fire for 2017. Over 76% of all Department responses were categorized as EMS and rescue responses, Good Intent calls (9.77%) and False alarms (9.6%) are the second and third most prevalent runs; actual fire responses are fourth at 1.66%. Actual fire includes building fires, structure fires, vehicle fires, cooking fires, outside fires, trash fires, grass fires and woods fires.

Thomasville Fire Rescue’s demand for service from 1 January 2014 to 31 December 2017 included 16,856 total responses (including Mutual Aid Given) and 21,945 individual unit responses.

To understand the full role the Department plays in the community, this report profiles the Department’s run activity as reflected in the Emergency Reporting (ER) RMS data. The data collected through ER 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: Fire, Explosion, Rescue & Medical, Hazardous Conditions, Service Call, Good Intent, False Alarm, Weather Relate, and Special Incident.
The nine major categories of this report include:

1. **Rescue & Emergency Medical Service** - Medical assist; Emergency medical service incident; Lock-in, Includes opening locked vehicles and gaining entry to locked areas for access by caretakers or rescuers, such as a child locked in a bathroom. Excludes lock-outs; Search for lost person; Extrication, rescue, Extrication of victim(s) from building or structure, such as a building collapse. Extrication of victim(s) from vehicle. Includes rescues from vehicles hanging off a bridge or cliff. Removal of victim(s) from stalled elevator. Trench/Below-grade rescue. Confined space rescue. Includes rescues from the interiors of tanks, including areas with potential for hazardous atmospheres such as silos, wells, and tunnels. High-angle rescue. Includes rope rescue and rescues off of structures. Extrication of victim(s) from machinery. Includes extrication from farm or industrial equipment; Water and ice-related rescue; Electrical rescue, Electrocution or potential electrocution. People trapped by power lines; Rescue or EMS standby Rescue or EMS standby for hazardous conditions. Rescue, emergency medical service (EMS) incident, other.

2. **False Alarm & False Call** - Malicious, mischievous false alarm; Bomb scare: System or detector malfunction; Unintentional system or detector operation (no fire). Includes tripping an interior device accidentally; Biohazard scare; and False alarm and false call, other.

3. **Fires** - Structure fire; Building fire. Fire in structure, other than in a building. Included are fires on or in piers, quays, or pilings: tunnels or underground connecting structures; bridges, trestles, or overhead elevated structures; transformers, power or utility vaults or equipment; fences; and tents. Cooking fire involving the contents of a cooking vessel without fire extension beyond the vessel. Chimney or flue fire originating in and confined to a chimney or flue. Incinerator overload or malfunction, but flames cause no damage outside the incinerator. Fuel burner/boiler, delayed ignition or malfunction, where flames cause no damage outside the fire box. Commercial compactor fire, confined to contents of compactor. Trash or rubbish fire in a structure; Fire in mobile property used as a fixed structure. Includes mobile homes, motor homes, camping trailers; Mobile property (vehicle) fire; Natural vegetation fire; Outside rubbish fire. Includes all rubbish fires outside a structure or vehicle; Special outside fire, includes HVAC, Outside mailbox fire; Cultivated vegetation, crop fire.

4. **Hazardous Condition** (No Fire) - Combustible/Flammable spills and leaks; Chemical release, reaction, or toxic condition; Radioactive condition; Electrical wiring/Equipment problem; Biological hazard; Accident, potential accident, Building or structure weakened or collapsed. Excludes incidents where people are trapped, Aircraft standby; Explosive, bomb removal; Attempted burning, illegal action; Hazardous condition, other.
5. **Good Intent Call** - Dispatched and canceled en route; Wrong location; no emergency found; Controlled burning; Vicinity alarm; Steam, other gas mistaken for smoke; EMS call where party has been transported by a non-fire service agency or left the scene prior to arrival; and HazMat release investigation w/no HazMat found.

6. **Service Call** - Person in distress; Lock-out. Includes efforts to remove keys from locked vehicles; Ring or jewelry removal, without transport to hospital; Water problem, Water or steam leak. Includes open hydrant; Smoke, odor problem; Animal problem or rescue; Public service assistance, Assist police or other governmental agency. Includes forcible entry and the provision of lighting; Unauthorized burning; Cover assignment, assist other fire agency such as standby at a fire station or move-up.

7. **Overpressure rupture, explosion, overheat (No Fire)** - Overpressure rupture from steam (no ensuing fire); Overpressure rupture from air or gas (no ensuing fire); Overpressure rupture from chemical reaction (no ensuing fire); Explosion (no fire); Excessive heat, scorch burns with no ignition; Overpressure rupture, explosion, overheat, other.

8. **Special Incident Type** - Citizen’s complaint. Includes reports of code or ordinance violation.

9. **Severe Weather & Natural Disaster** – Natural disaster assessment, no rescue or other service rendered (Excludes water rescue); Wind storm. Includes tornado, hurricane, or cyclone assessment. No other service rendered; Lightning strike (no fire). Includes investigation; Severe weather or natural disaster standby; Severe weather or natural disaster, other.
### 2014

**Demand for service to major incident types**

<table>
<thead>
<tr>
<th>Major Incident Type</th>
<th>#Incidents</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue &amp; Emergency Medical Service</td>
<td>1692</td>
<td>72.25%</td>
</tr>
<tr>
<td>False Alarm &amp; False Call</td>
<td>240</td>
<td>10.25%</td>
</tr>
<tr>
<td>Fires</td>
<td>130</td>
<td>5.55%</td>
</tr>
<tr>
<td>Hazardous Condition (No Fire)</td>
<td>117</td>
<td>5.00%</td>
</tr>
<tr>
<td>Good Intent Call</td>
<td>80</td>
<td>3.42%</td>
</tr>
<tr>
<td>Service Call</td>
<td>68</td>
<td>2.9%</td>
</tr>
<tr>
<td>Overpressure rupture, explosion, overheat - no fire</td>
<td>8</td>
<td>0.34%</td>
</tr>
<tr>
<td>Special Incident Type</td>
<td>5</td>
<td>0.21%</td>
</tr>
<tr>
<td>Severe Weather &amp; Natural Disaster</td>
<td>2</td>
<td>0.09%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2342</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

#### Pie Chart

- **Rescue & Emergency Medical Service**: 72.25%
- **False Alarm & False Call**: 10.25%
- **Service Call**: 2.90%
- **Special Incident Type**: 0.21%
- **Good Intent Call**: 3.42%
- **Overpressure rupture, explosion, overheat - no fire**: 0.34%
- **Hazardous Condition (No Fire)**: 5.00%
- **Fires**: 5.55%
- **Severe Weather & Natural Disaster**: 0.09%
Demand for service to major incident types

<table>
<thead>
<tr>
<th>Major Incident Type</th>
<th>#Incidents</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue &amp; Emergency Medical Service</td>
<td>3752</td>
<td>80.62%</td>
</tr>
<tr>
<td>Good Intent Call</td>
<td>308</td>
<td>6.62%</td>
</tr>
<tr>
<td>False Alarm &amp; False Call</td>
<td>275</td>
<td>5.91%</td>
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<tr>
<td>Hazardous Condition (No Fire)</td>
<td>127</td>
<td>2.73%</td>
</tr>
<tr>
<td>Fires</td>
<td>103</td>
<td>2.21%</td>
</tr>
<tr>
<td>Service Call</td>
<td>79</td>
<td>1.70%</td>
</tr>
<tr>
<td>Overpressure rupture, explosion, overheat - no fire</td>
<td>4</td>
<td>0.09%</td>
</tr>
<tr>
<td>Special Incident Type</td>
<td>3</td>
<td>0.06%</td>
</tr>
<tr>
<td>Severe Weather &amp; Natural Disaster</td>
<td>3</td>
<td>0.06%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4654</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Severe Weather & Natural Disaster 0.06%
False Alarm & False Call 5.91%
Service Call 1.70%
Special Incident Type 0.06%
Good Intent Call 6.62%
Overpressure rupture, explosion, overheat - no fire 0.09%
Hazardous Condition (No Fire) 2.73%
Fires 2.21%
## 2016
Demand for service to major incident types

<table>
<thead>
<tr>
<th>Major Incident Type</th>
<th>#Incidents</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue &amp; Emergency Medical Service</td>
<td>3772</td>
<td>80.38%</td>
</tr>
<tr>
<td>Good Intent Call</td>
<td>341</td>
<td>7.27%</td>
</tr>
<tr>
<td>False Alarm &amp; False Call</td>
<td>289</td>
<td>6.16%</td>
</tr>
<tr>
<td>Hazardous Condition (No Fire)</td>
<td>124</td>
<td>2.64%</td>
</tr>
<tr>
<td>Fires</td>
<td>105</td>
<td>2.24%</td>
</tr>
<tr>
<td>Service Call</td>
<td>55</td>
<td>1.17%</td>
</tr>
<tr>
<td>Overpressure rupture, explosion, overheat - no fire</td>
<td>4</td>
<td>0.09%</td>
</tr>
<tr>
<td>Special Incident Type</td>
<td>3</td>
<td>0.06%</td>
</tr>
<tr>
<td>Severe Weather &amp; Natural Disaster</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4693</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Pie chart showing the distribution of major incident types.

