

# Consultant Report

2021

## Community Risk Assessment and Standards of Coverage



**Fort Myers Beach Fire Control District**

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# Introduction

The following document functions as Fort Myers Beach Fire Control District’s (FMBFCD) All Hazard Community Risk Assessment and Standards of Cover statement. The Commission on Fire Accreditation International (CFAI) defines the process, known as “deployment analysis,” as a written procedure which determines the distribution and concentration of fixed and mobile resources of an organization. The purpose of completing such a document is to assist the Department in ensuring a safe and effective response force for fire suppression, emergency medical services (EMS), hazardous materials incidents, and technical rescues, and in facilitating activities for domestic preparedness, emergency planning, and disaster response.

Creating a Standards of Cover (SOC) document requires the research, study, and evaluation of a considerable array of community features. The following report will begin with a descriptive overview of FMBFCD and the area that it serves. Following this overview, an all-hazards risk assessment provides an analysis of potential risks and describes activities the Department employs to mitigate those risks. Current deployment and performance was assessed to determine the capabilities and capacities that are available. Benchmark statements and baseline performance support FMBFCD’s ability to meet distribution and concentration metrics. The report concludes with plans for maintaining and improving capabilities, as well as policy recommendations to address gaps in performance or desired outcomes.

Throughout the document several “accreditation building blocks” will be highlighted, drawing a direct link between the community risk assessment-standards of coverage and the requirements of the fire department accreditation process as administered through CFAI.

Core Competency or Performance Indicator
Description of the core competency or performance indicator with the most important phrases or words underlined for emphasis.

This SOC is demonstrative of FMBFCD’s continued commitment to regular community risk assessment (CRA). The Agency has adopted a formal process of reviewing and assessing risk as an annual process. FMBFCD anticipates that regularly revisiting and revising the SOC and CRA will allow the agency to stay on top of changes in the community as well as enable staff to efficiently distribute and plan for resources allocated throughout the jurisdiction.

Fort Myers Beach Fire Control District would like to thank all members for their continued dedication to the citizens and visitors to the district and for the commitment to continuous improvement embodied by the accreditation process.

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## **Standards of Coverage Process**

A fire department's Standards of Cover (SOC) document is defined by the Commission on Fire Accreditation International (CFAI) as the "adopted written policies and procedures that determine the distribution, concentration and reliability of fixed and mobile response forces for fire, emergency medical services, hazardous materials and other technical types of responses." For the elected body and district administrators to have confidence that their fire department is meeting the needs of the community, a complete assessment of the risks must be honestly undertaken. Only after the application of a proven and consistent risk assessment model is made can a fire department develop an SOC performance contract.

It is the responsibility of an agency to provide the District's decision makers with an educated calculation of the expected risk, what resources are available to respond to that risk, and what outcomes can be expected. All of these factors play a role in providing the community's emergency services. It is best practice that communities set response standards based on the identified risks within their jurisdictions. Fire departments that do not apply a valid risk assessment model to their community are not able to adequately educate their community leaders of their true needs. The application of a tested risk assessment model allows the fire department and elected officials to make educated decisions about the level of emergency service they desire.

### **Section A- Documentation of Area Characteristics**

The Fort Myers Beach Fire Control District (FMBFCD) is a full-service fire district providing fire suppression, emergency medical services (EMS), fire prevention, hazardous materials, and technical rescue services for over 9,000 full time residents, with a peak population of 40,000 during peak season. The district has an estimated 1.8 million visitors occupying the 10 square miles of the District's response area that make up this small corner of Southwest Lee County Florida, which covers the Estero and San Carlos islands, as well as a portion of the contiguous mainland. The town of Fort Myers Beach has an estimated total area of 6.2 square miles (16 km<sup>2</sup>), of which 2.9 square miles (7.5 km<sup>2</sup>) is land and 3.3 square miles (8.5 km<sup>2</sup>) (53.41%) is water. FMBFCD is governed by a five-member commission elected by district residents, each serving a term of four years. The district is funded by an annual millage rate set by the Fire Commissioners assessed on property within the district. The district employs 70 professionals.

### **Section B- Description of Agency Programs and Services**

The FMBFCD is a Special Independent District of Florida, which operates by the governance of a five-member Board of Fire Commissioners. The Board works with the Fire Chief in establishing the vision for the organization, strategic and long-range planning objectives, as well as overseeing financial activities. The Fire Chief then coordinates with his administrative staff through a paramilitary organizational structure to oversee department functions through three distinct branches:

- **Operations** - Fire /EMS Response Services, Support Services, Health Services and Professional Standards.
- **Life Safety** – Life Safety Division and Information Technology
- **Finance** - Documentation and Policy Management, Benefit Administration, Purchasing Processes, and Budgeting.

### **Section C- All-Hazard Risk Assessment of the Community**

A comprehensive risk assessment analyzed the physical, economic, sociologic and demographic aspects of the jurisdiction. The factors that drive the service needs were examined in a precise and scientific manner to determine the capabilities necessary to adequately address the risks that are present. Each of the major natural and manmade risks evaluated received a clearly defined probability and consequence ranking. Service areas that either had little quantitative data, or did not require that level of analysis, were evaluated through both retrospective analysis as well as structured interviews with District staff members. Final call types from the CAD data file were classified into the program areas of EMS, Fire, Hazmat, Other, and Technical Rescue based on District leadership decisions, and were assigned a risk classification based on District leadership criteria.

### **Section D- Community Feedback**

This 2022-2025 Fort Myers Beach Fire Control District Strategic Plan features a comprehensive perspective on the current conditions, stakeholder feedback and expectations; mission, vision, and values; goals, objectives, and critical tasks; and measures. Strategic planning is fundamentally about looking forward and backwards. It emphasizes that organizations have limits and must choose the best means to accomplish goals. It also means that the organization should understand what is on the horizon and how to respond to future opportunities and threats. More specifically, a strategic plan should help to build resiliency in order to meet community needs over the long term. As with the previous plan, the underlying strategy is to focus on the core services of the District. In doing so, the emphasis remains on those initiatives that create the foundation for excellent service to the community.

### **Section E- Program Goals and Objectives**

The major programmatic goals and objectives for FMBFCD have been captured in their most current strategic plan which covers 2022-2025. As a tool for District management, the Strategic Plan should be considered as a living document. It provides short-term direction for a 0-3 year period, builds a shared vision, sets priorities and objectives, and optimizes resources. The strategic priorities listed describe the ultimate aim, or target, of an activity. These form the logic and ultimate direction to support activity. They are suitable for reporting in the context of District documents or in its Annual Report. Objectives are more specific in that they describe the steps that are to be taken to accomplish the priority. Tasks describe activities that staff may take to accomplish a particular objective. It is important to note that because there is considerable overlap throughout the agency, many staff members will be involved in accomplishing the priorities, objectives, and tasks as outlined. Annually, a documented report-out is created by the Fire Chief to share with the Fire Commissioners. The annual reviews identify any gaps in current capabilities, capacity, and the level of service provided within each service delivery area.

