

City of Mount Pleasant  
Titus County  
Texas

Cooperative Services Study  
July 2016



**Emergency Services Consulting International**  
*Providing Expertise and Guidance that Enhances Community Safety*

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## Executive Summary

Emergency Services Consulting International (ESCI) was engaged by the City of Mount Pleasant and Titus County, Texas, to study opportunities for collaboration and enhanced cooperative service options between and among the City of Mount Pleasant and Titus County Volunteer fire service agencies. This report is the culmination of that evaluation.

ESCI thanks the participating citizens, department members, staff, and policy-makers of all seven agencies and Titus County for their outstanding cooperation in the preparation of this report. All involved were candid in their comments and provided valuable information, perspective, and data to the ESCI team.

The report provides the reader with a detailed assessment of current conditions and future options as follows:

- First, ESCI evaluates the current conditions that exist in each agency in terms of programmatic, financial, service level, and infrastructure considerations, comparing their existing processes independently, from which a baseline is established to evaluate opportunities for future collaboration.
- Next, the report identifies existing and potential partnership opportunities that are available to the agencies. Options are offered that are considered to be feasible and that offer potential to increase efficiency, enhance service delivery capabilities and provide for future cost projections.
- Finally, the most realistic options are analyzed and presented, recommending those with the greatest opportunity for success.

The report begins with an *Evaluation of Current Conditions*. In this section the ESCI project team has completed an analysis of each agency as it operates today autonomously; comparing the organizational components in a summarized appraisal. In doing so, the project team considers the relativity of each volunteer fire agencies current practices to those of the Mount Pleasant Fire Department to identify opportunities for greater collaboration.

Using this comparison as a baseline, the project team identifies the options that are available in the study area in the *Future Opportunities for Cooperative Efforts* section of the report. As has been proven with the failure and disbanding of the Winfield Volunteer Fire Department, the future of continued service provided by the remainder of the volunteer departments is uncertain. Decreasing numbers of personnel and the inability to recruit and train new volunteers for the roster have heavily impacted the ability to respond and to safely initiate and sustain emergency operations. A more thorough evaluation of the volunteer department's operations is conducted by utilizing the National Fire Protection Association Standard NFPA 1720: STANDARD FOR THE ORGANIZATION AND DEPLOYMENT OF FIRE SUPPRESSION OPERATIONS, EMERGENCY MEDICAL OPERATIONS AND SPECIAL OPERATIONS TO THE PUBLIC BY VOLUNTEER FIRE DEPARTMENTS

ESCI has observed that the combining of fire departments and emergency medical systems (EMS) has become a common and effective option in many areas throughout the country. Currently Titus Regional Hospital provides an effective EMS system to the residents of Titus County. In October 2002, Titus Regional Medical Center EMS and the Mount Pleasant Fire Department executed a first responder EMS Memorandum of Agreement (MOA) to enhance the EMS system. An in depth evaluation of the EMS system is beyond the scope of this project, but the impact the agreement has had on the volume of MPFD's incident responses will be further discussed.

In most situations, the motivation to consider cooperative efforts with neighboring emergency service agencies is undertaken for reasons including the desire to maintain or enhance current services or service levels, reduce or eliminate future costs, or to avoid duplication.

### *Summary of Key Findings*

It is apparent that all seven fire agencies and Titus County Regional Hospital EMS work effectively together. The willingness to work together is not always found in all fire departments. This supportive spirit presents opportunities to undertake and build additional future cooperative efforts.

All seven Titus County agencies are committed to the service they provide to their customers and citizens. In brief, ESCI finds:

- All six volunteer agencies are interdependent, relying upon each other and other neighbors for mutual aid and automatic aid assistance during emergency incidents.
- Each agency would benefit from additional regional cooperative measures. Combining efforts in some manner with the other agencies can enhance many of the identified improvements in this report.
- Multiple cooperative service options are feasible. These undertakings can be accomplished while the organizations remain separate from a governance standpoint.
- Policymakers should adopt a plan, to evaluate each of the recommendations contained herein, aligning the processes, services, and operations of the agencies where possible.
- The MPFD EMS First Responder has grown beyond initial expectations. EMS first responses now comprise 48.2% of all incidents in the city and 35.2% overall including calls to the County for the 5 years between 2011 & 2015.

### *Findings and Recommendations*

Given the analysis in this study and the findings above, ESCI developed the following recommendations:

- It is recommended that all seven agencies, at a minimum, evaluate and implement as many of the identified functional strategies as are found to be applicable.
- It has been identified that the City of Mount Pleasant and Titus County would receive mutual benefit from the addition of a third fire station with a career staffed engine company. As explained in further detail later in this report, the station should be strategically located as identified in the GIS analysis to provide the best coverage possible. The station must be

capable of housing multiple pieces of equipment including two full sized fire engines (one being the reserve) and two brush type units.

- Additional discussion should be pursued building upon previous informal communication with the Texas A&M Forest Service (TFS) relative to jointly developing the third fire facility to also house TFS wildfire suppression crews, offices and apparatus thereby helping to offset capital and operating costs. TFS assets would be located within Titus County reducing response time to initial wildfire attack.
- Review and adopt a framework to guide discussions between the City and County is discussed in this report to assist with implementing cost sharing strategies to provide the additional firefighting resources.
- It is recommended that the City and Titus Regional Hospital EMS revisit the 2002 EMS first responder MOA as the impacts and scope of the service have grown beyond what was initially envisioned. A mechanism to help offset the cost to provide the EMS First Response service should be discussed. The governing bodies of both entities should formalize any future agreements.
- The Mount Pleasant fire department supervisory/command structure would be improved by adding a shift commander/Deputy Chief (DC) per shift. Adding the DC position would require three additional FTE's.
- Creation of a fire apparatus driver/engineer through position reclassification, for each engine company, each shift, would add not only add responsibility, but minimum qualifications and accountability for staff that operate, maintain and drive the engines and trucks. Reclassification would create an intermediate position between the Captain and Firefighter. No additional personnel would be required, but would necessitate added compensation for those promoted from the current ranks. During time of company officer leave, the driver/engineer would step up to the Company Officer role.
- Currently the engine company/first line supervisors have the title of Captain at fire station #1 and Lieutenant at station# 2. It is recommended the Lieutenant title be eliminated and all company officers would carry the Captain title/rank as the positions have essentially the same duties.

### *Implementation and Next Steps*

ESCI suggests the following next steps to continue the collaboration and work toward improvement:

- *Adopt an equitable fire protection cost sharing formula for the City of Mount Pleasant and Titus County.*
- Determine and adopt the Capital and Operational budget necessary to construct staff and operate the third Mount Pleasant Fire Station. Identify the financial tools necessary to fund this project.
- Develop a timeline from inception to completion of the project.
- Utilize the existing Fire Advisory Board in the process to advise policymakers from a community perspective.

- Formally adopt, Pursuant to Chapter 791, Interlocal Cooperation Contracts, of the Texas Government Code - Title 7, an interlocal contract specifying the terms for fire protection as negotiated and agreed upon between the City and County.
- Establish a communication strategy to keep internal members, policy makers and elected officials informed as to the progress. Establish a communication strategy to keep residents and media informed when key milestones have been achieved. Communication should be positive, transparent, timely, and coordinated.
- Utilizing members of the executive management team of the City of Mount Pleasant develop and adopt a compensation strategy, departmental step-grade pay plan, command/rank structure and its impact upon the budget. If a phased approach is necessary, determine the timeline necessary.
- Celebrate successes publicly and build momentum.

## Section I – Evaluation of Current Conditions

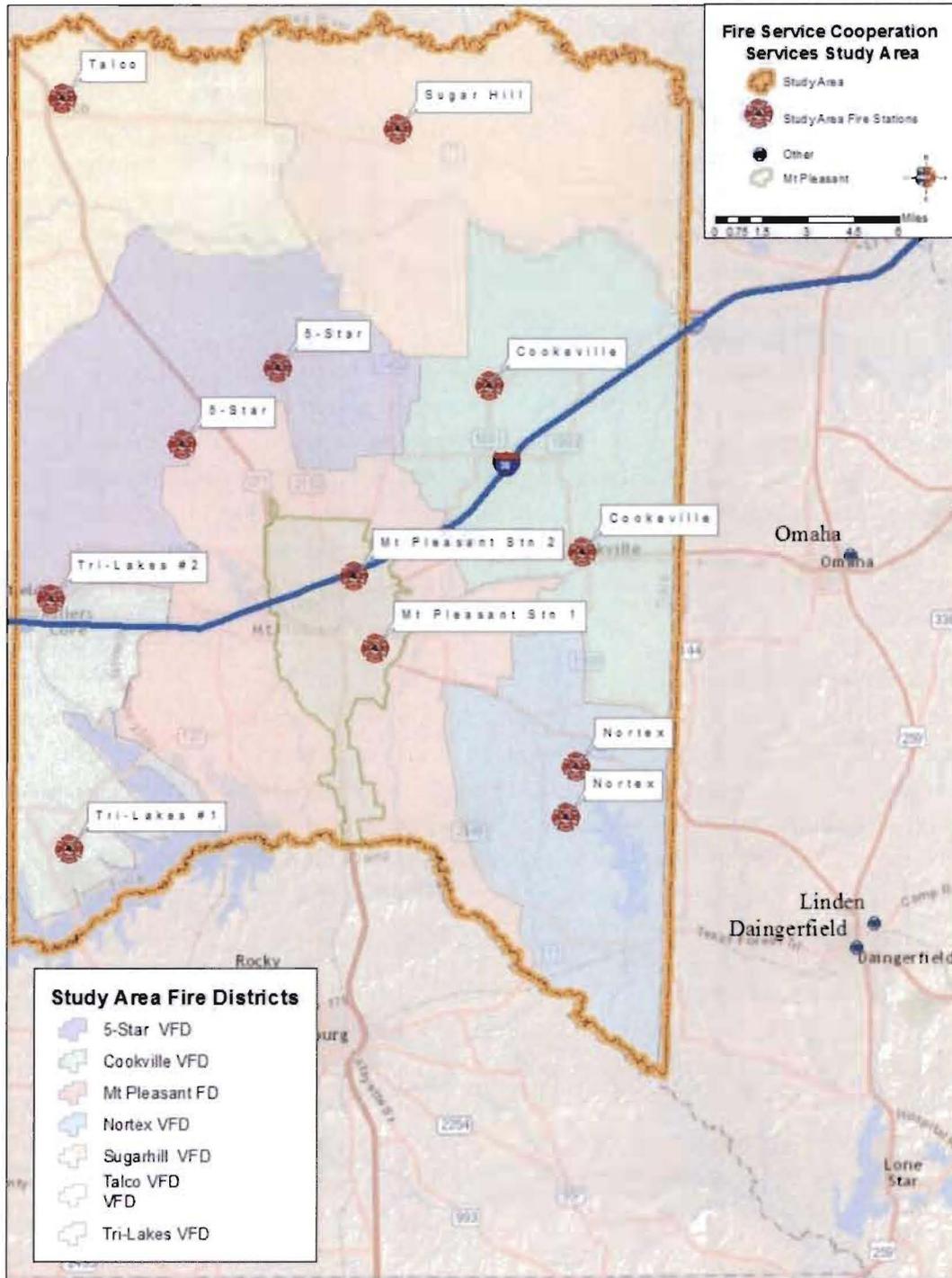
Emergency Services Consulting International (ESCI) was engaged by the city of Mount Pleasant and Titus County to conduct a study of fire protection services provided to their respective jurisdictions involving the seven agencies. This report is the culmination of that project and begins with a general overview of each organization, highlighting individual recommendations for improved efficiency and/or effectiveness where appropriate.

In order to fully appreciate the intricacies of how the participating agencies currently provide emergency services to their communities, ESCI initiates the project with an analysis of the current conditions existing in each agency. A review of all of the organizational elements is conducted for two reasons: first, to verify that ESCI's information collection is complete and accurate; second, to provide the reader that is not directly involved in fire and EMS service delivery with an understanding of how the agencies operate.

### *Organizational Overview*

Fire departments and other emergency services providers are actively involved in a number of varying activities primarily depending on the needs within their respective communities. The study area for this project is no different. This section provides a general description of each study agency's history, area served, population, infrastructure, and financial element. The following figure is a map of the study area including all the participating agencies' current service area.

Figure 1: Study Area Map



**City of Mount Pleasant Fire Department**

The Mount Pleasant Fire Department (MPFD) is organized as a municipal fire department included in the Charter of the City of Mount Pleasant, Texas. Annual revenues to support the fire department are through the general fund of the City of Mount Pleasant. The City also contracts with Titus County to provide limited fire protection services in the outside the City in county area. MPFD protects an estimated population of 16,201 within the city and a total population of 32,506 countywide. The total land area of the city is 15.0 square miles and 426 square miles within the county. The department is staffed by 24 Career, 11 part-time and 8 volunteer personnel. The department provides fire suppression, rescue, first response emergency medical services, first responder level hazardous materials response, fire prevention, and life-safety services from two fire stations, staffed by a combination of career and volunteer responders.

**Sugar Hill Volunteer Fire Department**

The Sugar Hill Volunteer Fire Department (VFD) is organized as a non-profit, 501(c)(3) organization chartered under the statutes of the State of Texas. Annual revenues to support the fire district are obtained from Titus County, Donations and fund raising. The reported response district is 66.39 square miles, providing service from one fire station to a permanent population of 938. The district is generally located in northeast Titus County bordered by Red River County to the north, and Morris County to the east. Sugar Hill VFD abuts the Cookville, 5-Star and Talco service areas. The active roster has 9 volunteer members.

**Cookville Volunteer Fire Department**

The Cookville VFD is organized as a non-profit, 501(c)(3) organization chartered under the statutes of the State of Texas. The VFD operates from two stations, with a total of 17 current members. Annual revenues to support the fire district are obtained from Titus County, donations and fund raising. The reported response district is 60 square miles with an estimated permanent population of 5,000. The district is generally located in eastern Titus County bordered by Morris County to the east and the Mount Pleasant county fire district to the west. Cookville VFD abuts the Sugar Hill, 5-Star and Nortex service areas.

**Nortex Volunteer Fire Department**

The Nortex VFD is organized as a non-profit, 501(c)(3) organization chartered under the statutes of the State of Texas. Annual revenues to support the fire district are obtained from Titus County, donations and fund raising. The reported response district is 59 square miles, providing service from two fire stations to a permanent population of 4,500. The district is generally located in southeast Titus County bordered by and Morris County to the east and Camp County to the South. Nortex VFD abuts the Cookville, and City of Mount Pleasant service areas. The active roster has 12 members.

**Tri-Lakes Volunteer Fire Department**

The Tri-Lakes VFD is organized as a non-profit, 501(c)(3) organization chartered under the statutes of the State of Texas. Annual revenues to support the fire district are obtained from Titus County, donations and fund raising. The reported response district is 58 square miles, providing service from two fire

stations to a permanent population of 2,500. The district is generally located in southwest Titus County. The district is bordered by Camp County, Lake Bob Sandlin, and Franklin County. Tri-Lakes VFD abuts the City of Mount Pleasant and 5-Star fire district. The district includes a gated community known as the Peninsula. The active roster has 14 members including two junior firefighters.

**5-Star Volunteer Fire Department**

The 5-Star VFD is organized as a non-profit, 501(c)(3) organization chartered under the statutes of the State of Texas. Annual revenues to support the fire district are obtained from Titus County, donations and fund raising. The reported response district is 66 square miles, providing service from two fire stations to a permanent population of 2,800. The district is generally located in northwest Titus County. The district is bordered by Franklin County. 5-Star VFD abuts the City of Mount Pleasant, Tri-Lakes, Talco and Sugar Hill VFD’s. The current roster has 15 members.

**Talco Volunteer Fire Department**

The Talco VFD is department is chartered by the City of Talco. Annual revenues to support the fire district are obtained from the city of Talco. Titus County, donations and fund raising. The reported response district is 46 square miles, providing service from one fire station to a permanent population of 1,000. The district is generally located in North West Titus County. The district is bordered by Franklin County. 5-Star VFD abuts the Tri-Lakes and Sugar Hill VFD’s. The current roster has 26 members.

The study area demographics are summarized in the following table.

**Figure 2: Study Area Demographics**

Study Area Demographics		
Agency	Square Miles <sup>3</sup>	Service Area Population
Mount Pleasant Fire Department	15*	16,201*
Sugar Hill VFD	66.39	938
Cookville VFD	60	5,000
Nortex VFD	59	4,500
Tri-Lakes VFD	58	2,500
5-Star VFD	66	2,800
Talco VFD	46	1,000
<b>Combined Study Area</b>	<b>426</b>	<b>32,506*</b>

\*Mount Pleasant is contracted to provide fire protection County wide

*Organizational Governance Configuration*

The figure below summarizes the general descriptions of the study agencies as well as governance and lines of authority elements.

<sup>3</sup> Calculated based on GIS data. Square mileage may vary from client estimates

Figure 3: Survey Table – Governance

Survey Components	City of Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Governance and Lines of Authority</b>							
Governing body	City Council	Board of Directors	Board of Directors	Board of Directors	Board of Directors	Officers of the Corporation	Board of Directors
Head of governing body	Mayor/City Manager	Board President	Fire Chief	Fire Chief	Fire Chief	Fire Chief	Fire Chief
Key employee of governing body	Fire Chief	Fire Chief	Fire Chief	Fire Chief	Fire Chief	Fire Chief	Fire Chief
Elected official authority defined	City Charter	Elected by members	Elected by members				
Fire chief position							
Hired by contract	Career At will	Volunteer	Volunteer	Volunteer	Volunteer	Volunteer	Volunteer
Term of contract	N/A	Member Elected	Member Elected				
Periodic performance evaluation	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fire chief/authority defined	By City Charter	By-Laws	By-Laws	By-Laws	By-Laws	By-Laws	By-Laws
Policy and administrative roles defined	City policy and job description	By-Laws	By-Laws	By-Laws	By-Laws	By-Laws	By-Laws

*Foundational Elements*

Foundational policy documents are those books, handbooks, and manuals that allow the organization to exist and govern its operations, both from an administrative and operational perspective. Many sets of these documents can exist within a single agency and the comprehensiveness of the documents can be highly varied. ESCI reviewed the policy documents for each agency as outlined in the following figure.

Figure 4: Survey Table – Summary of Foundational Elements

Survey Components	City of Mount Pleasant	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Attributes of Successful Organizations</b>							
Policy, rules, guiding documents	Standard Operating Guidelines (SOG), City employee handbook	SOG	SOG	SOG	SOG	SOG	SOG
Process for revision provided	Ongoing SOG review process	As needed					
<b>Legal counsel</b>							
Consultation available	City Attorney	Local as needed					
Labor counsel	City Attorney	N/A	N/A	N/A	N/A	N/A	N/A
<b>Financial controls</b>							
Financial control systems in place	Yes	Basic	Basic	Basic	Basic	Basic	Basic
Financial review	Third party audit performed	No audit					
Frequency of review	Annual	As requested by membership					
Governing body minutes maintained	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Availability of minutes	Posted on Website, Broadcasted	N/A	N/A	N/A	N/A	N/A	N/A

### *Discussion*

While each of the participating agencies operates under its respective policy documents, all appear to have the appropriate baseline policy and operational documents in place needed to operate a successful organization. Moving forward, it will be essential that all of the fire departments continue to assure that these foundational documents continue to be adequately and effectively reviewed and updated to assure that a structured, foundational document is in place. As all of the agencies respond together providing frequent mutual aid, the basic operational policies and guidelines should become common and universal. The MPFD does distribute their operational policies to the VFDs.

As with the dissolution of the Winfield Volunteer Fire Department, should other departments elect to formally combine their operations in the future, the departments should work closely together to establish a common set of operational policies and procedures to increase the consistency of service delivery across the region.

ESCI was not able to review the foundational documents of Nortex and Talco VFD's as they were not received in the data submission.

All of the participating agencies indicate that their foundational documents are periodically reviewed for consistency. Some are visited on an ongoing basis. ESCI recommends that all foundational documents be reviewed a minimum of annually and revised to reflect actual conditions and to maintain compliance with regulatory entities.

### *Organizational Design*

Most fire departments and emergency services agencies are structured in a "top down" hierarchy where the fire chief reports to a board, city administrator/manager, or city council and the remainder of the fire department is under his/her direction, usually consisting of deputy chiefs, line officers, and operational firefighters. Often span of control becomes an issue as departments grow and the ability of supervisory personnel, either career or volunteer, becomes overextended. In historical military literature, the origin of modern span of control theory, an individual in a stressful situation should have no more than six to eight personnel under his/her command. ESCI reviewed the organizational structure of each study agency as illustrated in the following figure.

Figure 5: Survey Table – Organizational Design

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco
<b>Organizational Structure</b>							
Structure type	Traditional top-down hierarchy						
Descriptions of all jobs maintained	Yes, including volunteer	No	No	No	No	No	No
Job descriptions updated	As needed only	N/A	N/A	N/A	N/A	N/A	N/A
Employment agreements	At Will	N/A	N/A	N/A	N/A	N/A	N/A
<b>Chain of Command</b>							
Defined Chain of command	Yes						
Span of control	3 to 1	Varies	Varies	Varies	Varies	Varies	Varies
Hiring/Firing authority	Fire Chief						

### *Discussion*

Each organization is structured in a traditional top-down hierarchy and retains a span of control that falls within acceptable thresholds. Currently the Mount Pleasant Fire Department Station #1 Captain is functioning as the shift commander, otherwise recognized in similar departments as a deputy or battalion chief. As such, the engine company then utilizes the most senior firefighter as the company officer. In this capacity, the engine #1 company staffing is reduced to three firefighters. Station #2 is staffed with four personnel, with the company officer rank of Lieutenant.

Each of the volunteer departments has an adequate existing rank structure in place.

### *Recommendation*

ESCI recommends that the Mount Pleasant Fire Department strongly consider restructuring the operational ranks to include a Deputy Chief assigned to each shift while retaining the Captain position of for both stations, per shift, as the engine company supervisor. The current Lieutenant rank should be reclassified to Captain. Additional consideration should be given to create the rank of engineer, or driver/operator. This position is responsible for the care and operation of the assigned stations fire apparatus. Current operations utilize a firefighter to fulfill this role. The continuity of care and maintenance, operation and driving of this expensive and vital equipment requires a higher degree of training, experience, skill and responsibility. This recommendation would require a net three additional FTE positions. Some differential in compensation would also be required to reclassify the lieutenant to captain rank and to compensate the new rank of engineer. This recommendation is made consistent with industry practices and norms.

### *Service Area and Infrastructure*

The study agency's description and summary of infrastructure and response resources is detailed in the next table.

Figure 6: Survey Table – Service Area and Infrastructure

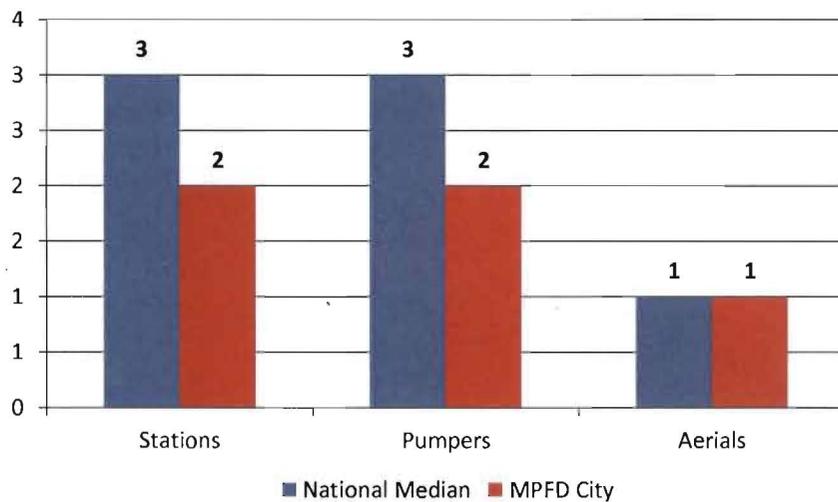
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>General Description of Agency</b>							
Agency type	Municipal subdivision	VFD 501(c)(3)	Municipal Subdivision				
Area, square miles	15.1	66			58	66	
Headquarters	Station 1	Station 1	Station 1	Station 1	Station 1	Station 1	Station 1
Fire stations	2	1	2	1	1	2	1
Other facilities	None	None	None	None	None	None	None
Population served	32,506	938	5,000	4,500	2,500	2,800	1000
<b>Service Delivery Infrastructure</b>							
Emergency vehicles							
Engines	2	1	1	1	1	1	1
Engine, reserve	1	0	0	0	0	0	0
Ladder truck	1	0	0	0	0	0	0
Ambulance	0	0	0	0	0	0	0
Ambulance, reserve	0	0	0	0	0	0	0
Water tender	0	0	2	1	1	2	1
Brush	4	2	3	2	4	2	2
Rescue	1	1	1	0	1	0	0
ISO rating	3/6	7	8/10	7	6	10	6/7
Date of most recent rating	05/2007		05/2013				

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
Total fire department personnel, uniformed and civilian	26	9	20	12	14	15	26
Administrative and support personnel, full-time	1	0	0	0	0	0	0
Administrative and support personnel, volunteer	0	0	2	0	0	0	0
Operational personnel, full-time	25	0	0	0	0	0	0
Operational personnel, volunteer and Part-time	8/11	9/0	20/0	12/0	14/0	15/0	26

*Discussion*

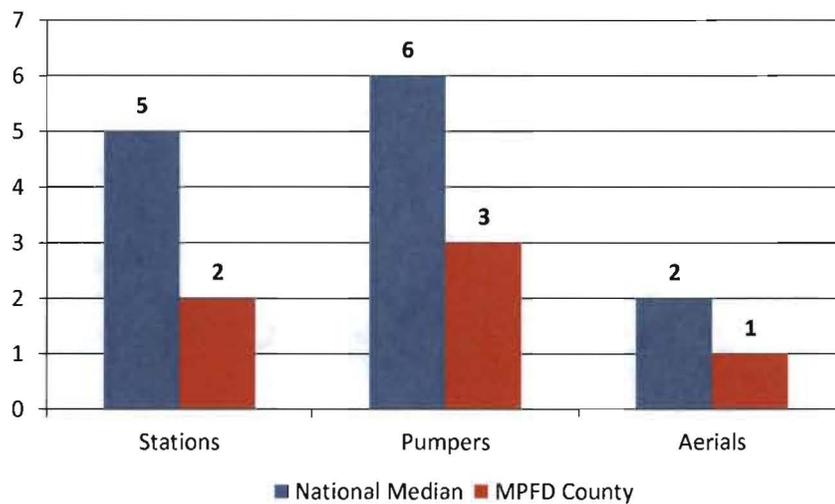
The next figure summarizes the capital resources within the Mount Pleasant Fire Department, compared to NFPA (National Fire Protection Association) benchmarks for departments serving similar populations within the region. It should be understood that these benchmarks do not consider land area and are population based only. Numbers, distribution and deployment of response resources is discussed later in this report. As compared to the national benchmarks, the MPFD stations and pumpers are below the norm. The City has grown and developed to the south. Planned annexation will also underscore the need to address the deficiency. As discussed later in further detail, analysis relative to travel times and distances from a fire station are in excess, due to the geography and district covered in the southern portion of the City.

**Figure 7: Comparison of Physical Resources to National Benchmarks – City of Mount Pleasant**



The following figure summarizes the capital resources within the Mount Pleasant Fire Department based upon the entire County area covered as compared to NFPA (National Fire Protection Association) benchmarks for departments serving similar populations within the region. It should be understood that these benchmarks do not consider land area and are population based only. Numbers, distribution and deployment of response resources is discussed later in this report.

**Figure 8: Comparison of Physical Resources to National Benchmarks – MPFD County Area**



When compared to national benchmarks, the Mount Pleasant Fire Department has a lesser number of fire stations and response apparatus. In addition, as described in Figure 8 above, the six additional County VFD’s supplement the needed apparatus, as is available.

Benchmark data available through National Fire Protection Association (NFPA) is based primarily on population and does not consider geographical size or population density of the particular area. In regards to costs per capita, the data from which these comparable figures are extracted does not delineate between volunteer or career departments nor does it segregate those departments heavily involved in the provision of emergency medical services, particularly transport service, which can increase departmental costs dramatically. Mount Pleasant Fire Department, is limited EMS first response to a portion of the city, but over the past has experienced a sizable increase in EMS calls. The county departments are engaged in EMS first responder at varied levels. Cookville Nortex and 5-Star report the very minimum of EMS activity. The remainder of the County departments record 20-50% of calls being EMS activity.

Mount Pleasant Fire Department will respond at the request of the Titus Regional EMS for serious or life threatening calls or when ambulances are unavailable, and when staffed fire apparatus is substantially closer to the location of an EMS call for service than an available ambulance.

The following table displays emergency response numbers and frequency for the study agencies.

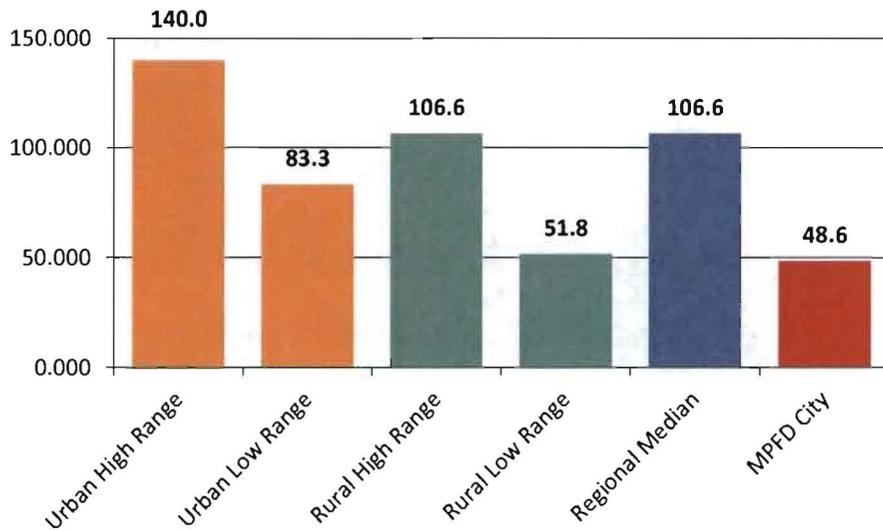
Figure 9: Survey Table – Emergency Response Type and Frequency 2015

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Incidents</b>							
Fire	165	41	22	48	30	37	45
value of property exposed to fire	Data not available						
value of property lost to fire	Data not available						
Rupture or explosion	3	0	0	0	0	0	0
EMS/rescue	632	16	34	2	20	0	126
Number of EMS transports	0	0	0	0	0	0	0
Hazardous condition	56	0	1	0	13	3	2
Service call	47	3	4	20	4	8	30
Good intent call	89	21	14	5	0	14	2
False call	87	0	3	11	7	13	0
Severe weather	0	8	0	0	2	2	0
Other	89	1	0	1	2		54
Total	1168	90	71	87	78	77	256

*Discussion*

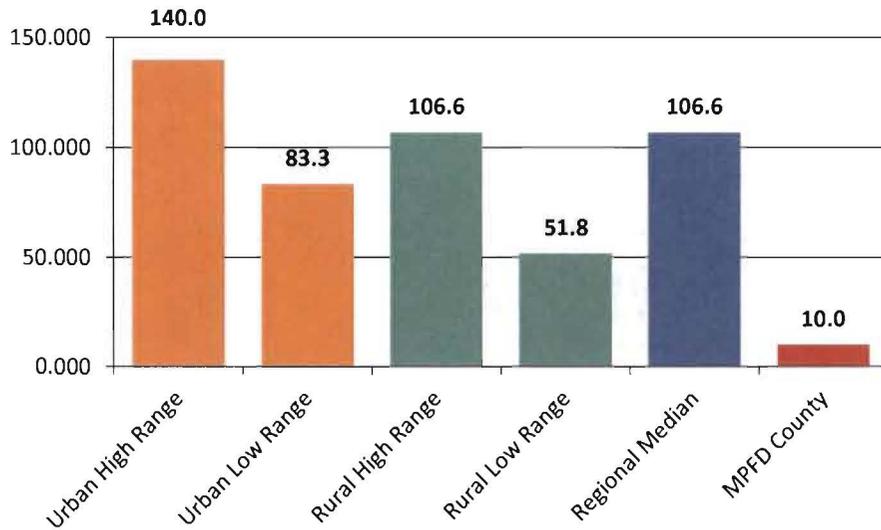
Based on the above data, ESCI compares the total number of emergency incidents to which the agencies responded in the 2015-reporting year to a series of national and regional benchmark data.

**Figure 10: Comparison of Incidents per 1,000 – Mount Pleasant**



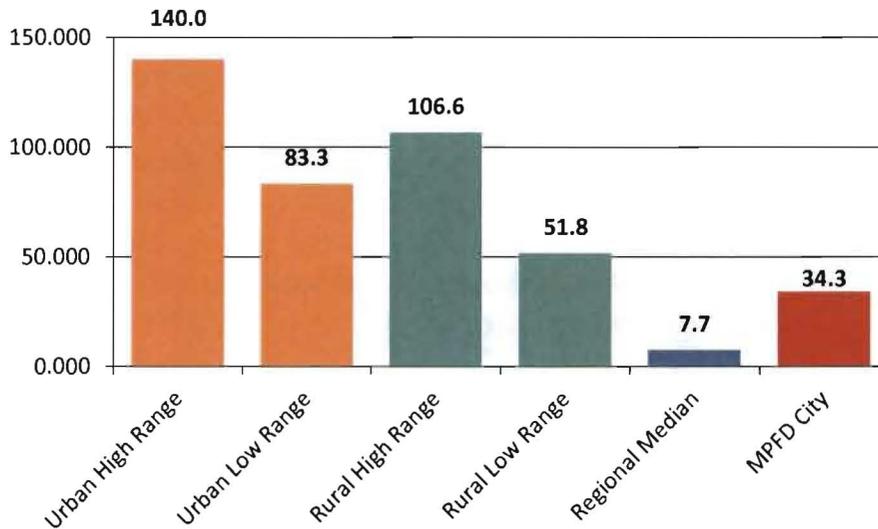
While Figure 10 would indicate the MPFD has considerably fewer incidents in comparison to benchmarks, the department is not responsible for providing primary EMS services. The MPFD EMS first responder program responds principally to the station #1 district. Agencies which respond to all EMS calls are included in the national reporting data.