**Rescue & Emergency... 80.38%**

- False Alarm & False Call 6.16%
- Service Call 1.17%
- Special Incident Type 0.06%
- Good Intent Call 7.27%
- Overpressure rupture,... 0.09%
- Hazardous Condition (No Fire) 2.64%
- Fires 2.24%
### 2017

Demand for service to major incident types

<table>
<thead>
<tr>
<th>Major Incident Type</th>
<th>#Incidents</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rescue &amp; Emergency Medical Service</td>
<td>3946</td>
<td>76.37%</td>
</tr>
<tr>
<td>Good Intent Call</td>
<td>505</td>
<td>9.77%</td>
</tr>
<tr>
<td>False Alarm &amp; False Call</td>
<td>496</td>
<td>9.60%</td>
</tr>
<tr>
<td>Fires</td>
<td>86</td>
<td>1.66%</td>
</tr>
<tr>
<td>Service Call</td>
<td>36</td>
<td>0.70%</td>
</tr>
<tr>
<td>Severe Weather &amp; Natural Disaster</td>
<td>8</td>
<td>0.15%</td>
</tr>
<tr>
<td>Special Incident Type</td>
<td>7</td>
<td>0.14%</td>
</tr>
<tr>
<td>Overpressure rupture, explosion, overheat - no fire</td>
<td>4</td>
<td>0.08%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5167</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

![Pie chart showing the distribution of major incident types](chart.png)
Building Fire Demand for Fire Service

The number of building (residence and commercial) fires has decreased since 2014. **Firefighting demand was down in 2015 by 43.75%**. This is contributed to a concentrated effort to decrease building fires through Fire Prevention education and inspection programs. The building fire demand has held steady at an average of 19 annually for the past three years (2015-2017).
Review of the Services Provided

This section of the Standards of Cover study includes an overview of the current level of service and a description of the Department’s physical and human resources.

Thomasville firefighters continue to offer dedicated services that exceed customer expectations with a 100% approval rating. Over 1000 customers surveyed from 2014 to 2017 rated TFR a 4.9 on a scale of 1 to 5 for customer satisfaction. Our goal is to help the citizens and visitors of Thomasville through fire and life safety education and community outreach programs.

The responsibility of the fire service today extends far beyond just protecting the community from fire hazards. The Department is the primary responder to all hazards and provides emergency response to fires, medical calls, rescues, hazardous materials incidents, technical rescue, and other specialized emergencies.

The Fire Chief is responsible for the overall administration of the Department. The Department is organized into four major areas of service: Fire Administration, Fire Prevention, Training, and Emergency Services. These four major areas are managed by the Fire Chief, three Assistant Chief Officers, the Fire Marshal, and the Chief of Training.

The Department operates as a Basic Life Support (BLS) provider to the community. This means that emergency personnel may perform airway control, conduct cardiac monitoring and defibrillation, as well as other lifesaving procedures in order to assist with emergency medical response inside the city. Firefighting personnel assigned to the fire stations have obtained Emergency Medical Technician (EMT) certifications.

The men and women of the Department are proud to serve this community and work closely with all other surrounding cities, communities, agencies, departments, staff, and committees. The firefighters of Thomasville remain fully committed to providing the City of Thomasville and surrounding communities with the best in fire and rescue services to protect the lives and property of residents, visitors, and businesses from any emergency that may arise.
The Emergency Operations Division is under the command of an Assistant Chief (Battalion Shift Commander). Apparatus assigned to the Emergency Services Division are designed to address the wide spectrum of emergency response:

- 2 Engine Companies charged with water supply and fire extinguishment. These units are designated as primary Basic Life Support (BLS). Engine 1 is staffed with 4 personnel and Engine 2 is staffed with 3 personnel.
- 1 Ladder/Quint Company designated to perform firefighting operations, search and rescue, forcible entry, victim rescue, ventilation, ladder rescue and more. The Ladder Company is equipped with pumps and has engine company capabilities and is staffed with a 3 personnel.
- 1 Light Rescue Pumper Company which is the nucleus of our Vehicle Extrication Technical Rescue, charged with providing the expertise necessary to rescue Citizens and Firefighters trapped in life-threatening situations. This specialized rescue unit is staffed with 2 personnel.
- 39 Hazardous Materials Technicians can investigate and mitigate rescue parameters at hazardous materials releases, including decontamination of both victims and responders at large and small scale disasters.

The primary responsibility for staffing is delegated to the Assistant Chiefs (Shift Commanders) assigned to the Emergency Services Division and or personnel acting in that capacity. Shift Commanders provide daily oversight of the overall process. Staffing for the Emergency Services Division is 13 personnel daily.

The Division currently staffs the following apparatus 24/7:
- 2 Engines (Pumper)
- 1 Ladder (100’ Aerial)
- 1 Rescue Pumper
- 1 Command vehicle
- And 1 Rescue Vehicle from 0800-1700 hours.
The Departmental Training Division comes under the direction of the Chief of Training to include: recruit training, in-service training, testing and promotional processes, and personnel development. The Training Division is managed by the Chief of Training and supported by highly trained state certified instructors. Training consists of ongoing education to satisfy many certification 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 City.

The primary goal of all training, education, and professional development programs is the reduction of firefighter injuries, illnesses, and fatalities. As members progress through various job duties and responsibilities, the Department now ensures the introduction of the necessary knowledge, skills, and abilities, as well as ongoing development of existing skills and updated job performance requirements.

Thomasville Fire Rescue is an agency member and holds a Certificate of Compliance as a Fire Rescue Department with the Georgia Firefighter Standards & Training Council (GFSTC). GFSTC is accredited by the National Pro Board Fire Service Professional Qualifications System (Pro Board) and makes certification available to its members. Pro Board Certifications are the stamp of approval from a third party review of our agency’s certification system. The review includes all aspects of certification testing including: completeness, fairness, security, validity, and correlation to the national standards.

Certification is the verification that a firefighter has successfully completed an evaluation of his/her knowledge, skills, and abilities against the national standard. Individuals that successfully pass a certification exam and practical skills test are certified and have reached a major accomplishment in demonstrated performance.
Fire Administration provides support to all Divisions of the Department, including coordinating all facilities maintenance, repairs, apparatus fleet maintenance, specifications and testing of apparatus and equipment, logistics, departmental supply, purchasing, repairs, acquisition, and coordination with the strategic planning functions including long range analysis of impacts on resources associated with increases in service demands.

The Fire Chief provides the fiscal oversight, planning, and management of the Department’s 3.5 million-dollar-plus budget. The City of Thomasville Budget is a utilities based budget. The budget is approved by City Manager and City Council. The purpose of the budget is to formalize policy, which is expressed financially through the budget to supply specific data to operational managers throughout the Department so those managers may fine-tune their operations as the fiscal year progresses and to provide a mechanism for controlling objectives and expenditures.

The Department subdivides its budget into five (5) major categories: revenues, administrative, fire suppression, fire prevention, and capital. The budget is formatted in the typical line item fashion: listing items of purchase and acquisition by category in order to operate within its available funding. The Department relies on annual fiscal planning to ensure adequate funding to sustain all current and future emergency and support services. Approximately 84% of the Fire Department’s total operating budget was appropriated for salaries and benefits.
Review of the Community Expectations & Performance Goals

Community baseline objectives are detailed and the ISO-PPC rating is discussed. These baseline service level objectives identify and describe community expectations as they relate to industry standards, best practices, and performance expectations. It is assumed that, going into the development of the 2018 CRA-SOC, these expectations remain unchanged as they have been continuously supported through City budget and fire department policies.

The Department is a fire and rescue organization designed to provide essential public safety and emergency services to the City of Thomasville. The primary mission is to provide fire, medical, hazardous material, and technical rescue response within the geographic boundaries of the Department response area and automatic and mutual aid support to county providers. The Department’s response and deployment standards are based upon community risk and service demand of the community.

The Department responds to all types of emergency and non-emergency situations within the designated Emergency Response Zones (ERZ, Figure 1). Often what is described to dispatchers does not reflect the actual incident; hence, the Department is trained and prepared to respond to a broad array of situations. The Department does respond to a wide variety of fire incident types. This includes building and structure fires, vehicle fires, outdoor fires, dumpster fires, and any other type of fire that may occur in the city. The Department is responsible for sending an appropriate level of response to the type of fire that is reported.

In the case of a reported building fire, a standard response consists of an ERF of a minimum of 13 personnel. TFR staffing is below the NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments (Figure 2-3). The NFPA 1710 standard is 17 personnel capable of extinguishing a fire in the typical 2000 sq. ft. residential structure. In the event that a fire is larger or more involved, additional resources would be requested through automatic and mutual aid. The national benchmark standard is for the fire department response time for the arrival of the first-due unit, **staffed with a minimum of four firefighters to be on scene within 5 minutes and 20 seconds 90% of the time.**

Are We Putting TFR Firefighters at Risk?

The U.S. Fire Administration (USFA) recommends that a minimum of four firefighters to respond on each fire truck. The IAFC goes further and recommends a minimum of five firefighters on every engine and ladder company.
Taking it beyond the Fire Service, the **International City Management Association (ICMA)** states that in “Managing Fire Services” there should be at least four and often eight or more firefighters, each under the supervision of an officer” that “should respond to fire suppression operations.” Further, it says, “If about 16 trained firefighters are not operating at the scene of a working fire within the critical time period, then dollar loss and injuries are significantly increased, as is fire spread.” It has found five-person companies 100-percent effective, four-person companies 65-percent effective, and three-person companies 38-percent effective.