## **Section F- Current Deployment and Performance**

This section analyzed the emergency response history of the district by taking a systems level view of current performance, establishing formal benchmark (what FMBFCD strives to attain) performance measures, and analyzing actual (baseline) performance. Projected growth of the emergency call volume was also evaluated, along with an in-depth look at each first due fire station area to identify areas of concern with elevated risks and lagging performance. Simultaneous calls (call concurrency), Distribution (first unit on scene), Concentration (arrival of the full effective response force), Reliability (how often a unit can answer their own calls), and several other measures were used to paint a clear picture of FMBFCD's performance.

## **Section G- Evaluation of Current Deployment and Performance**

It is imperative that district continuously evaluate their actual performance (baseline performance) versus their established goals (benchmark performance). This section takes a detailed look at the gaps where performance could be improved (noted in red) or is currently exceeding established goals (in green). Important trends can be discerned based upon the risk level (low, moderate, high, extreme) or where the incidents are occurring. The majority of performance gaps were minor in nature, allowing further refinement of the response system to achieve FMBFCD's response time goals.

## **Section H- Plan for Maintaining and Improving Response Capabilities**

A strategic plan, on paper, is a commitment to action. A commitment to action requires an execution strategy. FMBFCD does this by including the development of specific, measurable, attainable, relevant and time-bound goals in the strategic plan. The strategic plan was developed to provide an inclusive continuous improvement framework to address existing gaps and variations for each functional area of the District. Sustaining the work is a critical step in the implementation of a strategic plan. The plan is a living document that supports continuous improvement, rather than a static document that sits on the shelf. The planning team will assess progress and report out in a similar manner to what is shown here; areas of focus, objectives, goals, and tasks are examined to see if the target is still relevant, if more resources need to be allocated, or if adjustments to the strategy need to be undertaken; all to address existing gaps and variations between baseline and benchmark performance.

## **Section I– Conclusion and Recommendations**

Fort Myers Beach Fire Control District is an organization with a total authorized staff of 70 personnel who are committed to saving lives, protecting property, safeguarding the environment, and taking care of their people. Overall, the department is performing well within the current system. The community enjoys high quality services from a professional and well-trained department. The District per unit workload is both reasonable (<13%) and well below the upper recommended threshold (<30%). In other words, the department has a robust deployment strategy, and the existing resources can absorb more work prior to reinvestment due to workload. This provides considerable cost avoidance and long-term expenditure sustainability within the current resource allocation.

The District's distribution and concentration delivery models are appropriately aligned with the District's unique risks. The quantity and locations of the fire stations are well-planned and performing well. However, there are areas that have been identified where the District could make incremental system adjustments to improve.

A succinct list of observations and recommendations can be found in this section, further aiding FMBFCD in charting a path towards continuous improvement. The observations and recommendations address response time performance, station locations, move-up strategies, Rescue unit deployment, workload capacity, brown-out considerations, effective response forces and automatic-aid agreements. All primary recommendations are presented in this section



# Section A – Documentation of Area Characteristics

**Description of Community Served**  
**Description of Area Served**





## Description of Community Served

This section provides legal and historical background pertinent to the delivery of emergency services within the jurisdiction of Fort Myers Beach Fire Control District (FMBFCD). Included in this section are reviews of the legal and governmental structure, overview of the demographics and physical environment, and characteristics of particular areas for which the FMBFCD provides service.

### Documentation of Area Characteristics as it relates to Criterion 2A

The agency collects and analyzes data specific to the distinct characteristics of its legally defined service area(s) and applies the findings to organizational services and services development.

### Introduction

The FMBFCD is a full-service fire district providing fire suppression, emergency medical services (EMS), fire prevention, hazardous materials, and technical rescue services for over 9,000 full time residents, with a peak population of 40,000 during peak season. The district has an estimated 1.8 million visitors occupying the 10 square miles of the District's response area that make up this small corner of Southwest Lee County Florida, which covers the Estero and San Carlos islands, as well as a portion of the contiguous mainland.

The town of Fort Myers Beach has an estimated total area of 6.2 square miles (16 km<sup>2</sup>), of which 2.9 square miles (7.5 km<sup>2</sup>) is land and 3.3 square miles (8.5 km<sup>2</sup>) (53.41%) is water. The District is bordered by the Iona-McGregor fire district and the Bonita Springs fire district. The FMBFCD covers their responding area with a closest unit response system from three fire stations with an administrative headquarters located at Station 31. FMBFCD also responds about 25% of its total call volume outside its jurisdiction through automatic aide

FMBFCD staffs two (2) ALS Engines, one (1) ALS Truck, two (2) ALS-transport Rescues, and one (1) Battalion Chief on a three shift schedule. Daily minimum staffing is 14 personnel with three (3) personnel on Engines and Trucks to include at least one member with a Paramedic Certification. Rescue units have two (2) personnel with at least one (1) Paramedic. To ensure the continuity of operations and safety, the following minimums have been established:

A minimum of two promoted officers must be on-duty. This can be accomplished with:

- ◆ A minimum of at least two promoted Company Officers or,
- ◆ A combination of at least one promoted Company Officer and one promoted Battalion Chief

A minimum of one promoted Driver Engineer must be on-duty.

The Community and its economy are driven and supported largely by tourism. Fort Myers Beach, true to its name, has 26 public beach accesses on Estero Island and is known as a favorite destination of many locals, snowbirds, and vacationers with miles of white sandy beaches. The county is also known for its tarpon fishing, recreational boating, and championship golf courses.

## Legal Basis

The FMBFCD is a legally established and incorporated Independent Special District in full accordance with Title XIII, Chapter 191 of the Florida Statutes. The District is legally established to provide specialized government services in the form of emergency response Fire, EMS and Prevention services throughout its defined jurisdiction.

### Performance Indicator 2A.1

Service area boundaries for the agency are identified, documented, and legally adopted by the authority having jurisdiction.

As prescribed in Special Act House Bill No. 1507, the District is governed by a five-member board elected by residents of the District. The Board has four officer positions to include a Chairman, Vice-chairman, a Secretary, and a Treasurer. The Board maintains the special powers prescribed by Chapter 95-468, Laws of Florida, and Chapter 191, F.S. The Board appoints a Fire Chief to operate as the Chief Executive Officer of the District. Functioning under the delegated authority of the Board, the Fire Chief is responsible for all administrative and operational functions of the District.

## History of the Agency<sup>1</sup>

The following is a synoptic history of the fire district derived from the Fort Myers Beach Observer and Beach Bulletin.

The District began as a volunteer fire department in 1949 by the Beach Improvement Association, Inc. with Earl Howie as its first appointed chief. With a population of 2,500 residents in 1950, the district incorporated as the Fort Myers Beach Fire Control District, Inc. adding a fire rescue truck to its existing spray pump, tank, and trailer. The Florida Legislature organized FMBFCD as a special taxing district in 1951, instituting the Fort Myers Beach Fire Control District.