**Figure 11: Comparison of Incidents per 1,000 – Titus County**



While Figure 11 would also indicate the MPFD has considerably fewer county incidents in comparison to benchmarks, the department is not responsible for providing EMS services outside the City. The MPFD EMS first responder program again responds to primarily station #1 district. Agencies which respond to all EMS incidents are included in the national reporting data. Titus Regional Hospital EMS is the principal provider of EMS to the county.

Figure 12: Comparison of Incidents per 1,000 Population – City/County Combined



Combined analysis appears to indicate the department responds to less calls for service per 1,000 population. Again the MPFD first responder program is primarily within station #1 district.. Agencies which do provide responses to all EMS incidents are included in the national reporting data.

*Insurance Services Office Information (ISO)*

The City of Mount Pleasant enjoys a Public Protection Class Rate of 3/6. The class was assigned over ten years ago following a comprehensive evaluation of the fire defense capacity of the Fire Department, Fire Alarm and Communications System, Water Distribution and Supply and Fire Prevention efforts. During the ISO evaluation, the fire department was deficient in several areas. The lack of a fully equipped reserve fire engine reduced the available credit. When the department decides to add another staffed station, the addition of another engine is necessary for obvious operational needs, but also to receive the entire ISO credit available for a reserve engine. The department only received 75% of the available credit for distribution of companies and 40% of the available credit for staffing. Since that time, the City has changed through growth, development and annexations. The distribution of companies (fire stations) and staffing has not kept pace with City growth and the impact to the ISO PPC may be felt during the next evaluation. It is the desire of the ISO to evaluate each community in Texas no less than every ten years. To add a fire station from the ground up, it is nearly a two year process from the official governing body approval, to occupancy. This is not inclusive of the process it takes to secure funding through certificates of obligation or bond elections.

The Insurance Services Organization (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. A jurisdiction's ISO rating is an important factor when considering fire station and apparatus distribution, as it can affect the cost of fire insurance for fire district individuals and businesses.

The Public Protection Class (PPC) is the countrywide classification system used by the Insurance Services Office (ISO) to reflect a community's local fire protection for property insurance rating purposes. The public fire protection of a city, town or area is graded using ISO's Fire Suppression Rating Schedule to develop the community's classification. The PPC system in some form is used in all 50 states. All of the top insurance groups use ISO's PPCs except for State Farm. State Farm developed its own classification system, based on subzones. The subzone rating tracks very closely to the PPC. ISO classifies communities from 1 (the best) to 10 (the worst) based on how well they score on the ISO Fire Suppression Rating Schedule, which grades such features as water distribution, fire department equipment and manpower and fire alarm facilities.

The Public Protection Classification (PPC) program recognizes the efforts of communities to provide fire protection services. Some insurance companies use the PPC information to help establish fair premiums for insurance. By offering economic benefits for communities that invest in their firefighting services, the PPC program provides additional incentives for improving and maintaining public fire protection. The PPC program also provides help for fire departments and other public officials as they plan, budget and justify improvements.

The most significant benefit of the PPC program is its effect on fire losses. The better the fire protection the lower the fire losses. This results in lower insurance rates. Some companies may not use ISO, but for those that do, they assign a rating factor to each classification. If a community's PPC improves, in general, the premiums insurers charge will decrease; if the PPC deteriorates, then premiums will increase. Insurers determine how much each PPC affects premium based on their own experience, so rating factors vary by insurer. Source: Texas Department of Insurance, PPC Oversight

As of early 2016, the Mount Pleasant fire administration began fielding telephone calls from residents protected by the 5-Star Fire Department relative to significant increases to the homeowner's insurance premiums. After some investigation, the Mount Pleasant Fire Chief's understanding is, up to this year, insurance companies had been writing insurance policies using the Mount Pleasant's County area PPC 6. Unfortunately the primary fire service to these residents is provided by a department with a PPC of 10. PPC 10 is considered unprotected and is often a much higher rate than a PPC 6. Some companies do not even write policies in PPC 10 areas. By Texas Department of Insurance rule, the PPC of the primary fire department is used to calculate insurance premiums, despite being within five road miles of a Mount Pleasant Fire Station. If the Mount Pleasant Fire Department was recognized as the primary fire department, and the property was within five road miles of an MPFD fire station, the homeowners would be eligible for the PPC 6. At the time of this report, the Mount Pleasant Fire Chief, the County Judge and the Titus County Fire Chiefs' are conferring to possibly redraw the fire district lines to allow homeowners to take advantage of the lower PPC.

*Discussion*

The City must determine its desire to enhance the level of fire protection by considering the current ISO evaluation schedule and the comments made by the ISO relative to deficiencies and improvements from the May 2006 ISO evaluation. ESCI recognizes there is a potential for retrograde due to deficiencies including staffing, distribution of companies (Station), and the need for an additional engine to allow for one fully equipped in reserve. In an attempt to increase staffing levels incrementally, since FY 08-09, the Mount Pleasant Fire Chief has prepared budget requests to increase numbers of personnel. The efforts have been unsuccessful. A PPC retrograde would have an impact on the cost for homeowners and business insurance premiums.

*Recommendation*

The ISO is now overdue to reevaluate the fire defense capabilities of the City. Develop an implementation plan, timeline and funding mechanism for capital improvements and staffing over the next 24-36 months to provide an additional fire station in the southern portion of the City.

## Fiscal Analysis

This section provides information on the financial condition of the Mount Pleasant Fire Department and the local/regional economic context affecting its future operations. It begins with a review of selected national, state and local economic/demographic data to provide for the department's current condition and forecast outlook. Historical revenues and expenses are examined, highlighting key aspects and factors affecting the department's revenue and expense trends. Finally, using information provided by department staff and regional economic contextual information, a forecast of revenues and expenses through 2021 is provided.

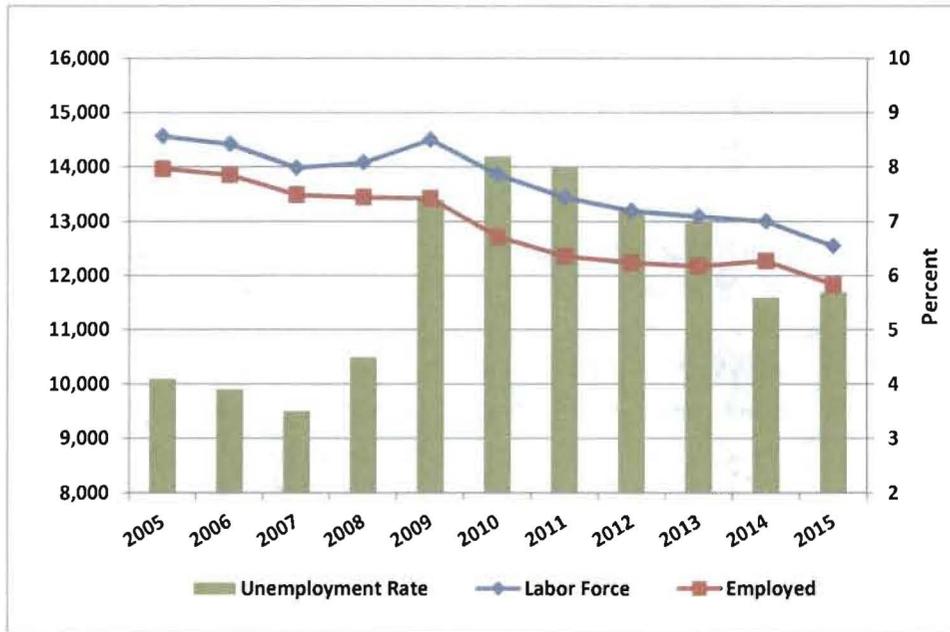
This presentation and analysis, as well as various staffing and funding cases modeled, relied on the financial documentation provided by the department. Additional information sources included; the US Census Bureau, US Department of Commerce Bureau of Economic Analysis, the Texas State Comptroller's office, the Economic Research Department of the Federal Reserve Bank of St. Louis, the Texas A&M Real Estate Center and the Titus County and Mount Pleasant Comprehensive Annual Financial Reports (CAFRs). The assumptions used in the forecast were developed by ESCI and reviewed by department staff.

### *Economic Context*

Economic data from Titus County suggests that the local economy is slowly recovering from the 2008-2011 recession but has yet to fully recover. Economic activity including levels of employment, one- and two-family residential permits, residential home sales in the region and associated construction costs and per capita income among other measures, while recovering from their lowest levels, are generally still below their pre-recession peaks.

Figure 13 below shows trends in total employment, available total labor force on the left-hand axis (red and blue lines; respectively) and unemployment rates on the right-hand axis (green bars) for Titus County from 2005 through 2015. As shown, there has been a long-term trend of a shrinking job force in the county which is expressed similarly in the number of employed workers. Although there was a slight uptick in the labor force around 2009, by the following year the declining trend was continued. The number of employed workers in the county flattened out between 2007 and 2009 after which the declining trend continued. This may be indicative of a shrinking job market in the county and eligible workers commuting to other areas to seek employment; particularly in light of the county population which has actually risen during the same period, as seen in Figure 14.

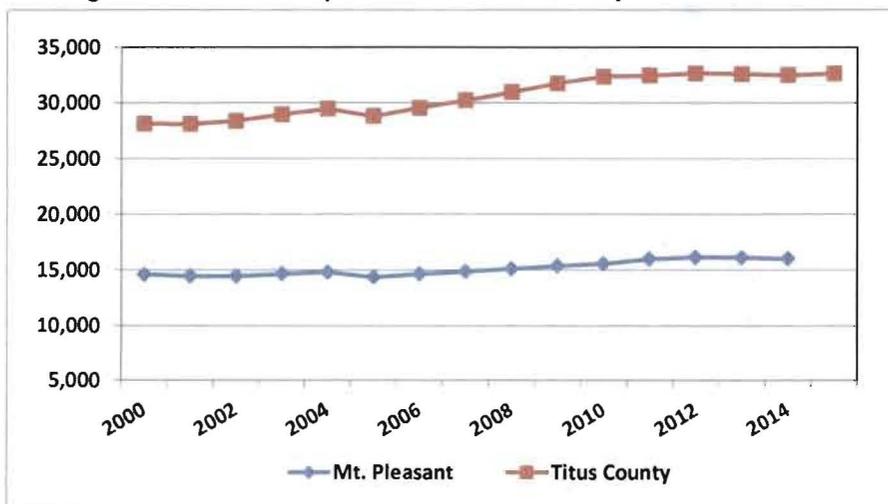
**Figure 13: Comparison of Texas and Titus County Employment, Available Labor Force and Unemployment Rate 2005-2015**



Source: US Bureau of Labor Statistics

Although it appears that the labor force and, by correlation the available jobs, has shown a declining trend which continues to the present day, Titus County experienced fairly low unemployment through 2008. Average unemployment hovered around four percent through 2008 when it jumped with the recession to 7.4 percent by 2009, reaching a recession high of 8.2 percent by 2010 before beginning to again decline. By 2014, the unemployment rate had dropped to 5.6 percent and is essentially flat to date.

**Figure 14: Titus County and Mount Pleasant Population 2000-2015**

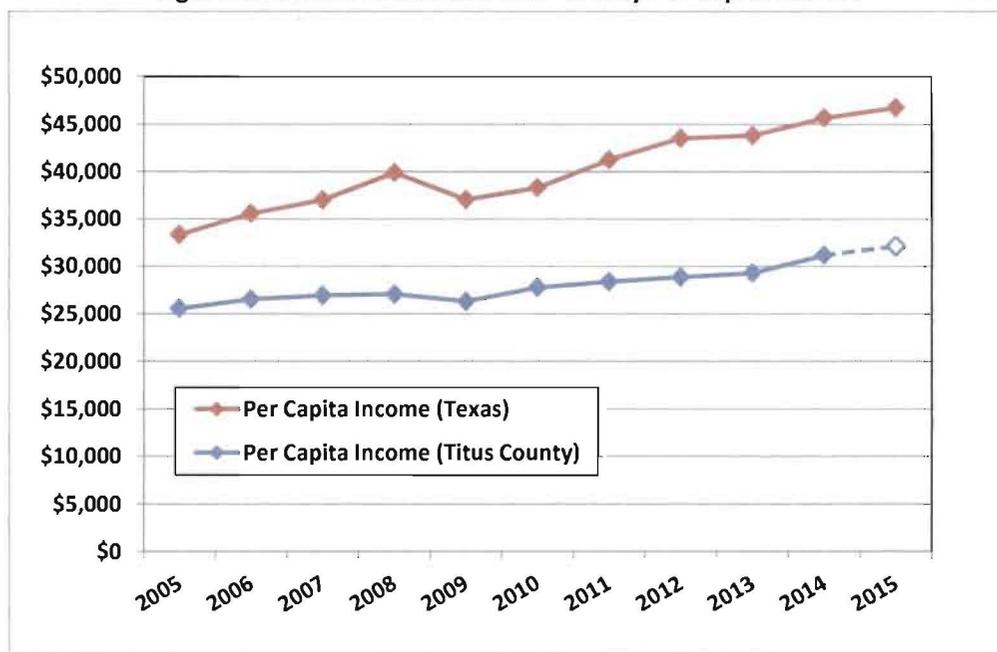


Source: US Census Bureau

Figure 15 shows per capita income for the State of Texas and Titus County for the period 2005 through 2015 (Titus County is projected for 2015). According to US Census Bureau figures, per capita income nationally increased gradually from the 2000 census through 2003 after which it increased at a higher rate to its pre-recession peak in 2008. Per capita income statewide also increased through 2008; however, in Titus County per capita income actually almost leveled off from 2006 through its pre-recession peak in 2008. Recession per capita income lows were reached in all cases by 2009. Recession per capita income lows were reached in all cases by 2009.

National, state and county per capita income levels recovered to their respective pre-recession peaks generally by 2011 and have since surpassed the pre-recession peaks. The state passed its pre-recession peak in 2011, while Titus County actually surpassed its pre-recession peak by 2010. US and Titus County per capita income is increasing at pre-recession rates, while the state per capita income began to increase at the pre-recession rate through 2012, then fell off subsequently to a lower rate of rise over the next three years. Over the period 2005 through 2015, national per capita income increased from \$35,904 to \$48,016 a 33.7 percent increase (US Census Bureau) while state per capita income increased from \$33,330 to \$46,745 for a 40.2 percent increase. Titus County per capita income increased from \$25,554 to a projected \$32,142 for the same period for an increase of 25.8 percent or about 2.6 percent per year.

**Figure 15: State of Texas and Titus County Per Capita Income**



Source: Economic Research, Federal Reserve Bank of St. Louis

There is limited data available on real estate sales and home values for Titus County and its municipalities. However, Figure 16 shows a comparison of home values for Talco, Winfield, Mount Pleasant and the county overall for 2014-2015. Although insufficient to show a trend, year-on-year values are up in all three municipalities by under one percent and just over one percent countywide.

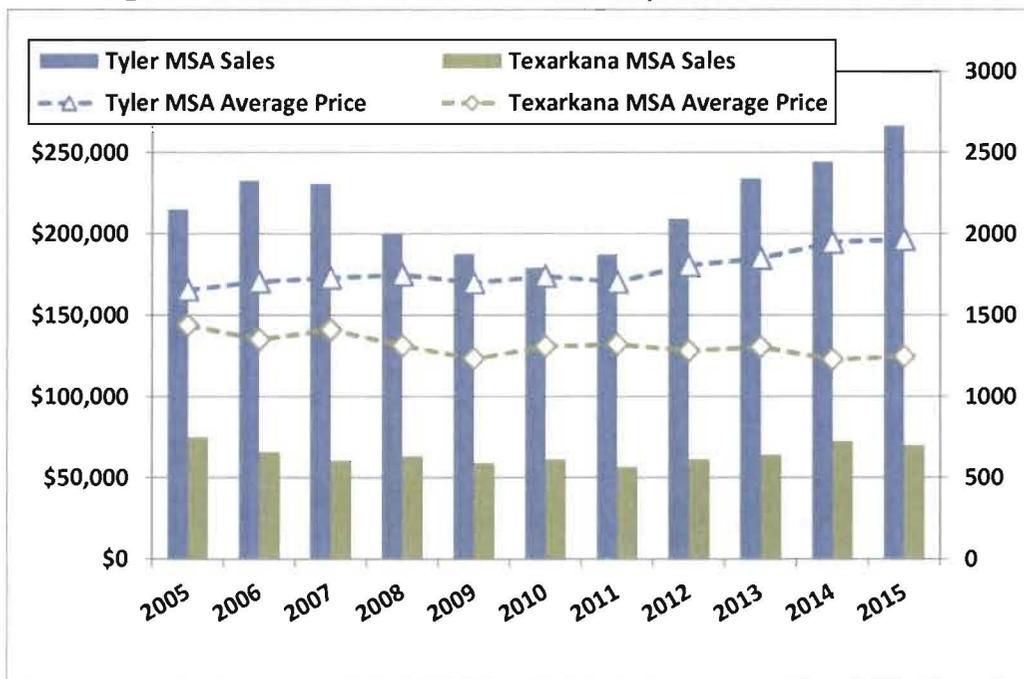
**Figure 16: Change in Average Home Values in Titus County 2014 to 2015**

	Average Home Values		Percent Increase (Decrease)
	2014	2015	
Talco	\$39,333	\$39,645	0.79%
Winfield	\$47,506	\$47,893	0.81%
Mount Pleasant	\$95,519	\$95,711	0.20%
Titus County	\$103,122	\$104,413	1.25%

Source: Economic Research, Federal Reserve Bank of St. Louis

The Real Estate Center at Texas A&M collects considerable data on real estate transactions from the Multiple Listing Service (MLS) and other sources by Metropolitan Statistical Area (MSA). Data from the two closest MSAs, Texarkana to the northeast and Tyler to the south is shown in Figure 17 (Tyler in blue, Texarkana in green). Home sales in the Tyler MSA, shown on the right-hand axis using bars, peaked at just over 2300 annually in 2006 and 2007 before falling to a recession low of 1791 in 2010. The trend in sales volume has been increasing annually since 2010 and the pre-recession high was passed by 2013, with the market continuing its upward trend at a brisk pace. The trend in the Texarkana MSA is more subtle, trending generally downward from a high of 749 in 2005 to a low of 564 in 2011. Sales volume began to pick up in 2012 and pre-recession volume was almost reached in 2014 but a slight downturn was seen in 2015.

**Figure 17: Real Estate Transaction Data from Tyler and Texarkana MSAs**



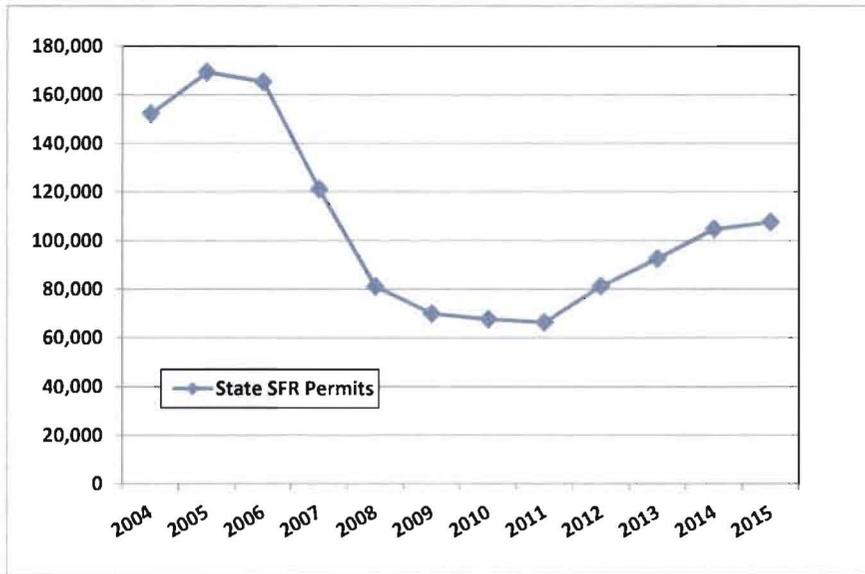
Source: Real Estate Center, Texas A&M

Average sales price for homes in the Tyler MSA, shown on the left-hand axis using a dashed line, rose slightly each year from \$165,562 in 2005 to a pre-recession high of \$174,781 in 2008. The low was reached in 2009 when prices dropped to \$169,922. Although the average price increased in 2009, it dropped again in 2010 to \$170,370 before beginning a post-recession increasing trend which continues today. Prices exceeded their pre-recession high in 2012 and have climbed from \$169,922 in 2009 to \$196,115 in 2015; a gain of 15.4 percent or approximately 2.6 percent annually. On the other hand, the Texarkana MSA has seen an overall decrease in home prices from 2005 when they averaged \$143,722 to 2015 when they averaged \$124,570, for a drop of 13.3 percent in the ten-year period. After dropping to a recession low of \$123,214 in 2009 they recovered somewhat the following year and averaged near \$130,000 from 2010 through 2013 after which they declined to \$122,694 in 2014 recovering slightly to \$124,570 in 2015.

To the extent that the nearby MSA data and the past two-year comparison for the county and several of its municipalities can be used to gauge real estate activity and values in Titus County, it would appear that the market is improving very slightly with sales activity picking up to pre-recession levels but home values showing a weak recovery or flattening for the next several years.

Figure 18 shows the number of one- and two-family residential home permits issued in the state from 2004 through 2015. Construction activity peaked around 2005-06 with between 165,000 and almost 170,000 SFR permits issued each of the two years. Recession construction lows were reached across the state by 2011 when the number of permits issued fell to 66,250 a reduction of 60.9 percent. Over the next three years, from 2012 through 2014, the industry began to recover at a rapid pace with permit activity reaching 104,629 in 2014 growing by almost 20 percent per year. The rate of recovery dropped off somewhat with permit activity increasing to 107,514 in 2015. The trend is still very positive although the rate of growth is more likely slowing to 10-15 percent annually.

**Figure 18: One- and Two-Family Residential Permits Issued in Texas 2004-2015**

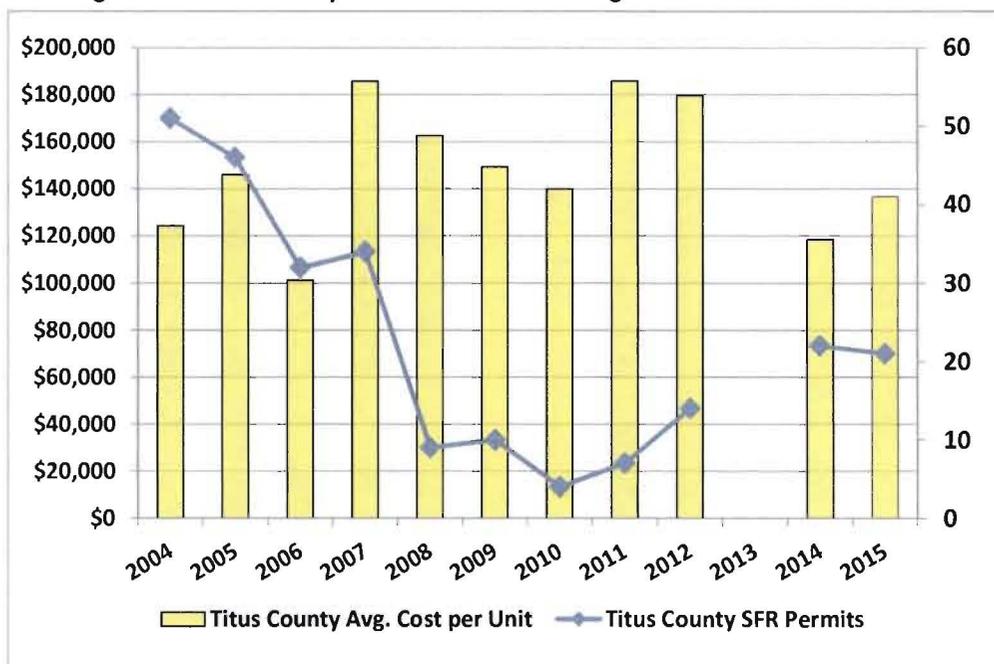


Source: Real Estate Center, Texas A&M



Figure 19 shows annual SFR construction permits issued for Titus County on the right-hand axis with yellow bars, along with average annual construction costs on the left-hand axis with a blue line. The construction activity trend mirrors that seen statewide, albeit on a much smaller scale. Permit activity for the period shown was highest in 2004 with 51 permits issued and recession lows were reached in 2010 when only 4 permits were issued. Activity rebounded over the next four years with 22 permits issued in 2014, leveling off at 21 in 2015. No discernible trend is observed in average construction cost per unit which ranges from a low of \$101,496 in 2006 to a high of approximately \$185,700 in 2007 and 2011. Average construction cost over the period is \$148,177.

**Figure 19: Titus County SFR Permits and Average Annual Construction Cost**

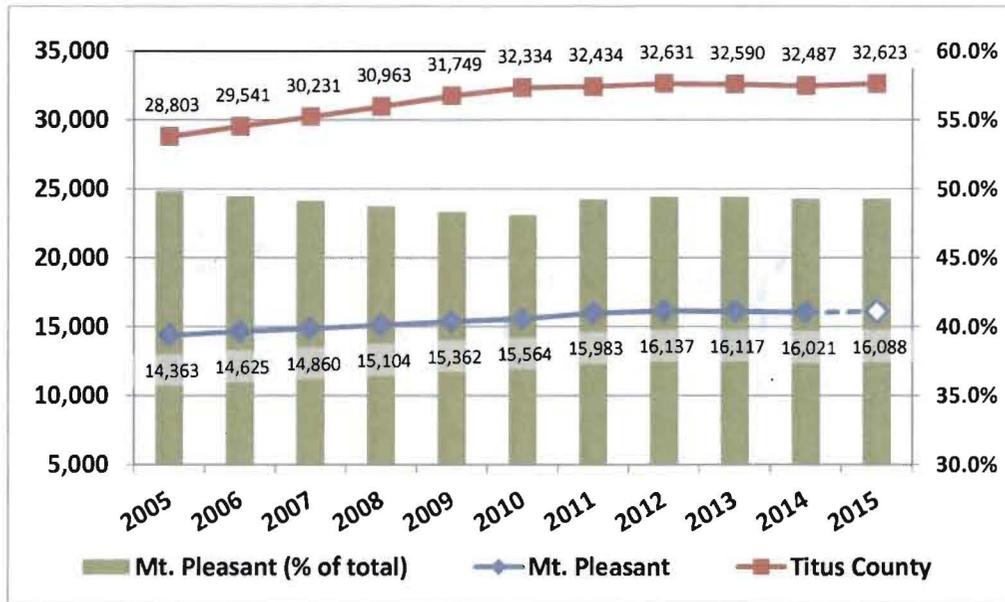


Source: Real Estate Center, Texas A&M

Figure 20 graphically illustrates population trends for Mount Pleasant (projected for 2015) and Titus County from 2005 through 2015. Mount Pleasant comprises approximately 50 percent of the total county population and is generally the driver for population changes in the county. Population grew at a fairly steady rate through 2010, increasing from 28,803 to 32,334 countywide and from 14,363 to 15,564 in Mount Pleasant, after which it appears to have leveled off at approximately 32,500 countywide and 16,000 for Mount Pleasant.

If this trend continues into the next five years, population-related demand for services should not increase significantly, particularly as demographic factors will not significantly change. As of 2014, the US Census Bureau reports that the median age in the county was 33.9 years, while 29.2 percent of the population was 17 and under with 14.9 percent over age 65. Almost 30 percent of the population under 18 lives in poverty while the total population living in poverty is 20.6 percent.

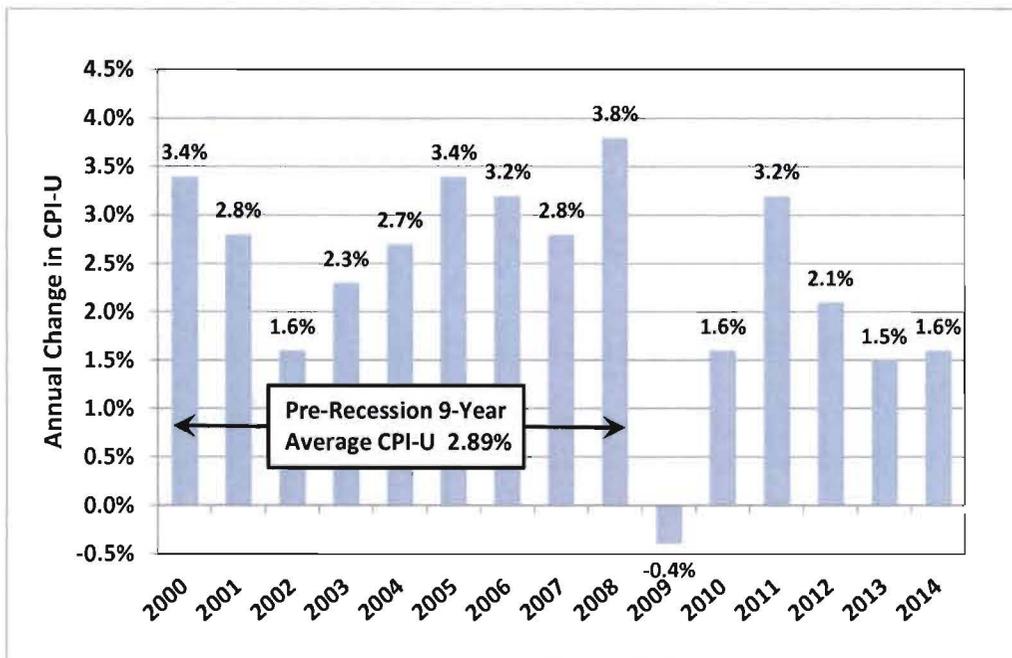
**Figure 20: Population Comparison of Titus County and Mount Pleasant from 2005-2015**



Source: US Census Bureau

Inflation is another measure of economic activity. While an inflation measure specific to Titus County is not available, Figure 21 below shows the trend from 2000 through 2014 of the national Urban Consumer Price Index for All Urban Consumers (CPI-U). While fairly variable in the nine years preceding the recession, the average annual inflation factor was approximately 2.89 percent. It was actually -0.4 in 2009, immediately after the pre-recession peak of the economy in 2008 and jumped to 3.2 percent by 2011, generally regarded as the low point in the recession economy. As the economy began to show signs of recovery, the annual inflation index dropped to 2.1 percent in 2012 and then appeared to stabilize around 1.5-1.6% over the next two years.

Figure 21: Inflation Trends: Urban CPI-U

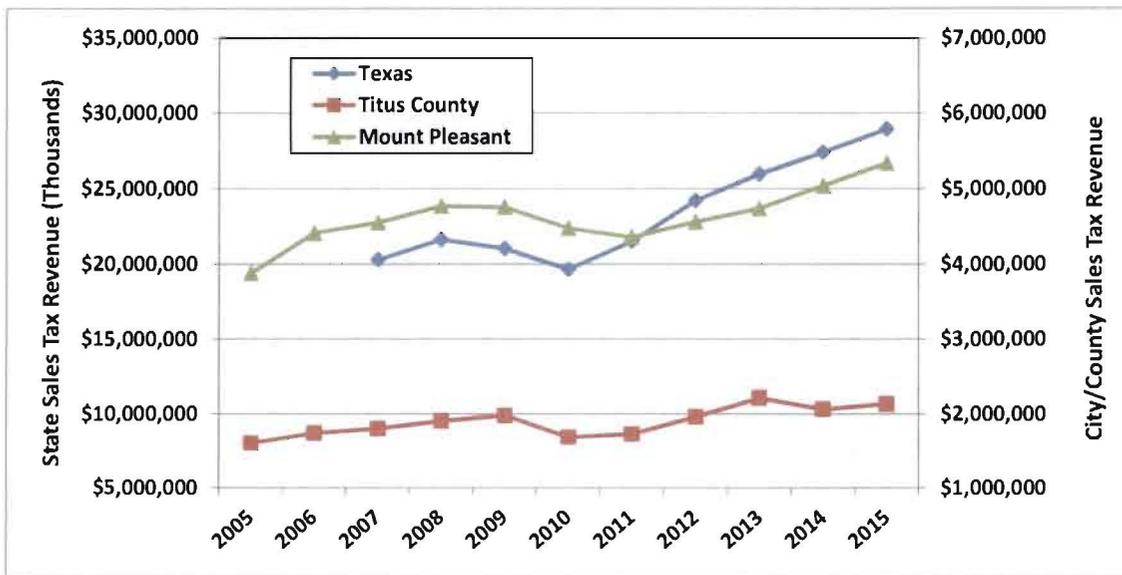


Source: US Bureau of Labor Statistics

The Texas State Comptroller compiles information on sales tax revenues at the state, county and municipal levels. This metric is often a very sensitive indicator of economic performance tending to track consumer confidence in the overall economy. Figure 22 shows state sales tax receipts for the period 2007 through 2015 on the left vertical axis (in blue). State sales tax receipts rose to a high of \$21.6 billion in 2008 leading up to the recession. Sales tax receipts statewide then dropped to their lowest point of the recession by 2010, plunging from a high of \$21.6 billion to \$19.6 billion, a drop of 9.3 percent in two years. Receipts then began to rise again significantly by 2011 almost reaching their pre-recession high point. By 2013, sales tax receipts had actually surpassed the pre-recession peak by \$4.33 billion. Between 2010 and 2015, sales tax receipts had risen from recession lows of \$19.6 billion to \$28.9 billion, an increase of \$9.28 billion per year or 47.3 percent (\$9.28 billion) in five years.