**The National Institute for Occupational Safety and Health (NIOSH) LODD** reports that every NIOSH LODD report recommends to “provide adequate firefighter staffing to ensure safe operating conditions.” And the IAFF: views inadequate staffing and crew size as contributing factors to LODDs and advocates maintaining adequate staffing as proposed in NFPA 1500, NFPA 1710, and NFPA 1720; the NFPA Fire Protection Handbook, 18th edition (1997), Section 10/Chapter 1 (1-34); and OSHA 29 CFR 1910.134 (two-in/two-out).

**What Are the Consequences of Inadequate Staffing?**

Fireground effectiveness may be compromised when staffing falls below four firefighters per company. However, the most important consequence to recognize is the higher risks we are placing firefighters in. Putting firefighters into a fire battle with inadequate staffing is extremely dangerous.

*Tests conducted with the Houston (TX) Fire Department indicated that staffing below a crew size of four can overtax the operating force and lead to higher losses.*

The District Chiefs’ Technical Advisory Committee (DCTAC) conducted a study of the Houston Fire Department, which determined that “fire apparatus staffing is an even greater citizen safety issue than a firefighter safety matter.” The report termed the understaffing situation a “crisis situation that demands immediate intervention.” Decreasing the number of firefighters without eliminating any of the tasks fire departments are to accomplish causes the department to delay some of the required tasks or to try to perform all tasks unsafely with inadequate staff, according to the study.

The study also noted the following:

*Firefighters working in understaffed environments are too often expected to perform beyond their capabilities.*

Inadequate staffing creates “a cumulative effect” caused by combined delays and lost functions of crews, resulting “in an even greater loss of overall effectiveness.”

*Understaffing increases physiological stress on firefighters, as they try to compensate.*
The U.S. Army and Marine Corps do not send their troops into battle with under-staffed combat units. However, some fire departments do. TFR is one of those departments. The NFPA periodically surveys U.S. fire departments to determine their needs. The latest survey, titled “Fourth Needs Assessment of the U.S. Fire Service,” confirms what the earlier surveys found. Most fire departments have too few firefighters to be combat-ready. The report notes that less than one-third of fire departments comply with the minimum crew size requirements outlined in NFPA 1710, which applies to career fire departments.

TFR does not meet the minimum requirements for staffing in NFPA 1710 for the initial full alarm assignment to a structure fire in a typical single-family dwelling. NFPA 1710 provides the minimum requirements relating to the organization and deployment of fire suppression operations, emergency medical operations, and special operations to the public by career fire departments. It provides an important objective measure of the standard of care that the reasonably prudent fire department would take.

NFPA 1710 provisions for staffing levels, deployment of resources, and levels of service are essential to public safety. TFR is already behind in the minimum staffing required for the single-family dwelling. The new staffing levels in the 2016 edition address garden style apartments, like Wildwood Apartment and Abbey Lake Apartments, are requiring fire departments to provide additional coverage beyond the levels for single-family dwellings covered in previous editions. The staffing requirements for open-air strip malls, and high-rise buildings is also included in the new edition.
What does Minimum Staffing look like?

The ERF and initial full alarm assignment to a structure fire in a typical single-family dwelling (moderate risk), according to NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments, 2016 Edition, should include enough personnel to complete the following tasks:

1. Establishment of incident command (IC) outside of the hazard area for the overall coordination and direction of the initial full alarm assignment with a minimum of one individual dedicated to this task.
2. Establishment of an uninterrupted water supply of a minimum of 400 gpm for 30 minutes with supply line(s) maintained by an operator.
3. Establishment of an effective water flow application rate of 300 gpm from two handlines, each of which has a minimum flow rate of 100 gpm with each handline operated by a minimum of two individuals to effectively and safely maintain the line.
4. Provision of one support person for each attack and backup line deployed to provide hydrant hookup and to assist in laying of hose lines, utility control, and forcible entry.
5. Provision of at least one victim search and rescue team with each such team consisting of a minimum of two individuals.
6. Provision of at least one team, consisting of a minimum of two individuals, to raise ground ladders and perform ventilation.
7. If an aerial device is used in operations, one person to function as an aerial operator and maintain primary control of the aerial device at all times.
8. Establishment of an IRIC consisting of a minimum of two properly equipped and trained individuals.
9. Establishment of a Safety Officer outside of the hazard area for the overall coordination and direction of fireground safety.
10. Establishment of an IC assistant outside of the hazard area.

The task for this moderate hazard would require a minimum total of 17 personnel. The Department currently deploys 13 personnel to moderate fire risks. Figures 2 and 3 show the comparison of the requirements of NFPA 1710 minimum staffing requirements verse the current capabilities at the 90th percentile for TFR.
2014-2017
THOMASVILLE FIRE RESCUE STANDARDS OF COVER
45
In the case of a reported medical emergency, a standard response consists of a single rescue company, engine company or ladder company. This response level consists of 1-3 personnel, capable of performing BLS. This means that emergency personnel may perform airway control, conduct cardiac monitoring and defibrillation, and other BLS procedures in order to assist Thomas County EMS with emergency medical response inside the city. The goal is for the response time for the arrival of the first-due unit, staffed with a minimum of 4 firefighters, to be on scene within 5 minutes 90% of the time.

All fire service areas within the City have the same performance level expectations and baseline objectives. The City of Thomasville strives for an equitable level of service throughout the community. The establishment of benchmark and baseline response objectives is discussed in detail in the Performance Objectives & Performance Measures section of this study. These benchmark and baseline response objectives set the Department’s goals and define the level of services expected by the community in measurable terms.

One way a Department can show homeowners and business owners in its jurisdiction a tangible benefit without their having to experience an emergency is to improve its ISO-PPC. The ISO is an independent organization that collects and analyzes information pertaining to a community’s ability to protect its citizens and property against fire. Certain factors are evaluated and compared with those on a pre-established rating schedule, and the community is assigned a PPC rating based on a scale of 1 (exemplary fire protection capability) to 10 (the fire protection system does not meet the minimum criteria).

The ISO-PPC evaluation process involves evaluating a community’s fire suppression system in accordance with three general categories established in the Fire Suppression Rating Schedule (FSRS):

- Receiving and Handling of Fire Alarms (10 percent of the FSRS score)
- Fire Department (50 percent of the score)
- Water Supply (40 percent of the score)
- Community Risk (5 percent of the score)

The fire department is judged on nine criteria:
1. Engine Companies – 10% (number of engine companies/hose equipment carried)
2. Reserve Pumpers – 1% (number of reserve engine companies/hose equipment carried)
3. Pump Capacity – 5% (total available pump capacity)
4. Ladder-Service Companies – 5% (number of ladder companies/equipment carried)
5. Reserve Ladder-Service Companies – 1% (number of reserve ladder companies/equip carried)
6. Distribution – 4% (engine company within 1.5 miles / ladder within 2.5 miles)
7. Company Personnel – 15% (number of firefighter and company officers on duty)
8. Training – 9% (training facilities and their use)

9. Fire Prevention 5 pts (Community Risk Reduction: fire and life safety education, fire inspections, code enforcement, plans review, ordinances, and pre-incident planning,)

The Department has an exemplary fire ISO-PPC rating of Class 2. The community of Thomasville has come to expect this level of fire protection. There are tangible benefits for a community in having achieved such a rating. Almost all insurers of home and business property use the ISO-PPC in calculating insurance premiums. Generally, the price of fire insurance in communities with a good ISO-PPC rating is substantially lower than a community with a poor ISO-PPC rating.

The ISO-PPC statistical data on actual fire and insurance loss history bears out a relationship between fire protection as measured by the ISO-PPC and fire losses in a community. On average, the ISO-PPC reports that communities in the lower classifications had commercial property fire losses more than three times as high, and residential fire losses more than twice as high, as communities in the best classification. Reduced losses due to fire, reduced insurance premiums, and the ISO-PPC’s effect as an economic development recruitment factor, all combine to create a significant and positive economic benefit to the community.
Overview of the Community Risk Assessment & Risk Levels

“Effectively managing a fire department requires an understanding of and an ability to demonstrate how changes to resources will affect community outcomes. It is imperative that fire department leaders as well as political decision makers, know how fire department resource deployment in their local community affects community outcomes in three important areas: firefighter injury and death; civilian injury and death; and property loss.”

Conducting a risk assessment is not a project but an ongoing process of identifying risks and hazard in order to implement strategic plans to deploy resources, equipment, and personnel to mitigate a situation. Hazards and risk to which a community is susceptible determine the planning and strategies necessary to ensure available resources are deployed to mitigate the situation. Conducting a community risk assessment and identifying target hazards within a city plays a vital role in building a safer, more secure, and more resilient community.

This requires accurate up to date data which creates the information for answering the questions for community risk and needs. Strategic planning that includes data analysis can also assist in growth management and staffing levels to ensure there are enough personnel to accomplish emergency scene critical tasks in order to safely and properly mitigate the incident.

Risk assessment is the analysis of the probability or chance of an event occurring verses the consequence or the results or damage that could occur as a result of the event. Within this assessment it is necessary to analyze the physical, economic, sociologic, and demographic aspects of the City of Thomasville.

When properly considering a risk assessment as a process, it is crucial for a department to continuously monitor their response jurisdiction and the surrounding community. This includes evaluating where the hazards are located and the conditions of the environment they are in, whether they are inside a structure or outside. It also includes aggressive inspection, prevention, and education programs. Prevention prevents these events. Although the majority of time, money, and effort are spent on salaries and equipment to support emergency response, the reactive approach. There still needs to be more emphasis, strategy, and resources placed on the prevention of fires, the proactive approach.