**Figure 1. Early Fort Myers Beach Fire Control and Rescue District Fire Engine**



Shortly thereafter, Mr. and Mrs. Donald and Ora Zimmer donated land for the construction of Fire Station #1 (Station 31 today) on Estero Boulevard. The Zimmer's donated the land with the understanding that the property remains a fire station, or reverts to family ownership. Throughout the remainder of the 1950s, the district grew. The district funded the fire chief and captain positions, acquired additional equipment (a 1947 Jeep and new Ford engine), levied taxes on real and personal property, approved the first burn ordinance and promoted Nicholas Briuglia to chief.

The District experienced considerable growth throughout the 1960s. In 1960, Joseph Busta was promoted to chief. In that same year, the district acquired property, additional trucks, communication equipment, and received a radio license. That year, Hurricane Donna hit the beach on September 10, 1960 with 117 mile per hour winds, causing 26 million dollars worth of damage at the time. The storm caused severe financial shortfalls for the district due to extensive recovery efforts. In 1961, the district acquired an additional parcel from the Zimmer family for station expansion. Between 1961 and 1962, the Fort Myers Beach Equipment Vehicle Inc. and the Fort Myers Beach Rescue Unit formed as not-for-profit organizations. The Rescue Unit transported patients to Miner Corner for ambulance service to the hospital.

<sup>1</sup> Retrieved from <https://www.fortmyersbeachtalk.com/2009/06/24/fire-district-60-years-of-rescue-fires-and-transport/>

In 1962, Chief Thomas was promoted. In 1963, the district's territory expanded to the mainland, establishing its current boundaries. Also, in 1963 the Fort Myers Beach Rescue Unit, Inc. and all of its properties were transferred and became an official division of the FMBFCD. FMBFCD became one of only two districts in Lee County to handle ambulance calls.

In 1966, the district received a Certificate of Need (CON) license and a \$2,500 vehicle to operate an ambulance service. Also in 1966, the district constructed a two-story addition to Fire Station 31. In 1969, the district purchased a new rescue vehicle and promoted Eugene Goetze to chief. Two years later Goetze resigned and was replaced by Robert G. Cornwell as acting chief. Cornwell was replaced shortly thereafter by Al Bradford, who was promoted to probationary chief.

**Figure 2. Fort Myers Beach 1960's**



In 1972, Chief Bradford resigned, and Lowell Hill took his position. In May 1976, the Fort Myers Beach Professional Firefighters Union formed. This caused considerable conflict between firefighters and the Commission over a three-year period. In 1978, Chief Hill resigned amidst the turmoil and was replaced by John Duke. The conflict culminated in lawsuits, strikes, and the 1979 resignation of all fire commissioners. Still the district seemed to be moving forward as property was leased and a second station opened in 1978. The growth was short-lived as the district scaled back operations in 1979 due to financial constraints, terminating its fire prevention activities and closing the newly built station. More change was evident throughout the 1980s.

In 1980, Chief Duke resigned and was replaced by John McCarthy. At that time, the district's programs included a medical director, a fire apprentice program, and programs for educating schoolchildren on safety behavior. In addition, the district reinstated its fire prevention activities, and the Fire Commission was expanded from three to five elected members. In 1981, enabling legislation authorized the Fire Board to determine millage and operate an ALS ambulance. Station 2 (Station 32 today) opened in a different location that better served the residential and commercial patterns in 1983. The FMBFCD added equipment to better support medical emergencies on the waterways and address cardiac emergencies.

Despite these positive changes, there was continual turnover in the administrative staff. Chief McCarthy was suspended in 1983 and was replaced by Assistant Chief Mulac with Fire Marshal Weatherby as assistant chief. McCarthy was subsequently reinstated with Mulac and Weatherby moving back down to assistant chief and fire marshal, respectively. Months later, Mulac and Weatherby were accused of misappropriating funds and were terminated.

During the 1990s, the district suffered severe financial setbacks because of poor administrative decisions and the Save Our Homes amendment. Chief McCarthy was placed on leave in 1995 for mismanaging the districts' finances to the point of bankruptcy and James Bradford took his position. In 1997, Bradford was replaced by Doug Desmond as acting chief, until Stephen Markus, from the Lehigh Acres Fire Department was hired. Doug Desmond then resumed his position as assistant chief. Chief Markus served for nine years, during which time he worked to reestablish the district's funding base.

The District's finances were also affected by the 1992 Save Our Homes amendment to the Florida Constitution. This amendment limited the increase in assessed value for properties receiving the Homestead Exemption to no more than 3% or the increase in the Consumer Price Index. The cap on property tax limited the financial capacity of all local governments and special districts budgets.

Despite rapid demographic growth and a healthy tax base, the district spent the latter part of the 1990s recovering financially. From 1990 to 2000, 5 employees were hired and no new stations were constructed. Also significant was the 1995 incorporation of the Town of Fort Myers Beach. Prior to incorporation the fire district was solely within the jurisdiction of Lee County; after 1995 the fire district also operated within the Town of Fort Myers Beach, requiring the fire district to work with both local governments.

**Figure 3. Fort Myers Beach Today**



The development of Fort Myers Beach has continued to the present day where year-round and seasonal residents coexist with a vibrant business community oriented to the steady stream of island visitors. As early as 1935 the residents of Fort Myers Beach began discussing incorporation. In 1995 Lee County's approval of high-rise development on Estero Island brought incorporation efforts to a successful passage, as a referendum passed to incorporate Estero Island to engage citizens of the island in the preservation of their own small-town character. After legislation was enacted by the State of Florida, on December 31, 1995 the Town of Fort Myers Beach was born. Currently, FMBFCD is governed by a five-member commission elected by district residents, each serving a term of four years. The district is funded by an annual millage rate set by the Fire Commissioners assessed on property within the district. The district employs 68 professionals.

The FMBFCD provides a variety of services to include Fire Suppression Services, Emergency Medical Advanced Life Support (ALS) on all apparatus, ambulance transport, hazardous materials incident response, fire permitting, fire plan review, fire code enforcement, new construction services and public education services. The District's annual operating budget is primarily funded through property tax collection, fees for services, and impact fees.

The EMS Division of FMBFCD was awarded the American Heart Association's Mission: Lifeline® EMS Award for their success rate in treating patients who experience a severe heart attack, known as an "ST Elevation" Myocardial Infarction. The District is one of only two departments in Lee County with this designation. This last year was a historic year in the community, thanks to the positive interaction from the increased public awareness campaign, increased interactions with the community, and an aggressive and proactive inspection program. The Fort Myers Beach community has set a record for the lowest fire loss in the community in its history. Over the last twelve calendar months, the community has sustained only \$4,480 in fire loss. Only one of these fires directly impacted a structure resulting in an estimated \$500,000 saved.

A six-year review of fire loss in the community demonstrates a dramatic reduction in 2019, which coincides with a fully staffed Life Safety Division, and increased community outreach. This historical accomplishment was made possible thanks to the hard work of the community in heeding safety messages concerning the dangers of fire in the home and working towards ensuring their properties are fire code compliant. It is also thanks to the efforts of the Life Safety and Operations team for the time and commitment devoted to educating the community about being fire safe!