Titus County and Mount Pleasant sales tax receipts are shown for the period 2005 through 2015 on the vertical axis to the right of the figure (Mount Pleasant with a green line, Titus County with a red line). The trend is very similar to that shown for statewide values with some differences. Mount Pleasant sales tax receipts increased significantly from \$4.4 million in 2005 to their two-year pre-recession peak of just over \$4.75 million in 2008-09 before reaching a recession low of \$4.35 million in 2011, actually a year after the statewide low. They began to climb at close to pre-recession rates in 2012 and almost reached pre-recession highs by 2013, exceeding them by \$267,386 in 2014. Between 2011 and 2015, sales tax receipts had risen from recession lows of \$4.35 million to \$5.3 million, an increase of almost \$200,000 per year or 22.6 percent (\$985,401) in five years. The trend for Titus County is somewhat similar but less pronounced and the recovery actually flattens out from 2013 through 2015 after recovering from recession lows in 2010. However, the county has still recovered to its pre-recession high level of sales tax revenue.

**Figure 22: State of Texas, Titus County and Mount Pleasant Sales Tax Trends 2005-2015**

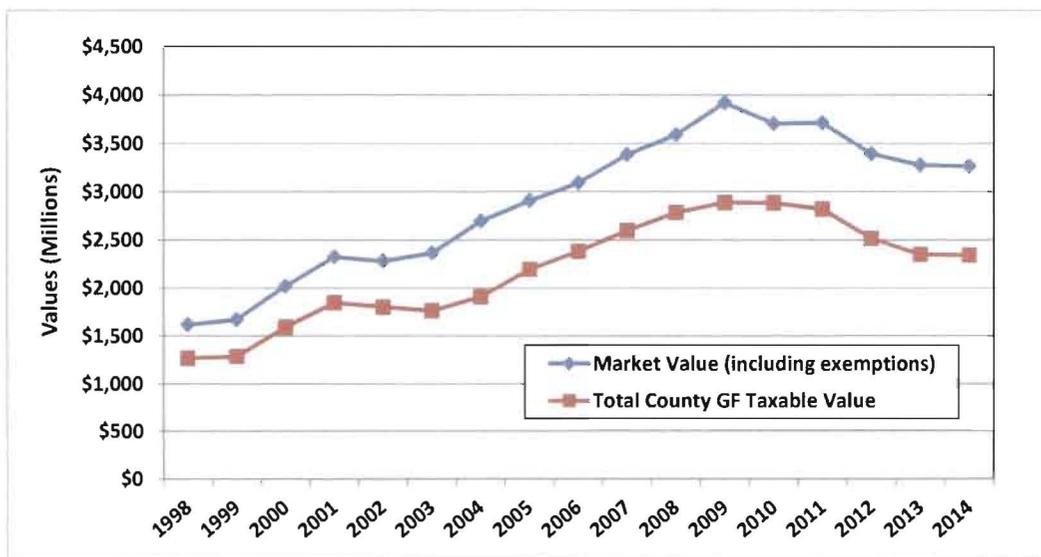


Source: Texas State Comptroller

Figure 23 shows Titus County market value (including exemptions) in blue and general fund taxable value in red for the period 1998 through 2014 as reported by the Texas Association of Counties. GF taxable value began a steady rise from 2003 through 2009 increasing from \$1.76 billion to \$2.88 billion in 2009, an increase of \$1.12 billion or 63.9 percent over the six-year period. This equates to an approximate annual increase of just over 10 percent for the period. After a two-year peak over 2009-10, the taxable values had dropped to a post-recession low by 2013 of \$2.3 billion where they remained for 2014, dropping slightly.

It appears that values may have reached their post-recession lows as of 2014. However, there are some critical factors which may cause taxable value to continue dropping over the next several years outside of the cycle seen statewide. According to staff comments in the county’s annual financial audit for 2015, the dropping valuation of two power plants in the county is a significant negative factor for the local economy over the next several years. These two coal-fired plants, one owned by Luminant Generation LLC and the other by AEP Southwestern Electric, are receiving greater attention from the Environmental Protection Agency (EPA) as are many coal-fired plants across the nation. EPA regulation of coal-fired power plants is becoming much tighter and companies are faced with closing these increasingly expensive operations. As these business challenges are met, the value of these plants is dropping, particularly as they begin to face the potential for closure. The county reports that the Luminant plant was subject to yet another significant devaluation in 2015. In order to maintain, let alone improve, current service levels, the county will be forced to seek alternative sources of revenue to fund recurring operational expenses. Conversely, services would have to be reduced or cut.

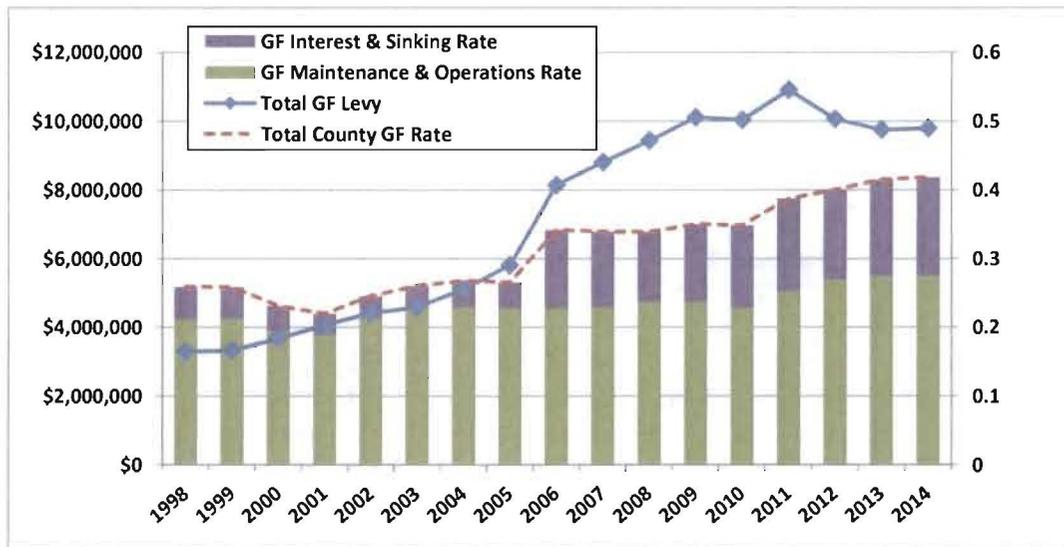
**Figure 23: Titus County Market Value and Taxable Value 1998-2014**



Source: Texas Association of Counties

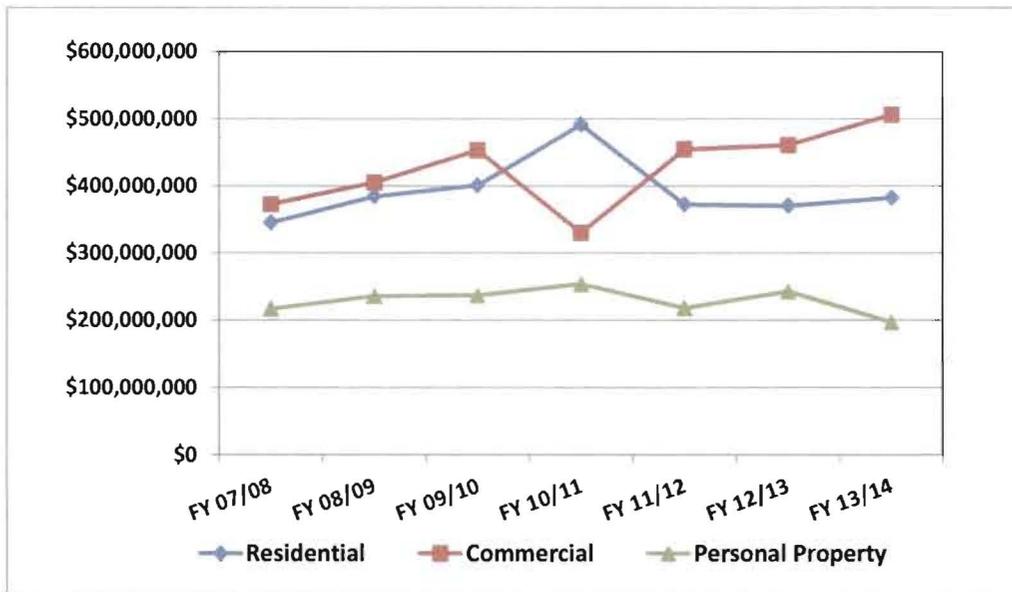
Also shown in Figure 24 are the composite county tax rates used in conjunction with the General Fund (GF) tax levy for the period 1998 through 2014 as reported by the Texas Association of Counties. The levy rose at a steady rate from \$3.3 million in 1998 to \$5.8 million (\$2.53 million or 77 percent in seven years) in 2005 for an annual increase of \$360,000 or 11 percent. After a large increase in 2006, the levy again rose steadily from \$8.1 million to \$10.9 million at its peak in 2011. This was a total increase of \$2.77 million or 34 percent in five years for an annual increase of \$550,000 or just under 7 percent. As discussed above, the levy has fallen subsequently averaging approximately \$9 million for 2013-2015. Mill rates on the other hand have continued to rise as values have fallen in order to bring in the necessary revenue for operations (green bars) and debt service (purple bars).

**Figure 24: Titus County Millage Rates and General Fund Tax Levy 1998-2014**



Source: Texas Association of Counties

**Figure 25: Comparison of Residential, Commercial and Personal Property Taxable Values in Mount Pleasant FY 07/08 through FY 13/14**

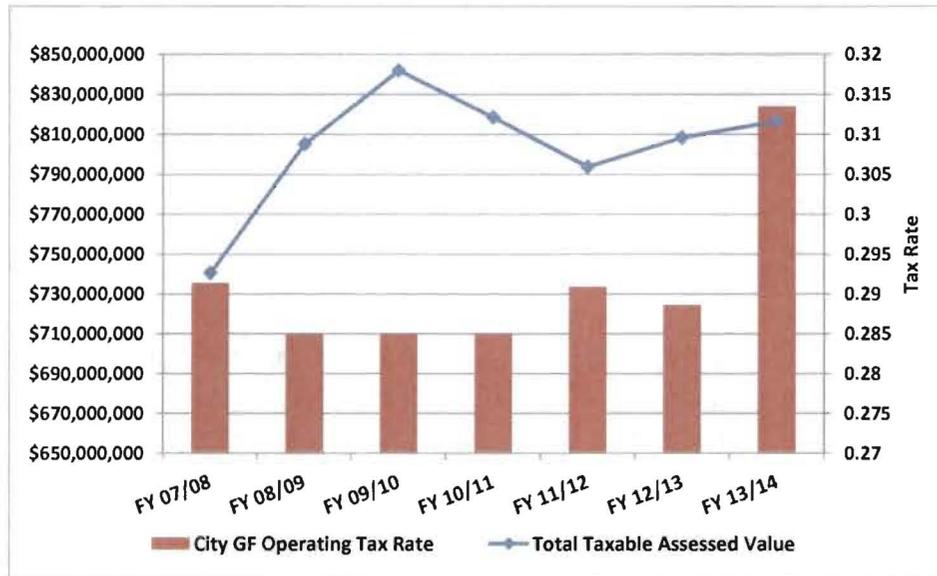


Source: City of Mount Pleasant

Figure 25 shows taxable value in Mount Pleasant for residential (blue line), commercial (red line) and personal property (green line) from FY 07/08 through FY 13/14. With some variability, particularly in FY 10/11, residential and commercial values have been increasing throughout the period. Commercial values have increased from \$372,361,440 in FY 07/08 to \$505,820,208 in FY 13/14, an annual rate of approximately 6 percent. Residential property, while also increasing over the period from \$344,979,828 to \$382,278,082 has gone through a period of lower values associated with the recession but has seen an annualized rate of increase over the period of 1.8 percent. This is consistent with the year-on-year real estate increases from 2014 to 2015 discussed earlier and shown in Figure 16. Personal property values on the other hand have increased slightly to a high in FY 10/11 after which they have generally declined to their lowest point in the review period by FY 13/14.

Figure 26 shows the interaction of total taxable values and general fund millage rates in Mount Pleasant from FY 07/08 through FY 13/14. Total taxable value increased from \$740,588,189 in FY 07/08 to a high of \$871,754,136 in FY 09/10 after which it declined over the next two years to a low of \$793,555,131. Over the next two years, overall taxable value increased gradually to \$816,550,532 and increase of 2.9 percent or just less than 1.5 percent annually.

**Figure 26: Mount Pleasant Taxable Values and General Fund Millage Rates FY 07/08 through FY 13/14**



Source: City of Mount Pleasant

Typically, as taxable value goes up, the same tax rate will generally provide the taxing entity with more revenue. In order to maintain the same annual revenue stream then, if the taxable value goes up, then the tax rate is reduced and vice versa. This trend is shown very well in Figure 26. Between FY 07/08 and FY 09/10, when the taxable value was going up at a very high rate, the tax rate was reduced leading to lesser revenue than would have otherwise been received by the city. However, the tax rate was still not reduced sufficiently to maintain the previous year’s revenue amount so revenue still increased despite a reduction in the tax rate. As values fell to a low in FY 11/12, the millage rate was increased to maintain sufficient revenue. The rate was then reduced the following year when values started to rise again.

## HISTORICAL REVENUES AND EXPENSES

An analysis of departmental historical revenues (to the extent applicable since it is a department of the city general fund rather than a self-contained fund) and expenses for the Mount Pleasant Fire Department (MPFD) was completed in order to help identify relevant financial trends, strengths and weaknesses and to lay the groundwork for the financial forecast presented in the next section of the report. Additionally, an analysis of Titus County fire service expenditures was included to provide both elected boards with a more comprehensive picture of fire service costs across both jurisdictions.

The historical analysis helps illustrate how the MPFD funds its services – where the money comes from and where it goes. Historical budget data for the department was provided by staff and was supplemented with a review of past city audits and county historical budget records. The historical analysis should provide administration and elected officials with a solid basis upon which to evaluate recommendations and develop sound, sustainable future policy.

### *Revenue – Mount Pleasant Fire Department*

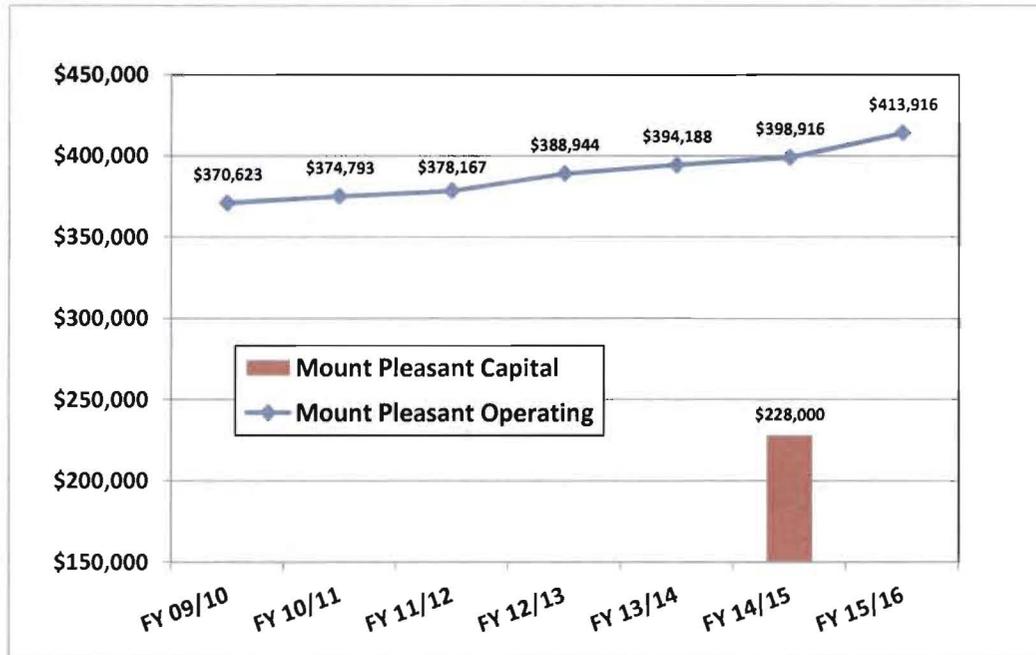
Titus County and the City of Mount Pleasant entered into an interlocal agreement, “Fire Protection Service Agreement”, on August 10, 2010 under Chapter 791 of the Texas Government Code. The purpose of the agreement is to, “...increase the efficiency and the effectiveness of the City and Titus County concerning fire protection.” Certain pieces of county fire equipment were provided for city use and the city department will respond to various emergency calls within county fire districts pursuant to the agreement. The county agreed to provide funding to the city in return for the requested services.

Section 1 of the agreement details how the county will compensate the city for its response. Effective October 1, 2010 (FY 10/11), the county paid the city \$370,624 (the “Base Rate”). In subsequent years, the county would pay the city the base rate for the preceding twelve month period plus an annual adder. The annual adder is essentially 75 percent of the annual Consumer Price Index for all urban consumers (CPI-U based upon the Dallas-Fort Worth index as published by the US Department of Labor’s Bureau of Labor Statistics) multiplied by the previous year’s base rate.

The agreement has been amended twice with the first amendment addressing the 50-50 cost share of an equipped, new Type 1 fire engine purchased by the city for use under the terms of the agreement (fire response into Titus County outside of city limits). The cost of this engine was estimated at \$400,000. The county’s projected payment for this equipment was \$228,000 in FY 14/15.

The agreement was further amended on November 3, 2015 to modify response protocol of the MPFD into the county’s various fire districts as well as change the county contribution to the city for fire services. Specifically, the city hired and equipped three additional firefighters and the amended agreement acknowledged that each entity would fund half of the initial and ongoing costs of those firefighters. The annual adder would still be calculated as before and the base rate as of October 1, 2015 was specified in the amendment as \$398,916. The county’s proposed FY 15/16 budget does not show the increased cost of the new firefighters since the budget was prepared prior to finalization of the agreement. For purposes of the financial forecast, this increase will be included as intended by the amended agreement.

**Figure 27: Titus County Payments to Mount Pleasant for Fire Service under Interlocal Agreement**



Source: Titus County Budget Documents

Figure 27 shows payments made by Titus County to the City of Mount Pleasant under the terms of the interlocal agreement as originally adopted in 2010 and amended in 2015. Actual amounts are shown for FY 09/10 through FY 13/14, while FY 14/15 figures are adopted and FY 15/16 are proposed. In FY 14/15, the city contribution towards the Type 1 pumper purchase is shown as a red bar since this payment was made through a one-time amendment. The total payment to the city for FY 14/15 was expected to be \$626,916. The proposed FY 15/16 amount includes \$15,000 towards the consultant study. Therefore, the base interlocal payment, as set in the amended interlocal, was proposed at \$398,916 or the same as in FY 14/15 (excluding the engine payment as discussed).

The annual county payment to the city for MPFD recurring expenses under section one of the interlocal agreement has risen from \$370,623 in FY 09/10 to \$398,916 in FY 15/16; a total increase of \$28,293 or 7.6 percent over the past six years (exclusive of the engine payment and the one-time consultant fee). This is approximately 1.3 percent per year.

*Expenditures – Mount Pleasant Fire Department*

Figure 28 shows, in tabular format, actual MPFD expenses for the period FY 09/10 through FY 13/14, projected for FY 14/15 and proposed for FY 15/16 according to department budget records. Total expenses are shown two different ways. The first is total expenses incurred by the department. The second total excludes the \$400,000 (approximate) Type I fire engine jointly purchased by the city and county in FY 14/15 which was purchased through an amendment to the interlocal agreement. Further, the consultant contract for approximately \$30,000 in FY 15/16 was also excluded. These exclusions were done so that staff and elected officials could examine the trend of more “typical” annual departmental spending through time which can be considered as recurring expenses. Neither of these one-time expenditures is considered recurring expenses identified and used to project future spending.

**Figure 28: Mount Pleasant Fire Department Expenditure Trend**

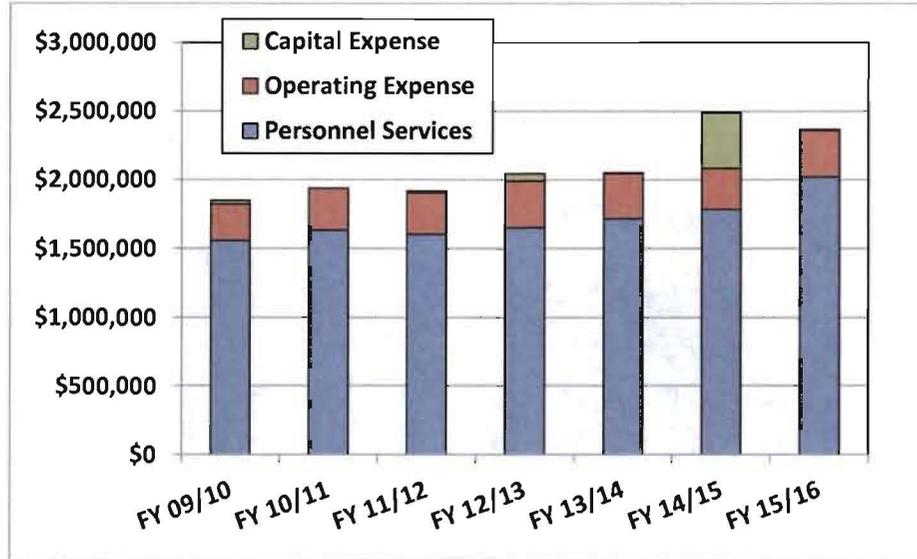
EXPENSE	FY 09/10 Actual	FY 10/11 Actual	FY 11/12 Actual	FY 12/13 Actual	FY 13/14 Actual	FY 14/15 Projected	FY 15/16 Proposed
Personnel Services	\$1,559,607	\$1,635,152	\$1,605,658	\$1,654,493	\$1,717,961	\$1,787,505	\$2,023,812
Operating Expense	\$264,474	\$305,601	\$301,741	\$337,507	\$326,718	\$296,875	\$335,817
Supplies and Materials	\$59,186	\$82,775	\$75,550	\$73,291	\$68,846	\$69,500	\$68,900
Maintenance, Buildings/Structures	\$10,956	\$8,017	\$7,889	\$7,785	\$14,757	\$18,000	\$7,600
Maintenance, Machinery/Equipment	\$64,378	\$86,589	\$80,089	\$109,669	\$74,207	\$52,500	\$67,500
Contractual Services	\$129,954	\$128,220	\$138,213	\$146,762	\$168,908	\$156,875	\$191,817
Capital	\$27,734	\$0	\$11,388	\$51,914	\$8,754	\$408,664	\$8,000
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$1,851,815	\$1,940,753	\$1,918,787	\$2,043,914	\$2,053,433	\$2,493,044	\$2,367,629
Total Expenses <sup>1</sup>	\$1,851,815	\$1,940,753	\$1,918,787	\$2,043,914	\$2,053,433	\$2,093,044	\$2,337,629

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

Source: MPFD Budget Documents

- Total fire expenses for FY 15/16 are estimated at \$2,367,629 including the consulting study cost.
- From FY 09/10 through FY 15/16 (excluding the FY 14/15 pumper purchase and the FY 15/16 consultant study), total expenses increased by 26.2 percent (\$485,814), rising from \$1,851,815 to \$2,337,629.
- The most significant driver of increased annual operating costs for FY 09/10 through FY 15/16 was raising personnel costs as shown in Figure 29.

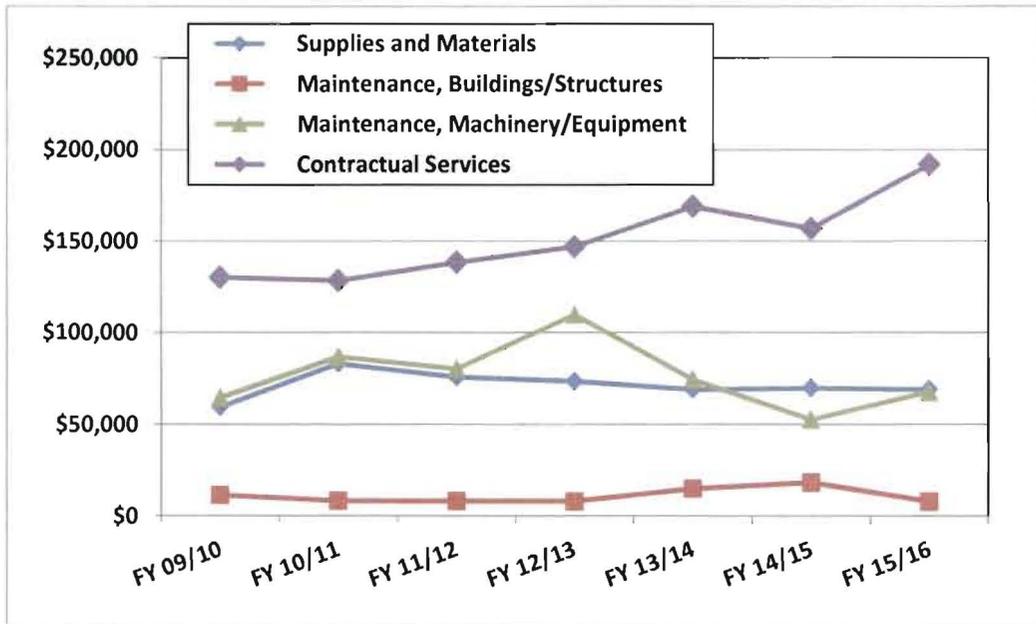
Figure 29: Mount Pleasant Fire Department Expenditures by Major Category



Source: MPFD Budget Documents

- Between FY 09/10 and FY 14/15, personnel services increased from \$1,559,607 to \$1,787,505 an increase of 14.6 percent (\$227,898) in five years or approximately 2.9 percent each year. In FY 15/16, three additional firefighter positions were added increasing the personnel services costs to \$2,023,812 in the proposed FY 15/16 budget.
- Except for the FY 14/15 spike in capital expenditures due to the jointly funded purchase of the Type I fire engine, annual capital expense averages approximately \$16,600.
- The department has no outstanding debt service.
- Operating expenses have fluctuated over the period but have increased between FY 09/10 and FY 15/16 from \$264,474 to \$305,817 (excluding the estimated \$30,000 consultant agreement in FY 15/16), an increase of 15.6 percent (\$41,343) or approximately 2.6 percent per year.
- Figure 30 shows MPFD operating expenses by major category from FY 09/10 through FY 15/16.
- With some annual fluctuation, supplies and materials have generally averaged \$71,150 over the period. Additionally, other than a spike in FY 12/13 and a marked drop in FY 14/15, machinery and equipment maintenance costs have generally remained constant, averaging \$76,420 per year. Building maintenance costs have also seen little fluctuation and have averaged \$10,720 for the period.
- Contractual services, on the other hand have generally risen from \$129,954 in FY 09/10 to \$161,817 (excluding an estimated \$30,000 for the consulting contract) in FY 15/16; an increase of \$31,863 (24.5 percent) or approximately 4.1 percent per year.

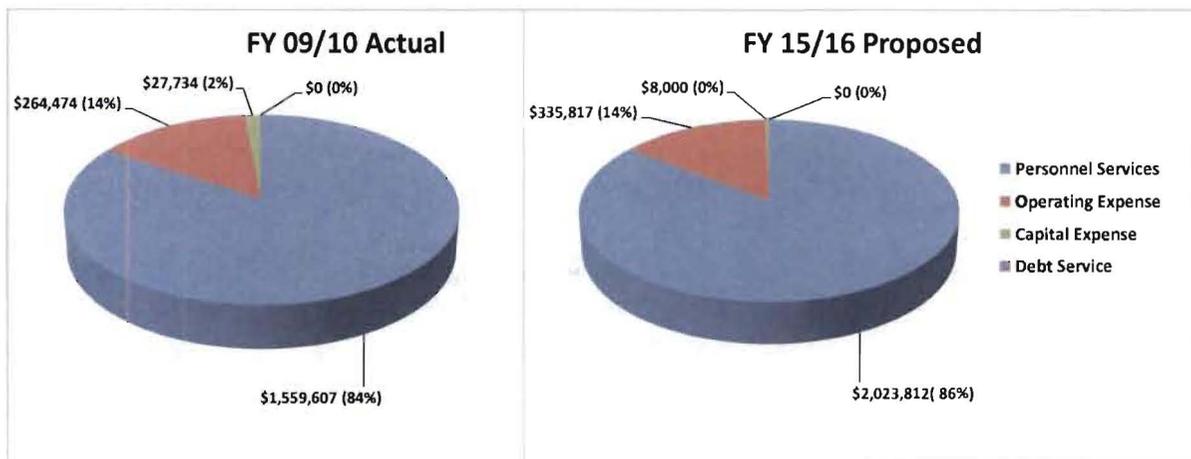
Figure 30: Mount Pleasant Fire Department Operating Expenditures by Category



Source: MPFD Budget Documents

- Personnel costs as a percentage of total expenditures, shown in Figure 31, were 84 percent of the total departmental resources allocated for FY 09/10 and have remained very similar at 86 percent of the total for FY 15/16.
- Operating expenses were 14 percent in both fiscal years.

Figure 31: Major Expenditure Categories as Percent of Total Fire Budget FY 09/10 versus FY 15/16

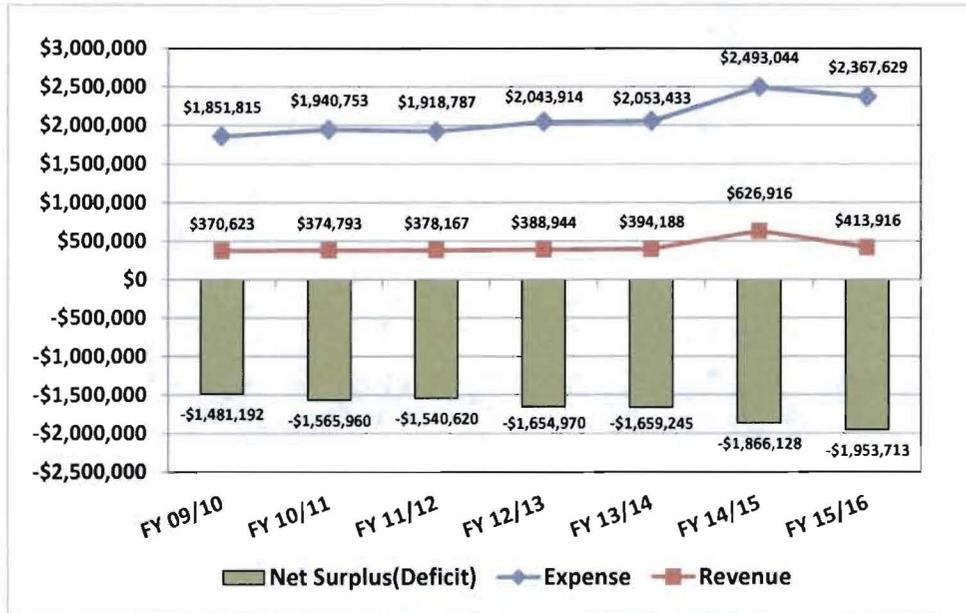


Source: MPFD Budget Documents

Net Income/Deficit – Mount Pleasant Fire Department

Figure 32 graphically shows actual total departmental expenses for MPFD for FY 09/10 through FY 13/14 with adopted for FY 14/15 and proposed for FY 15/16 in blue. Revenue shown for the same period represents the contractual payment from Titus County to Mount Pleasant for extra-territorial protection provided annually by MPFD to the county. Since the MPFD is a department of the city general fund, the “operating deficit” reflects that portion of the department expenditure budget funded by city general revenue other than the county transfer; for example, tax revenues such as sales and property taxes.

**Figure 32: Mount Pleasant Fire Department Revenue, Expenditure and Net Revenue Trends**



Source: Departmental Audited, Adopted and Proposed Budget Documents

*Expenditures – Titus County Fire Services*

Figure 33 shows, in tabular format, actual county expenses for fire protection services outside of Mount Pleasant as well as interlocal costs for the period FY 09/10 through FY 13/14, projected for FY 14/15 and proposed for FY 15/16 according to county budget records. Total expenses are shown two different ways. The first is total expenses incurred by the county for fire protection, both under the terms of the interlocal agreement (transfer to Mount Pleasant) and through support of county volunteer fire districts. The second total excludes the county portion of the cost (\$228,000) of the Type I fire engine jointly purchased by the city and county in FY 14/15, purchased through the amended interlocal agreement. Further, the projected county share of the consultant contract (\$15,000) in FY 15/16 was also excluded. These exclusions were done so that staff and elected officials could examine the trend of more “typical” annual fire service spending through time which can be considered as recurring expense. Neither of these one-time expenditures is considered recurring expenses identified and used to project future spending. The annual payments to the volunteer fire districts do include some capital costs which would be considered recurring as there typically will be some level of annual capital equipment replacement needed to fund these services across all departments.