This exercise of data and analysis will enhance the understanding of the community and will help “to promote within communities a comprehensive, multi-hazard risk-reduction plan led by the fire service organization”, the forth operational objective set by the United States Fire Administration (USFA). This community risk study also relates to the National Fire Academy’s Executive Analysis Course objective to “apply the change management model to a new or existing community.”
It is also necessary that a department adopts a method to define risk categories within their geographical response areas. The objective is to address the hazards at different levels from low, to moderate, to high, and any areas needing a maximum deployment of resources. The risk category determines the types and number of companies dispatched. The selected risk included identifying the hazard levels of a: low fire hazard, moderate fire hazard, high fire hazard, or special fire hazard. The typical moderate risk for the City of Thomasville is the single-family residential structure.

In summary, it really doesn’t matter if the truck was on time and met the coverage standards if a fire department doesn’t have the personnel, equipment, and abilities needed to mitigate the hazard. A fire department must be prepared by conducting a community risk assessment. This assessment, as defined by the United States Department of Homeland Security, is described as the analysis of emergency situations that tax an agency beyond their normal capabilities. How these risks affect the community and the fire department are also important in order to develop strategies to properly deploy resources to the hazard in order to properly mitigate the situation and bring it to a close. According to the NFPA 1600 Annex A.5.3, a comprehensive risk assessment should include identification of all hazards, threats, and perils in a community served. Not just identifying the location but how these hazards may impact the department, the city infrastructure, and the surrounding area.
Risk Assessment Methodology

Conducting a community risk assessment is nothing new to the fire service. In order for strategic planning to be effective it must be a process that is flexible and dynamic in nature. The planning process should be a continuous ongoing process and not a project to complete a strategic planning document. A systematic approach ensures structure with deliberate goals and outcomes and proper strategic planning helps to steer and organization towards future excellence.

“Even the most exhaustive and aggressive risk analysis stands vulnerable to the loss of property and life due to the nature and multitude of hazards within a community.”

The number of hazards potentially at risk will almost always outweigh the number of resources available. In large scale incidents it is therefore extremely important to know where to apply available resources to mitigate risk in a priority of both life and critical infrastructure. Hazard identification is the part of the ongoing community risk assessment process that assigns relative priorities for mitigation plans and implementation.

What is the definition of a hazard or risk as components of a community risk analysis? The CFAI FESSAM defines a hazard as “a source of danger that can create an emergency event” and a risk as “the probability of loss due to exposure to a hazard.” The level of risk is often determined by considering the hazards involved, the consequence of something occurring, and the likelihood of it happening. A continuous dynamic risk assessment can help to identify hazard levels and target hazards in an ever changing community.

CFAI offers a comprehensive self-assessment and evaluation model that enables fire and emergency service organizations to examine their services, their community, and analyze strengths and weaknesses. This self-assessment process leads to improved service delivery by helping fire departments to determine community risk and safety needs, evaluate the performance of the department, and to establish a method for achieving continuous organizational improvement. This requires accurate up to date data, a desire to research what is occurring in a department, and a desire to make the necessary and critical decisions associated with that knowledge of information.

The CFAI FESSAM from CPSE considers the community risk assessment to be the very foundation from which to build upon in order to make the intelligent and critical policy decisions required by a fire department.
“Identifying hazards and assessing risk should begin long before the call is received. This can be accomplished most effectively by on-site visits that include performing inspections and pre-plans.”

What is a risk assessment? Risk assessment as defined by the NFPA Standard on Recommended Practice in Fire and Emergency Services Organization Risk Management is a process to identify hazards, their probability, vulnerability and the impact danger the hazard poses to a community. This standard goes on to define a risk or hazard assessment as an ongoing “function of preparedness”. It refers to this ongoing process as including the activities of strategic planning for developing the necessary systems and identifying the proper task in order to maintain a proper assessment of risk.

According to CFAI a risk assessment is a “process”. It is a process of strategic planning that identifies, evaluates, creates, and then measures the performance. This helps to identify the hazards within a community and the risk to which a community is exposed. It also identifies "the process for developing, adopting, and implementing prevention and deployment policies, including specific SOC objective statements for each significant risk”.

The results of assessing risk should include the steps necessary to identify, influence, and increase the ability to minimize the vulnerability of risk that hazards create. Even the most exhaustive and aggressive risk analysis stands vulnerable to the loss of property and life due to the nature and multitude of hazards within a community. A risk assessment must include the creating of policy for service level objectives and a way to measure performance capabilities of the resources deployed to mitigate such risk.

Input Factors

Identifying hazards and assessing risk should begin long before the call is received. This can be accomplished most effectively by on-site visits that include performing inspections and pre-plans. Thus begins the process of information gathering needed to size up the hazard potential and assess the risk. Data gives insight, strengthens resources, and identifies the planning and training needs for an organization.

What information should be collected in order to identify target hazards? When it comes to fire and life safety the lack of knowledge is the greatest risk. In order to gain knowledge, it requires data and information. The knowledge therefore is gained by the appropriate collection of information and is useful in the strategic planning process in order to gain evaluated understanding. The data and information gathering resources are available include: incident records, pre-plans, inspections, and fire fighter familiarity with the location are all critical to gaining the necessary knowledge and identifying hazards in order to determine the risks.
The CFAI FESSAM provides valuable information on conducting a community risk assessment along with strategic planning. Part of the criteria within this manual requires a department to assess whether or not as an organization they are analyzing the community it serves. This part of assessment and planning is considered crucial to establishing service level objectives, response coverage, and proper deployment of resources in order to affect proper outcomes.

The FESSAM criterion also includes a need for an organization to collect data specific to its community served and apply this information to the organizations strategic planning. This strategic plan must include a community risk assessment to “assess the nature and magnitude of the hazards within its jurisdiction and develop appropriate response coverage strategies”. In order to create an accurate assessment and establish proper service level objectives for distribution of resources, a department must conduct a comprehensive risk assessment.

Utilizing the FESSAM a risk assessment would include the following key components:

- Fire Flow - available and needed fire flow for specific occupancy types
- Probability - the likelihood that a particular event will occur
- Consequence - life safety, economic and environmental impact
- Occupancy Risk - risk to life and property
- Fire Management Zones - can be a single structure or facility, usually defined in geographical boundaries
- Community Risk - overall profile of the community

The Department Planning Division has evaluated various risk assessment models to determine how community risk assessment data can best be captured. The Department already has a records software program that utilizes a weighted score to collect and analyze data for a risk assessment. The result of this captured data is known as an OVAP score. With an OVAP score each building or complex can be identified as a low, medium, high or special risk and each one will have a score to assist in establishing the risk level. This is established by examining the construction type, size, height, fire resistance classification, fire protection systems, square footage and gallons per minute (gpm) requirements. Once this classification is established, it can be determined what resources have to be applied within specific time limits to achieve the goals of response in order to mitigate the situation.
The following components are used to develop the OVAP score:

<table>
<thead>
<tr>
<th>Component Class</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>Property use, size, height, access, occupancy type, square footage, exposures</td>
</tr>
<tr>
<td>Life Safety</td>
<td>Occupant load, occupant mobility, alarm systems, fire protection systems</td>
</tr>
<tr>
<td>Risk</td>
<td>Fire code enforcement, human activity, fire event history</td>
</tr>
<tr>
<td>Consequences</td>
<td>Fire control, hazards, fire load</td>
</tr>
<tr>
<td>Water Demand</td>
<td>Fire flow, availability, sprinkler systems</td>
</tr>
<tr>
<td>Value</td>
<td>Property value</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>OVAP Score Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special</td>
<td>60+</td>
</tr>
<tr>
<td>High</td>
<td>40-59</td>
</tr>
<tr>
<td>Moderate</td>
<td>15-39</td>
</tr>
<tr>
<td>Low</td>
<td>0-14</td>
</tr>
</tbody>
</table>

Once the occupancy is understood, standard tools can be used to determine the required gpm fire flow to stop the fire in its area of origin before it flashes over. Once flash over occurs the chances of extinguishing the fire and saving the structure are reduced substantially. The critical tasks are examined in order to deliver the required fire flow to the structure. This is determined by a number of factors: How many fire fighters will it take to perform the tasks of connecting hoses and stretching lines in order to deliver the water? How many hydrants? How many pieces of apparatus need to be on the scene to have enough fire fighters and pumping capability? How long will it take to get them there? The answers to these questions will help you to determine the required resource concentration and distribution, the ERF, and the deployment of resources for the hazard and the community at risk.

**Occupancy Classification**

The Department has approximately 1,369 properties listed in the inspection program occupancy inventory. These properties are classified according to the International Building Code. Residential properties do not come under the jurisdiction of the International Fire Code and, therefore, are not carried in the inventory.

The CAPP process includes an occupancy classification of assigning an OVAP score for all occupancies within the city. Data from this will enable a comprehensive GIS-based analysis and identification of the various target hazards located in Thomasville.
Utilizing a rating score assigned to each property can help to determine which target hazards are the most critical.
**Probability verse Consequences**

The following risk matrix is representative of the considerations of risk assessment. They are the probability of an event occurring and the consequences of that event occurring. As the level of risk increases, a different commitment of fire resources is needed to keep the risk from escalating.

- **Low Risk** - low probability, low consequences
- **Moderate Risk** - high probability, low consequences
- **High Risk** - low probability, high consequences
- **Maximum** - high probability, high consequences

(Source: CFAI, 2010)

This creates four possible relationships between structures or hazardous conditions and the concentration and distribution of resources:
The following information defines the four levels of risk identified in the matrix.