One of the most significant accomplishments in Support Services was the establishment of the Division Program Management System. This system encourages, engages, and empowers members to help address departmental and community needs. This results in employees' involvement in the management of the organization at all levels and achieves a more efficient response to needs. With the advent of this new internal initiative, the Support Services Program saw additional internal teams formed. These included Operational Technology, which manages the valuation, implementation, and training of operational staff on new Department Technology. The other new Support Services component helps to coordinate, evaluate, implement, and assist with health, wellness and safety functions, community events, and community outreach programs.



## Jurisdiction

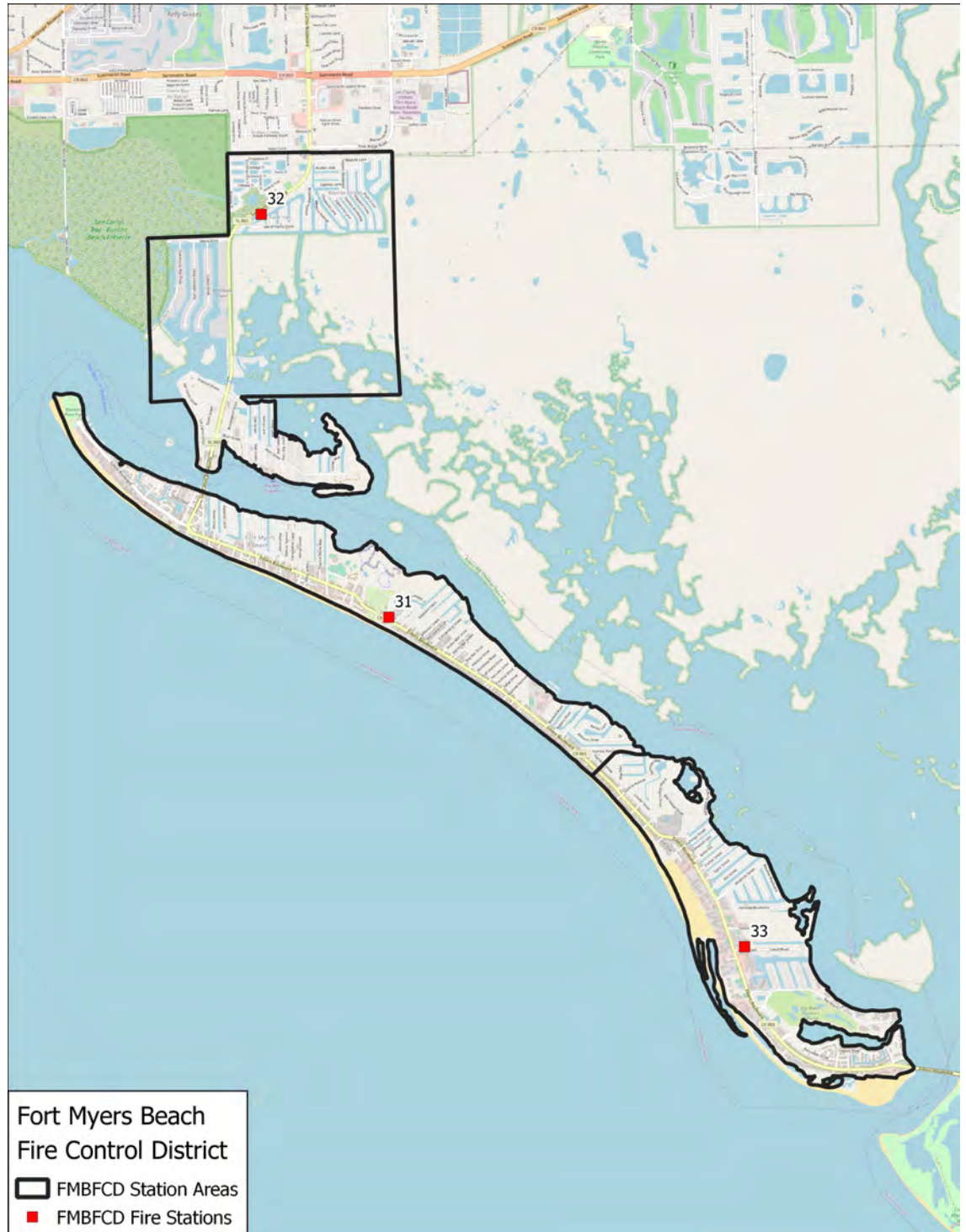
The FMBFCD is in Southwest Lee County Florida, covering the Estero and San Carlos islands as well as a portion of the contiguous mainland. The District is bordered by the Iona-McGregor fire district and the Bonita Springs fire district. The FMBFCD covers a 10 square mile area with three fire stations and an administrative headquarters, it also responds outside its jurisdiction through an automatic aid and a closest unit response system.

**Core Competency 2A.3**

The agency has a documented and adopted methodology for organizing the response area(s) into geographical planning zones.

**Figure 4. Fort Myers Beach Fire Control District Overall Jurisdictional Map**

The FMBFCD has adopted a fire station demand zone methodology for organizing the jurisdiction's response area into geographical planning zones. The District is currently divided into three geographically distinct planning zones. These zones have resource allocation strategies based on measured risk.