**Figure 33: Titus County Fire Services Expenditure Trend**

EXPENSE	FY 09/10 Actual	FY 10/11 Actual	FY 11/12 Actual	FY 12/13 Actual	FY 13/14 Actual	FY 14/15 Projected	FY 15/16 Proposed
Mount Pleasant Operating	\$370,623	\$374,793	\$378,167	\$388,944	\$394,188	\$398,916	\$413,916
Mount Pleasant Capital						\$228,000	
<b>Sub-total Mount Pleasant</b>	<b>\$370,623</b>	<b>\$374,793</b>	<b>\$378,167</b>	<b>\$388,944</b>	<b>\$394,188</b>	<b>\$626,916</b>	<b>\$413,916</b>
Winfield VFD	\$8,508	\$51,674	\$9,600	\$9,600	\$7,200	\$0	\$0
Talco VFD	\$17,164	\$19,052	\$12,234	\$17,712	\$27,560	\$17,000	\$17,000
Tri-Lakes VFD	\$25,756	\$10,860	\$9,800	\$9,600	\$37,215	\$16,250	\$20,770
Cookville VFD	\$21,780	\$37,548	\$14,400	\$14,400	\$14,400	\$41,250	\$20,770
Five Star VFD	\$10,692	\$25,660	\$11,800	\$12,000	\$12,000	\$16,250	\$20,700
Nortex VFD	\$27,184	\$12,732	\$12,000	\$12,000	\$12,000	\$16,250	\$45,770
Sugar Hill VFD	\$13,433	\$15,086	\$14,400	\$14,400	\$14,400	\$16,250	\$20,770
<b>Sub-total VFDs</b>	<b>\$124,517</b>	<b>\$172,612</b>	<b>\$84,234</b>	<b>\$89,712</b>	<b>\$124,775</b>	<b>\$123,250</b>	<b>\$145,780</b>
<b>Total County Fire Protection</b>	<b>\$495,140</b>	<b>\$547,405</b>	<b>\$462,401</b>	<b>\$478,656</b>	<b>\$518,963</b>	<b>\$750,166</b>	<b>\$559,696</b>
<b>Total County Fire Protection<sup>1</sup></b>	<b>\$495,140</b>	<b>\$547,405</b>	<b>\$462,401</b>	<b>\$478,656</b>	<b>\$518,963</b>	<b>\$522,166</b>	<b>\$544,696</b>

<sup>1</sup>Excludes 50% cost share of FY 14/15 Type I engine purchase pursuant to interlocal agreement as amended and \$15,000 share of consultant study in FY 15/16

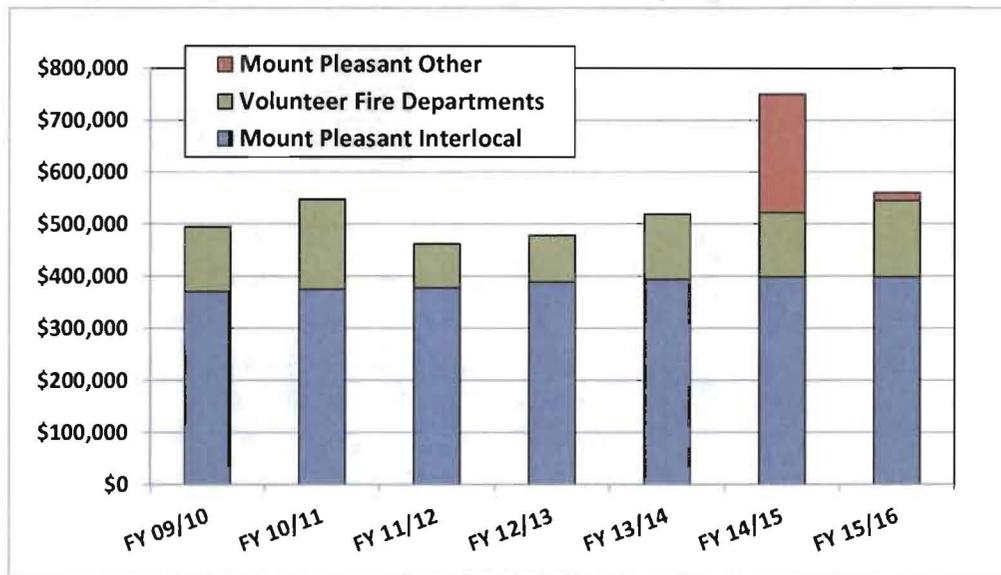
Source: *Titus County Budget Documents*

- Total fire service expenses for FY 15/16 are estimated at \$559,696 including the consulting study cost.
- From FY 09/10 through FY 15/16 (excluding the FY 14/15 pumper purchase and the FY 15/16 consultant study), total expenses increased by 10 percent (\$49,556), rising from \$495,140 to \$544,696. This equates to approximately an annual increase of 1.67 percent.

Figure 34 shows the gradually increasing payment (blue bars) to the City of Mount Pleasant for extra-territorial fire protection services as provided for in section one of the interlocal agreement. The annual base payment has risen from \$370,623 in FY 09/10 to \$398,916 in FY 15/16; a total increase of \$28,293 or 7.6 percent over the past six years (exclusive of the engine payment and the one-time consultant fee). This is approximately 1.3 percent per year.

- After paying half the costs to hire and equip three additional firefighters in FY 15/16 according to the amended interlocal agreement, the final FY 15/16 payment to Mount Pleasant is expected to be \$513,916 (the base for FY 15/16 of \$398,916 plus \$15,000 for the consultant study and \$100,000 for the new firefighters).

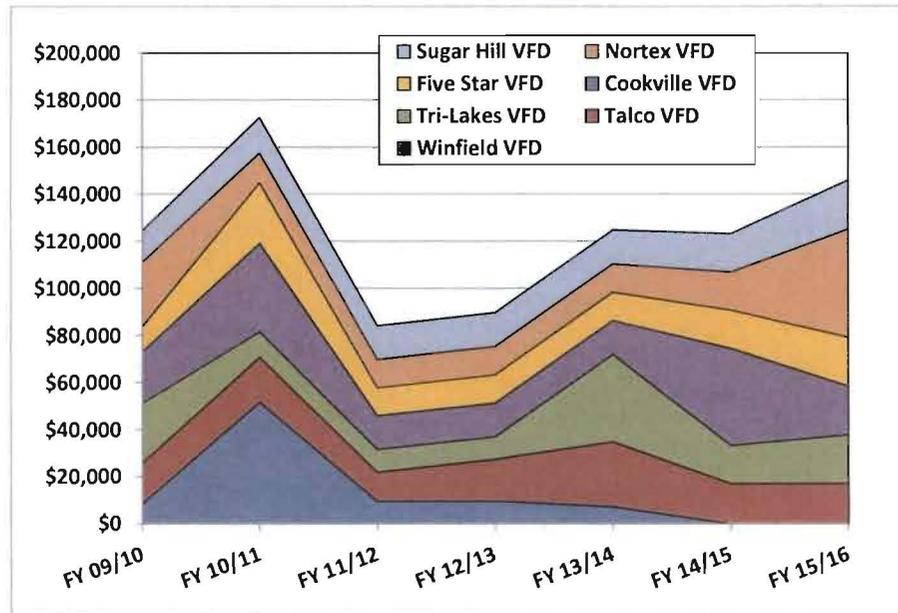
**Figure 34: Titus County Fire Service Expenditures by Major Category**



Source: Titus County Budget Documents

- The red bars illustrate non-recurring payments made to the city as previously discussed.
- Although fluctuating over time, rising from \$124,517 in FY 09/10 to \$172,612 in FY 10/11, the total cost of providing volunteer fire services (green bars) actually fell in FY 11/12 to \$84,234. However, since FY 11/12, this expense as a whole has increased annually to \$145,780 in FY 15/16 for a total increase of \$61,546 (73 percent in four years or approximately 18.3 percent per year).

**Figure 35: Titus County Fire Service Expenditures by Volunteer Fire District**



Source: Titus County Budget Documents

- The red bars illustrate non-recurring payments made to the city as previously discussed.

Figure 35 is an area plot showing the relationship of payments made by the county from FY 09/10 through FY 15/16 to each of the seven volunteer fire departments in the county.

- As discussed previously, overall payment amount has gone up since FY 11/12 although the actual amounts have varied between departments from year-to-year. Some of the variability is attributed to capital equipment purchases spread between departments over the various fiscal years covered.
- Payments to Winfield VFD ceased in FY 14/15 as the department was dissolved.
- Annual payments are generally balanced between departments with the exception of capital equipment purchases.
- Average total VFD costs over the period are \$123,554. Average annual increase from FY 09/10 through FY 15/16 is 2.85 percent.

## REVENUE AND EXPENDITURE FORECAST

ESCI developed a forecast of revenues and expenditures to assess the near term financial sustainability of current operations. The forecast is based on historical actual revenues and expenditures and informed assumptions about how those revenues and expenditures will change in the future. The key assumptions used in the forecast are presented below followed by the forecast results and selected metrics.

Since both county fire service expenditures and MPFD expenditures are part of their respective general funds, rather than separate funds with their own revenue, expense and fund balances, revenue projections are limited in scope. Revenues are largely dependent upon over all county and city revenue sources and subject to future allocation decisions by respective elected boards. The only significant and dedicated revenue stream is the transfer from Titus County to Mount Pleasant under the interlocal agreement; therefore, several assumptions concerning this source are outlined below. The previous discussion of local economic performance and indicators provides some context for potential general fund revenue growth in both the city and county during the forecast period.

### *Forecast Assumptions*

#### *Revenue Forecast Assumptions – Mount Pleasant Fire Department*

- County Fee for Service
  - MPFD remains a General Fund department of the City of Mount Pleasant. As such, its only department specific revenues are fees for various services; specifically the transfer from Titus County under the interlocal agreement for extra-territorial services provided.
  - The annual county base payment to the city rose from \$370,623 in FY 09/10 to \$398,916 in FY 15/16; a total increase of \$28,293 or 7.6 percent over the past six years (exclusive of the engine payment and the one-time consultant fee). This is approximately 1.3 percent per year.
  - The base fee proposed by Titus County for FY 15/16 is \$398,916 which was budgeted prior to the November, 2015 amendment to the interlocal agreement, whereby the county agreed to fund half of the cost of hiring and equipping three new city firefighters. Therefore, the forecast assumes that half of this cost will be added to the fund transfer for FY 15/16 and in subsequent years; this new total will increase annually at 1.3 percent.
  - The MPFD personnel services budget for FY 14/15 was \$1,787,505. With the annual increase and addition of three firefighters, this cost had risen to \$2,023,812 in FY 15/16. Application of the annual increase rate of 2.9 percent to the FY 14/15 personnel services budget would have meant that the FY 15/16 budget without the new firefighters would have been approximately \$1,839,343 or a difference of \$184,469 (the estimated loaded cost of the three new firefighters).
  - On-boarding costs for the three firefighters (uniforms, bunker gear, etc.) are estimated at \$15,000). Total cost of hiring and equipping the three new firefighters is estimated for FY 15/16 at \$200,000.

- The FY 15/16 county payment under the amended interlocal is therefore estimated to be \$513,916 (the originally agreed upon base plus half of the first-year cost of the three new firefighters and half of the consultant study).
- The first year forecast (FY 16/17) payment would be \$498,916 (the FY 15/16 expected \$513,916 minus the \$15,000 for the consultant study) less 50 percent of the equipping costs for the new firefighters incurred in FY 15/16 (\$7,500) which would give a base figure of \$491,416 plus the adder which is estimated to increase at approximately 1.3 percent annually. Therefore, the second year payment from the county is estimated at \$497,804. This is the base for the second forecast year and will escalate annually at 1.3 percent assuming no additional amendments during the forecast period.
- Additional staffing and capital costs incurred by MPFD to provide services to the county (additional firefighters, equipment and facilities), exclusive of any salary adjustments that may be made subsequent to city salary studies, will be shared on a 50/50 basis through further amendments to the interlocal agreement.
- Other Revenue
  - None anticipated.

*Expense Forecast Assumptions – Mount Pleasant Fire Department*

- Salaries/Wages/Benefits
  - No change in staffing levels for status quo scenario.
  - Additional engine companies for alternative service level scenarios assumed to be each staffed with one captain, one FF III and two FF I on each of three shifts for a total of twelve additional employees. Median captain salary for FY 15/16 is \$54,341; FF III is \$43,109; FF I is \$36,779. Total overtime and benefit cost is estimated at 50 percent of salary for each position. On-boarding costs for twelve new positions at \$5,000 each is \$60,000 in one-time operating expense.
  - New Deputy Chief (shift commander) position, if added, would start at an annual salary of \$62,591.36 or pay grade 16E on the FY 15/16 city pay scale. Currently, the next position below the fire chief is captain which is a pay grade 13. Each city pay grade is approximately 5 percent above or below adjacent pay grades. ESCI experience is that the Deputy chief position is 15 percent higher than the captain position given the greater responsibility for an entire shift and departmental administrative duties. The police department currently has a deputy at a pay grade of 18B with shift supervisors at pay grade 15. The fire department has no assistant or deputy position and the Deputy Chief would fill that role as well as the shift supervisor role and should be leveled appropriately. The fire department median captain salary is \$54,341 and a 15 percent increase would be \$64,492 or approximately the pay rate for a 16E pay grade on the city scale. Overtime plus benefits are assumed to be 50 percent of annual salary and on-boarding costs per position are assumed at \$5,000 per person.

- Historical personnel services increases from FY 09/10 through FY 15/16 averaged 2.9 percent annually and are assumed to continue increasing at that rate for the forecast period excluding any other, additional salary adjustments.
- Operating Supplies and Operating Equipment
  - Historically, operating expenses increased 2.6 percent annually from FY 09/10 through FY 15/16.
  - MPFD FY 15/16 operating amount is used as the base amount for the forecast period and is increased by 2.6 percent per year.
- Capital Expenses
  - Historical capital expenditures, excluding the major capital apparatus purchase in FY 14/15 averaged \$16,600 annually from FY 09/10.
  - Should an additional company be placed into service, the cost of an additional fire engine is \$400,000.
  - Typical engine replacement occurs on a 15 year cycle. Assuming a replacement cost of \$400,000 the department should add approximately \$27,000 annually for a capital apparatus replacement fund.
  - The forecast uses \$45,000 as a base for capital replacement inflated at a rate of 3 percent annually based upon emergency services capital equipment inflationary trends.
- Debt Service
  - No debt is contemplated during the forecast period. However, the additional \$27,000 projected for a capital replacement fund could also be used as a debt service payment in the event a piece of capital equipment needed to be replaced and the total funding was not available at the time the equipment was needed.

*Expense Forecast Assumptions – Titus County Fire Service*

- Mount Pleasant Interlocal Agreement
  - The adopted base fee for FY 15/16 of \$398,916 was proposed prior to the November, 2015 interlocal agreement amendment, whereby the county agreed to fund half of the cost of hiring and equipping three new city firefighters. The forecast assumes half of this cost will be added to the fund transfer for FY 15/16. Half of the estimated consultant cost (\$15,000) is also budgeted for FY 15/16.
  - Total cost of hiring and equipping three new firefighters is estimated for FY 15/16 at \$200,000 (including salary/benefits and equipment). Therefore, the FY 15/16 payment is estimated at \$513,916.
  - The first year forecast (FY 16/17) payment would be \$498,916 less 50 percent of the equipping costs for the new firefighters incurred in FY 15/16 (\$7,500) which would give a base figure of \$491,416 in addition to the adder which is estimated to increase at approximately 1.3 percent annually. Therefore, the total first year payment is estimated at \$497,804. This is the base for the second forecast year and will escalate annually at 1.3 percent assuming no additional amendments during the forecast period.

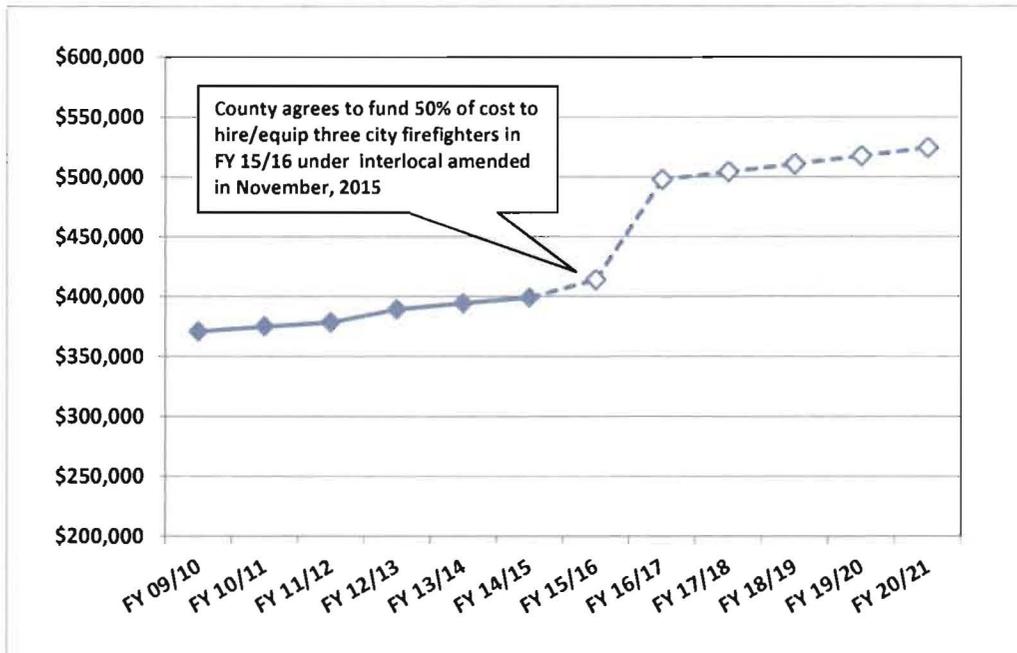
- Additional staffing and capital costs incurred by MPFD to provide services to the county (additional firefighters, equipment and facilities), exclusive of any salary adjustments, will be shared on a 50/50 basis through further amendments to the interlocal agreement.
- Volunteer Fire Departments
  - Although fluctuating over time, rising from \$124,517 in FY 09/10 to \$172,612 in FY 10/11, the total cost of providing volunteer fire services actually fell in FY 11/12 to \$84,234. However, since FY 11/12, this expense as a whole increased annually to \$145,780 in FY 15/16 for a total increase of \$61,546 (73 percent in four years or approximately 18.3 percent per year).
  - Average total VFD costs over the period are \$123,554. Average annual increase from FY 09/10 through FY 15/16 is 2.85 percent.
  - Year-to-year variability is largely due to capital replacement costs from department to department.
  - Forecast assumes a base cost of \$125,000 for FY 16/17 increasing at an annual rate of 5 percent.

#### *Financial Forecast Results (Status Quo)*

Applying the revenue forecast assumptions identified above results in the revenue forecast for MPFD as presented in Figure 36. Again, since MPFD is a general fund department, it shares GF revenues with other departments and the city must make decisions each year about allocation of those unrestricted revenues. However, the interlocal agreement for fire protection with Titus County does provide a dedicated, recurring revenue source for MPFD which is modeled here.

Actual revenues are shown through FY 13/14 with projected FY 14/15 revenues all shown in solid colors. FY 15/16 is the originally budgeted amount; however, this amount was calculated prior to the amended agreement providing for the county to fund half of the three newly hired (in FY 15/16) MPFD firefighters. While there probably will be additional actual revenue for FY 15/16, only the budgeted amount is shown. The increase representing the amount to fund half of the new positions is shown effective FY 16/17, the first year of the forecast. This revenue source increases at approximately 1.3 percent annually from just under \$500,000 in FY 16/17 to just under \$525,000 in FY 20/21 under the status quo scenario with no increase in service.

Figure 36: MPFD Interlocal Revenue Forecast (Status Quo)



Applying the expense forecast assumptions identified above for MPFD results in the expense forecast presented in Figure 37. Personnel expenses represent roughly 85 percent of total forecasted annual recurring expenses by FY 20/21 and grow by 2.9 percent per year from \$2,023,812 in FY 15/16 to \$2,334,786 in FY 20/21. Operating expenses grow from \$335,817 in FY 15/16 to \$347,695 in FY 20/21. Overall, operating expenses are forecasted to increase by approximately 2.6 percent per year. Although capital expense shows a significant jump in FY 16/17, the increase represents both an average of the prior five years plus an additional amount for capital apparatus replacement that could be applied to restricted reserve for cash carried forward or debt service depending upon timing and need for a capital apparatus purchase.

Figure 37: MPFD Expenditure Forecast by Expenditure Type (Status Quo)

EXPENSE	FY 15/16 Proposed	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Personnel Services	\$2,023,812	\$2,082,503	\$2,142,895	\$2,205,039	\$2,268,985	\$2,334,786
Operating Expense	\$335,817	\$313,768	\$321,926	\$330,296	\$338,884	\$347,695
Capital	\$8,000	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$2,367,629</b>	<b>\$2,441,271</b>	<b>\$2,511,171</b>	<b>\$2,583,076</b>	<b>\$2,657,042</b>	<b>\$2,733,129</b>
Total Expenses <sup>1</sup>	\$2,337,629					

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

**Figure 38: MPFD Revenues and Expenditures – Forecast (Status Quo)**

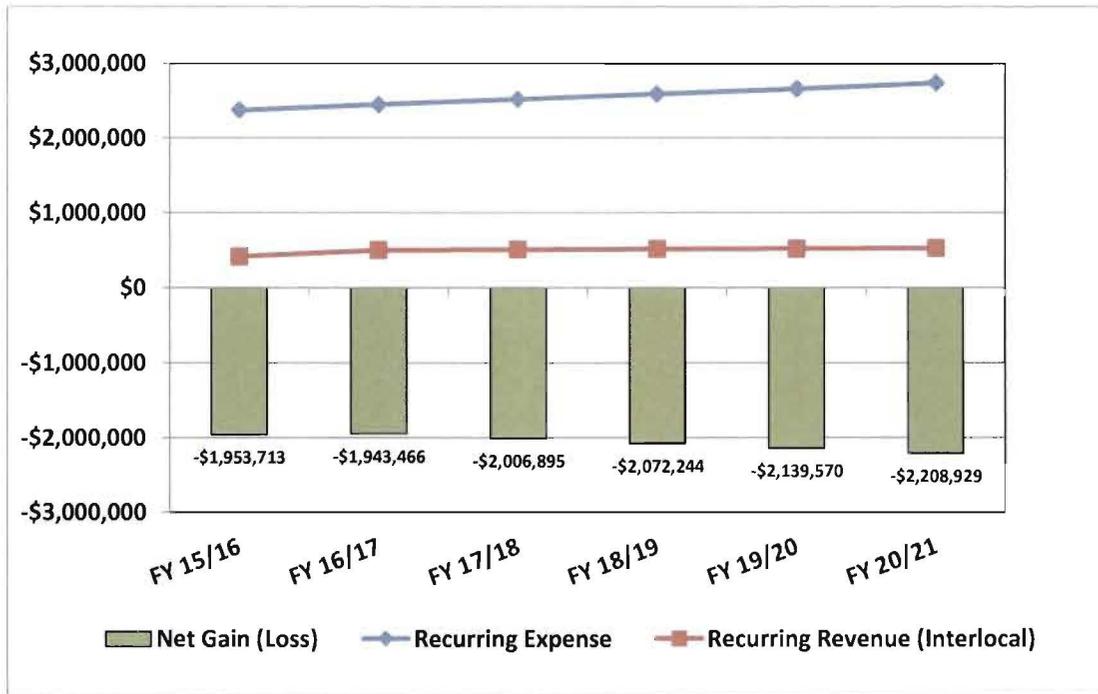


Figure 38 illustrates the relationship between recurring expenditures and revenues through time with the net loss shown in green bars representing the undifferentiated general fund revenue contribution (property, sales and other taxes and fees) needed to fund the department. The general fund amount needed in FY 15/16 will likely be reduced by approximately \$100,000 as discussed above. The GF contribution represents 79.6 percent (\$1,943,466) of the total funds needed by the department in the first year of the forecast period (\$2,441,271). This gap increases slightly to almost 81 percent (\$2,208,929) of the total recurring expenses (\$2,733,129) by FY 20/21 as expenses rise at a higher rate than the transfer from Titus County under the interlocal agreement.

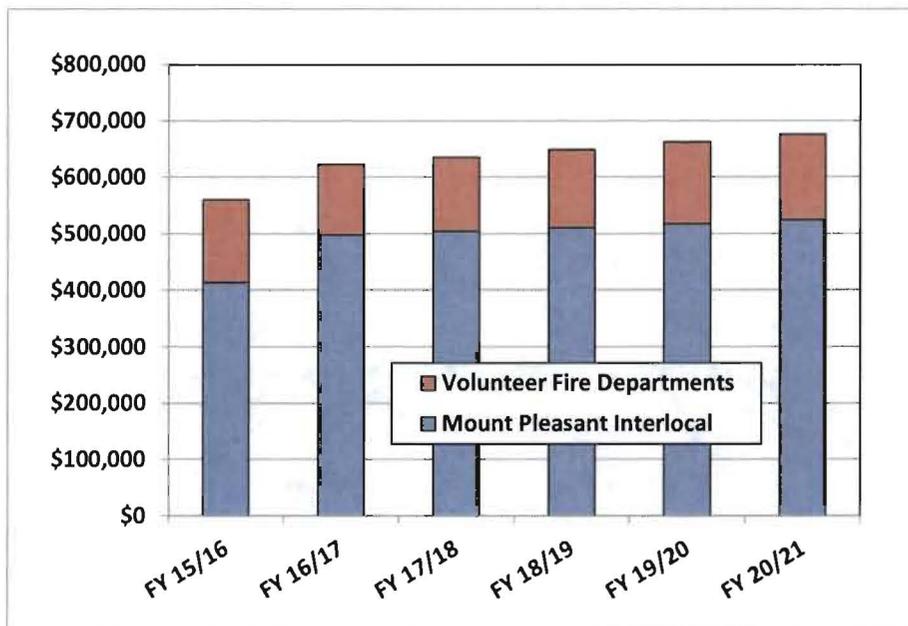
The table in Figure 39 shows the expenditure forecast for Titus County fire services, including the interlocal transfer amount to Mount Pleasant. The final transfer amount for FY 15/16 will probably increase by \$100,000 as discussed previously due to the amended interlocal agreement.

**Figure 39: Titus County Fire Service Expenditures – Tabular Forecast (Status Quo)**

EXPENSE	FY 15/16 Proposed	FY 16/17 Proposed	FY 17/18 Proposed	FY 18/19 Proposed	FY 19/20 Proposed	FY 20/21 Proposed
Mount Pleasant Interlocal	\$413,916	\$497,804	\$504,276	\$510,831	\$517,472	\$524,199
Volunteer Fire Departments	\$145,780	\$125,000	\$131,250	\$137,813	\$144,703	\$151,938
Total County Fire Protection	\$559,696	\$622,804	\$635,526	\$648,644	\$662,175	\$676,138

Figure 40 shows the total county fire service expense in graphical format with the volunteer funding component shown in red bars and the transfer to Mount Pleasant shown in blue. The volunteer expenditure increases relative to the transfer to Mount Pleasant from 20.1 percent in FY 16/17 to 22.5 percent in FY 20/21 under the status quo scenario. With capital replacement and the annual increase projected for the volunteer departments, the total cost of those services is increasing at a higher rate (5 percent) than the transfer to Mount Pleasant (1.3 percent).

**Figure 40: Titus County Fire Service Expenditures – Graphical Forecast (Status Quo)**



The above discussion of forecast results for both Mount Pleasant and Titus County involved projections assuming the same level of service currently established throughout both jurisdictions. Specifically, the above models a status quo scenario. For discussion purposes, three additional scenarios have been modeled; one of which maintains current service level and one of which improves service level by adding a career-staffed engine company to the Mount Pleasant Fire Department. This company would respond both inside and outside the city. For comparison purposes, the status quo is identified as Scenario #1 and is shown again in tabular form in Figure 41.

The third scenario adds a Deputy Chief to each shift who serves as both a shift commander and provides departmental administrative support to the fire chief. Currently, there is no assistant who can serve in absence of the fire chief and assists with administrative functions such as budget preparation, planning, personnel management, training, etc. Further, given the span of control, the Deputy Chief on shift can more readily serve as incident commander/safety officer and determine where and when city resources are needed given the countywide responsibilities of the MPFD.

**Figure 41: MPFD Scenario #1 Forecast - Status Quo**

EXPENSE	FY 15/16 Proposed	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Personnel Services	\$2,023,812	\$2,082,503	\$2,142,895	\$2,205,039	\$2,268,985	\$2,334,786
Operating Expense	\$335,817	\$313,768	\$321,926	\$330,296	\$338,884	\$347,695
Capital	\$8,000	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$2,367,629</b>	<b>\$2,441,271</b>	<b>\$2,511,171</b>	<b>\$2,583,076</b>	<b>\$2,657,042</b>	<b>\$2,733,129</b>
Total Expenses <sup>1</sup>	\$2,337,629					

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

*Scenario #2 – Service Level Status Quo (Two Annual 5 Percent Salary Adjustments)*

Scenario #2, shown in tabular form in Figure 42 was developed in response to the potential outcome that the benchmark survey of neighboring fire departments shows Mount Pleasant firefighter pay not to be competitive. If that is determined to be the case, city staff and elected officials would have the comparison data and some idea of what impact a salary adjustment would have on future cost of the department. In order to model some type of salary adjustment, ESCI utilized a 10 percent across-the-board figure which is applied in two 5 percent increments over the first two years of the forecast period. Again, Scenario #2 shows the impact of a salary adjustment only and has no impact on service level which remains the same as the status quo in Scenario #1.

**Figure 42: MPFD Scenario #2 Forecast - Status Quo Plus 10% Salary Adjustment**

EXPENSE	FY 15/16 Proposed	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Personnel Services	\$2,023,812	\$2,186,628	\$2,362,542	\$2,431,056	\$2,501,556	\$2,574,101
Operating Expense	\$335,817	\$313,768	\$321,926	\$330,296	\$338,884	\$347,695
Capital	\$8,000	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$2,367,629</b>	<b>\$2,545,396</b>	<b>\$2,730,818</b>	<b>\$2,809,092</b>	<b>\$2,889,613</b>	<b>\$2,972,444</b>
Total Expenses <sup>1</sup>	\$2,337,629					

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

*Scenario #3 – Service Level Improvement (Addition of Career-Staffed Four-person Engine Company)*

**Scenario #3** contemplates the addition of a career-staffed engine company to improve response times both within the city and throughout the rest of Titus County. Figure 43 is a table showing the estimated personnel and first-year costs to hire and equip an additional engine company. Not included in the forecast are capital costs associated with the addition of another engine and associated equipment or the construction of another station should that be desired. The major recurring expense will be the cost of the personnel as shown here. It is envisioned that each of three shifts will require a captain, a firefighter III to serve as driver/engineer and two firefighter I positions. The captain and firefighter III salaries shown are the median of those currently employed in those positions. The firefighter I is an entry level position. Overtime and benefit costs are estimated at 50 percent of salary costs for the purposes of this projection. Equipping all twelve personnel would cost approximately \$60,000 and be a non-recurring cost shown in operating expenses. Recurring personnel costs are \$769,536.

**Figure 43: MPFD FY 15/16 Cost of Additional Engine Company Staffing**

MPFD FY 15/16 Cost of Additional Engine Company			
	Median Salary	Loaded + OT	x3 per shift
Captain	\$54,341	\$81,512	\$244,535
Firefighter III	\$43,109	\$64,664	\$193,991
Firefighter I	\$36,779	\$55,169	\$165,506
Firefighter I	\$36,779	\$55,169	\$165,506
On-boarding Cost	\$20,000	\$20,000	\$60,000
First Year Cost		\$276,512	\$829,536
Total Recurring	\$171,008	\$256,512	\$769,536

Figure 44 shows in tabular format the impact of adding an engine company as outlined above for Scenario #3. Again, one-time capital costs for an additional engine, equipment and a fire station, if needed, are not shown; neither is increased recurring operating costs due to the addition of this engine company. However, annual company operating costs are minor relative to the personnel costs.

**Figure 44: MPFD Scenario #3 Forecast – Additional Engine Company**

EXPENSE	FY 15/16 Proposed	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Personnel Services	\$2,023,812	\$2,874,355	\$2,957,711	\$3,043,485	\$3,131,746	\$3,222,567
Operating Expense	\$335,817	\$375,328	\$385,087	\$395,099	\$405,372	\$415,911
Capital	\$8,000	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$2,367,629</b>	<b>\$3,294,683</b>	<b>\$3,389,148</b>	<b>\$3,486,325</b>	<b>\$3,586,290</b>	<b>\$3,689,126</b>
Total Expenses <sup>1</sup>	\$2,337,629					

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

*Scenario #4 – Service Level Improvement (Command & Control – Addition of Three Deputy Chiefs)*

As discussed above, the fire chief currently has no assistant or deputy position to serve in his absence and assist with the many administrative functions of running the department and there does not appear to an adequate level of shift supervision (command and control) given the scope of services and the countywide response requirements on MPFD under the interlocal agreement. The addition of a shift commander position as envisioned under Scenario #4 would accomplish both goals for the department.

Figure 45 shows in tabular format the impact of adding a Deputy Chief to act as shift commander as outlined above for Scenario #4. Initial costs of equipping the three new personnel to fill these positions are added to the operating expenses in FY 16/17.