1. **Maximum Risk**: The Maximum Risk Level includes a high probability of occurrence and a high level of consequences. This level of risk has the potential for a high level of life and property loss as well as significant property damage. Examples of a Maximum Risk level might include a non-sprinkled high-rise structure that exceeds the reach of fire department ladders.

2. **High/Special Risk**: The High/Special Risk level has a low probability of occurrence and a high level of consequences. This risk level has the potential for high to moderate life and property loss. A high risk may vary in magnitude and may create varying threats to those people in the immediate area of impact. High Risks can also impact those in close proximity to the immediate threat zone. Examples of a High Risk level would include chemical and hazardous material facilities.

3. **Moderate Risk**: The Moderate Risk level has a high probability of occurrence and a low level of consequences. This level of risk can present a potential for life and property loss but these are usually limited to only those areas, properties and residents in the immediate threat zone. An example of a Moderate Risk level would be a single-family dwelling of 3500 square feet or less.

4. **Low Risk**: The Low Risk level has a low probability of occurrence and a low level of consequences. This risk level presents little threat to the community’s ability to function unless the community does not have adequate resources allocated to handle this level of risk. Examples of a Low Risk level would include refuse, detached garages, and out buildings.
The Commission on Fire Accreditation International recommends fire departments have specific service level objectives to address the distribution of resources for each risk level. The term distribution is often used in the fire service to describe the location of fire department emergency response resources in an effort to ensure their availability to provide intervention for all risk levels. Because of the cost related to the allocation of fire resources, fire departments generally use a static response system. A static response system is a system in which fire stations are strategically located in designated response areas across the community, or coverage area. This allows fire department units to travel from one point to another in a pre-designated period of time known as response times or performance objectives.

A key component to a static response system is to ensure fire department resources are properly placed based on 4 minute travel times. Properly spaced fire stations are needed to create a rapid deployment of emergency resources in order to respond to and mitigate average, or routine, emergency calls for service in a timely manner.

The term concentration is used to describe the spacing of multiple fire department resources so a fire department can assemble an “effective response force” at the scene of an emergency incident. An ERF is one that which would most likely stop the escalation of the emergency incident as it is categorized in each risk level. Differing incident types require different levels of initial and secondary staffing based on the nature of the incident. These incident specific resource requirements are considered critical task.
The Department also considers the availability & reliability of resources in order to determine the performance of an effective response force within a station territory. Utilizing the station workload (actual incidents where at least one fire department unit arrived) the availability is based on the percentage of time the station’s assigned apparatus was in-service, answered the call, and arrived first. The unavailability of a station apparatus is also measured to determine the percentage of events that another station apparatus arrived first.

The performance reliability is determined for each fire station assigned apparatus and its ability to provide a first-due unit in accordance with adopted performance measure objectives. The overall performance reliability of the stations first-due territory measures the percentage of time that an apparatus (despite station assignment) was placed on scene in accordance with adopted performance measure objectives.
Strategic Planning - Comprehensive Assessment and Planning Process (CAPP)

According to the CFAI Self-Assessment Process Category II that pertains to Assessment and Planning, "assessment and planning are defined as the processes used to identify the community's fire protection and other emergency service needs in order to identify potential goals and objectives. All agencies should have a basic source of data and information in order to logically and rationally define the organization's mission. Assessment and planning is critical to the establishment of service level objectives, standards of response coverage, and ultimately, the quality of program outcomes".

Risk assessment as a systematic activity that requires both technical and management attention should be a continuous process. One useful concept is that for each risk posed by an identified hazard and potential outcome there can be risk reduction leverage through proper planning that identifies needed resources for each mitigation action. This requires a search for and locating of potential hazards and risks before they become problems. A systematic approach to discover risks would include a process of analyzing and transforming data into decision making information used to evaluate the impact and probability in order to classify and prioritize risks. The Department utilizes the CAPP for the effective management of the resources required for deployment, in order to mitigate emergency events, required for an understanding of the community at risk.

One method of ensuring current and up to date data is pre-planning. The Department Emergency services personnel update pre-plans annually. The pre-planning process offers critical data and contribute to firefighter safety by improving the overall knowledge of what lies in wait. It also ensures that facility and infrastructure information gathering is complete and current data for the CAPP. This requires that the firefighter conducts an on-site visit and physically tour the structure or potential risk site in order to properly document the information needed. Successful mitigation outcomes require proper pre-planning and pre-incident preparation (Bachman, 2010). This information must also be shared and made available to all personnel who may be called upon to mitigate an emergency incident involving the identified hazards and risks.

In addition to the risk factors mentioned, consideration must also be given to built-in protection. Built-in protection includes buildings that are fully or partially protected by an alarm system. This is significant since the high risk property category represents less than 1% of the total inventory and a portion of these buildings have built-in protection.
Documentation of Area Characteristics

The Department collects and analyzes data specific to the distinct characteristics of the community served and applies this information to the community risk assessment and organizational planning. The information is applied to the strategic planning process that involves response territory. The CAPP is used for the purpose of analyzing the community demographics, demand for service, performance capabilities, distribution and concentration of resources, growth factors, and developing response time standards.

For the purpose of analyzing service provision, the Department’s response territory (ERZ) is divided into zones with Emergency Service Numbers (ESN). ERZs and ESNs provide layers of information in order to analyze service demand, department performance capability, and growth factors which make up the CAPP.
Community’s Demand for Service

The Department analyzes the community’s need for response by using the CAPP for identifying geographic boundaries, planning areas, demographics, economic factors and development patterns; the community risk assessment for defining risks, evaluating potential risks, analyzing historical data, determining probability and consequences, and defining the community profile; and SOC to identify baseline and benchmark service level objectives.

Data including fire loss, injury and life loss, property loss, and other associated losses, are recorded for a minimum of the three immediate previous years as a part of the ER records system. The CAPP, utilizing these response assessment tools, has been able to determine response performance expectations and establish an effective response force, and proper concentration and distribution of resources. This method of analysis has proven to be reliable for the purpose of analyzing response and developing response time standards. This method has shown response level deficiencies in fire risk level response objectives. The analysis of fire risk levels conducted in the 2014-2017 response study has shown that the Department needs to re-define response levels, risk, and deployment of resources.
Water supply is a factor in risk assessments and service area assessments and is included in the planning process. The City water supply system and water/sewer boundaries are utilized in the CAPP. All hydrants locations have been collected by GPS and are available as a layer in the ER hydrant map which includes codes for hydrant markings for low flow areas. Required fire flow and available water are elements of all pre-plans.

There are 1031 hydrant records in the ER Records Management System. The Emergency Operations BACs are responsible for the annual hydrant maintenance program. The Emergency Operations Division updates these records annually as part of the hydrant maintenance program. Emergency Operations Division Company Officers are required to test flow hydrants at a rate of one hundred percent annually in order to meet the requirements of the PPC program from ISO.
Fire Risk Assessment and Response Strategies

The CAPP is responsible to identify and assess response coverage. This strategic analysis process begins with assessing the community’s risk levels used in determining an acceptable standard of cover for the community. The CAPP encompasses a critical analysis of response performance and service demand needs. An effective standard of response coverage strategy has been established through a formal annual process of assessing fire risk levels and suppression capabilities in defined ERZs. Each significant fire risk level has been categorized as low, moderate, or high/special to determine standards of cover within the department response area. The Department has identified industry best practices and standards in order to establish an ERF benchmark measurement for travel time objectives.

<table>
<thead>
<tr>
<th>FIRE RISK LEVELS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Risk</strong></td>
</tr>
<tr>
<td>- Automobile Fires</td>
</tr>
<tr>
<td>- Carbon monoxide calls</td>
</tr>
<tr>
<td>- Grass and low fuel types</td>
</tr>
<tr>
<td>- Automobile accidents or industrial accident</td>
</tr>
<tr>
<td>- Tractor trailer fires</td>
</tr>
<tr>
<td>- Storage Sheds</td>
</tr>
<tr>
<td>- Detached garages</td>
</tr>
<tr>
<td>- Out building</td>
</tr>
<tr>
<td>- Single patient EMS calls</td>
</tr>
<tr>
<td><strong>Moderate Risk</strong></td>
</tr>
<tr>
<td>- Detached, single-family dwellings</td>
</tr>
<tr>
<td>- Older multi-family dwellings</td>
</tr>
<tr>
<td>- Mercantile facilities</td>
</tr>
<tr>
<td>- Railroad facilities</td>
</tr>
<tr>
<td>- Mobile Homes</td>
</tr>
<tr>
<td>- Buildings with low occupancy load, but with high concentrations of fuel load or hazardous materials</td>
</tr>
<tr>
<td>- Industrial or commercial under 10,000 sq.ft.</td>
</tr>
<tr>
<td>- Aircraft on/off airport property</td>
</tr>
<tr>
<td>- Loss of life or property value limited to occupancy</td>
</tr>
<tr>
<td>- Concentrations of older multi-family dwellings</td>
</tr>
<tr>
<td>- Multi-family dwellings more than 2 stories</td>
</tr>
<tr>
<td><strong>High Risk/Special Risk</strong></td>
</tr>
<tr>
<td>- Built-up areas with high concentration with substantial risk of life loss, severe financial impact upon the community or potential for unusual damage to property or environment</td>
</tr>
<tr>
<td>- Government or infrastructure risks</td>
</tr>
<tr>
<td>- Apartment complexes more than 25,000 sq.ft.</td>
</tr>
<tr>
<td>- All Buildings where available water supply is less than projected fire flow</td>
</tr>
<tr>
<td>- Nursing homes</td>
</tr>
<tr>
<td>- Hospitals</td>
</tr>
<tr>
<td>- Refineries and warehouses</td>
</tr>
<tr>
<td>- Vacant/abandoned structures</td>
</tr>
<tr>
<td>- Industrial complexes (flows of 3,500 gpm or greater)</td>
</tr>
<tr>
<td>- High rise</td>
</tr>
</tbody>
</table>
The CAPP analysis includes service demand factors (call volume, commercial square footage, risk score, property valuation), performance/capability factors (percent uncovered within 4 minutes, over 4 minute travel times, distance to fire station), and growth factors (developable land, population, developed land, ISO-PPC hydrant count) for each ERZ that are evaluated in order to determine service demand and response needs.