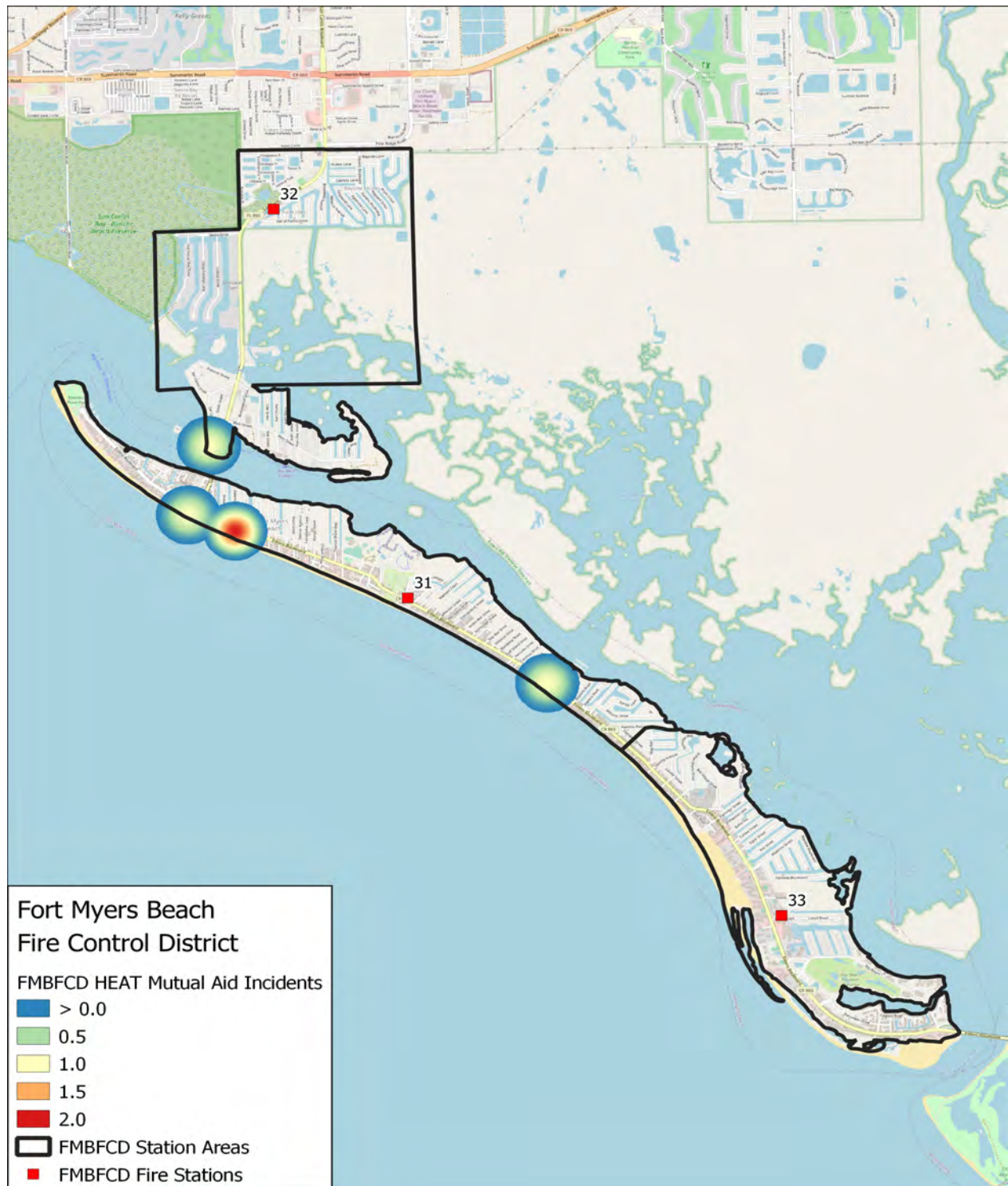
## Auto/Mutual Aid

FMBFCD maintains an active relationship with the surrounding agencies receiving 155 automatic aid response to 88 calls (4% of the volume within the District) during 2019-20. Conversely, FMBFCD provided 991 auto-aid response to 745 incidents (24% of their total volume) in the same period. The associated heat map shows that the limited amount of automatic aid occurs within just a few areas of the district.

**Performance Indicator 2A.2**

Boundaries for other service responsibility areas, such as automatic aid, mutual aid and contract areas, are identified, documented, and appropriately approved by the authority having jurisdiction.

**Figure 5. Fort Myers Beach Fire Control District’s Mutual Aid**





## Population Overview

### Population and Density

The Town of Fort Myers Beach is located in Lee County Florida. It is the 197<sup>th</sup> largest city in Florida and the 3,939<sup>th</sup> largest city in the United States. Spanning over 6.2 miles, the Town has a population split between full time, seasonal, and visitor population.

The District’s jurisdiction covers the Estero and San Carlos islands as well as a portion of the contiguous mainland. Over the approximate 10 square miles, the population density within the District averages 917 people per square mile. The District serves a population of 10,675 according to current U.S. Census Bureau data<sup>3</sup>.

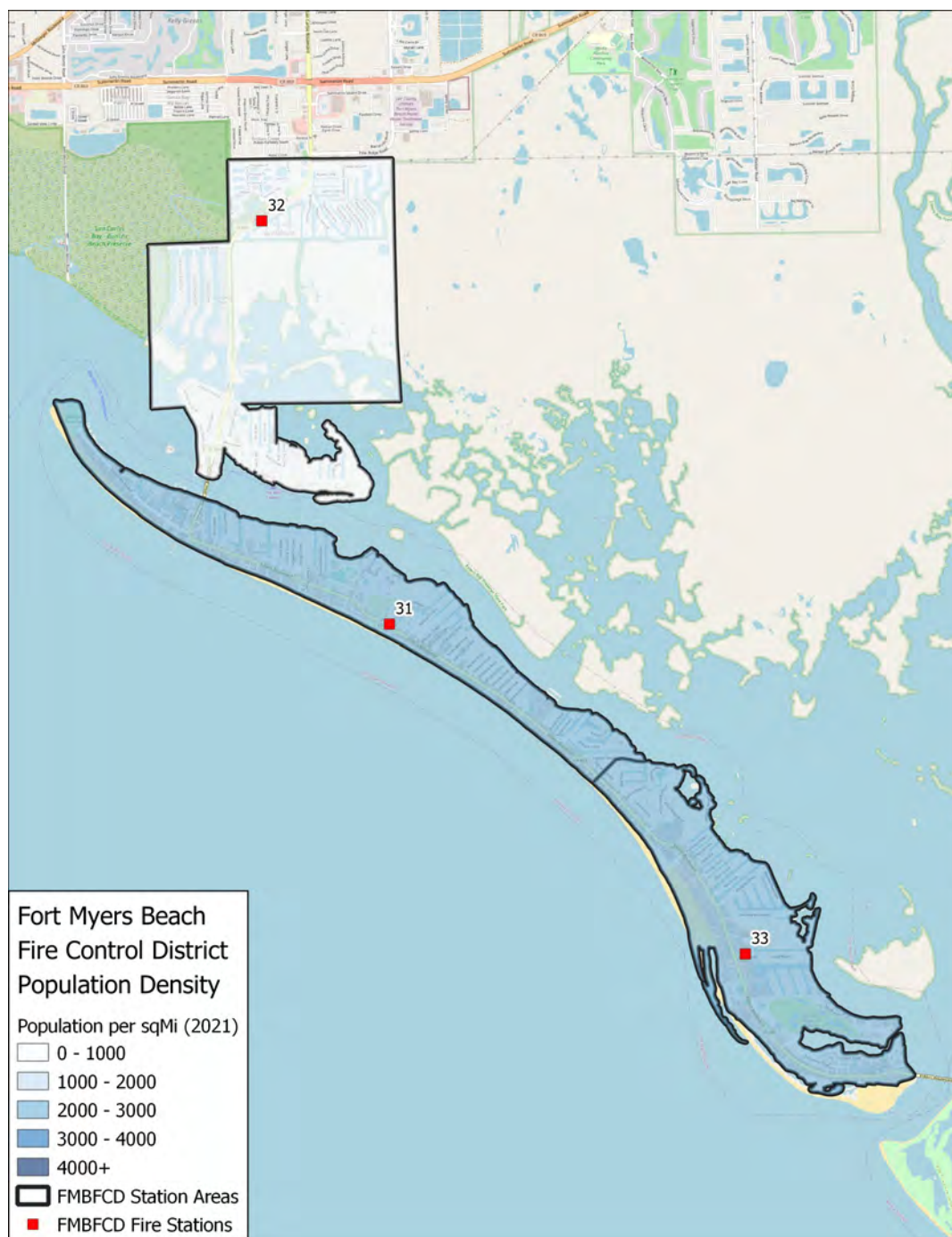
### Demographics and Growth

The District’s demographical makeup is primarily white with the number of seniors over 60 YOA making up 71.8% of the population, representing an extremely large portion, while the number of people in their late 20s to early 40s is extremely small. There are also an extremely small number of single parents and a large number of single adults. The percentage of children under 18 living in the District’s jurisdiction is extremely small compared to other areas of the country. Of note, previous U.S. Census data (2010) showed that the District’s population had been in decline over the previous 10 years, decreasing to 10,005 from 10,461. However, the current to 2024 projected growth rate for the District is predicted at > 0.2% to 2.7% .