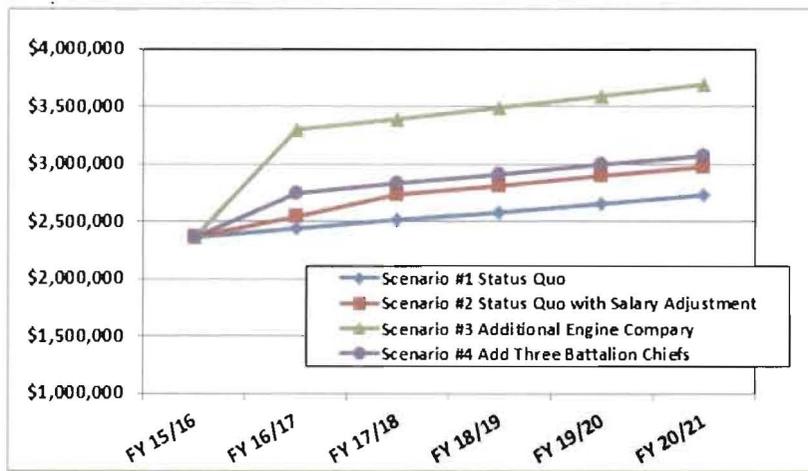
**Figure 45: MPFD Scenario #4 Forecast – Add Deputy Chief (Shift Commander) Position**

EXPENSE	FY 15/16 Proposed	FY 16/17 Forecast	FY 17/18 Forecast	FY 18/19 Forecast	FY 19/20 Forecast	FY 20/21 Forecast
Personnel Services	\$2,023,812	\$2,372,332	\$2,441,129	\$2,511,922	\$2,584,768	\$2,659,726
Operating Expense	\$335,817	\$329,158	\$337,716	\$346,497	\$355,506	\$364,749
Capital	\$8,000	\$45,000	\$46,350	\$47,741	\$49,173	\$50,648
Debt Service	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses</b>	<b>\$2,367,629</b>	<b>\$2,746,490</b>	<b>\$2,825,196</b>	<b>\$2,906,160</b>	<b>\$2,989,447</b>	<b>\$3,075,123</b>
Total Expenses <sup>1</sup>	\$2,337,629					

<sup>1</sup>Excludes FY 14/15 \$400,000 Type I engine purchase and \$30,000 FY 15/16 consultant study fee

Figure 46 shows the financial impact over the forecast period of each scenario. With the first year of implementation of each scenario, the annual increase in costs is the same with the exception of Scenario #2 which has a personnel services increase of 5 percent in FY 16/17 and FY 17/18 after which it increases at the same rate as the other two scenarios. Clearly, the addition of another engine company has the largest impact on increased cost; 35 percent above the status quo case in Scenario #1 with the difference ranging from \$853,413 in FY 16/17 to \$955,997 in FY 20/21. However, Scenario #3 also provides both the city and county with a significant service level improvement. Scenario #2 shows the impact of salary adjustments of 5 and 10 over the status quo in FY 16/17 and FY 17/18; respectively. A 5 percent increase in personnel services equates, approximately, to 4.3 percent over the status quo while a 10 percent increase equates to an 8.7 percent total increase in cost over the status quo with no impact on service level. Scenario #4 also adds to level of service but more from the perspectives of better administrative oversight and shift command and control. It should also be noted that Scenarios #3 and #4 are modeled using current salaries.

**Figure 46: Comparison of Forecast MPFD Annual Recurring Expense Scenarios 1-4**



## MANAGEMENT COMPONENTS

Units of government, municipal fire departments and volunteer entities have always faced challenges to organizational change and new demands. The challenges have perhaps been the most significant during the economic downturn that the country is currently recovering from. In addition to the operational challenges of emergency response, the management of the business of a fire agency presents unique issues involving the administration of financial resources, the setting of goals and objectives, internal and external communications, information management, security, and recruitment and retention of volunteers. This section examines the efforts made by the fire agencies in Titus County and preparation for the future health of the organizations.

### *Foundational Management Components*

The development of baseline management components in an organization enables it to move forward in an organized and effective manner. In the absence of foundational management elements, the organization will tend to operate in a random and generally ineffective manner.

Similarly, an organization should establish appropriate documentation, policies, procedures, and identification of internal and external issues that affect the agency. Processes must also be established to address the flow of information and communication within the agency, as well as with its constituents.

The following table reviews the agencies' foundational management components.

Figure 47: Foundational Management Components

Survey Components	Management Components-Observations						
	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Mission, Vision, Strategic Planning, Goals and Objectives</b>							
Mission statement adopted	Yes	No	No	No	No	No	No
Displayed	Yes						No
Periodic review	Ongoing, Annually						
Vision established and communicated	Yes	No	No	No	No	No	No
Values of staff established	Yes	No	No	No	No	No	No
Strategic or master plan	No	No	No	No	No	No	No
Adopted by elected officials	No	No	No	No	No	No	No
Published and available	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Periodic review	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Agency goals and objectives established	Yes	No	No	No	No	No	No
Date developed	Annual with Budget	N/A	N/A	N/A	N/A	N/A	N/A
Periodic review	Annual	N/A	N/A	N/A	N/A	N/A	N/A

Management Components-Observations							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
Objectives linked to programs	No	N/A	N/A	N/A	N/A	N/A	N/A
Performance objectives established	Yes	No	No	No	No	No	No
Code of ethics established	Yes	Membership Ruled and Regs					

Figure 48: Survey Table: Foundational Documents and Processes

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Availability of SOG's, Rules and Regulations, Policies</b>							
Copies of rules and provided	Provided electronically to all personnel	Hard copy available					
Last date reviewed	2014	As needed					
Copies of SOG's or guidelines available	Provided electronically to all personnel	Hard copy available					
Regular update	Ongoing	As needed					
Process for development of new SOG's	Developed by officers as needed	Chief	Chief	Chief	Chief	Chief	Chief
SOG's used in training evolutions	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Policy manual available	Yes, in the form of SOG's	Yes, in the form of SOG's	Yes, in the form of SOG's	Yes, in the form of SOG's	Yes, in the form of SOG's	Yes, in the form of SOG's	Yes, in the form of SOG's
Reviewed for consistency	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reviewed for legal mandates	Yes, when needed	SFFMA Template					

Training on policies provided	Ongoing	With revision					
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
<b>Critical Issues</b>							
Critical issues identified							
First critical issue	Staffing, not enough personnel to meet mission	Staffing and inadequate numbers of volunteers					
Second critical issue	Excessive response times in developing areas in the response area	Excessive response times currently in the response area	Excessive response times currently in the response area	Excessive response times currently in the response area	Excessive response times currently in the response area.	Excessive response times currently in the response area.	Excessive response times currently in the response area.
Third critical issue	Increased overall activity due to EMS First responder calls	Inability to provide adequate staffing consistently on initial alarms	Inability to provide adequate staffing consistently on initial alarms	Inability to provide adequate staffing consistently on initial alarms	Inability to provide adequate staffing consistently on initial alarms	Inability to provide adequate staffing consistently on initial alarms.	Inability to provide adequate staffing consistently on initial alarms.
Fourth critical issue	Inability to recruit, train and retain volunteers	Inability to train all members to SFFMA Structural Firefighter certification	Inability to train all members to SFFMA Structural Firefighter certification	Inability to train all members to SFFMA Structural Firefighter certification	Inability to train all members to SFFMA Structural Firefighter certification	Inability to train all members to SFFMA Structural Firefighter certification	Inability to train all members to SFFMA Structural Firefighter certification

Fifth critical issue	Development of a near term plan to provide Capital, personnel and the resources to provide adequate services	Development of a long term plan to sustain the department.	Development of a long term plan to sustain the department.	Development of a long term plan to sustain the department.	Development of a long term plan to sustain the department.	Development of a long term plan to sustain the department.
<b>Challenges of the Future</b>						

Challenges are identified

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
First challenge	Communicating the need to enhance fire protection/EMS first responder services to maintain ISO and acceptable service levels	Ongoing effort to recruit, train and retain volunteer personnel	Ongoing effort to recruit, train and retain volunteer personnel	Ongoing effort to recruit, train and retain volunteer personnel	Ongoing effort to recruit, train and retain volunteer personnel	Ongoing effort to recruit, train and retain volunteer personnel	Ongoing effort to recruit, train and retain volunteer personnel
Second challenge	Determine the source of funding required to enhance services, Determine equitable cost sharing formula between the City, County and possible TFS	Current personnel are beginning to envision the end of their service due to age considerations	Current personnel are beginning to envision the end of their service due to age considerations	Current personnel are beginning to envision the end of their service due to age considerations	Current personnel are beginning to envision the end of their service due to age considerations	Current personnel are beginning to envision the end of their service due to age considerations	Current personnel are beginning to envision the end of their service due to age considerations

Third challenge	Maintaining adequate firefighting force within the City while responding to calls in the County	Meeting the increased hours of "mandated" training					
Fourth Challenge	Developing a Strategic and Master Plan to guide the organization into the future	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate	Participation in a future effort to plan for the mid to long term viability of the VFDs to continue to operate

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
<b>Internal and External Communications</b>							
Internal communications	Multiple Forms	Verbal and Written					
Regularly scheduled staff meetings (fire department)	Officers Meetings	During training sessions					

Written staff meeting minutes	Summarized	N/A	N/A	N/A	N/A	N/A	N/A
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
Memos	Electronic	-	-	-	-	-	-
Member newsletter	Periodic	N/A	N/A	N/A	N/A	N/A	N/A
Member forums	Open Door	Open Door	Open Door	Open Door	Open Door	Open Door	Open Door
Open door policy	Only following chain of command	Yes	Yes	Yes	Yes	Yes	Yes
Bulletin board	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vertical communication path clearly identified	Yes	By Rules and Regs					
E-mail	Yes	Personal	Personal	Personal	Personal	Personal	Personal
Employee mail boxes	Yes	No	No	No	No	No	No
Voice mail	No	No	No	No	No	No	No
Issues taskforce	Multiple "teams" assigned in specific issue areas	No	No	No	No	No	No
External communications	Yes	No	No	No	No	No	No

Community newsletter	No						
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco
Website	Extensive website and social media outreach	Facebook	Limited Facebook	Limited Facebook	Facebook	No	No
Advisory committee(s)	Public safety advisory committee (citizens)						
Complaint process	Yes	No	No	No	No	No	No
Social media (Facebook/twitter)	Yes	Yes	Yes	Yes	Yes	No	No
Community survey							
Focus Groups	N/A						

### *Discussion*

Each participating agency reports having the necessary foundational documents. As evidenced by the qualification and participation in the Texas A&M Forest Service grant program, the proper incorporation and by-laws have been adopted to qualify as an IRS 501(c)(3) organization.

Critical issues and corresponding operational plans to address the issues facing the agencies are not formally developed for all the participating agencies. Incorporating these into a future strategic planning process can focus the agencies toward addressing the critical issues in a coordinated and efficient manner.

The seven organizations have a recognized mission for their organizations. They do not all have a vision statement or core organizational values in writing. Mount Pleasant has the basic goals and objectives documented. These are all cornerstones to an effective strategic plan. Ultimately, the agencies serving the County could benefit by establishing a specific strategic plan for functioning as if a single, cohesive agency, while yet maintaining individual autonomy.

The agencies each have a set of rules and regulations, standard operating guidelines (SOG) and policies and procedures. The County VFD's basic documents received have been developed from a similar model set. Modifications have been made to reflect the needs of each individual department. The Mount Pleasant Fire SOG's are more in depth and have been distributed to each of the County departments to coordinate what is expected when the departments operate together.

The critical issue the County volunteer agencies have in common are staffing needs; recruitment, retention and training of volunteer personnel. This critical shortage of personnel compels the agencies to work together to support and achieve what would be difficult as independently operating, isolated agencies. Regardless of the outcome of this study, the agencies must continue to work collaboratively and expand their alliance to improve service which they provide to their constituents.

Quality communications is an always sought after but seldom fully achieved goal for most organizations. Organizations with wise leadership are never satisfied with the level of communication their organization achieves, recognizing the importance of thorough communication up and down the organization internally and outward by the organization to its customers or constituents. The Mount Pleasant Fire Department has developed various communication processes internally and to some degree externally with their constituents. While the County agencies have communication processes in place, with limited administrative capacity, an appropriate level is evident. Further attempts can be made to communicate with one voice through the Titus County Chief's Association in areas such as fire prevention, volunteer recruitment and various fundraising events.

The Mount Pleasant Fire Chief described a management philosophy which, at its core, is empowerment based. The Chief is described as being very approachable by their membership and comfortable with the distinction between an open door policy and breaches in the chain of command. The County Fire

Chiefs manage just a small number of tightly knit personnel. The City and County Chiefs meet on a frequent basis to coordinate resources, policies and efforts.

The management of each participating agency to be appears to be competently administered, although each has a varied approach to managing their organizations. All seven agencies communicate well with their personnel, although it is difficult to over-communicate. A more regular, intentional staff meeting schedule would enhance communication of the leader's intent throughout the organization.

*Record Keeping and Documentation*

It is essential organizations maintain appropriate records and documentation of their practices, as summarized in the following survey component.

Figure 49: Survey Table - Record Keeping and Documentation

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
<b>Document Control</b>							
Process for public access established	City policy	Open Government Statutes Attorney General					
Hard copy files protected	Locked file	Locked file	Locked file	Locked file	Locked file	Locked file	Locked file
Computer files backed up	Offsite	On site only					
<b>Security</b>							
Building security	Combination locks, no intrusion alarms	Combination locks					
Office security	Locked	No	No	No	Locked	No	No
Computer security	Yes	Yes, Password					
Capital inventory maintained	Yes	No	No	No	No	No	No
Asset security system used	Yes	Marked	Marked	Marked	Marked	Marked	Marked
Inventory interval	Annually	Not formal					
<b>Monetary controls</b>							

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
Cash access controls	Yes, kept in city hall	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
Credit card controls	Limited number of cards and expenditure limits	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
Purchasing controls	Purchase order system in place, limits established	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined	Undetermined
<b>Reporting and Records</b>							
Periodic report to elected officials	Yes by City Finance Staff	No	No	No	No	No	No
Financial report	Finance director provides reports to the city	No	No	No	No	No	No
Management report	Monthly to City Manager	No	No	No	No	No	No
Operational report	Monthly	Monthly response roster					
Annual report produced	Yes	Summary	Summary	Summary	Summary	Summary	Summary
Incident reports	TEXFIRS	TFS	TFS	TFS	TFS	TFS	TFS

Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
Patient care reports	By EMS Provider	By EMS Provider	By EMS Provider	By EMS Provider	By EMS Provider	By EMS Provider	By EMS Provider
Exposure records	In individual medical files at City Hall	No	No	No	No	No	No
SCBA testing	Annually	Annually	Annually	Annually	Annually	Annually	Annually
Hose	Annually	Annually	No	No	No	No	No
Ladder	Annually	Annually	No	No	No	No	No
Pump	Annually	Bi-Annual	Bi-Annual	No	No	No	No
Breathing air	Quarterly	MPFD Supplies					
<b>Information Technology</b>							
Computer platform	Windows PC	Windows PC	Windows PC	Windows PC	Windows PC	Windows PC	Windows PC
Maintenance/IT Support	Internal IT department	As needed					

### *Discussion*

The Mount Pleasant Fire Department is conducting critical equipment testing in accordance with best practices and mandates. In some cases, for safety established industry standards and requirements are being exceeded. The County VFD's are responsible to provide maintenance, testing and service of all essential items. Not all of the volunteer departments are in compliance with recognized standard for essential and critical apparatus and equipment.

Financial records, management records, and operational records and reports appear to be adequately maintained by the Mount Pleasant Fire Department. It is beyond the scope of this project to evaluate the individual VFD's fiscal, management and operational records. Incident call logs are being maintained to measure activity. MPFD is in voluntary conformance with the Texas Department of Insurance for incident reporting to the National Fire Incident Reporting System (NFIRS). The NFIRS reporting allows the department to maintain eligibility with the Federal Fire Act Grant program. The VFDs and MPFD all participate in the Texas A&M Forest Service incident reporting system which captures only the most basic of information.

### **STAFFING AND PERSONNEL MANAGEMENT**

An analysis of staffing is a review of personnel levels and distribution of those levels among primary, support, and administrative functions. Such an analysis includes a review of staff allocation, scheduling, standards of cover, and career and volunteer firefighter/EMS distribution. By the term personnel management, we mean those systems by which the human resource functions is implemented and managed throughout an organization.

#### *Administrative and Support Staffing*

One of the primary responsibilities of a fire organization's administration and support staff is to ensure that the operational entities of the organization have the ability and means to accomplish their responsibilities on an emergency incident. Efficient and effective administration and support are critical to the success of a fire agency.

In addition, public safety members of the administrative team have emergency scene command and control responsibilities. One of the key factors to an organization's overall strength and success is to identify and place administrative and operationally competent and experienced personnel into these positions. It is not enough to be operationally sound or administratively gifted, public safety fire administration services must be both. It is imperative appropriate training, education and hands on experience is provided to public safety members of the fire administration and overhead team.

Like any other part of a fire department, administration and support require appropriate resources to function properly. Analyzing the administrative and support positions of a fire department facilitates an understanding of the relative number of resources committed to this important function. The appropriate balance of the administration and support components to the operational component is critical to the success of the department's mission and responsibilities.

In departments which have the similar combination career/volunteer structure as the MPFD, the Fire Chief position requires a high degree of knowledge, skill and ability. In larger organizations, multiple employees split the burden to stay current and in compliance with regulatory agencies. The MPFD administration operates with only two highly knowledgeable and competent employees. The department is regulated by the following governmental agencies:

- Texas Fire Commission
- Texas Department of State Health Services
- US Department of Homeland Security
- Texas Department of Public Safety – Division of Emergency Management
- Texas Department of Insurance and the State Fire Marshal
- US Environmental Protection Agency
- Texas Commission on Environmental Quality
- Texas A&M Forest Service

As evidenced in the Fire Chief's Title he is also the Emergency Management Coordinator for the City and County. At some time in the past, the Fire Marshal position was also rolled up into the Chief's job description. Some consideration should be given to the fact the Chief has 40 years of service and the need for a succession plan must be addressed.

#### RECOMMENDATION

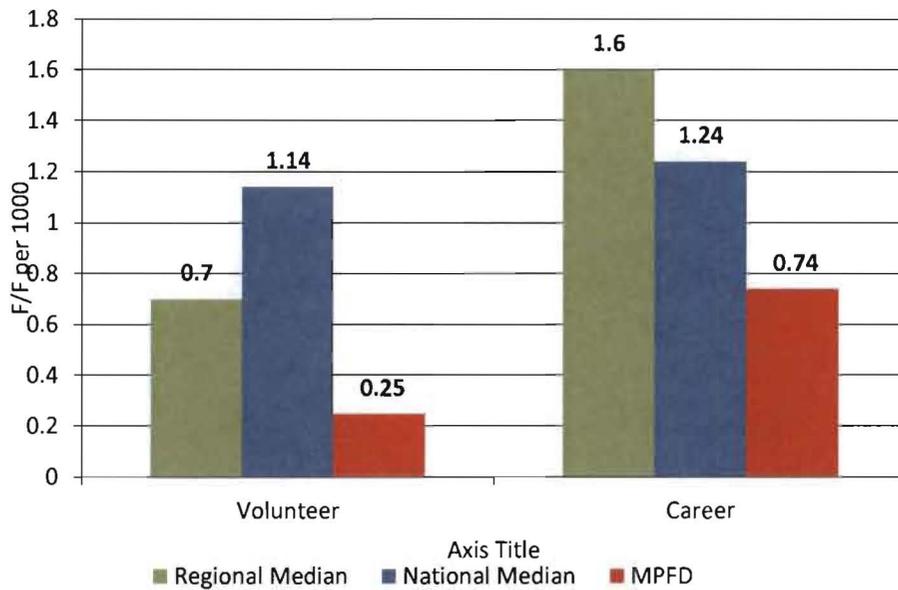
As the complexity of the Fire Service has grown, in the near future some of the Chief's duties should be delegated. As discussed in other sections of this report, when Deputy Chiefs are appointed to spread the expertise, some duties should be reassigned along with appropriate authority and responsibility.

In the next figure, ESCI reviews the participating agencies' administrative and support staffing configurations.

Figure 50: Survey Table – Administrative and Support Staffing

Survey Components	Staffing Analysis						
	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
<b>Administration and Other Support Staff</b>							
Fire Chief	1	1	1	1	1	1	1
Division Chief/ Fire Marshal	0	0	0	0	0	0	0
Division Chief/Training and Ops	0	0	0	0	0	0	0
Battalion Chief	0	0	0	0	0	0	0
Shift Captain	3	0	0	0	0	0	0
Career Lieutenant	3	0	0	0	0	0	0
Volunteer Lieutenant	0	0	0	0	1	0	0
Volunteer Captain	0	2	0	0	1	1	0
Volunteer Asst. Chief	0	1	0	0	0	1	0
IS/IT	City	0	0	0	0	0	0
HR	City	0	0	0	0	0	0
Finance	City	0	0	0	0	0	0
Training	0	0	0	0	0	1	0
EMS Coordinator	0	0	0	0	0	0	0
Fire Prevention	0	0	0	0	0	0	0
Administrative Assistant	1	0	0	0	0	1	0
Support Specialist	0	0	0	0	0	1	0
Mechanic	0	0	0	0	0	0	0
Firefighters	18	0	0	0	0	0	0
Volunteer Firefighters	8	6	17	11	13	11	12
Part-time Firefighters	11	0	0	0	0	0	0
Total Administrative & Support Staff	2	0	0	0	0	2	0
Percent Administrative & Support to Total	8%	0	0	0	0	0	0

Figure 51: Emergency Response Staffing, Comparison



At a minimum MPFD daily staffing level has eight emergency personnel available to respond to all incidents. MPFD often experiences concurrent emergency response incidents. In review of data and information provided by the Fire Chief, the numbers of occurrences exceed 100 per year. As discussed in the incident staffing analysis section below, the MPFD is marginally capable of safely staffing the tasks required to perform initial operations at the basic single family residential structure fire. Anything beyond the first alarm, currently resources are depleted.

While the incidence of simultaneous structure fires is low, it does occur. During extreme seasonal weather, the incidence of concurrent structure fires increases along with the host of other associated calls for service.

During the wildfire season, the department has occurrences when three or more fires have been reported in the same operational period. Wildfire starts are known to occur in the early to late afternoon when the grasses and fuels cure, and the relative humidity drops. This period also coincides with the time period when volunteers are not immediately available to respond to assist due to employment and other responsibilities.

As with most Fire Departments, the majority of the MPFD workload is EMS. Resources are frequently previously assigned to EMS calls and must complete the assignment prior to being available to respond to fire calls and other incidents. With the delay, initial critical tasks that must be performed at a structure fire is compromised and the effectiveness of initial fire operations is hindered. As the

following critical task analysis will demonstrate, the first 15 minutes of operations and fire suppression is the most crucial period.

A heavy reliance for additional help is placed upon volunteers, off-duty call back and the County VFDs which are all uncertain at best. Many of the department's off-duty are unavailable in a timely manner to assist with the most critical initial operational period. Due to distance and geography, career mutual aid resources are limited and up to 30 minutes away.

#### RECOMMENDATION

Based upon the critical task analysis and regional benchmarks, ESCI recommends the City develop a plan to add a four person engine company to effectively and safely operate at the scene of structure fires. The additional company will also add response capacity to the system when other units are deployed on simultaneous incidents. ESCI has also included GIS modeling which will help the City to determine the most appropriate location for a future fire station with respect to efficiency of response times to develop and future developing area.

#### *Discussion*

The administrative structure between the City and County Volunteer agencies differ. Mount Pleasant has a career administrator and administrative assistant. The County departments are completely volunteer staffed.

All participating agencies provide training and certification to personnel who respond to emergencies. The Mount Pleasant career personnel are subject to the Texas Commission on Fire Protections rules and must meet minimum basic training and continuing education levels. Many members also have multiple certifications in fire, and EMS disciplines in their capacity as employees. Each member and the department are therefore responsible for maintaining additional hours of mandated continuing education.

Volunteer agencies are not regulated by the State. Agencies can voluntarily participate in the State Firefighters' and Fire Marshal's Association (SFFMA), but are not compelled to do so. With SFFMA participation, individual fire department members can earn certifications by following a prescribed training curriculum and education. Of the County VFD's it is reported only a small percentage are SFFMA structural firefighter certified. A high percentage of the VFD membership is however certified as wildland firefighters.

#### *Emergency Response Staffing*

It takes an adequate and properly trained staff of emergency responders to put the appropriate emergency apparatus and equipment to its best use in mitigating incidents. Insufficient staffing at an operational scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved.

Tasks that must be performed at a fire can be broken down into two key components – life safety and fire flow. Life safety tasks are based on the number of building occupants, their location, status, and

ability to take self-preservation action. Life safety related tasks involve search, rescue, and evacuation of victims. The fire flow component involves delivering sufficient water to extinguish the fire and create an environment within the building that allows entry by firefighters.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different types of fires. In the absence of adequate personnel to perform concurrent action, the command officer must prioritize the tasks and complete some in chronological order, rather than concurrently. These tasks include:

- Command
- Scene safety
- Search and rescue
- Fire attack
- Water supply
- Pump operation
- Ventilation
- Back-up/rapid intervention

The first 15 minutes is the most crucial period in the suppression of a fire. How effectively and efficiently firefighters perform during this period has a significant impact on the overall outcome of the event. This general concept is applicable to fire, rescue, and medical situations. Critical tasks must be conducted in a timely manner in order to control a fire or to treat a patient. All participating agencies are responsible for assuring that responding companies are capable of performing all of the described tasks in a prompt, efficient, and safe manner.

#### *Discussion*

Considerable ongoing local, regional, and national discussion and debate draws a strong focus and attention to the matter of firefighter staffing. Frequently, this discussion is set in the context of firefighter safety. While there are published national standards regarding firefighter staffing, they generally speak in terms of the number of firefighters assigned to a particular response apparatus, often characterized as a “minimum of personnel per Engine Company.” ESCI notes that the more critical issue is the number of firefighters that are assembled at the scene of an incident in conjunction with the scope and magnitude of the job tasks expected of them, regardless of the type or number of vehicles upon which they arrive.

It is important to understand that the assembly of firefighters on an incident, also called an “Effective Firefighting Force” or “Effective Response Force,” is a determination that is made at the community level based on risk, capability, and citizen expectations. There is not a mandated requirement, though there are standards that are discussed in this report. In the Service Delivery section, resource concentration is evaluated, finding that the participating agencies individually have difficulty at assembling an effective firefighting force. ESCI notes that with the current service delivery model, the participating agencies are capable of establishing an effective response in a timely manner in few areas of the response area, but are challenged to do so in most areas based on staffing, access, travel time and volunteer availability to respond from the closest fire stations.

The current and former volunteers of Titus County and the City of Mount Pleasant fire department that serve their communities have provided selfless service and are to be commended. Their commitment has saved countless numbers of lives and property, as well as, providing essential services the communities could not otherwise afford. As the number of members has dwindled, exhaustive efforts to recruit additional personnel have been made by each of the departments. In the current fiscal year, a stipend is being paid to volunteers on a per call response basis. Even this effort has yielded few results in generating more personnel on scene and the recruitment of new members.

Despite the lack of results, the participating agencies are encouraged to continue to work jointly on recruitment, retention and response standardization for volunteer personnel. This will maximize response capacities throughout the study service area. The trend of decreasing numbers of volunteer is not unique to just Northeast Texas, or just the fire service, it is being felt nationwide.

The roots of American volunteer fire departments date well back to the colonial times. According to the document *Volunteer Firefighter Recruitment and Retention in Rural Pennsylvania*, A report by Robert S. D'Intino, Ph.D. Pennsylvania State University, Schuylkil, May 2006, an alarm was sounded regarding the sustainability of volunteer fire departments.

In the following passages from the report, in the decade since it was published, warnings are becoming reality.

Benjamin Franklin, who organized the nation's first volunteer fire company (VFC) in Philadelphia in 1736, volunteer firefighters continue to respond to fire and other emergencies in Pennsylvania and the nation. This 270-year-old tradition, however, may be in jeopardy as increasing job demands, family commitments and other factors hinder volunteerism. Since rural Pennsylvania relies heavily on volunteers, the Center for Rural Pennsylvania sponsored research in 2003-2004 to better understand firefighter recruitment and retention issues and identify strategies that may help increase firefighter volunteerism in rural areas. Using qualitative and quantitative methodologies, the researcher conducted a literature review, surveyed senior-level fire officials in 32 states and fire chiefs in rural Pennsylvania, and surveyed rural Pennsylvania firefighters. After analyzing the research results, the researcher concluded that recruitment and retention of volunteer firefighters is a national problem and not unique to rural Pennsylvania. The results indicated that rural volunteer firefighters are more likely to join their local fire company because of their commitment to community and because of their families' connection to the fire company. The results also showed that financial benefits may play only a small role in motivating people to volunteer and remain active.

Through the interviews with 41 state fire officials in 32 states, the researcher found general agreement about the increasing problem of finding volunteers who would respond to Monday-to-Friday daytime emergencies. For example, an official from Illinois estimated that 25 percent of VFCs sometimes were unable to respond to daytime emergency calls, while officials in Delaware, Nevada, and Texas said up to 50 percent of VFCs were sometimes unable to respond during weekdays.

State officials' suggested that volunteerism, in general, was decreasing, and thereby negatively effecting recruitment and retention of volunteer firefighters.

Adding to the turnover rate is the realization of how much time is required to obtain training and assist with fundraising. These requirements put too many time constraints on firefighters and keep them away from their families.

Three decades ago, at the height of the number of volunteer ranks, a firefighter needed only minimal hours of training. In 2016, that number has grown upward of **434 hours** to obtain firefighter certification. Certifications can take up to a year to obtain for someone working a regular job and attending training on weekends and evenings. Additional training relative to the National Incident Management System (NIMS) and EMS First Responder put huge burdens on members striving to achieve a work-life, volunteer and family balance. Among the membership of the County volunteer fire departments 24 members are structural firefighter trained but only seven members are willing and able to fight structural fires.

As this issue has been recognized previously, it is worthy to revisit testimony previously provided by the Mount Pleasant Fire Chief relative to the downside of becoming a volunteer.

As Mount Pleasant Fire Department Chief Larry McRae explained at a Titus County Commissioners meeting, “We require them (volunteers) to attend numerous hours of training. We look for people to be willing to go into a structure fire or approach a burning vehicle to save someone’s life. We ask them to expose themselves to contagious disease, use their personal vehicles, and pay for their costs to replace their clothing, be available to respond at any time day or night, seven days a week in any kind of weather and under potentially stressful and life-threatening circumstances.”

“And we are asking them to do this for no pay,” McRae said. “And then we ask them to work at their volunteer fire department fundraisers.”

As reported by Sabian Warren, [swarren@citizen-times.com](mailto:swarren@citizen-times.com), Asheville, NC

The National Volunteer Firefighter Council reports, according to the most recent data, the percentage of volunteer fire-fighters age 50 and older in 2012 was 25% nationwide; an increase from 13 percent in 1987. As reported by the Titus County Fire Chiefs, this statistic may be under represented in the ranks of the current volunteers. This statistic underscores the inability to attract the younger generations to serve as volunteer firefighters.

In the same period nationwide the total volunteer ranks have thinned by 13%, even as the total volume of calls for service has increased.

There are also influences which impact potential members beyond just the department. The County departments are in rural settings, but many of its residents commute to a nearby city for work. It is unrealistic for volunteers to respond in a timely manner from that distance. Although some volunteers

do work closer, employers are now much more reluctant to allow employees to leave to respond to calls.

Following work, family commitments and activities compete with available time to maintain volunteer fire department membership.

In an attempt to address staffing issues and to overcome the dwindling volunteer participation and response, the Mount Pleasant Fire Department began approximately 15 years ago utilizing part-time firefighters. The personnel are utilized to staff positions when personnel are on leave (vacation, sick, injury or participating in mandated off-site training). The part-time use is restricted normally from 7 AM to 7 PM as this time period experiences the most incident activity, unless needed to cover shifts for full-time personnel on leave.

The personnel are compensated, but continue to be classified as volunteer firefighters. Initially due to Texas Commission on Fire Protection (TCFP) rules allowed a threshold of 2,080 hours at minimum wage before the employee must be certified. Because the City is enrolled in the Texas Municipal Retirement System (TMRS), the maximum number of hours had to be reduced in 2013 below 1,050 annual to avoid being considered full time. Currently, the number of annual hours has again been amended to reduce to below 950 to maintain compliance with the Federal Affordable Healthcare Act. The new threshold is 75 hours a month, or 30 hours in a week. Because shift staffing is in 12 or 24 hour increments, the threshold is exhausted by covering just one shift in a week, or just three per month.

The applicable threshold hour rules have had major impact on utilizing part-time staff. Because of the unwillingness of people to work at the reduced number of hours, the department reports they have a difficult time scheduling part-time positions. Additionally, the cost associated with providing personal protective equipment (PPE) has risen to over \$4,800 per employee. As PPE has a usable life of only ten years by NFPA Standards, manufactures no longer back stock items. The lead time exceeds three months in most cases when the items are ordered. Most gear is made to order by measuring the firefighter to avoid thermal injuries due to ill-fitting equipment. The wait time being so long, the department may not get cost effective utilization. Part-time firefighters are often seeking full-time careers and move on leading to frequent turnover. It is conceivable that a part-time employee may only get a few months, if any use of the gear before leaving.

#### *RECOMMENDATION*

In the past, the part-time program appears to have served the department well. The program is now challenged to provide a cost effective return on the investment. Consideration should be given to allowing the part-time program to be phased out. The part-time program costs could be used to help offset the cost of overtime for full-time personnel, to cover vacancies or hiring additional full-time personnel. The department has calculated annually 9,174 hours of leave time is required to be covered.

**Personnel Management**

By the term personnel management, we mean those systems by which the human resource functions is implemented and managed throughout an organization. A review of personnel management will consider policies and handbooks, job descriptions, reports, and record-keeping, compensation systems, disciplinary processes, counseling services, new hire recruitment and processing, testing, and promotion processes, and member retention efforts and programs (this last being most applicable to volunteer programs). This section will discuss the “human resources” side of the agencies.