The ER RMS maps incidents in order to identify and assess each ERZ for frequency and probability of occurrence. This data is utilized in the Annual Report Statistical Summary and in the annual CAPP strategic planning process.

By dividing the community into ERZs, the CAPP is able to analyze fire service demand history in order to improve response. The planning process has allowed the department to make educated recommendations on response needs based on call volume, frequency, probability, property usage, community risk, travel times, and demographics. Fire protection and suppression systems are identified in the ER RMS.

The Department CAPP work group identified the maximum or worst fire risk in each ERZ within the ER preplan module. Risk classifications (Low, Moderate, High/Special) for each ERZ are identified.

There are four ERZs surveyed, covering all the incorporated areas in the City of Thomasville. The purpose of the ERZ is to identify manageable response areas used in risk assessment and development of response plans. For the purpose of this study, every ERZ was evaluated through the CAPP for a number of factors to in order to produce a life safety score. An evaluation of risk factors provides a clear picture of what type of potential hazard occurs and where these hazards are located by ERZ.

The ER RMS is able to create a for a risk assessment comprised of eighteen data factors used for creating an OVAP risk score. This method has proven effective in identifying the maximum or worst fire risk in each ERZ.
A performance based measurements program has been established by the Department Training Division, that is based on current standards set forth in NFPA 1001 Professional Qualifications for Firefighters, NFPA 1410 Initial Fire Attack, NFPA 1404 Self-Contained Breathing Apparatus and NFPA 1021 Fire Officer Professional Qualifications and is measured by using the JPR program. The JPR performance based training program has proven effective in addressing the critical task necessary for firefighting activities.

The critical task analysis for fire incidents is conducted utilizing 1410 Drills found in the Department Standard Operating Procedures (SOP) for performance based measurements. The purpose of this SOP is to specify the minimum job performance requirements for firefighting in order to address the Department’s ability to place adequate resources on any specific risk, and to properly mitigate each risk category.


The Department's CAPP, includes a review of the current deployment of resources and a risk assessment of the area served. This program evaluates the fire service areas and planning zones for fire risk factors, area of responsibility, demographics, economic indicators, fire loss data, water supply and automatic fire protection system information. From this strategic planning process an effective SOC is established.
Historical Perspective & System Performance

This section provides a review of the historical performance and the measurements of the current system. The measurements of system performance include factors such as distribution, concentration, availability, and reliability.

The historical performance of the Department is measured utilizing the ER Records Management System. Historical data provides an analysis of the ability to meet performance expectations. These measurements include the distribution and concentration of available resources. Distribution is defined as the geographic location of all resources, specifically first-due resources, for the initial dispatch of an ERF. This is generally measured from the location of the fire station to a potential event. The concentration of resources is defined as the spacing of multiple resources. These resources are arranged to provide an initial ERF to effectively mitigate an emergency event.

Fire service area (FSA) analysis determines distribution of fire station and fire companies in the City of Thomasville based on the element of travel time and a geographical analysis of first-due resources. The goal for distribution in Thomasville is to provide equitable service levels throughout the city.

Distribution & Concentration measures include:

**Service Demand Factors**
- Call Volume
- Commercial Square Footage
- Risk Factors
- Property Valuation

**Growth Factors**
- Developable Land
- Population
- Developed Land
- Hydrant Count

**Performance Capability Factors**
- Distance to Fire Station
- Incidents Over 4 minutes travel
- Percentage Covered in 4 minutes travel
- Unit reliability
The Geographic Analysis and Planning (GAP) overlay creates an Ideal Response Zone (IRZ) that can assist in meeting industry best practices. Using GIS technology this grid system is centered over a current Fire Station (Center of Static Response Area). Each grid is divided into equal 4.5 square mile areas for a 1.5 mile response distance from the centroid or 3 minutes at 30 mph.

GAP:

- Ideal Response Zone
- 4.5 sq. Miles
- 1.5 mile response distance
- or 3 minutes at 30 mph
GAP overlay centered over current TFR Fire Stations Static Response Area (SRA).
GAP overlay centered over City for IRZ SRA and ideal equitable service levels.
GAP overlay 2 mile response areas.
Almost all of the Departments Standards of Cover for emergency response are based upon the time/temperature curve and cardiac survival curve. The Time/Temperature Curve is the time from the initiation of a fire until temperatures reach flashover and a whole room becomes involved in fire. Almost all fire deaths and injuries occur in incidents where the fire extended beyond the room of origin. The Cardiac Survival Curve is the time at which brain death begins. This time is within four to six minutes of cardiac arrest. The chance of survival decreases by approximately 10% for every minute after four minutes from onset and only 40% chance of survival after six minutes. The Department has trained Emergency Medical Technicians (EMT) and Paramedics and responds to all emergency medical calls, within the city limits of Thomasville.
Performance Objectives & Performance Measures

Elements of Response Time

Response time has historically been interpreted by the fire service community in many different ways. It is important to recognize that the individual time elements are critical components of an organization’s ability to positively impact the outcome of an emergency event. Fire growth is exponentially based upon concentration of fuels, elapsed time to intervention, atmospheric conditions, etc. Similarly medical emergencies, especially in terminal events such as cardiac arrest, the elapsed time to effective intervention has a direct relationship in determining survivability and ultimately, quality of life.

Various scientific models have been developed to graphically display the relationship between time and an organization’s ability to successfully mitigate emergency events. One can readily determine from these models that the window of opportunity for both fire and critical medical emergencies to effectively intervene is narrowly defined.

If a state of normalcy exists there is no need to call emergency services to the scene. However, once an event initiation begins, and the cascade of events begins to unfold, the degree of loss of life and property that can be prevented may be impacted by the passage of time.

Within the City of Thomasville the cascade of events unfolds as follows: The event initiation begins when someone dials 9-1-1 and a Thomas County 9-1-1 dispatcher answers the phone (alarm answering time). The call-taker must then decide if the call will be an emergency incident and enter it as an event in the Computer Aided Dispatch (CAD) module (this time is not currently measured by TC9-1-1).

The alarm processing time begins once it is determined to be an incident. Questions are not asked based on Emergency Fire Dispatch (EFD, but do include Emergency Medical Dispatch (EMD) protocol to determine response levels. Fire events are not fast forwarded to the fire dispatcher for immediate dispatch once it is determined to potentially be a fire.

Turnout time begins once the tones go off (activation of station house-set) at the fire station. The dispatcher then announces the call over the station intercom and radio. Turnout time ends when the fire engine or ladder company pulls over the threshold of the station bay doors and travel time begins. The travel time ends once the apparatus is on scene (on-scene time) and the initiating action time begins.

For the purpose of establishing Benchmark (goals), total response time is a compilation of the elements beginning with the alarm answering time up to on-scene time. This includes three elements: alarm handling time, turnout time, and travel time.

Benchmark for Total Response Time at 90%

- **Alarm handling time** = 60 seconds
- **Turnout time** = 60 seconds for medical response
  - = 80 second for Fire & Special Operations response
- **Travel time** = 4 minutes

<table>
<thead>
<tr>
<th></th>
<th>Alarm Handling Time</th>
<th>Turnout Time</th>
<th>Travel Time</th>
<th>Total Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>MedCells</td>
<td>90% in 60 sec</td>
<td>EMS: 90% in 60 sec</td>
<td>90% in 4 min</td>
<td>90% in 6 min</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Alarm Handling Time</th>
<th>Turnout Time</th>
<th>Travel Time</th>
<th>Total Response Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>FireCalls</td>
<td>90% in 60 sec</td>
<td>FIRE: 90% in 80 sec</td>
<td>90% in 4 min</td>
<td>90% in 6 min 20 sec</td>
</tr>
</tbody>
</table>

The targeted service level objectives in the standards of cover benchmark statements are based on industry standards and best practices.
Baseline objectives (current performance) are based on total response times that include call processing time, dispatch time, turn out time and travel times for responding apparatus and personnel. Event response times for fiscal years 2015/2016/2017 were used in the determination of service level baseline objectives.

The quantities and types of resources deployed shall be based upon a reasonable projection of the critical tasks and typical activities that can be expected of an effective initial response force. Sufficient resources shall be provided to accomplish compliance with applicable legal requirements and generally accepted industry standards.

Benchmark and Baseline statements contain information in the following sequence:

- Percentage
- Type of risk including levels of risk for fire response
- First-in apparatus or initial ERF
- Total response time in minutes and seconds (if applicable)
- Staffing level
- Total response time of entire ERF
- Critical task list identifying the capabilities of the first due apparatus and the ERF
- These statements include the entire population density(s) served within the City of Thomasville.