#### Core Competency 2A.4

The agency assesses the community by planning zone and considers the population density within planning zones and population areas, as applicable, for the purpose of developing total response time standards.

**Figure 6. FMBFCD Population Density by Station**





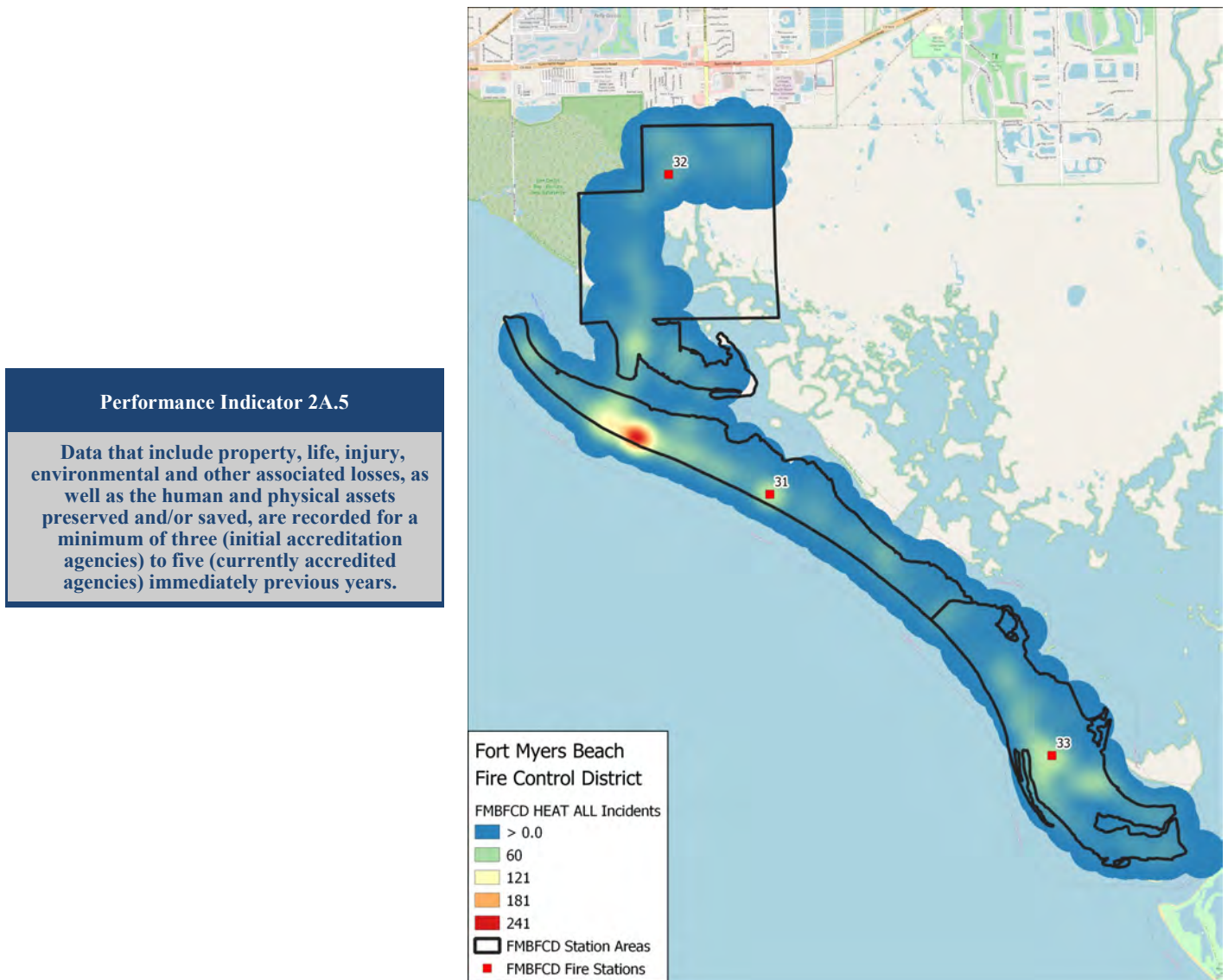
## Data Overview

A 2016-17 to 2019-20 community demand snapshot indicates that the overall community demand for services has remained relatively stable with an aggregated growth of just 6% over the rating period. In 2019-20, the agency responded to 3,264 total incidents, or 8.9 unique incidents per day.

**Table 1. Incidents Dispatched by Call Category and Period**

Call Category	Reporting Period <sup>1</sup>			
	2016-17	2017-18	2018-19	2019-20
EMS Total	2,500	2,097	2,094	2,507
Fire Total	484	398	440	606
Hazmat Total	11	16	10	24
Mutual Aid Total	3	7	9	12
Rescue Total	81	94	65	115
Total	3,079	2,612	2,618	3,264
Average Calls per Day <sup>2</sup>	8.4	7.2	7.2	8.9
YoY Growth	N/A	-15.20%	0.20%	24.70%