**Figure 52: Survey Table – Personnel Management, Personnel Systems and Processes**

Personnel Management							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
<b>Disciplinary Process</b>							
Disciplinary policy established	Yes, a part of employee handbook.	In rules and regulations					
Disciplinary process communicated	Yes, Not civil service	In rules and regulations					
Appeal process provided	Yes	No	No	No	No	No	No
Pending litigation	None	None	None	None	None	None	None
<b>Counseling Services</b>							
Critical incident stress debriefing	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available	Yes, CISD program, chaplains available
Intervention program	Yes	No	No	No	No	No	No
Intervention program	Yes, will refer appropriate resource	No	No	No	No	No	No
<b>Application Process</b>							
Recruitment program	Yes, HR is responsible. Volunteer coordinator Fire Chief	Yes	Yes	Yes	Yes	Yes	Yes

Personnel Management							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
Application process	Workforce solutions Texas Workforce Commission	Yes	Yes	Yes	Yes	Yes	Yes
Qualification check	Yes, career and Volunteer.	Yes	Yes	Yes	Yes	Yes	Yes
Reference check	Yes – Career and Volunteer	Yes	Yes	Yes	Yes	Yes	Yes
Background check	Criminal background check on career and volunteer. DMV records monitored	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually	Strongly recommended new Volunteer applicants be screened for criminal and driving background Monitor annually
Physical standards established	Yes.	No	No	No	No	No	No
Knowledge testing	Yes.	No	No	No	No	No	No
Interview	Yes, career and volunteer.	Yes	Yes	Yes	Yes	Yes	Yes
Medical exam required	Yes, for career and volunteer.	No	No	No	No	No	No
Psychological exam required	No	No	No	No	No	No	No

Personnel Management							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-StarFD	Talco FD
Periodic physical competence testing	Yes	No	No	No	No	No	No
Periodic performance review	As scheduled	No	No	No	No	No	No
Promotional testing	Yes	No	No	No	No	No	No
Medical standards established	NFPA 1582 standard examination	No	No	No	No	No	No
Periodic medical exam	Yes	No	No	No	No	No	No
Safety committee established	Yes	No	No	No	No	No	No
Membership							
Meetings	Ad-hoc						
Meeting minutes	No						

Personnel Policies, Systems, and Processes							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>Policies, Rules &amp; Regulations, SOP s</b>							
Human resource manager	City HR	No	No	No	No	No	No
Personnel policy manual maintained	Yes, at the City level. Fire included in city manual.	No	No	No	No	No	No
Manual provided at initial hiring	Yes, get a copy, and orientation	No	No	No	No	No	No
Training provided	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Periodic review & update	Review every 3-4 years or as needed/changes	N/A	N/A	N/A	N/A	N/A	N/A
Employee/Volunteer retention program established	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Compensation, Point System, and Benefits</b>							
Uniformed employee compensation, FT annual	Yes	Per Call	Per Call	Per Call	Per Call	Per Call	Per Call
Fire chief	Pay and benefits determined by city						
Division Chief	N/A						
Deputy/asst. chief, Support	N/A						
Fire marshal	N/A						
Training captain, nonexempt	N/A						
Field training officer,	N/A						

Personnel Policies, Systems, and Processes							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
EMS coordinator, nonexempt	N/A						
Captain							
Fire lieutenant/Fire investigator							
Lieutenant							
Firefighter II							
Additional compensation							
Clothing allowance							
Longevity pay							
Other specialty pay							
Non-uniformed employee compensation							
Administrative assistant							
Career employee benefits							
Social security	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Worker's compensation	Yes	VFIS	VFIS	VFIS	VFIS	VFIS	VFIS
Pension	Yes	Yes	N/A	N/A	Yes	Yes	
Deferred compensation	Available	N/A	N/A	N/A	N/A	N/A	N/A
Medical insurance	Yes	N/A	N/A	N/A	N/A	N/A	N/A
Dental insurance	Yes	N/A	N/A	N/A	N/A	N/A	N/A

Personnel Policies, Systems, and Processes							
Survey Components	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
Short and long term disability insurance	Available	N/A	N/A	N/A	N/A	N/A	
Life insurance	Yes	N/A	N/A	N/A	N/A	N/A	
Vision insurance	Yes						
Survivor income benefit	Yes						
Additional life insurance	Purchase, if desired						
Volunteer compensation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Other benefits/incentives							
<b>Reports and Records</b>							
Personnel records maintained	Yes						
Application retained	Yes						
Historical records archived	Yes						
Performance evaluations retained	Yes						
Injury and accident records retained	Yes						
Health and exposure records maintained	Yes						

### *Discussion*

A Safety Committee is not formally in place in MPFD. Many of the components and practices are already incorporated within the organization. ESCI strongly encourages all the County's fire departments to work together to standardize a safety committee membership, functions and reporting requirements to assist with consistency and meaningful benchmarking practices. This may be an added function to the County Chief's Association. Documentation of the efforts should be recorded for future reference.

### *RECOMMENDATION*

ESCI Strongly recommends new Volunteer applicants to be screened for criminal and driving background prior to appointment. Each department must annually monitor the same data for its current members.

### **TRAINING**

Although the delivery of fire suppression and emergency medical services lies at the core of each department's mission, it is necessary for every emergency services agency to be supported by other activities. These activities provide the basis for employee training and education, career development, public safety education, fire prevention, and code enforcement.

Training is the acquisition of knowledge, skills, and competencies as a result of teaching new information or practicing existing abilities that come together to form a useful proficiency. One of the most cost effective, critical investments a fire agency can make is in the training and development of its personnel. The three physical resources that a fire department brings to bear in responding to an emergency are properly located facilities, the right kind of equipment in proper working order, and skilled firefighters to perform the tasks required. In order to ensure that the firefighters are skilled, a comprehensive training program must be in place. These newly acquired skills or enhanced competencies provide firefighters with the ability to adaptively problem solve during a compressed time frame under significant pressure. This section evaluates the training program for the participating agencies.

### *General Training Competencies*

For training to be fully effective, it should be based on established standards. There are a variety of sources for training standards. The following table displays that the study agencies use the National Fire Protection Association (NFPA) and International Fire Service Training Association (IFSTA) and Texas Commission on Fire Protection (TCFP) established standards as the basis for its fire suppression training practices.

Figure 53: Survey Table – General Training Competencies

Survey Components	Training Program-Observations						
	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
<b>General Training Competency</b>							
Incident command system	NIMS compliant	NIMS compliant	NIMS compliant	NIMS compliant	NIMS compliant	NIMS compliant	NIMS compliant
Accountability procedures	Check In Passport System	Check In Passport	Check In Passport	Check In Passport	Check In Passport	Check In Passport	Check In Passport
Policy and procedures	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Safety procedures	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recruit training	Yes	Minimal SFMMA	Minimal SFMMA	Minimal SFMMA	Minimal SFMMA	Minimal SFMMA	Minimal SFMMA
Special rescue (high angle, confined space, etc.)	Some technical rescue training in the academy.	No	No	No	No	No	No
Hazardous materials	First Responder Operations level	Awareness	Partial Awareness Level	Awareness	Partial Awareness Level	Partial Awareness Level	Partial Awareness Level
Wildland firefighting	All members certified Some Dozer Certified	TFS	TFS	TFS	TFS	TFS	TFS
Vehicle extrication	Yes	Some	Some	Some	Some	Some	Some
Defensive driving	In-house Emergency driver training	VFIS	VFIS	VFIS	VFIS	VFIS	VFIS
Use and care of small tools	Yes, part of firefighter academy	Yes	Yes	Yes	Yes	Yes	Yes

Survey Components	Training Program-Observations						
	Mount Pleasant FD	Sugar Hill FD	Cookville FD	Nortex FD	Tri-Lakes FD	5-Star FD	Talco FD
Radio communications & dispatch protocol?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EMS skills and protocol	Continuing Education to meet state standards	N/A	N/A	N/A	N/A	N/A	N/A

*Discussion*

The Mount Pleasant Fire Department provides all six VFD's with the opportunity to participate in bi-weekly training programs. MPFD also provides training classes upon request. MPFD does not charge the VFDs for training. As previously discussed, demands on personal and family time of the volunteers inhibits the ability to regularly participate in training. Turn out to most sessions is reported to be poor.

*Training Program Administration and Management*

To be able to deliver effective training to fire and EMS personnel, tools and resources are needed, and effective methodologies must be employed if delivery is to sufficiently meet needs. Planning and scheduling is necessary to assure that training delivery is effective.

Figure 54: Survey Table – Training Program Administration and Management

Survey Components	Mount Pleasant FD
Director of training program	Fire Chief
Education or background	40 years, also director of NTCC Fire Academy
Program goals and objectives identified	Yes - documented
Annual training plan	Yes, Communicated in memo form
Governing body support and concurrence	Yes, program receiving high level of support.
Individual training files maintained	Yes, keep electronic records (Firehouse) with some hard copies. Majority of records are kept electronically.
Records and files computerized	Yes, mostly electronic and web portal.
Daily training records	Yes, available
Company training records	Yes, company and shift
Lesson plans used	Yes, basic IFSTA and Jones and Bartlett. Lesson plans available to instructors.
Pre-fire planning included in training	Pre-fire planning a part of Firefighter on-going training. Pre-plan high-risk facilities are completed. Hard copies are available.
Budget allocated to training	Yes
Using certified instructors	Yes, certified instructors are utilized if required.
Annual training report produced	Yes
Adequate training space/facilities and equipment	Yes, Certified by TCFP. Small burn building also.
Maintenance of training facilities	Good. Monthly check (safety check) and an annual PM, which is more in-depth.
Support Staff support	Yes, officers and staff assist
Records computerized, software used	Firehouse
Adequate office space, equipment, and supplies	Yes
Support Staff support	No Dedicated training Officer

Figure 55: Survey Table – Training Resources, Scheduling and Methodology

Survey Components	Mount Pleasant FD
Training facilities (tower, props, pits)	Yes
Live fire prop	Yes
Fire and driving grounds	Yes
Classroom facilities	Yes
DVD, projectors, computer simulations	Yes
Books, magazines, instructional materials	Yes
Manual developed and used	Yes, separate training and instructional manuals.
IFSTA manuals used	Yes, majority of fire training.
Career training schedule	Yes, career personnel have a weekly schedule. Volunteers utilize a monthly schedule.
Minimum training hours, competencies	Annual plan exceeds TCFP minimums
Manipulative	Yes
Task performances	Yes
Use of lesson plans	Yes
Night drills	Yes
Multi-agency drills	Yes
Inter-station drills	Yes
Physical standards or requirements	No, voluntary beyond recruit
Annual performance evaluation conducted	No. Testing as necessary to validate training units
Employee Development program	No – College is local
Disaster drills conducted	Yes
Attention to safety	Yes including NFPA 1403
After Action Review	Yes, PIA conducted on selected and significant events. After incident “Hot Wash” debrief conducted on scene.
Priority by management toward training	Yes, priority has been increased.

### *Training Program Planning*

An annual training plan for the MPFD is developed by the Fire Chief. The plan incorporates curriculum which provides for refresher, new and advanced topics applicable to the duties of the MPFD personnel. Included are drills to reinforce skills, teach new tactics and procedures and to evaluate performance. The department provides regular night drills.

The volunteer departments would be best served to develop a combined regional annual training plan in conjunction with the Mount Pleasant Fire Department. Once developed the commitment to participate is required by a majority of the departmental members. The lack of a VFD training plan or clearly defined training program goals and objectives that guide the program is hindering its effectiveness. While the VFDs and Mount Pleasant Fire are delivering volunteer training, the program is not built on the foundation of an established plan and, as a result, is not as effective as it could be. ESCI recommends establishing a training plan and that the VFDs further develop the program.

As a component of the training plan, specific goals and objectives should be established for the training program. Goals need to be developed to reach a high percentage of members who initially achieve or advance SFFMA certifications. Clearly there is a lack of personnel structural firefighter certified in each of the individual departments and collectively countywide. Without an effective training plan, operational emergency outcomes may be compromised, department personnel are at risk, and the organization exposed to liability for the actions of its members.

### *Entry Level Training*

The manner in which new firefighters are trained in their first months and years of membership lays the foundation for the development of their skills and knowledge base for their entire service time. A good entry level training plan is essential to assuring that new recruits get a good - and safe - start.

New volunteers should be required to complete a recruit-training program and for safety, limit the capacity to serve until certified. As of January 2016, the SFFMA adopted the curriculum and training hours which reflect the *National Fire Protection Association, Standard 1001: Standards for Fire Fighter Professional Qualifications*. The SFFMA requirements now mirror the requirements of the Texas Commission on Fire Protection Standards for career fire fighters.

New volunteer recruits should be able to receive this introductory training through the department's in-house training program, though they can also obtain the same training through Texas Engineering Extension service (TEEX) affiliated with the Texas A&M University, outreach courses, community colleges or by attending classes at neighboring fire departments.

Participation and certification in the SFFMA is voluntary, so the department is not required to use the process. It is appropriate to do so, in order to document that the individual has been trained to a widely accepted standard. ESCI recommends certification of entry-level personnel through the SFFMA curriculum.

### *Ongoing Skills Maintenance Training*

The MPFD training program is generally focused around the targeting of on-the-job and in-service training. Structural fire suppression training, various types of rescue instruction, and EMS training is delivered on an irregular basis. Hazardous materials response training is delivered to department personnel at the awareness levels only. Wildland fire suppression training is provided, as the VFDs responds routinely to wildland fires. Finally, a program for defensive driving training needs to be routinely delivered. ESCI recommends that the above listed areas be included in future training plans.

The composition of the ongoing training program should be focused on the SFFMA Firefighter 1 and 2 course content. These training requirements are routinely updated and should be referenced at [SFFMA.org](http://SFFMA.org); Examples of these types of requirements are depicted in the following figure.

NFPA 1001 training requirements adequately address an appropriate scope and content for an ongoing training program framework to revisit the essentials and fundamentals of the discipline.

It is important that any fire department training program establish well-defined minimum annual training hours, or alternatively, a competency-based approach. Doing so enables the training program to properly develop training plans and also provides measures by which training delivery can be gauged. The VFDs have not established minimum hours of annual training or skills competencies. Instead, each department determines hours and training content on an as-needed basis. It is determined based on their evaluation of areas that are in need of improvement or by an individual need for certification at prescribed by the SFFMA. ESCI recommends that countywide VFD annual training requirements be established and measured.

The SFFMA certification program is currently being amended to include an annual minimum continuing education hour requirement to maintain certification. The SFFMA is not a regulatory agency and therefore powerless to enforce any training requirements. ESCI further recommends the development of minimum continuing education requirement for county VFD personnel. As discussed earlier, the development of a training plan would be the place to address this need.

Emergency medical responses constitute the majority of the Mount Pleasant's department's call volume, making EMS training of critical importance. The Texas Department of State Health Services (DSHS) sets standards for recertification of emergency medical technicians (EMTs), based on the National Registry for EMT standards. MPFD uses those standards to maintain its personnel's licensure, continuing education or certification requirements. These are met by in-house EMS training that is scheduled on periodic basis, covering a variety of continuing education content. Members also have access to on-line curriculum. In addition, personnel should be encouraged to participate in EMS training provided by the neighboring EMS agencies.

### *Competence Testing and Annual Skills Assessment*

It is essential to provide regular competence testing. This is to assure that personnel are receiving adequate training and also that they are able to put their knowledge and skills into practice. A program of annual skills testing will enable the department to verify that its personnel possess the necessary hands on capabilities. Testing also validates the effectiveness of the organization's training program and identifies needs to be emphasized in the subsequent annual training plan. ESCI recommends that a system of annual skills proficiency testing be established.

### *Pre-Promotion Development Training*

National standards recommend that personnel demonstrate the skills and knowledge required of a more responsible position prior to being promoted within the organization. Pre-promotional training is often provided to ensure promotional candidates meet the minimum educational and certification requirements for the position. The promotional process should be used to select the most qualified individual based on a demonstration of proficiency.

MPFD provides informal pre-promotional training to potential or aspiring officers. The department will benefit by using a standardized curriculum or evaluation system. The NFPA has standards for fire rescue service positions and specialty skills. The fire officer standard is found in *NFPA 1021*.

### *Competency-based Training*

Ongoing training must follow an identified plan based on demonstrated training needs. Such a plan is best developed as a result of periodic evaluation of the current skill levels of members (competency-based training).

Under a competency-based system, an evaluation of skill performance is conducted at scheduled intervals to determine if the person being evaluated can perform the tasks in accordance with pre-determined standards. Those skills that are performed well require no additional training. Those skills not performed well are practiced until the standard is met.

This approach maximizes the time used for training. Further, it ensures that members are performing at the established performance based level. Specialty skills can be evaluated in the same manner with further training provided as needed. Ideally, the competency-based training approach is used on an ongoing basis. For example, each quarter skills are evaluated on an individual basis.

To institute a competency-based training approach, skills must be identified and documented to describe the standard of performance. This would include skills such as hose handling, apparatus operation, EMS procedures and protocols, PPE, use of equipment and tools, forcible entry, ventilation, tactics and strategy, and others.

The VFD training program is generally designed around training content that is identified on an as-needed basis at the discretion of department officers. Implementation of a competency-based approach to identifying training needs and developing training plans offers a more effective and efficient method of training program management. This program will validate each individual member's performance

abilities. Deficiencies can be corrected by targeted individual training delivery until the member can meet expectations.

*Training Records and Reports*

The VFDs maintains its training records using hard copy sign in sheets and rosters. The program is not capable of providing reports showing the amount and subject of training received by each member. Regular training and competency management reports should be produced, which can be of tremendous value in identifying training needs and developing annual training plans.

MPFD has an electronic training record management system. The system provides a more structured training reporting element for monitoring, management and performance reporting.

The City of Mount Pleasant and Northeast Texas Community College partnered to create the NTCC Recruit Fire Academy. The five to six month program meets the Texas Commission on Fire Protection (TFCP) 468 Hour basic curriculum for a student to achieve career structural firefighter certification, equivalent to National Fire Protection Association Firefighter II and HAZMAT Operations. The training and classes are held at the Mount Pleasant Fire facilities and delivered by the department’s TFCP certified instructors and field examiner personnel.

All of the Titus County and the Mount Pleasant fire departments have collaborated on the volunteer training program. Periodic training sessions are offered to the six Titus County VFDs as well as multiple weekend drill sessions. Unfortunately, the participation is not great due to the reasons previously discussed related to declining ranks and the limited availability of individual members. In the following figure, countywide, the volunteers collectively have the following certification levels:

**Figure 56**

Total Personnel 93	Structural level 1	Structural Level 2	Wildland Firefighter	HAZMAT Awareness	Support Only	Safety Officer	EMS
<b>Number certified</b>	<b>8</b>	<b>16</b>	<b>68</b>	<b>47</b>	<b>46</b>	<b>2</b>	<b>12</b>

While collectively the County VFDs volunteer roster has 93 members, only a fraction of the members can respond to incidents and participate in regular training at any given time. Some of the members included in the totals above rarely, if ever respond to incidents. It is reported as few as seven personnel are capable or willing to fight structural fires. As previously discussed, constraints such as employment, family commitments and other issues compete for member’s time to assist with incident response and training. Some of the VFDs have an appointed training coordinator who provides reports to the SFFMA.

The State of Texas does not regulate minimum standards for VFDs or training. Individual volunteer departments are most often affiliated with the SFFMA, but are free to develop their own standards. The

Titus County VFDs do participate in frequent countywide drills covering mobile water supply operations. The VFDs are all trained in tender/tanker operations to assist by providing continuous water flow to support firefighting operations. The water supply proficiency is reflected in the ISO 6 rating for the Tri-Lakes and MPFD County areas. Reviewed training records indicate the VFDs are frequently drilling in the use of SCBA and PPE.

As discussed in other sections of this report, volunteer participation is declining not only on incident response, but also at training and drill sessions. Each of the departments is actively recruiting additional personnel, but few personnel have been added to the roster. The commitment to train competes for time with vocation and family concerns. Each of the VFD members must also invest considerable man-hours for fund raising events.

The curriculum MPFD uses and the approach to training meets Texas Commission on Fire Protection Firefighter standards, Texas Department of State Health Services, and the Texas A&M Forest Service. The MPFD Fire Chief is the recognized training coordinator. Each of the department's company officers assists by developing lesson plans and delivering coursework or conducting drills. The department meets and well exceeds the TCFP mandated required annual 20-30 hours of continuing education (CE). Additional annual requirements also apply when individual have multiple certifications. Four hours of wildland firefighting CE, and if certified as an EMT or Paramedic, an additional 80-144 hours per four year cycle is also required. This does not include any additional mandated training topics imposed following each Bi-annual Texas Legislative session.

#### *RECOMMENDATION*

Each VFD must prioritize and develop an annual training plan for the department and individual. A critical look at the operations performed by each entity will determine the most important areas. At the top of the list must be Safety and Personal Protective Equipment followed by driving and operators training. All of the VFDs place an emphasis on wildfire suppression and each member receives approved training. The departments must provide additional concentration in advanced wildfire topics. The departments do not have enough trained and certified structural firefighter personnel to initiate and sustain structural firefighting operations. Although most current VFD members do not want structural training or certification, emphasis must be placed upon encouraging volunteers, especially new members, to seek SFFMA structural certification.

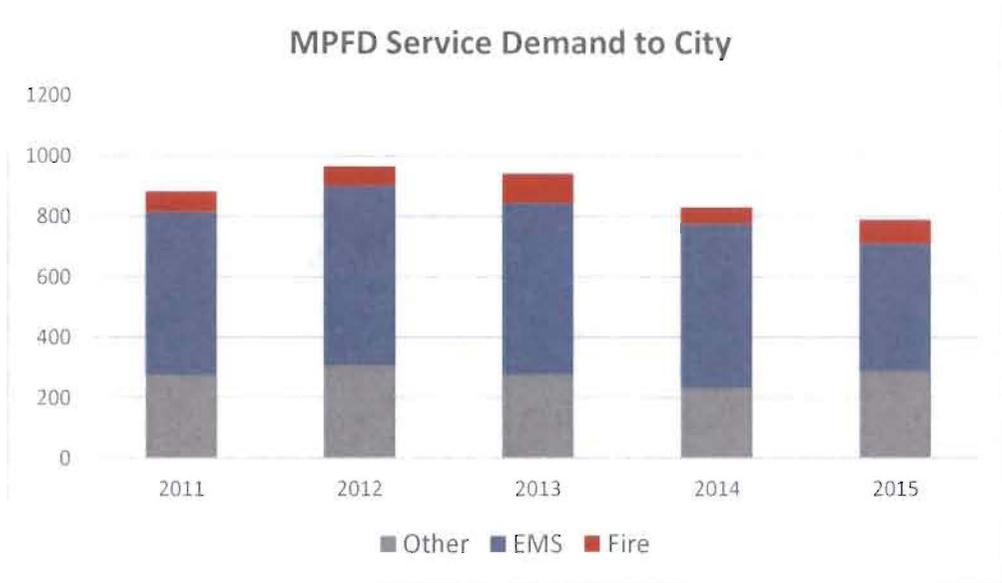
**SERVICE DELIVERY AND PERFORMANCE**

In this section of the report, ESCI reviews current service delivery and performance within the Titus County and Mount Pleasant study area. Observations will be made concerning service delivery for the county study area as a whole and for the City of Mount Pleasant, as appropriate and depending on the available data.

*Service Demand*

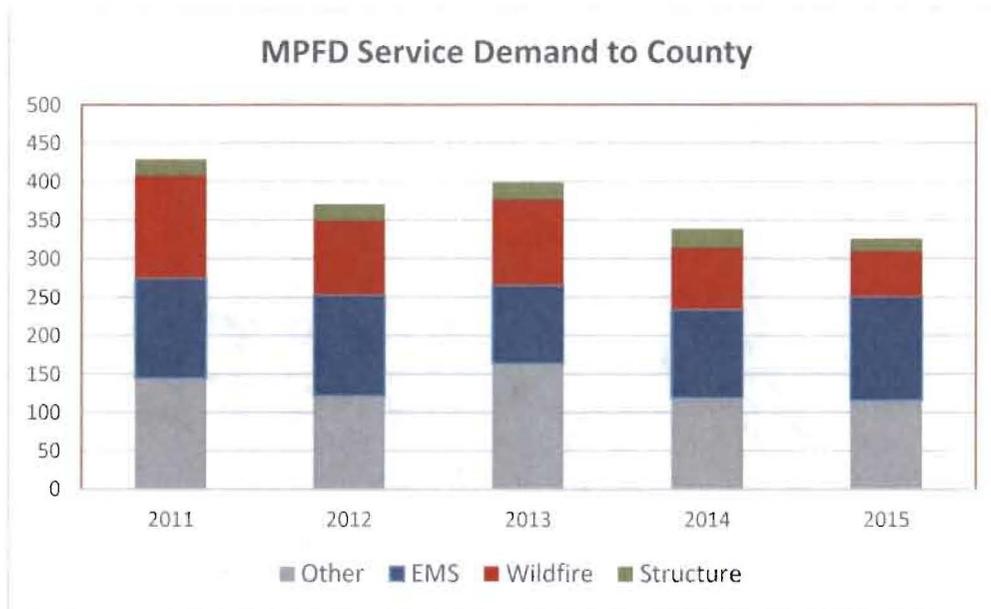
In the demand study, ESCI reviews current and historical service demand by incident type and temporal variation for the study area and the participating jurisdictions. GIS software is used to provide a geographic display of demand within the overall study area. The data used in this analysis is derived from National Fire Incident Reporting System (NFIRS) data provided by Mount Pleasant Fire Department. The figure below depicts historical service demand from 2011 through 2015. EMS incidents constitute the greatest workload for all of the participating agencies and fires represent the lowest workload. *Fire* refers to all types of fires (structure, wild-land, vehicle, etc.). The *EMS* category includes all calls for medical service including Motor Vehicle Accidents and rescue incidents. The *Other* category refers to incidents such as hazmat, false alarms and cancelled calls, service calls, or weather related incidents. The percentages displayed above are comparable to similar fire jurisdictions in the region and nationally.

**Figure 57: Study Area Historical City Service Demand, 2011 through 2015**



Analyzing the response data, it is clear the vast majority of incident response by the Mount Pleasant Fire Department is EMS. While 2015 shows a decrease in the total responses, as well as EMS activity, the Mount Pleasant responses are trending higher for 2016. The department reports with the Titus County Hospital EMS now providing service to Mount Vernon area, EMS resources are stretched thin. The jurisdictions of Franklin County and Mount Vernon are also aware and are considering options to bolster EMS service.

Figure 58: Study Area Historical County Service Demand, 2011 through 2015



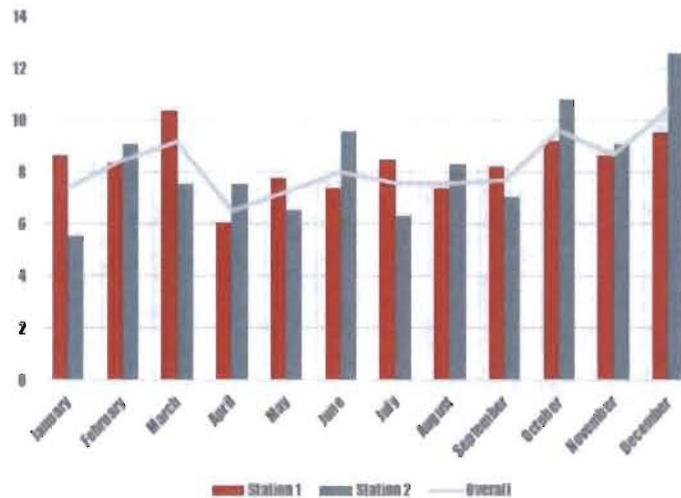
The previous figure demonstrates that demand for service to the County area has experienced a decrease in service demand from 2011 to 2015. Analyzing the data will demonstrate the EMS response activity has generally increased with the exception of 2013. In the years 2014-15, the decreased number of wildfire incidents had an effect on the total number of Fire Department responses.

The unseasonable cooler and wet weather pattern temporarily lessened the wildfire danger. According to the National Weather Service, the dominant El Nino pattern which has brought a moderate and wet climate is beginning to erode. The jet stream movement is bringing more of a typical seasonable climate. As with the fire season of 2011, the tonnage of fuel per acre is now massive as compared to the norm. The wet weather and longer growing seasons has provided optimal conditions for the development of heavy loads of fuels. With the return of neutral or La Nina weather pattern, wildfires over the short term will most likely increase in number. The fires will be hotter, faster moving and the extinguishment period will be longer in duration.

*Temporal Variation*

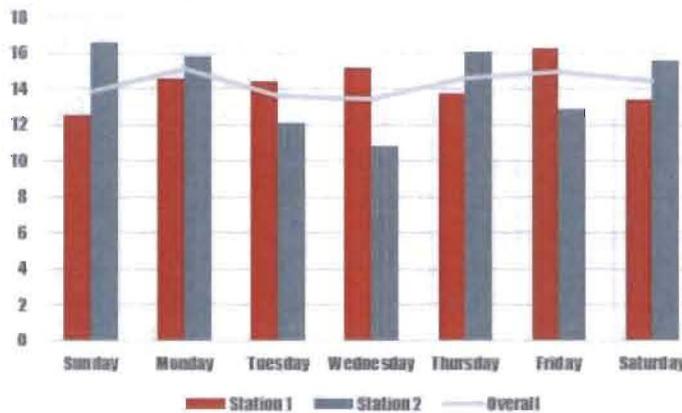
A temporal analysis of incidents reveals when the greatest response demand is occurring. The following charts show how activity and demand changes for the MPFD study area based on various time measurements. The data used is 2015 MPFD data for the following graphic.

**Figure 59: Study Area Service Demand by Month, 2015**



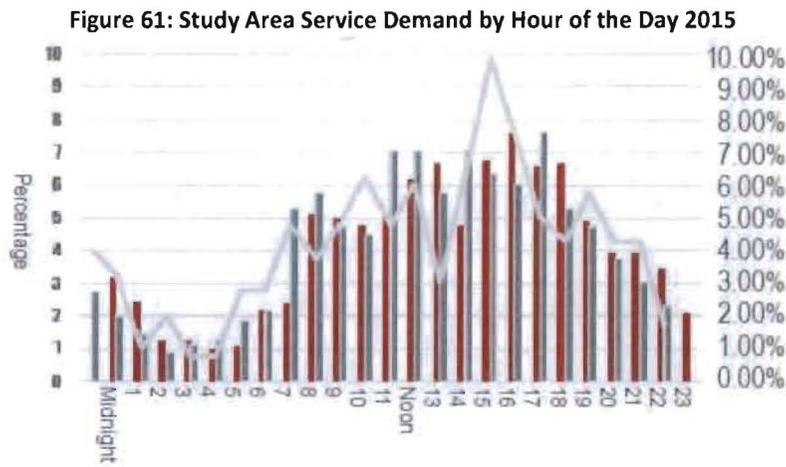
Service demand is highly variable. Overall service demand varies from a low of nearly 7 percent in February to a high of 10.24 percent in August. The following figure looks at service demand by day of the week.

**Figure 60: Study Area Service Demand by Day of the Week, 2015**



Again, service demand by day of the week varies Mount Pleasant. Overall, service demand varies within a range of approximately 13.74 percent between the lowest demand Wednesdays and the highest demand on Monday and Fridays hovering around 15 percent. In actuality, the line appears somewhat flat with a movement of only 1.25 percent. Being a central City, Mount Pleasant does not see the

activity fluctuation or spikes of an urban or even suburban community. The last temporal analysis of service demand examines demand summarized by hour of the day.

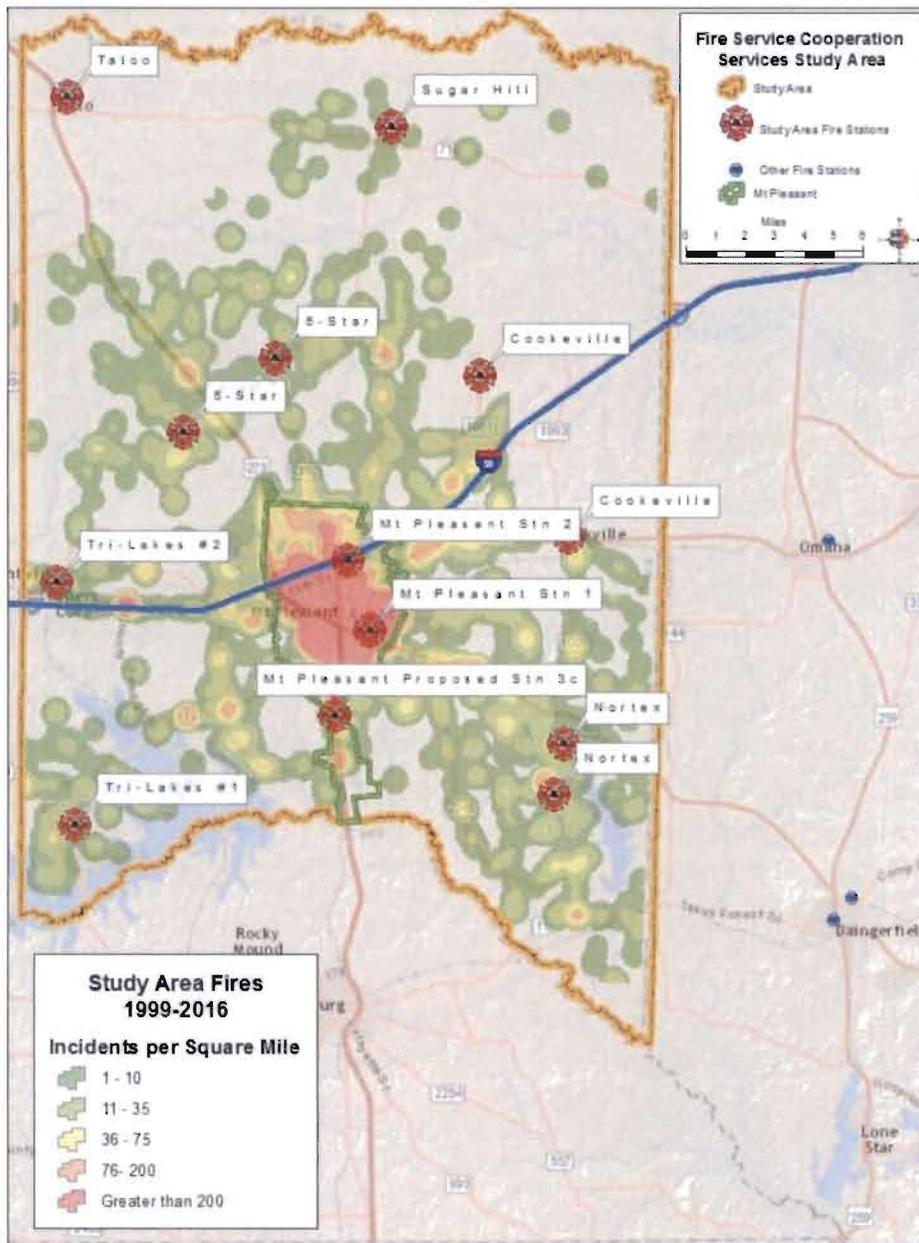


In this figure, service demand correlates with the activity of people, with demand increasing during the workday and decreasing in the evening and early morning hours. Over 74 percent of service demand occurs between 8:00 AM and 8:00 PM. Peak volume is between the hours of 4:00 PM and 8:00 PM and the least volume occurs between 3:00 AM and 6:00 AM. Workload issues do not currently appear to affect service delivery or response performance in the Mount Pleasant service area. However, there is a significant and predictable increase in service demand during the day. This provides an opportunity for administration to anticipate increased workload and deploy resources in a dynamic manner during periods of peak activity.