The SOC is applied in practice through response plan objectives. In addition to response determiners, the Department applies response plans based upon information gathered in the call taking process by TC 911 Communications Center.
The Department’s benchmark objectives (goals) are based on industry standards and/or industry best practices. The Department’s benchmark service level objectives are as follows:

**Benchmark Building Fire Response Objectives**

Fire Hazards include all building fire events. The service level benchmark for building fire events are for a first-in unit turnout and travel time of 5 minutes and 20 seconds or less 90% of the time. These service level benchmarks for fire events are applied city wide and not at a neighborhood level.

**Fire Response Objective**

- For 90% percent of all building fires, the turnout and travel time (total response time) for the arrival of the first-due unit, staffed with a minimum of 4 firefighters, shall be: 5 minutes and 20 seconds. The first arriving unit shall be staffed with a minimum of four firefighters capable of establishing command, size up, establishing water supply, or initiating rescue, and utilizing safe operational procedures when necessary. The first due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gpm pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with Departmental standard operating procedures while providing for the safety of responders and the general public.

- For 90% of all building fire responses, the turnout and travel time (total response time) of the ERF, of a minimum of 17 personnel, shall arrive within 8 minutes 20 seconds. The ERF for moderate risk shall be capable of establishing command; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the OSHA requirements of two in-two out; completing forcible entry; searching and rescuing at-risk victims; evacuation; ventilating the structure; exposure protection; controlling utilities; and performing salvage and overhaul.
**Benchmark Rescue Response Objectives**

*Rescue Hazards include medical events and technical rescue events.* The service level benchmark for medical events of a life threatening nature are for a first-in unit turnout and travel time of 5 minutes or less 90% of the time. These service level benchmarks for rescue and medical events are applied city wide and not at a neighborhood level.

**Emergency Medical** Response Objective

- For 90% of all priority medical aid incidents, a first-in apparatus shall arrive within 5 minutes total response time (turnout and travel time). The first-in unit shall be staffed with a minimum of 2 EMTs and be capable of providing basic life support with Automatic External Defibrillator (AED) capability until the EMS unit arrives on the scene. If the EMS unit arrives first, EMS will begin medical assistance and upon arrival, the Department fire rescue company will provide support, if required.

**Technical Rescue** Response Objective

Technical rescue events include structural collapse rescue, rope rescue, confined space rescue, vehicle and machinery rescue, water rescue, search and rescue, and trench rescue. Fire Hazards include all building fire events. The service level benchmark for technical rescue events are for a first-in unit turnout and travel time of 5 minutes and 20 seconds or less 90% of the time. These service level benchmarks for technical rescue events are applied city wide and not at a neighborhood level.

- For 90% of all potential technical rescue incidents, the first-in fire department unit shall arrive within 5 minutes 20 seconds total response time. The first-in unit shall be staffed with a minimum of 4 rescue technician level firefighters, capable of establishing command, conducting size up to determine if a technical rescue response is required, request additional resources, identify the hazards, establishing patient contact, staging and apparatus set up, providing technical expertise, knowledge, skills and abilities during technical rescue incidents, and providing basic life support to any victim without endangering personnel.

- For 90% of all technical rescue incidents, the ERF of 12 personnel shall arrive within 11 minutes 20 seconds total response time. The TRT shall be capable of technical rescue support.
Benchmark Hazardous Materials Response Objectives

Hazardous materials events include hazardous materials releases, including decontamination of both victims and responders at large and small scale disasters.

The service level benchmark for hazardous materials events of a life threatening nature are for a first-in unit travel time of 4 minutes or less 90% of the time; capable of establishing command, size up, assessing the situation to determine the presence of a potential hazardous material/explosive device; determine the need for additional resources, estimate the potential harm without intervention, need for evacuation, and to begin establishing a hot, warm, and cold zone.

♦ For 90% of all hazardous materials incidents, the first-in fire department unit shall arrive within 5 minutes 20 seconds. The first-in unit shall be staffed with a minimum of 1 firefighter Haz-Mat Technician, capable of establishing command, conducting size up to determine if a Hazardous Materials response is required, request additional resources, identify the hazards, be capable of providing the technical expertise, knowledge, skills and abilities in order to mitigate a hazardous materials incident, and provide basic life support to any victim without endangering personnel.

♦ For 90% of all potential hazardous materials incidents, the first-in apparatus shall arrive within 5 minutes 20 seconds total response time. The first-in unit shall be staffed with a minimum of 4 firefighter Haz-Mat Technicians capable of establishing command, size up, assessing the situation to determine the presence of a potential hazardous material/explosive device; determine the need for additional resources, estimate the potential harm without intervention, and begin establishing a hot, warm, and cold zone.
The Department’s **baseline objectives** are based on actual performance capabilities. The Department’s baseline service level objectives are as follows:

**Baseline Building Fire Response Objectives**

**Fire Hazards include all building fire events.** The service level benchmark for building fire events are for a first-in unit turnout and travel time of 5 minutes and 20 seconds or less 90% of the time. These service level benchmarks for fire events are applied city wide and not at a neighborhood level.

**Building Fire** Response Baseline Objectives

- For 70% percent of all building fires, the turnout and travel time (total response time) for the arrival of the first-due unit, staffed with a minimum of 2-3 firefighters, shall be: 6 minutes and 10 seconds. The first arriving unit shall be staffed with a minimum of four firefighters capable of establishing command, size up, establishing water supply, or initiating rescue, and utilizing safe operational procedures when necessary. The first due unit for all risk levels shall be capable of: providing a minimum of 400 gallons of water and 1,500 gpm pumping capacity; initiating command; requesting additional resources; establishing and advancing an attack line flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with Departmental standard operating procedures while providing for the safety of responders and the general public.

For 80% percent of all building fires, the turnout and travel time (total response time) for the arrival of the first-due unit, staffed with a minimum of 2-3 firefighters, shall be: 6 minutes and 41 seconds.

For 90% percent of all building fires, the turnout and travel time (total response time) for the arrival of the first-due unit, staffed with a minimum of 2-3 firefighters, shall be: 7 minutes and 58 seconds.
Baseline Medical Response Objectives

Rescue Hazards include medical events. The service level benchmark for medical events of a life threatening nature are for a first-in unit turnout and travel time of 5 minutes or less 90% of the time. These service level benchmarks for rescue and medical events are applied city wide and not at a neighborhood level.

Baseline Emergency Medical Response

♦ For 70% of all priority medical aid incidents, a first-in apparatus shall arrive within 5 minutes 50 seconds total response time (turnout and travel time). The first-in unit shall be staffed with a minimum of one EMT and be capable of providing basic life support with Automatic External Defibrillator (AED) capability until the EMS unit arrives on the scene. If the EMS unit arrives first, EMS will begin medical assistance and upon arrival, TFR will provide support, if required.

♦ For 80% of all priority medical aid incidents, a first-in apparatus shall arrive within 6 minutes 25 seconds total response time (turnout and travel time).

♦ For 90% of all priority medical aid incidents, a first-in apparatus shall arrive within 7 minutes 19 seconds total response time (turnout and travel time).

♦ The average first-in apparatus shall arrive within 5 minutes 1 seconds total response time (turnout and travel time).

Technical rescue events include structural collapse rescue, rope rescue, confined space rescue, vehicle and machinery rescue, water rescue, search and rescue, and trench rescue. Fire Hazards include all building fire events. The service level benchmark for technical rescue events are for a first-in unit turnout and travel time of 5 minutes and 20 seconds or less 90% of the time. These service level benchmarks for technical rescue events are applied city wide and not at a neighborhood level.
Overview of Compliance Methodology

The Department’s Comprehensive Assessment and Planning Process (CAPP), is responsible to identify and assess response coverage. The strategic analysis process begins with assessing the community’s risk levels used in determining an acceptable standard of cover for the community. The CAPP process encompasses an annual critical analysis of response performance and service demand needs. An effective standard of response coverage strategy has been established through a formal annual process of assessing fire risk levels and suppression capabilities in defined ERZs of the CAPP. The Department has identified industry best practices and standards in order to establish an effective response force measurement for travel time objectives.

Each ERZ area is analyzed in the yearly CAPP. The CAPP contains service demand factors (call volume, commercial square footage, risk score, property valuation), performance/capability factors (percent uncovered within 4 minutes, over 4 minute travel times, distance to fire station), and growth factors (developable land, population, developed land, ISO hydrant count) for each ERZ that are evaluated in order to determine service demand and response needs.

The Fire Chief will continue to conduct a Statistical Summary to identify fire suppression service demand factors and make recommendations based on performance indicators.

The CAPP process will update annually the OVAP scores and make additions or changes as appropriate. The future plan is to have the CAPP work group assign a risk score to every pre-planned structure in the city by 2020.

The Training Division will continue to be responsible to measure critical tasks needed for an ERF. Performance-Based Measurements shall be met by completing monthly training specific to a JPR and NFPA 1410 Standard on Training for Emergency Scene Operations. This standard provides fire departments with an objective method of measuring performance for initial fire suppression and rescue procedures used by fire department personnel engaged in emergency scene operations using available personnel and equipment... The Company Officer will be responsible for ensuring the performance capabilities of their assigned personnel and equipment. The Company Officer shall conduct company’s evaluation (all members of the company shall be evaluated). The Training Division is responsible for periodically auditing the program by randomly evaluating companies and conducting on-call drills or station drills.
The Department baseline and benchmark travel time objectives for fire response are incorporated into the benchmark and baseline objectives and are based on local needs and circumstances and industry standards and best practices adopted from: CFAI FESSAM, eighth and ninth edition; CFAI Standards of Cover, fifth and sixth edition; NFPA1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems; NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments.