**Figure 7. 2018-2020 FMBFCD Incident Demand Heat Map**



## Description of Area Served

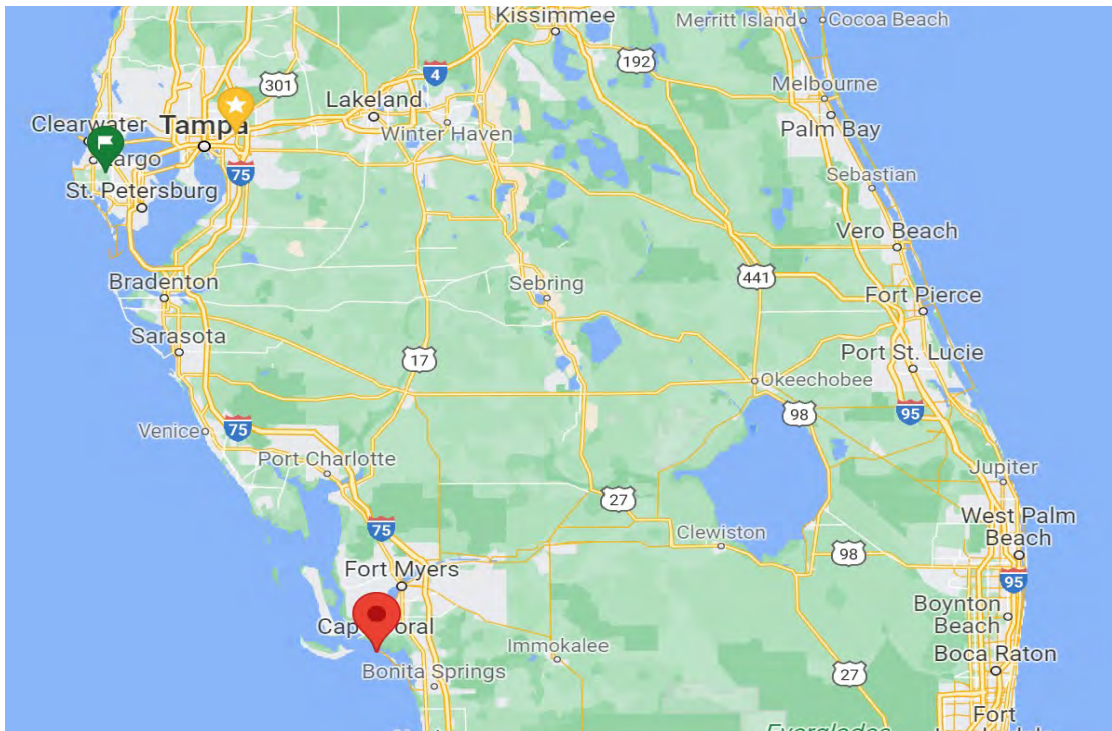
### Geography

The FMBFCD is located on Estero Island, a narrow barrier island over 6 miles long (11km) between Estero Bay and the gulf. The District also protects a portion of unincorporated mainland adjacent to the northern access point of the island. The Town of Fort Myers Beach is 15 miles (25 km) south of Fort Myers, and Sanibel Island is just west of that city. For the purposes of this report, the geographical coordinates of Fort Myers Beach are 26.453 deg latitude, -81.950 deg longitude.

**Performance Indicator 2A.6**

The agency utilizes its adopted planning zone methodology to identify response area characteristics such as population, transportation systems, area land use, topography, geography, geology, physiography, climate, hazards, risks, and service provision capability demands.

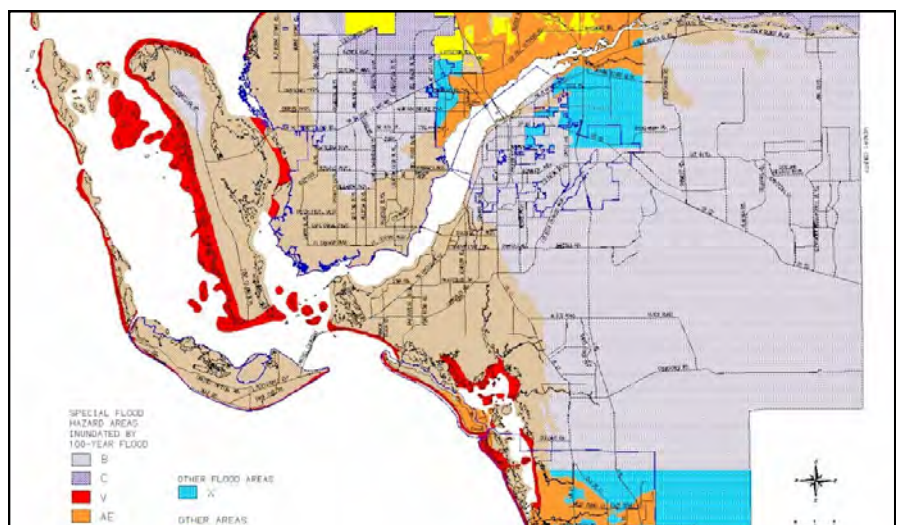
**Figure 8. FMBFD Geographical Location as Compared to Florida**



### Topography<sup>4</sup>

The topography within 10-75 miles of the District is essentially flat, with a maximum elevation change of 3 feet and an average elevation above sea level of 1 foot. The area within 2 miles of Fort Myers Beach is covered by water (53%), mangroves (20%), and artificial surfaces (16%), within 10 miles by water (51%) and artificial surfaces (32%), and within 50 miles by water (49%) and herbaceous vegetation (20%).

**Figure 9. Flood Map of Lee County, FL<sup>5</sup>**



<sup>4</sup> Retrieved from: <https://www.google.com/maps/place/Fort+Myers+Beach,+FL+33931/@26.9464488,-82.3313839,8z/data=!4m5!3m4!1s0x88db378c2c2e58e7:0xd4cfd60809b83052!8m2!3d26.4520248!4d-81.948145>

<sup>5</sup> Retrieved from: <https://www.fortmyersbeachfl.gov/DocumentCenter/View/14259/2019AHGfinalmap-all>



### Geology<sup>6</sup>

The District primarily rests upon shell beds and Holocene sediments consisting of quartz sand with small amounts of clay and organic matter. The Holocene sediments are primarily in the island and coastal areas. The inland portion of the District is primarily shell beds of undifferentiated materials. This geographical profile is very consistent for the south western coastal regions of Florida.