*Geographic Service Demand*

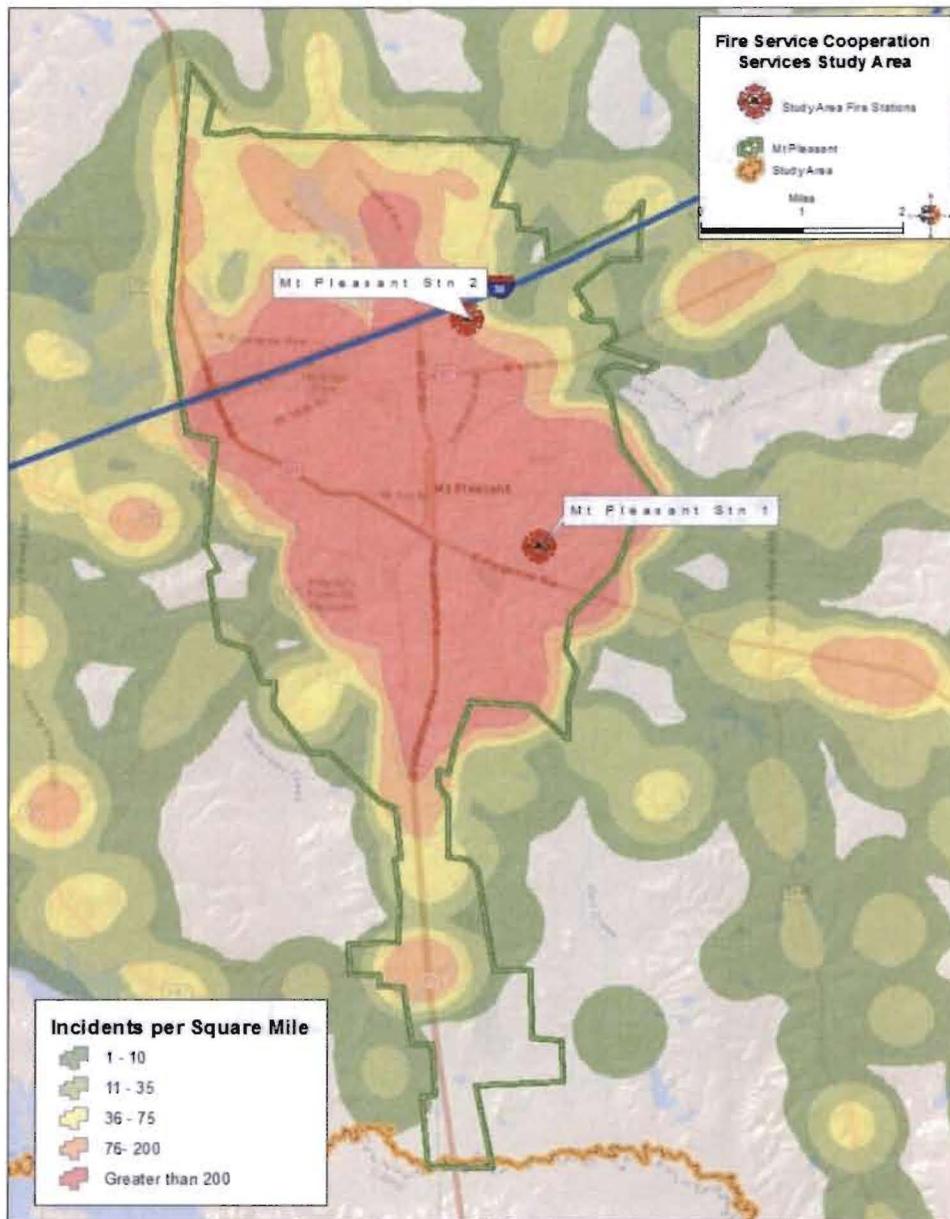
In addition to the temporal analysis of service demand, it is useful to examine the geographic distribution of service demand. Utilizing the data set, ESCI calculates the mathematical density of incidents from 1999 through 2016 throughout the study area.

Figure 62: Study Area Geographic Service Demand, 1999 though 2016



Service demand is spread throughout the study area. As seen in this figure, the highest concentration of incidents occurs inside the city of Mount Pleasant. Other areas of higher incident density occur along the major transportation routes throughout the study area. Highly travelled Interstate 30 bisects Mount Pleasant and Titus County generally west to east. US Hwy. 271 provides a high volume of traffic generally north and south. The following figure provides a more detailed view of incident density in the incorporated communities within the City study area.

Figure 63: Incident Density-Study Area Incorporated Communities



The figure more clearly demonstrates the higher incident density in Mount Pleasant. The previous two figures demonstrate incident density for all incident types. EMS incidents constitute the majority of these incidents. In the following figure, Fire incidents are displayed in the overall incident density data.

EMS transport services are provided to the City of Mount Pleasant and Titus County by Titus Regional Hospital. MPFD provides only EMS first responder services. First responder service comprised 48.2% of all incidents in the city and 35.2% total incidents for the 5 years between 2011 & 2015. The program was initially designed for MPFD to respond to life threatening EMS incidents in the southern half of the

city on, or south of 7<sup>th</sup> Street within the City limits. As the figure demonstrates, the EMS geographical response area has greatly increased, as well as the number and frequency of calls.

By MOA, fire department personnel often assist either with patient care in the ambulance, or by driving the unit back to the Hospital. Recently East Texas Medical Center EMS (ETMC) pulled out of the City of Mount Vernon and Franklin County, and Titus Regional Hospital EMS has assumed the vacated area. The additional volume of calls has also increased the frequency when Titus EMS has no units immediately available to respond. The fire department is then dispatched more frequently and to lesser acuity EMS incidents. The MPFD is also dispatched countywide for all motor vehicle accidents involving injury.

As EMS providers nationwide have experienced, people in chronic need of medical care often resort to 911 as the default to seeking help. Often times these people have just fallen into the cracks of the system and have nowhere else to turn for care. In addition, hospital Emergency Departments now see many lower acuity cases which could be better handled by clinics, or even tele-medicine programs. Personnel dispatched to the increasing number of incidents not only have more exposure to risk or injury or to accidents, but the public is also at increased risk. Many 911 centers nationwide have invested in dispatch software to assist telecommunicators to prioritize EMS calls for service. A series responses to questions helps rank the severity of the incident and responses adjusted accordingly. Not all calls must be answered with units operating the emergency warning lights and sirens, or with multiple vehicles and crews.

For many communities and agencies, the answer to keeping the increased volume of EMS incidents in check is to proactively address the situation. To that end, identifying habitual and frequent users and developing an individualized plan to address their specific needs, has driven their use of EMS down. A model often cited is the Community Paramedicine program, which has been successful in such places as Fort Worth and McKinney, Texas.

The current MOA never addressed compensation to the City of Mt. Pleasant by Titus Regional Medical Center other than replenishing of supplies used on an incident.

#### *RECOMMENDATION*

It is recommended that the City and Titus Regional Hospital EMS revisit the 2002 EMS first responder MOA as the impacts and scope of the service have grown beyond what was initially envisioned. A mechanism to help further offset the City's direct cost to provide the service should be discussed. The governing bodies of both entities should formalize any future agreements.

Figure 64: Study Area EMS Incidents and Incident Density, 1999 through 2015

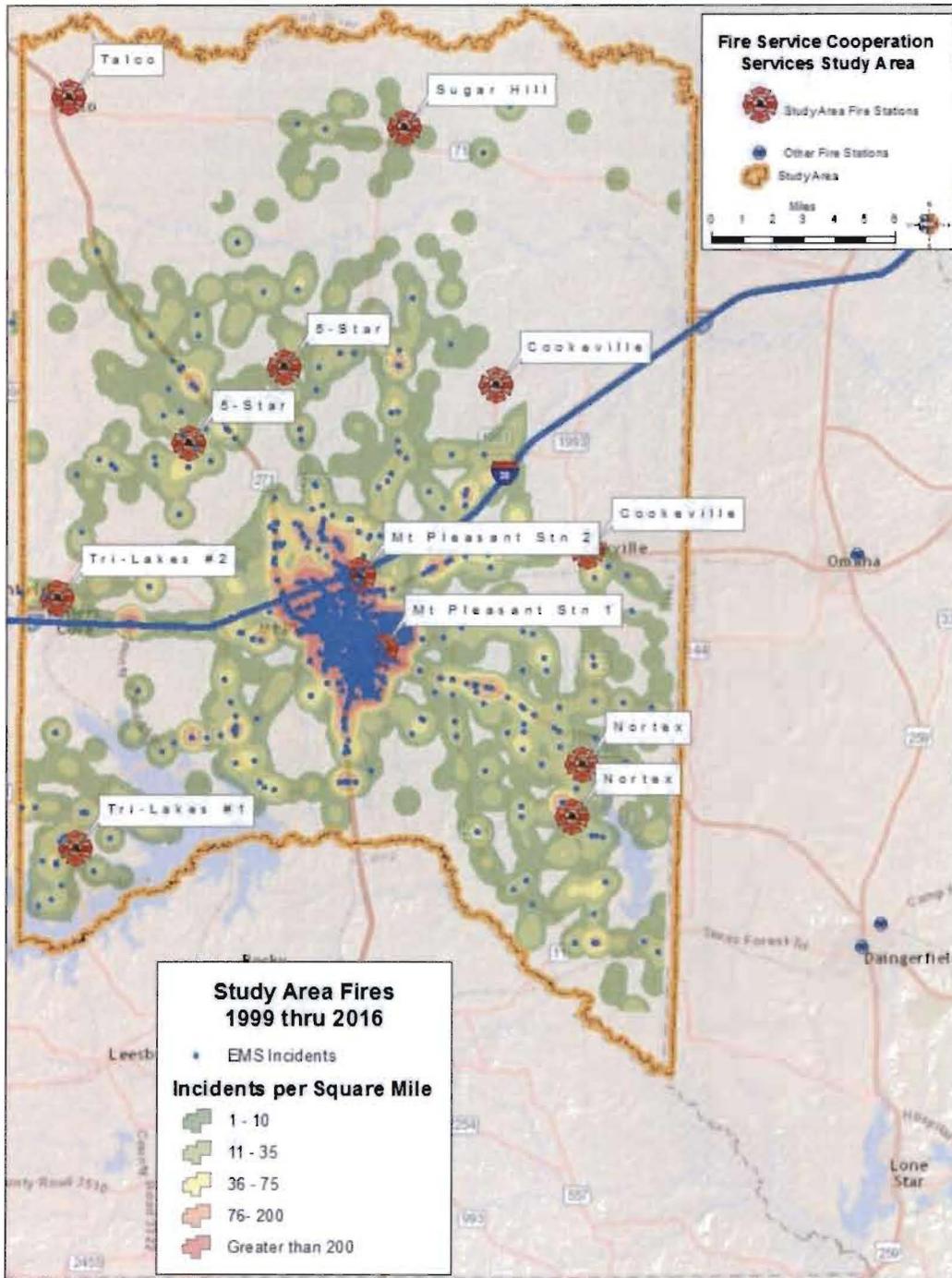
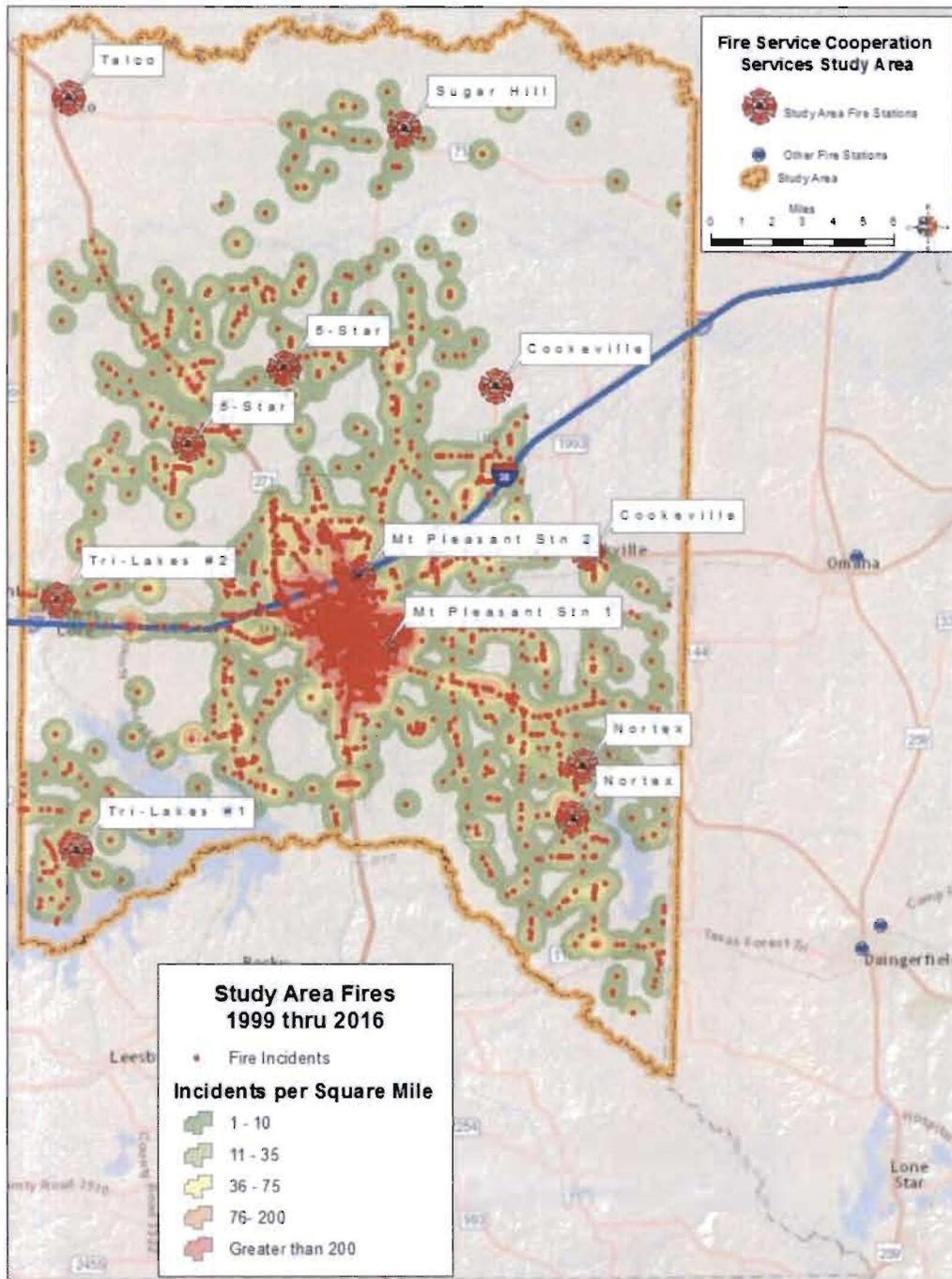


Figure 65: Study Area Fire Incidents and Incident Density, 1999 through 2015

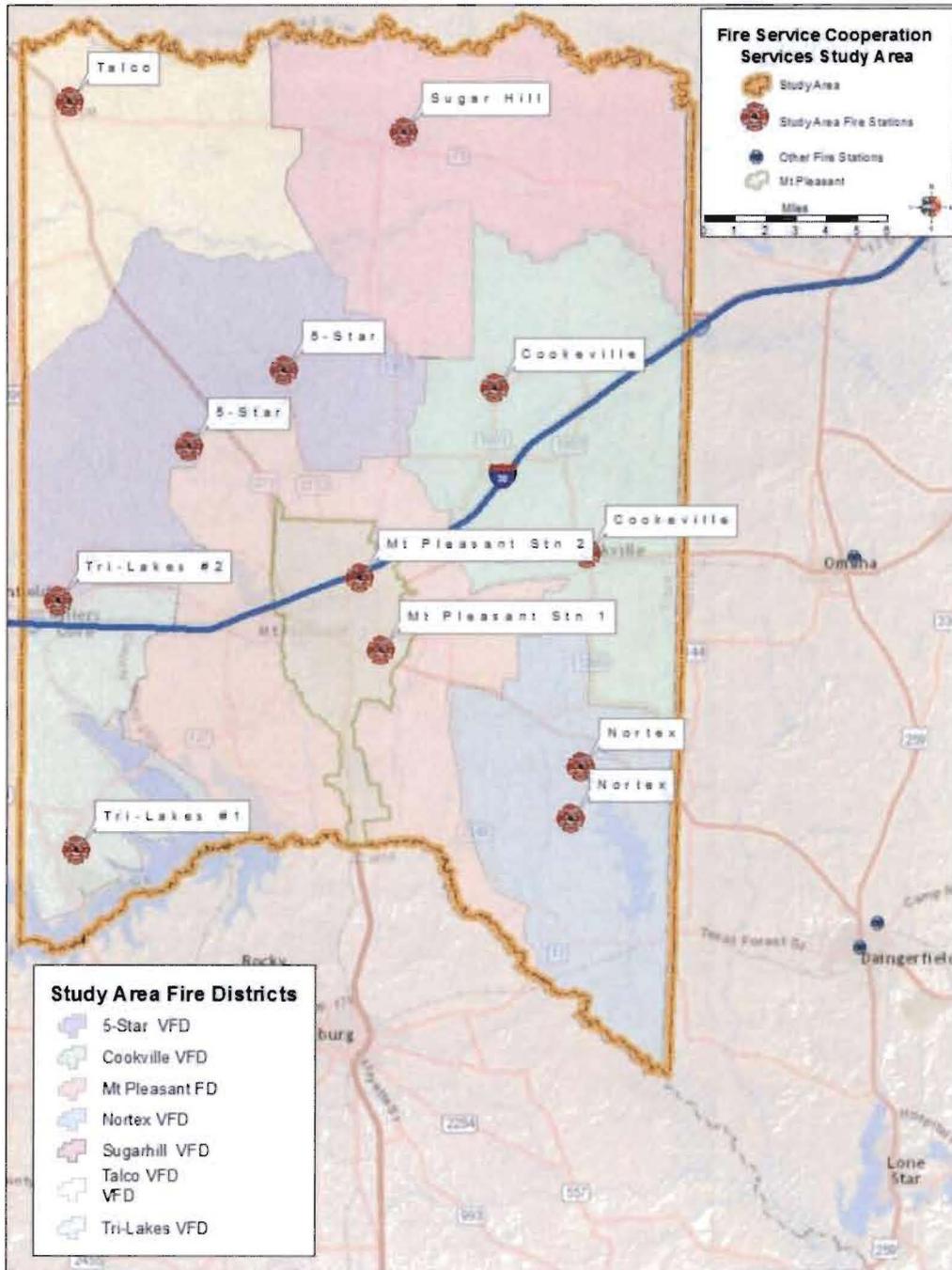


Fire incidents are the least frequent incident type in the data set. However, fires are distributed throughout the study area in a pattern that is similar to the overall incident density data.

*Resource Distribution*

In the distribution analysis, ESCI presents an overview of the current distribution of fire agency resources in the study area. The figure below displays the study area and the participating fire jurisdictions.

**Figure 66: Fire Service Cooperative Services Study Area**



The study area encompasses the entire Titus County. The participating agencies serve the area from twelve fire stations distributed throughout their respective service areas. Mount Pleasant Fire Department provides service to the rural areas by contract with the County of Titus. The small incorporated cities of Winfield, Talco and the Town of Miller’s Cove are included in the County VFD districts. The following two figures depict the distribution of population throughout the study area.

Figure 67: Study Area Population Density, 2010 Census Blocks

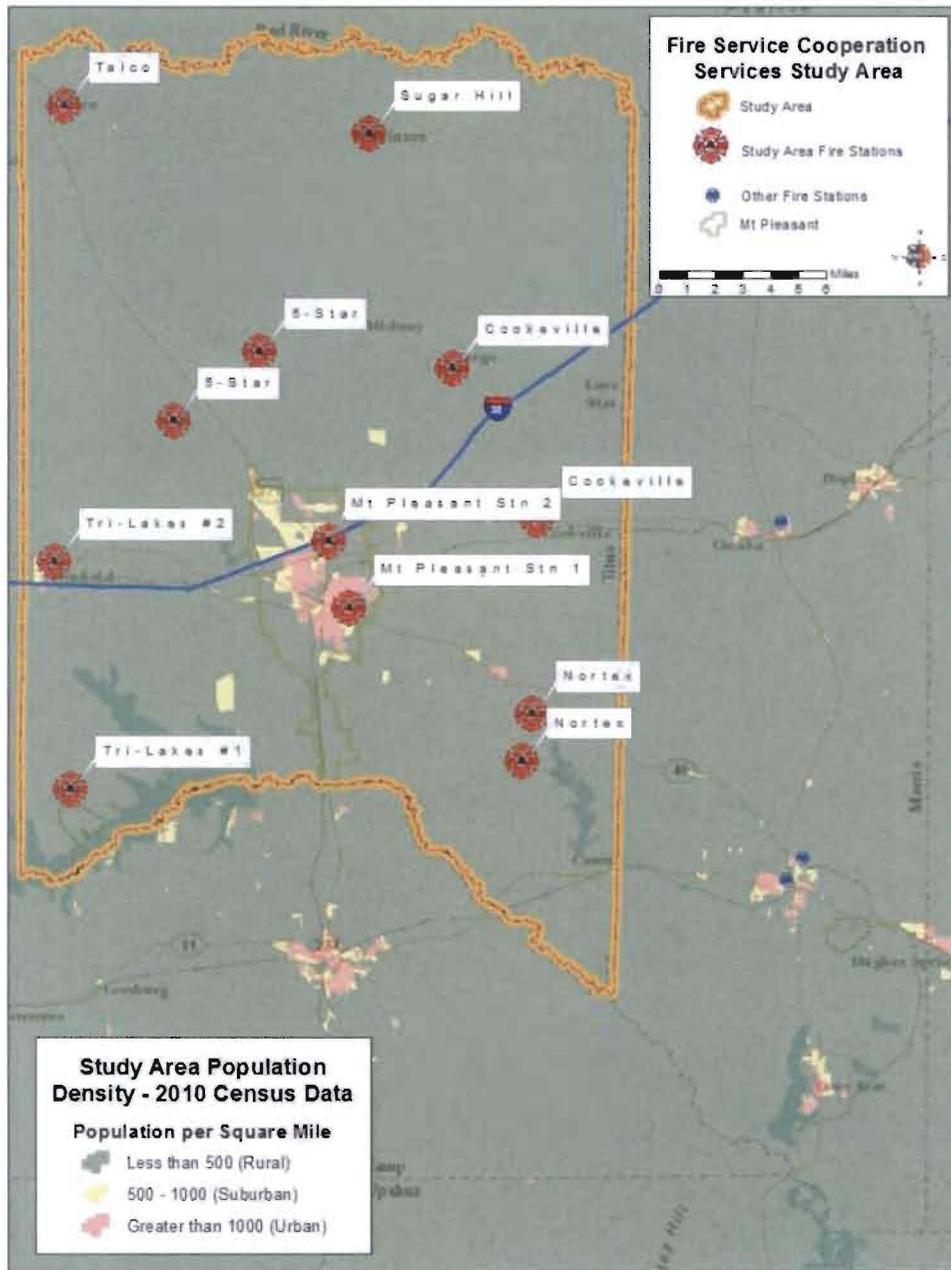
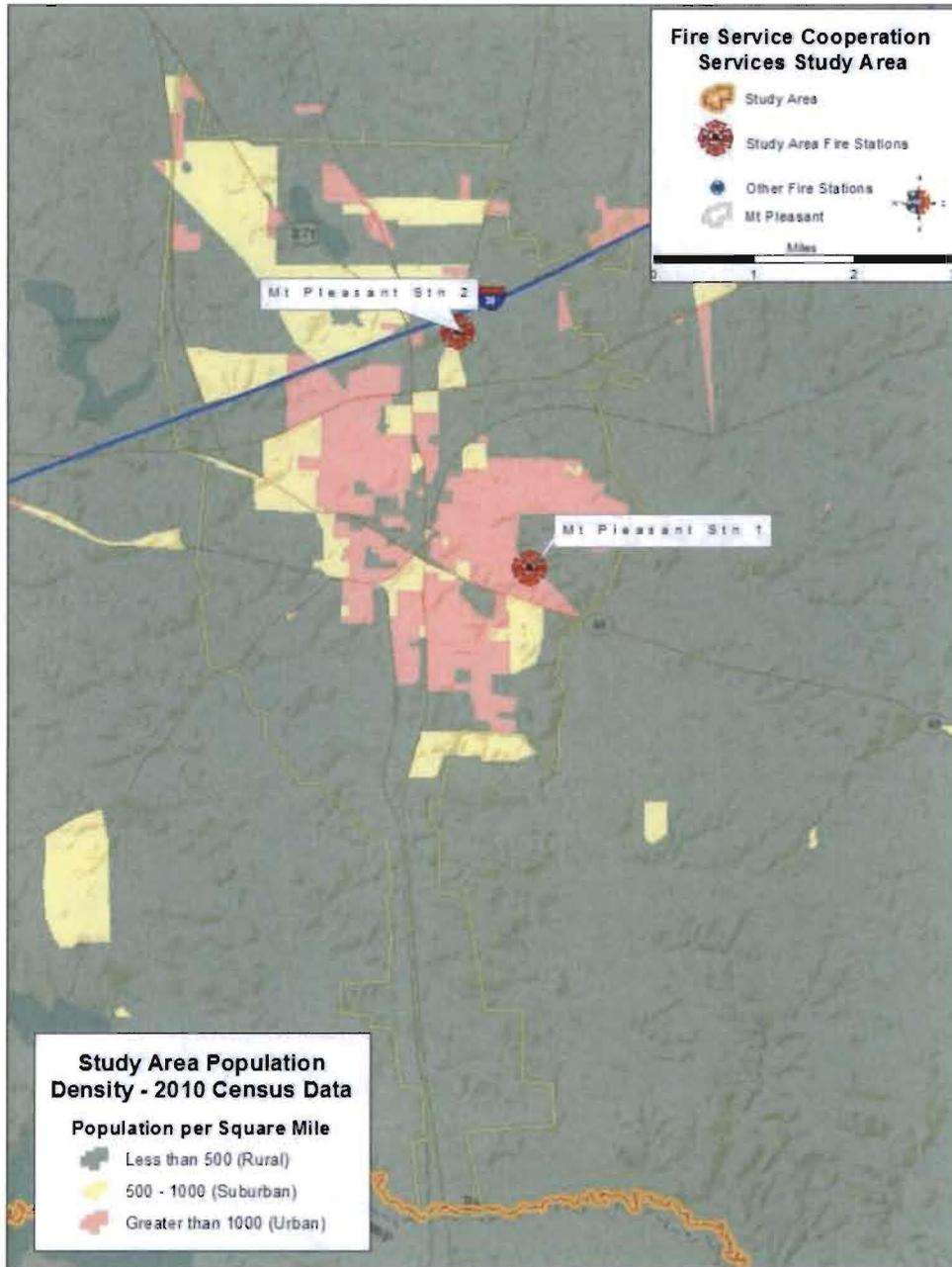


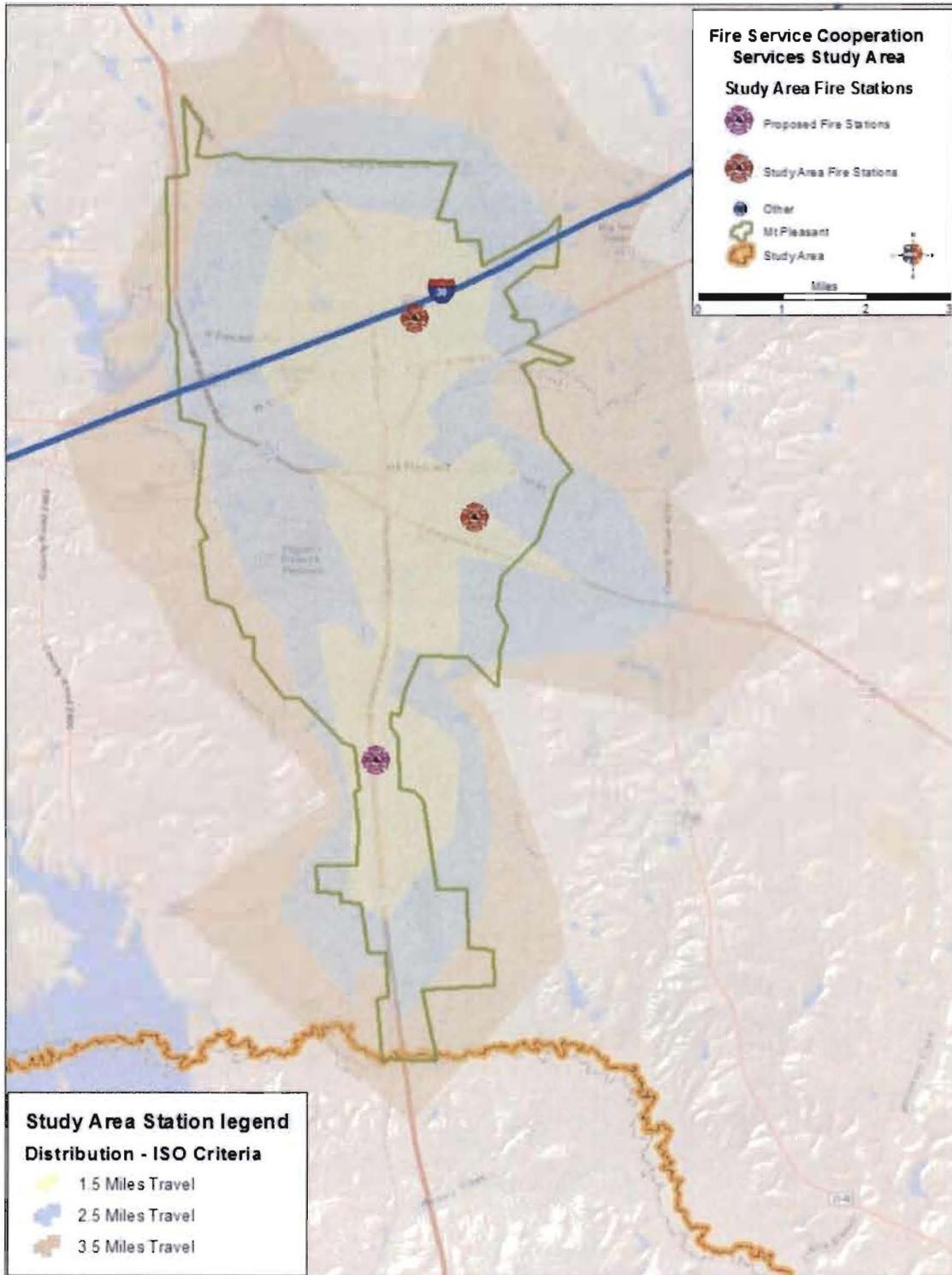
Figure 68: Study Area Population Density-Incorporated Cities



The study area is largely rural with a high concentration of the population in Mount Pleasant. Over 48% percent of the estimated 33,506 residents within the study area reside in Mount Pleasant. Note that the areas with the highest population density correspond with the areas of highest incident density displayed in the demand analysis.

The Insurance Services Organization (ISO) is a national insurance industry organization that evaluates fire protection for communities across the country. A jurisdiction's ISO rating is an important factor when considering fire station and apparatus distribution, as it can affect the cost of fire insurance for fire district individuals and businesses. To receive maximum credit for station and apparatus distribution, ISO recommends that all "built upon" areas in a community be within 1.5 road miles of an engine company. Additionally, a structure should be within five miles of a fire station to receive any fire protection rating for insurance purposes. In the figure below, ESCI examines the Mount Pleasant fire facility distribution by distance over the existing road network.