For 90% of all fire responses, the first arriving apparatus should arrive within 6 minutes 30 seconds or less for total response time. For 90% of all fire responses, an initial ERF of 12 personnel has arrived within 10 minutes 30 seconds or less for total response time.

Performance & Accountability for performance capabilities lies with the Battalion Assistant Chief (BAC). The BAC shall continue to provide monthly reports for turnout time objectives and travel time objectives. The BACs have the responsibility and expectation to monitor response performance for their particular shifts against the expectations of the standards of cover benchmark and baseline travel time objectives.
Overall Evaluation

To summarize, it is known that the continuous assessment of risk within a community, taking into account changing environments and demographics, can effectively identify hazards, assess the risks, and decide on appropriate actions or control measures based on the likelihood and consequence of the hazard being realized.

The Department’s Comprehensive Assessment and Planning Process (CAPP), should include a review of the current deployment of resources and a risk assessment of the area served. This program evaluates the fire service areas and planning zones for fire risk factors, area of responsibility, demographics, economic indicators, fire loss data, water supply and automatic fire protection system information. From this strategic planning process an effective SOC is established. This method has proven effective in identifying the maximum or worst fire risk in each ERZ. This type of strategic planning helps to establish educated recommendations on response needs based on call volume, frequency, probability, property usage, community risk, travel times, and demographics. The CAPP will continue to be updated annually by the Department Strategic Planning Team in order to analyze and establish effective standards of response coverage strategies.

Not only are potential risks identified through such an assessment but further benefit is justified by identifying performance capabilities and available resources. It is the responsibility of the fire department to understand the risk within its own community. The results are a more effective and efficient strategic plan that can be utilized to safely combat the risk identified and determine the potential impact of each hazard, threat, or risk. These evaluations of risk must be continuous, at least annually, as the community changes so do the hazards and risk.

The community risk assessment allows a department to estimate with better accuracy the relative severity, frequency, and vulnerability to each hazard, threat, or risk. A risk assessment also provides the department an opportunity to categorize each risk or hazard according to how severe it is, how frequently it occurs, and how vulnerable the department resources are. This allows a department to develop strategies to deal with these hazards and work with Fire & Life Safety to help prevent or better protect. If the risk does become a hazardous situation that needs mitigation then response is more accurate, safety and recovery are part of the planning in order to determine the impact on resources and community. One of the core elements when creating the community risk assessment is developing an understanding of the risk of potential losses. The risk assessment document must take several criteria into consideration. The potential and frequency of risks should also utilize historic data based on past occurrences. Values of structures, residential properties, businesses, occupancies, etc. that may suffer losses become a part of the process as these contribute to the risks.
Identifying hazards and risks is only one part of the community risk assessment. A critical element in the assessment process is the evaluation of the department’s ability to deploy adequate resources, in a timely manner, in order to bring a situation under control. The importance of evaluating fire department capabilities cannot be underestimated. The gap between hazard identification, risk assessment, and deployment of resources must also be bridged.

As a result of the Standards of Cover study several conclusions were reached:

- Three primary factors are impacting the department’s ability to meet baseline objectives and recommended industry standards:
  - Low Risk Hazards, Moderate Risks Hazards, High Risks Hazards, and Special or Maximum are not identified as separate risk hazards and response plans.
  - ERF to fire hazards is impacted by the current ERF of 13 firefighting personnel.
  - The quantities and types of resources deployed are not based upon a reasonable projection of the critical tasks and typical activities that can be expected of an effective initial response force and generally accepted industry standards.
- The Department’s current response time performance generally meets currently adopted performance objectives, but should be measured at 90% for baseline goals and objectives and compared to nationally recognized standards, benchmarks, and best practices.
- Geographic areas remain uncovered by first-in units City Fire Stations and require Automatic Aid and Mutual Aid Contracts.
- Unit availability and reliability impacts the emergency incident delivery system.
- Opportunities exist to utilize technology, response studies, and performance reports to improve response capabilities and include a need to add apparatus and personnel.
- The North portion of the city shows a need for a city fire station.
- Opportunities exist to improve dispatch procedures.
- Opportunities exist to improve response plans.
- Opportunities exist to improve turnout and travel times.

Recommendations include:

- Continue to conduct a risk assessment to further provide the department an opportunity to categorize each risk or hazard according to how severe it is, how frequently it occurs, and how vulnerable the department resources are.
- Each significant fire risk level has been categorized as low, moderate, or high/special to determine demand for service and response capabilities within the ERZ.
- Develop strategies to deal with risk hazards and work with Fire & Life Safety to help prevent or better protect in the areas of inspections and plans review.
The Department should re-evaluate currently adopted response performance objectives to ensure the level of service expected of the Department is reasonable and appropriate for the identified community risks/hazards and the ERF tasks.

Re-define the Department’s ERF to include all four identified categories of community risk: Low, Moderate, High, and Maximum or Special.

Align response to meet or exceed NFPA 1710 recommendations and ensure proper personnel to implement job tasks in a timely manner.

City Management and Council should formally adopt NFPA 1710 minimum staffing requirements of 15-17 firefighting personnel as the ERF.

Create performance measures that identify time expectations once an ERF arrives on scene.

The Department should continue to work closely with Thomas County 9-1-1 Communications to reduce Alarm Handling time.

Opportunities exist to improve dispatch procedures.

Opportunities exist to improve dispatch procedures for Emergency Fire Dispatch (EFD) fast-forwarding.

Currently there exists a time gap between alarm transfer time and alarm processing time that cannot be measured. This is the time between the call-taker answering the phone and determining whether or not it is an incident that will create an event in the computer aided dispatch (CAD) software.

These study results and recommendations will be carried forward to the 2018/19 SOC update.
In Conclusion

The purpose of this SOC-CRA was to determine how the City of Thomasville, its commercial buildings, industrial areas, residences, and its fire department can presently perform in the event of a fire or other type of emergency event. This report has helped to define what deficiencies need to be corrected to ensure a more fire safe city and to determine how best to correct these deficiencies in a manner that both ensures fire safety and preservation of our community.

What is the real economic impact of firefighting operations in the community we serve, and how do we measure it? Firefighters know all too well that fires spread quickly in Americana. Practical guidance is needed for fire department strategic planners and city planners as they assess the risk of fires to businesses and groups of businesses in an older downtown.

In the “central business district” (CBD) of Thomasville, we can determine which businesses in the CBD layout would be most likely to contribute to the spread of a fire based on the OVAP score, location, size, the lack fire suppression systems and fire alarms, and the close proximity to other businesses. The threat of a large scale fire is a real possible scenario for downtown Thomasville. The real concerns for firefighters sent to fight a fire of this magnitude is the need for an ERF and an adequate water supply.

Communities have long recognized and appreciated firefighters’ heroic efforts that result in lives and property being saved. Over the years the fire service has developed several methods of measuring how well these goals are achieved, such as response times, lives saved and historically, “fire loss.” These methods of assessment may improve our response tactics, but they fail to recognize the financial benefits provided by departments when they respond quickly and effectively and save businesses.

The Phoenix Fire Department and United Phoenix Firefighters Association (L493) recently partnered with Underwriters Laboratories (UL) and Arizona State University’s (ASU) Seidman Research Institute to scientifically assess the economic value of firefighting, and the results have proven to be a tremendous asset in justifying the bottom line of our department in the long run, and could likely help yours as well.

In July 2011, a fast-moving, wind-driven fire in a Phoenix river bottom impinged upon Trendwood, Inc., a large furniture manufacturing and distribution business. After an aggressive firefight stopped the fire with minimal impact on the business, we incident commanders discussed the performance of our crews and recognized that their efforts literally saved this business and all the jobs of those employed by the company. This made us think: Why do we always measure fire loss, but never consider what we save?

This new concept led us to senior research analyst Dr. Anthony Evans with ASU’s L. William Seidman Research Institute. Among other business analytics, Seidman’s researchers scientifically analyze organizations using a program called REMI, a simulation model designed to forecast the impact of public policies and external events on an a community’s economy and its population.

ASU was intrigued by our concept of measuring fire service performance in terms of what is saved, and they agreed to utilize the REMI program to analyze the Trendwood fire at no cost to the fire department. Trendwood, whose premises were completely saved by the Phoenix Fire Department with no disruption in business operations, agreed to participate.

The initial study revealed that without this successful intervention, Trendwood’s production capability would have been lost for up to a year, and up to 203 jobs would have been eliminated. But further details from the analysis were staggering: production loss from the fire would have dropped gross state products by approximately $20 million in 2011, and disposable personal income would have been reduced by approximately $9 million for the same fiscal year. – The Economic Impact of Firefighting, Firehouse Magazine, 2014

What would be the economic impact locally if a downtown Thomasville fire impinged upon Flowers Industry? What would be the impact globally?
Thomasville’s CBD is indicative of old town Americana without working sprinkler systems, and unprotected 1800’s and early 1900’s structures. These structures once ignited would spread like the fires we often see in larger cities or in California wildfires. With an adequate ERF, quick response, well-prepared fire companies, and hours of firefighting, crews can extinguish the fire.

Risk is the potential harm or, more formally, the potential for realization of unwanted and negative consequences of an event. The objective for the control of risk from fires, is to reduce the probability and consequences of events leading to and resulting from fires, to an acceptable level. Each individual part of the community must be continually evaluated from a fire and life safety standpoint, and acceptable levels of risk must be established and re-established.
References