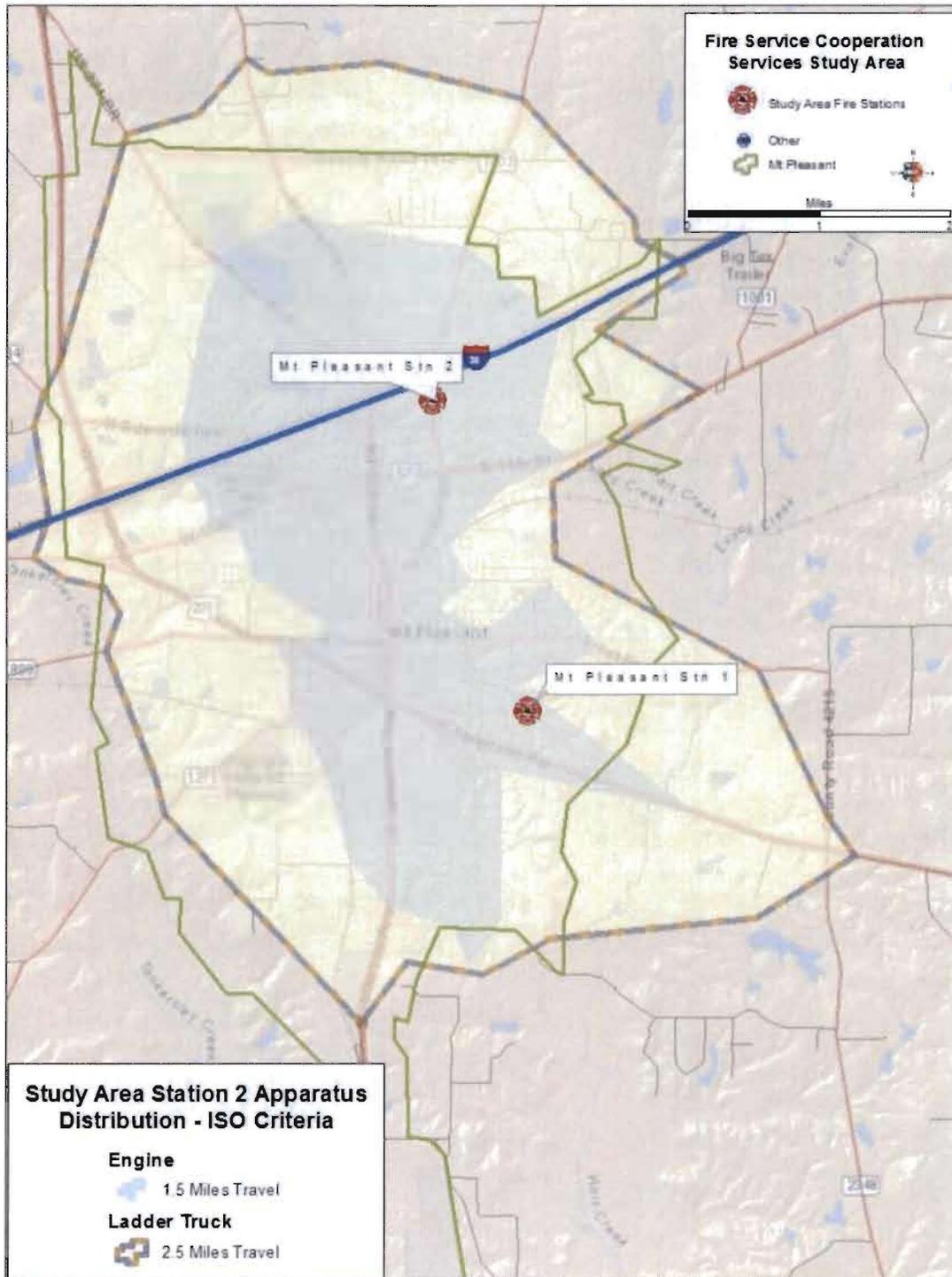
Figure 69: Study Area Station Distribution, ISO Criteria



Based on the ISO rating criteria, fire company deployment (stations) are currently insufficient within the City of Mount Pleasant. ESCI notes that beyond the 271 Flyover and Business 271 interchange exceeds the 1.5 Mile travel distance provided from fire station No. 1. Generally, the ISO 1.5 miles travel distance applies to municipal areas such as Mount Pleasant. Currently the two fire stations in Mount Pleasant provide only partial coverage. The above figure provides a GIS representation of the coverage provided by the two existing fire stations and future third facility. To provide more complete coverage in the southern reaches of the City, GIS analysis would indicate a future third facility be located in the general area of the intersection of US 271 and FM 3417. With a third facility, nearly 100% of the road network in the City's study area is within 3.5 miles of travel from a fire station. This is still short of complete coverage as recognized by the ISO. With the addition, current fire station locations would be deemed appropriate under current service demand and service delivery standards. As anticipated higher density or commercial or industrial occurs in the City's outer reaches, and the ETJ, of Mount Pleasant, additional station(s) will need to be considered to meet response time and effective firefighting force standards.

Similar to the 1.5 mile engine company criteria, ISO recommends that truck companies (aerial apparatus) be placed at 2.5 mile intervals in areas with buildings over six stories in height. Mount Pleasant has an aerial apparatus at Station 2. The current staffing model for the department is that personnel must decide based upon the alarm type whether to remove personnel from engine 2 to drive the truck to the call. While essentially unstaffed the department receives partial ISO credit. The next figure demonstrates the 2.5 mile service area for this aerial apparatus.

Figure 70: 1.5 and 2.5 Mile Travel Service Area



The aerial apparatus at Station 2 provides partial coverage within the City. This apparatus also responds into the County to aid responses requiring an aerial apparatus.

ISO criteria are only one of many factors to consider when deploying fire department resources. The ISO criteria are primarily concerned with the geographic coverage of a service area and only address fire suppression. Equally important, especially to all hazard fire agencies, is the time required to respond to a call for service and whether resources are located to serve the greatest amount of service demand within a jurisdiction's service area.

The following analysis demonstrates travel time over the existing road network. Travel time is calculated using the posted speed limit and adjusted for negotiating intersections and turns.

The geography and nature of the road network presents challenges to the fire jurisdictions within the study area. However, it is apparent in the figure below that the majority of the study area is within 8 to 12 minutes of a fire station. While Mount Pleasant Fire Department perpetually staffs two fire engine companies, the total response time to an incident can be considerably less than that of the county VFDs. Volunteer personnel are not always in close proximity to the fire station, or immediately available to respond to assist. As a word of caution when interpreting the following, the figures below only represent the drive time from the station to an incident. In many cases the responding Mount Pleasant Fire units arrive, with a complete crew, prior to the arrival of the volunteer fire units. As previously discussed, volunteer departments, not just in Titus County – but nationwide, have seen declining ranks which continue to challenge the ability to assemble personnel for incident response.

The next figures display the 1999 through 2015 service demand over the travel time model. Due to the volume of incidents included in the data set, three models are presented. The first figure represents the combination of fire and EMS incidents. Note that the representation becomes a solid blanket of incidents. To further define the service volume, analyzing by incident type fire versus EMS, allows for more complete understanding.

Figure 71: Study Area Travel Time Model

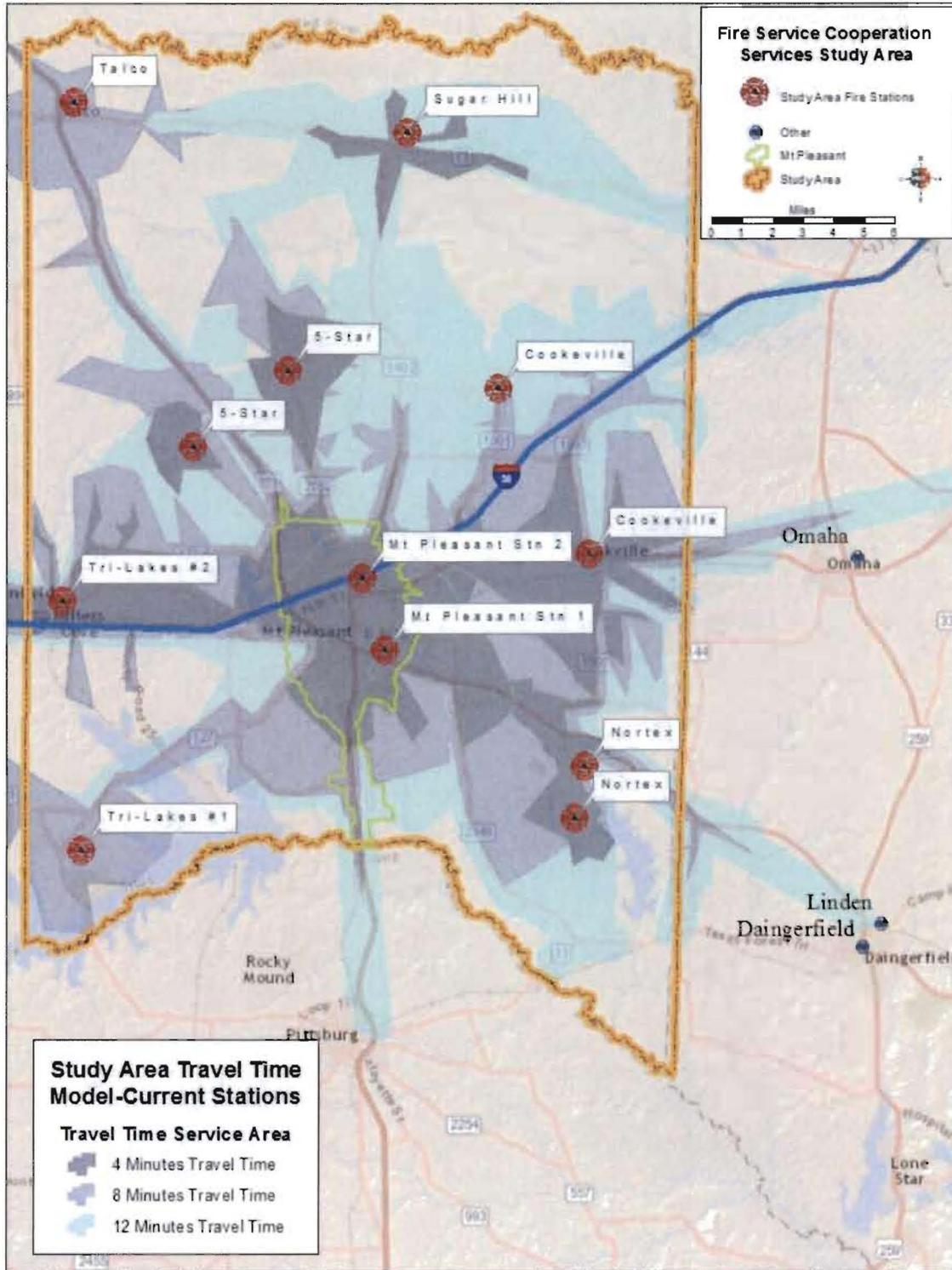


Figure 72: Study Area Travel Time Fire Model and 2012-2013 Service Demand

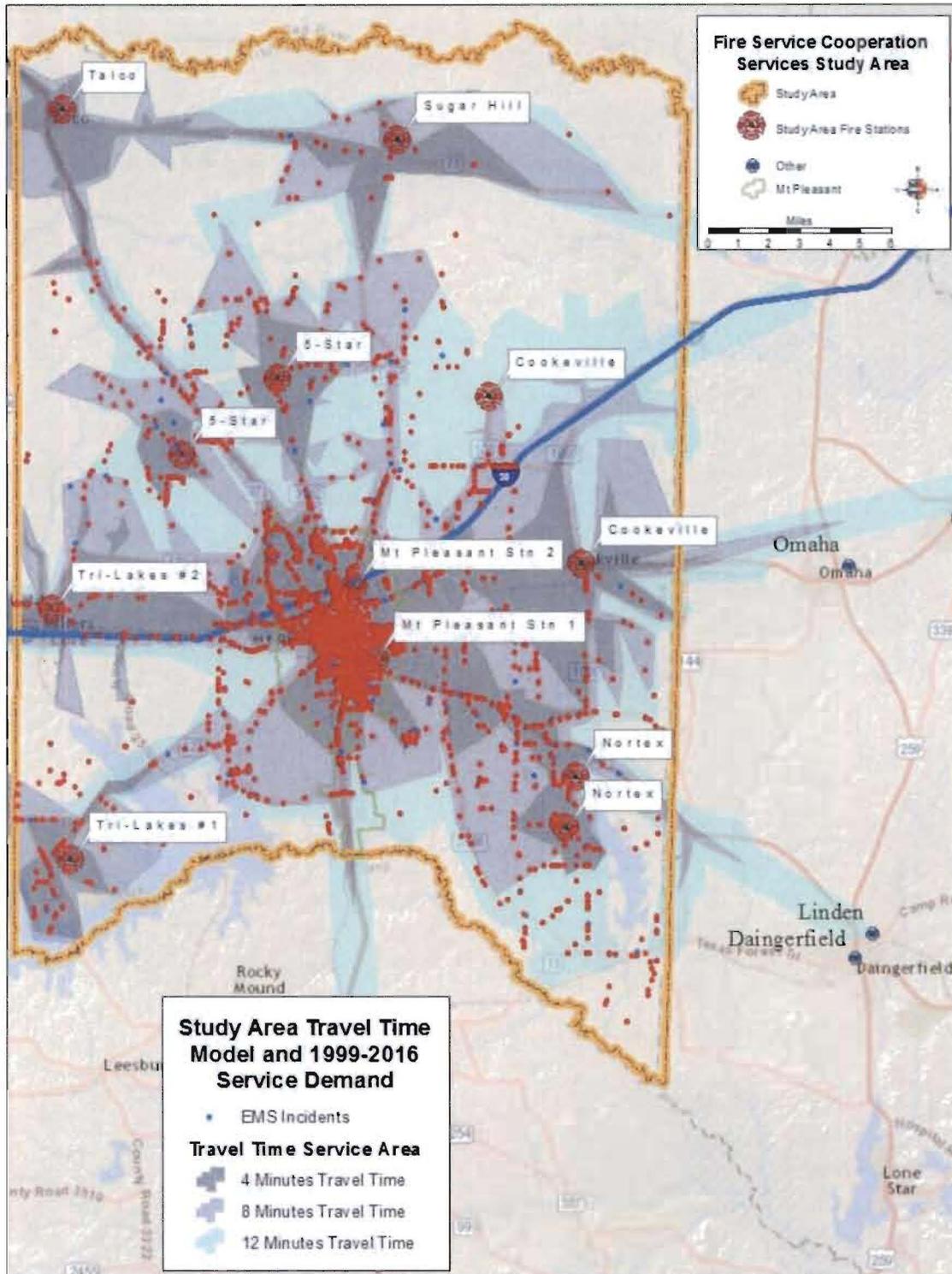
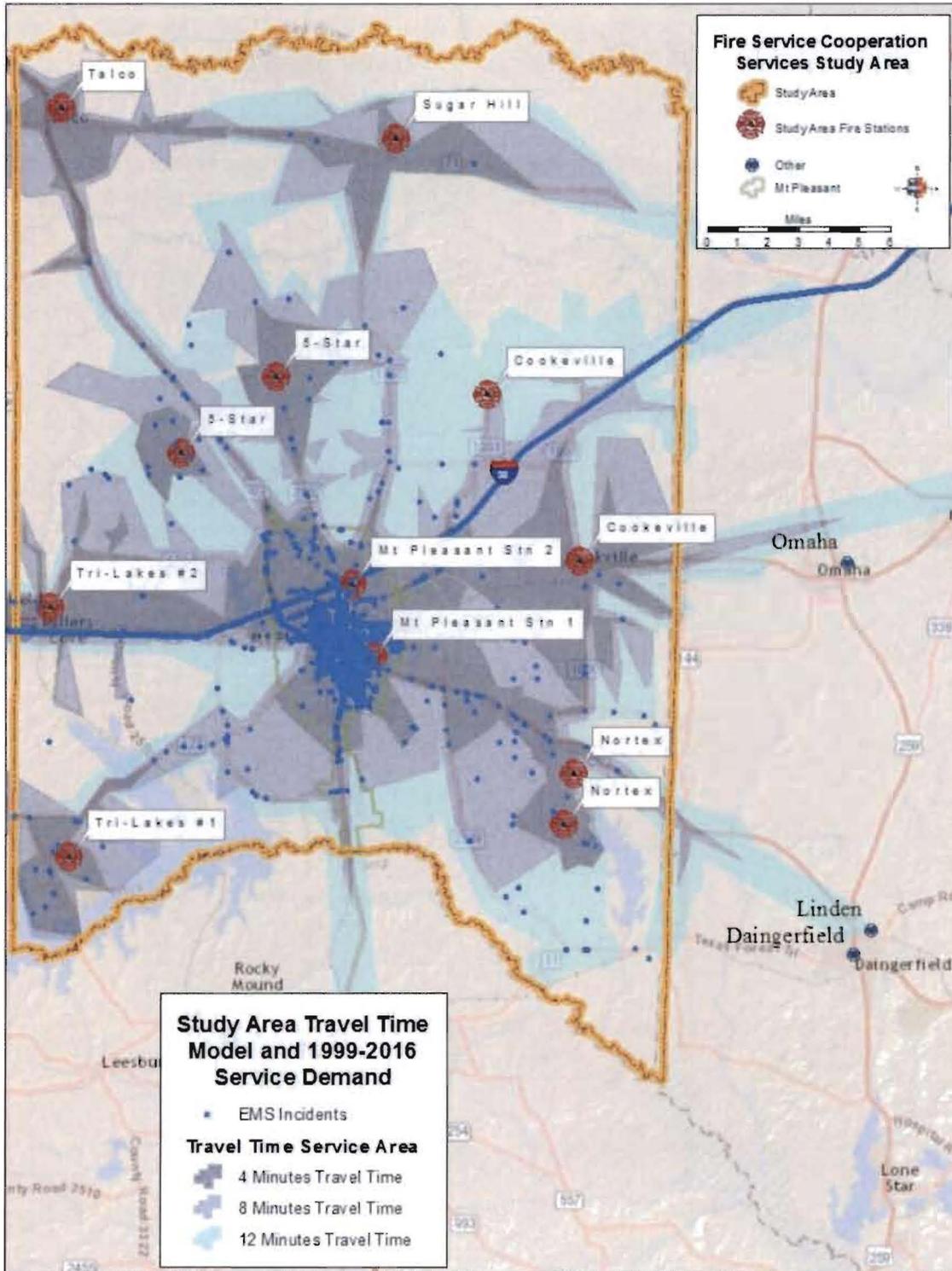


Figure 73: Study Area Travel Time EMS Model and 2012-2013 Service Demand



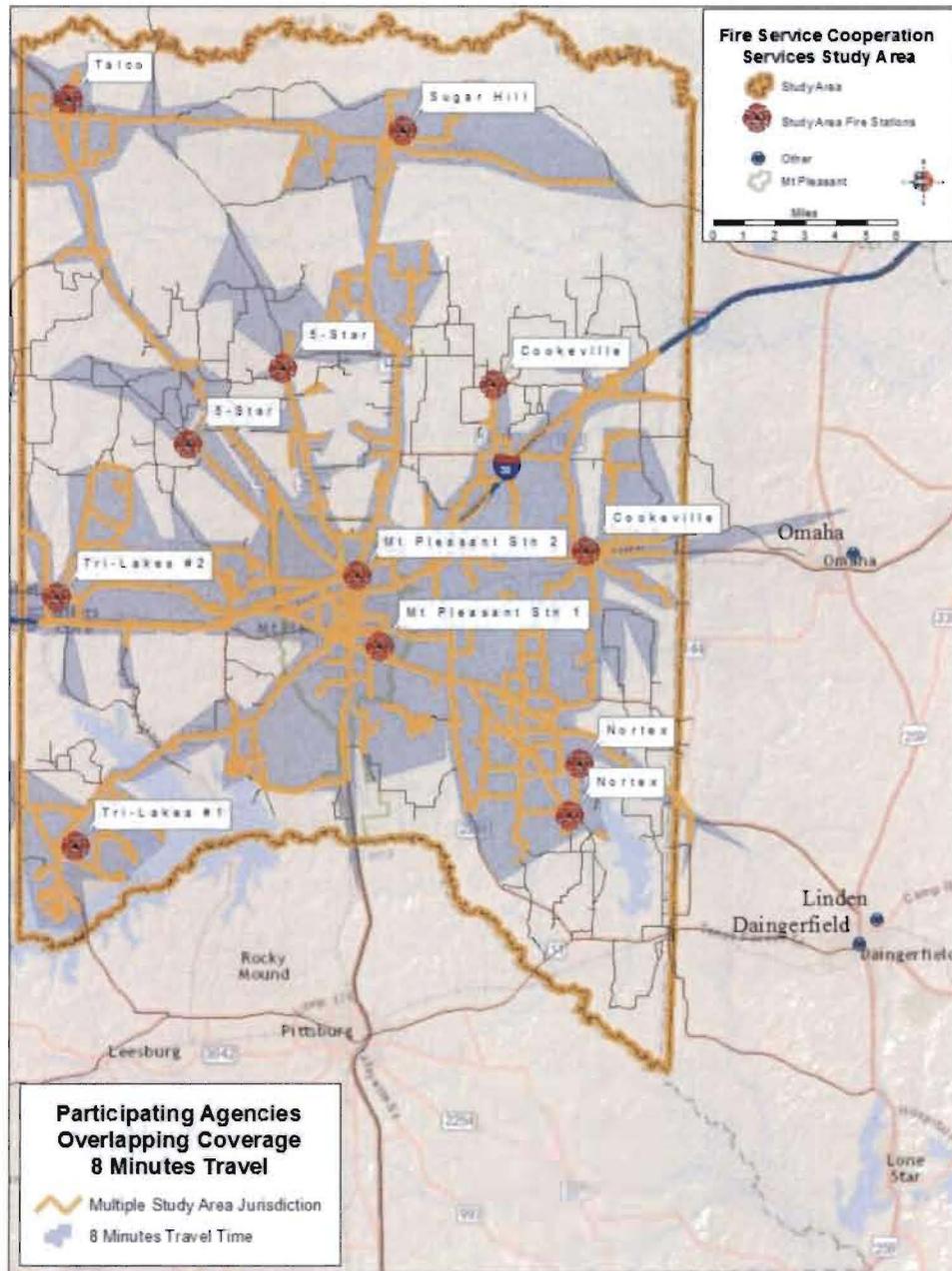
### Resource Concentration

Standard firefighting procedures call for the arrival of the entire initial assignment (sufficient apparatus and personnel to effectively deal with an emergency based on its level of risk, referred to as Effective Response Force) within a specified amount of time. This is to ensure that enough people and equipment arrive soon enough to safely control a fire or mitigate any emergency before there is substantial damage or injury. In this analysis, ESCI examines the participating agencies' ability to assemble multiple resources across the study area. The following figure uses the eight-minute travel time model to illustrate the portions of the study area within 8 minutes travel of 2 or more of the study area fire jurisdictions.

A limiting factor of this graphic is again it only studies drive time. The assumption is that the vehicle would be ready to respond when the call is received. The volunteer fire stations are not staffed. The time it takes for the volunteers to respond to the station to pick up apparatus for response is not calculated.

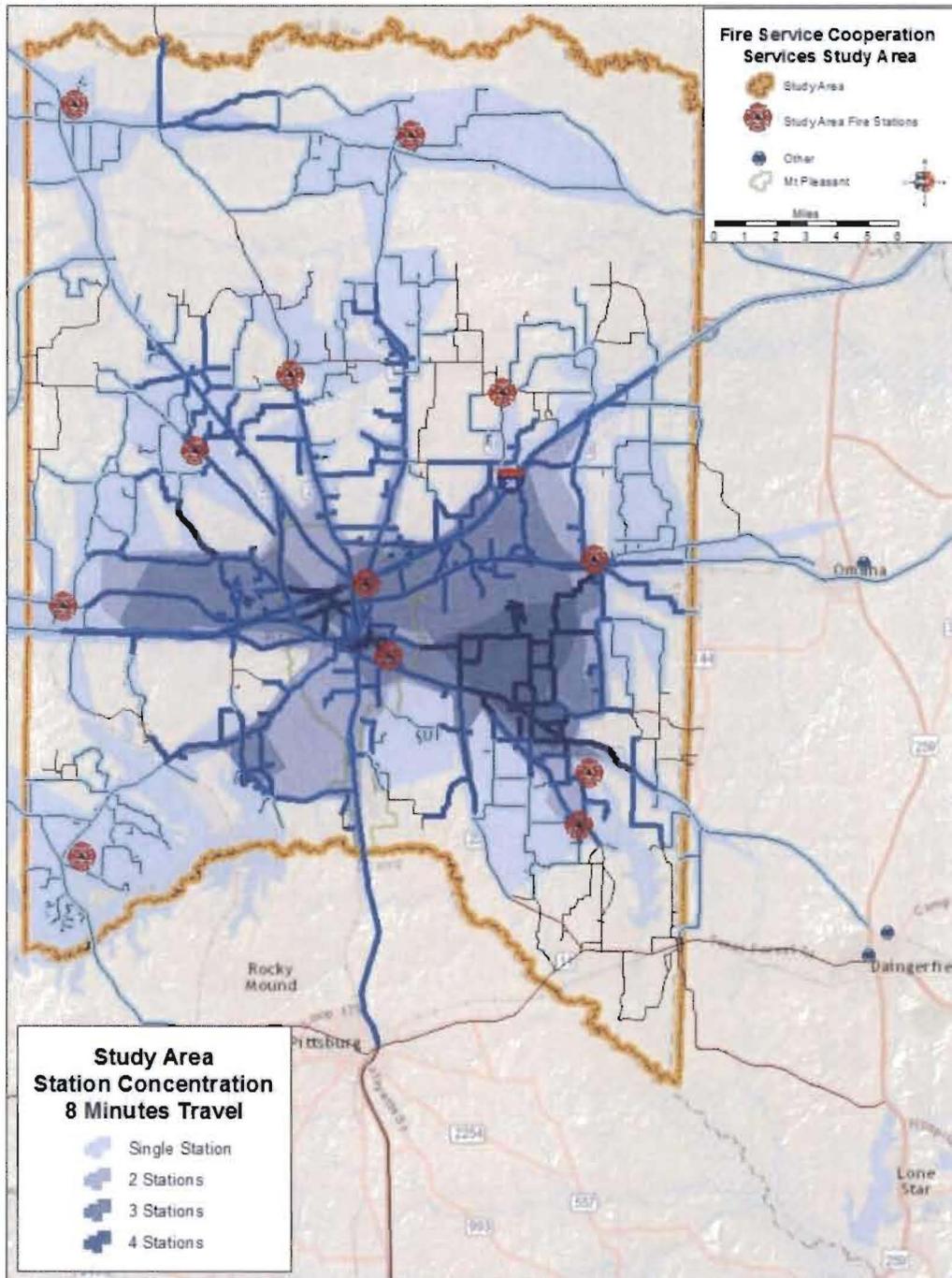
Only a portion of the study area is within eight minutes travel of a fire station. The figure below demonstrates areas within the eight-minute travel of two or more jurisdictions. The next figure depicts the number of fire stations within 8 minutes travel time in the study area.

Figure 74: Study Area Multi-Jurisdictional Coverage, 8 Minutes Travel



As previously discussed, only a portion of the study area is within 8 minutes travel of a single station. The figure below illustrates areas within 8 minutes travel of two or more study area facilities. The availability of personnel, geography, rural nature, and travel distance between stations can negatively affect the time required to assemble an effective response force for incidents beyond the capabilities of a single engine company.

Figure 75: Study Area Station Concentration



### *Mutual and Automatic Aid Systems*

Mutual and automatic aid agreements are in place between fire agencies in County and the study area. Much of the land inside the study area and the area surrounding the study area is undeveloped forest and farm land that is also protected by the Texas A&M Forest Service (TFS). Study area fire jurisdictions work with TFS wildland fire suppression resources during the wild-land fire season. An interlocal agreement is not in place between Mount Pleasant and Titus Regional Hospital EMS. The agencies assist each other under a memo of agreement (MOA), signed each the agency head. ESCI recommends a review and revision of the 2002 document followed by formal adoption by the governing body of each organization.

Mutual aid is typically employed on an as needed basis where units are called for and specified through an Incident Commander. Automatic aid differs from mutual aid in that under certain mutually agreed upon criteria, resources from the assisting agencies are automatically dispatched as part of the initial response.

### OPTIONS CONSIDERED FOR SERVICE

The Following is a discussion of the options available to the City of Mount Pleasant and Titus County following the study of fire protection delivery.

#### *Option 1-Ultimately, the jurisdictions could opt to do nothing and remain status quo.*

Engaging in the effort of this study, obviously the communities' desire change and enhancements to the level of emergency services.

#### *Option 2-Increase the ranks of the volunteer force.*

Unfortunately as discussed above, volunteering has generally been declining. The reliance upon unpaid or slightly paid people to assume the ranks of a dangerous and dirty hobby has been less fruitful in the past two decades. Demands on personal time, increased activity by departments and the now overwhelming training demands have made the hobby less appealing. **Those that have, and continue to volunteer in the fire departments must be applauded.** They have treated this as a passion, or calling to serve others, rather than considering it a hobby. Countless hours, saved property and lives, and the savings of hundreds of thousands of dollars in uncompensated wages have resulted from the volunteers work. Each of the Chiefs of the departments has reported they have invested serious resources and time to attract and retain volunteers. The volunteer numbers continue to fall while the average age continues to rise. The closure of the Winfield VFD is an example of what could occur in any of the volunteer departments in the future.

#### *Option 3-Consolidate all of the VFDs as a single department under one organization.*

Each of the current departments operates under autonomy. Each serves a defined community. The departments are often looked at as a source of pride, a community based organization which helps to bind their areas. Fund raisers and events held by the departments are usually well attended as a result. Operating funds are generated to provide additional resources for fuel maintenance and small tools. With the lack of community based autonomy, it is expected the ranks would be further reduced. Most of

the departments already function under similar protocols, much as a single department when providing emergency service. Ultimately little advantage would be recognized with this option. As a note the 5-Star Fire Department service area continues to be considered unprotected. With minimal but, some effort, the department should seek the ISO PPC 9 level.

#### Option 4-Provide full-time help to the VFDs.

In discussion with the county Fire Chief's, this option was not considered viable. The Chief's would be required to take on a different level of management and administration. Each of the Chief's would become employers now subject to the Commission on Fire Protection, the IRS, benefits administration and other full-time administrative tasks. The volume of each department's activity does not individually necessitate a single employee. As discussed above, it takes a cohesive number of personnel to arrive and safely begin fire operations. A single person, beginning operations without back up is inherently more dangerous and unwise. This option was not well received by the Chiefs.

#### Option 5-Provide additional resources to the City of Mount Pleasant Fire Department.

Throughout the development of this study, it became apparent, both Titus County and the City of Mount Pleasant equally needed to enhance the level of fire protection offered within their jurisdiction. The City has grown within its borders, but also to the south. Increased development and commercial building along with past annexations has stretched the ability to continue to provide services commensurate with the current ISO rating. Increases to incident volume, including EMS, have challenged the department. As discussed above, the City needs to:

- Add a third fire station in the southern area. GIS location maps are provided for reference.
- Recognize an additional station cannot be effectively staffed with the current number of employees. A four person engine company is recommended to be assigned.
- Add another fire engine to the fleet to allow for a reserve unit to be pressed into service as needed. The vehicles are nothing more than heavy machinery. They need continual maintenance and often repairs which can lead to long down times.

The County benefits as well from the increase as there are more built in capacity within the emergency system. As is known, the current contract between Titus County and The City of Mount Pleasant requires only two vehicles and two personnel to respond from MPFD. Due to firefighter and community safety, as well as needed operational effectiveness, the MPFD has been responding with considerably more resources. The capacity to continue to provide this level of service to the county is diminishing as the MPFD activity level increases. The volunteer fire departments must be maintained as long as possible to augment available resources. The VFDs provide mobile water supply and support operations to assist MPFD at structural fires and other incidents. Within the County, major critical infrastructure such as the electrical generation plants, rail lines, Interstate 30 and heavy industrial add realized and potential threats to public safety. The current County contract provides insufficient resources to control incidents at these locations.

### RECOMMENDATION

It is recommended that Titus County and the City of Mount Pleasant strongly consider Option 5 to enhance the level of fire and emergency services currently being provided. While it may impose serious financial challenges, the jurisdictions may be able to spread the full impact over several fiscal years. It may take time to secure funding. In addition, securing a location and property can consume a lengthy period. Developing a set of construction documents and the bidding period can be upward of 12 months, followed by a 12 month construction period. The staffing can also be brought on incrementally to allow for sufficient time to become proficient in their roles. Apparatus purchases can be spread over numerous fiscal years depending upon financing plans.

### SUMMARY OF CONCLUSIONS

This document provides an enormous amount of technical data, much of which was provided by the Mount Pleasant Fire Department and County VFDs, and allows the reader to gain a clear understanding of the fire and emergency services provided within the study area of Titus County. It as well is an indication of how well those services are being provided. The intent of this document is not intended to be a critical evaluation of the organization but rather provide fire department personnel and policymakers' information from which to make informed decisions about the future of the department. Based on information obtained throughout this process, the departments are challenged to function at a level commensurate with community expectations. While response performance analysis indicates that the department must improve, it is possible that the adoption of a plan to incrementally approach improvements will move the service ability forward. Improvements could be made over the next three fiscal years to enhance fire and emergency services by adding a strategically located and staffed Engine Company. Given the willingness of the City Council and Commissioners Court to undertake this study, it is likely follow through will occur with the enhancements to fire and emergency services to the benefit of the communities and residents they serve.

ESCI began collecting data and information for this project in February 2016, and the analysis presented in this report is comprised of months of data review and evaluation including one-on-one interviews with the departments, community members and stakeholders, evaluation of internal documents, policies, rules and regulations, assessment of current service delivery, and the recognition of current and projected service demand and possible improvements to service delivery models. It is ESCI's sincere hope that the information contained within this document is found to be useful and provides policymakers with the information necessary to meet the emergency services needs of the citizens the City of Mount Pleasant and Titus County.