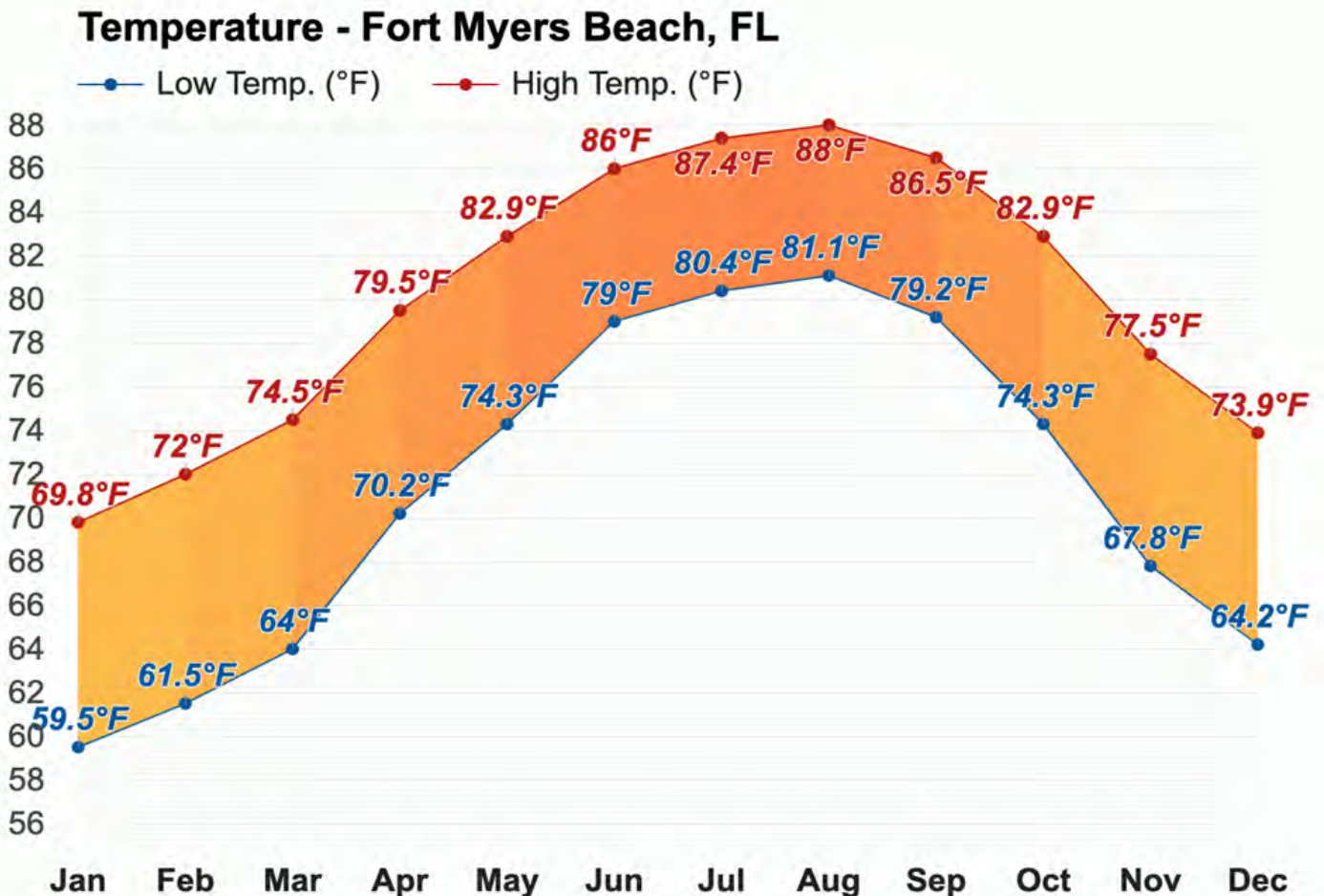
**All-Hazard Risk Assessment and Response Strategies as it relates to Criterion 2B**

The agency identifies and assesses the nature and magnitude of all hazards and risks within its jurisdiction. Risk categorization and deployment impact considers such factors as cultural, economic, historical, and environmental values, and operational characteristics.

### Climate<sup>7</sup>

The District has a humid subtropical climate with warm, humid summers and cold winters. The average summer temperatures range from 71.1 to 89.1 degrees Fahrenheit with the peak temperature taking place during the month of July. The coldest month of the year is January with average temperatures ranging between 38.7 to 59.6 degrees Fahrenheit. Fort Myers Beach is prone to thunderstorms during the summer and flooding amid heavy rainfall. August is the month that typically brings the most rainfall, averaging 7.8 inches, while November is the driest month, averaging only 2.5 inches of precipitation. The average annual rainfall per year is 52.1 inches. The average hourly wind speed in Fort Myers Beach experiences significant seasonal variation over the course of the year. The windier part of the year lasts for 7.7 months, from September 24 to May 13, with average wind speeds of more than 8.1 miles per hour.

Figure 10. Average Annual High and Low Temperatures Fort Myers Beach, FL<sup>8</sup>



<sup>6</sup> Retrieved from: <https://ufdc.ufl.edu/UF00099169/00001/30x>

<sup>7,8</sup> Retrieved from: <https://www.weather-us.com/en/florida-usa/fort-myers-beach-climate>

## Physiography/Disaster Potentials<sup>9</sup>

The District is vulnerable to natural hazards of hurricanes, flooding, severe weather conditions, and tornadoes. In addition, the District is also vulnerable to technological (human-caused) hazards associated with pandemics, hazardous materials spills, terrorism, civil disturbances, and transportation accidents. A snapshot of the overall hazard probability is referenced in Table 2 below. These specific hazards are discussed in detail in the Community Characteristics of Risk section.

The entire incorporated area of the Town of Fort Myers Beach is located within an area of Coastal High Hazard as defined in Florida Statutes, Chapter 163.3178. All life and property on Estero Island is especially vulnerable to destruction by high winds and flooding caused by hurricanes, and their accompanying tornadoes and heavy rainfall. Large areas of the island are subject to damage from wave action of flood waters. Life and property may also be endangered by the insufficient precautions of others when wave action batters structures with unsecured debris and wreckage of destroyed structures. Evacuation is limited by the two exit points from the Town, necessitating advanced warning. Additionally, during a wind event, bridges may be closed thus limiting response on and off the island.

Afterward, utility services may be disabled, and may continue to be nonfunctional for extended periods; public safety may be impaired through lack of police and fire protection and emergency medical response; downed power lines, gas leaks, and damage to structures can cause safety hazards; and necessities such as food, fresh water, and gasoline may be unavailable for extended periods of time.

Tropical weather is the most likely event to affect the Town of Fort Myers Beach, however, the Town is vulnerable to other emergency events. The Lee County Local Mitigation Strategy (LMS) identifies the following additional hazards as potential threats to our community: coastal erosion, drought/extreme heat, and terrorism, pandemic, civil unrest and collateral effects from disasters and emergencies from other parts of Florida.

The Town of Fort Myers Beach has adopted the Lee County Comprehensive Emergency Management Plan (CEMP), which includes flood/surge impact scenarios and the County flood warning plan for Estero Island. Additionally, the Town adopted the Lee County LMS that contains a detailed risk analysis outlining potential damage to town residences, businesses and infrastructure.

**Table 2. Community Risk Probability Profile<sup>10</sup>**

Natural Hazard Profiles	Annual Probability
Animal/Plant Disease Outbreak	0.5 to 1
Coastal Erosion	> 1
Drought/Extreme Heat	< 0.5
Epidemic/Pandemic Diseases	0.5 to 1
Flood	> 1.0
Freeze/Extreme Cold	0.5 to 1
Storm Surge Flooding	< 0.5
Sustained Wind (Tropical Cyclones)	0.5 to 1
Thunderstorm Winds/Lightening/Hail	> 1.0
Tornado	> 1.0
Wildfire	0.5 to 1
Manmade Hazard Profiles	Annual Probability
Aircraft Crash	< 0.5
Cyberattack	< 0.5
Hazardous Materials Release	< 0.5
Mass Casualty/Mass Fatality	< 0.5

**All-Hazard Risk Assessment and Response Strategies as it relates to Criterion 2B**

The agency identifies and assesses the nature and magnitude of all hazards and risks within its jurisdiction. Risk categorization and deployment impact considers such factors as cultural, economic, historical, and environmental values, and operational characteristics.

<sup>9</sup> Accessed from <https://www.fortmyersbeachfl.gov/DocumentCenter/View/15015/Emergency-Preparedness-Plan-2020?bidId=>

<sup>10</sup> Retrieved from: [https://www.lee.gov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.lee.gov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)

## Human Related Characteristics

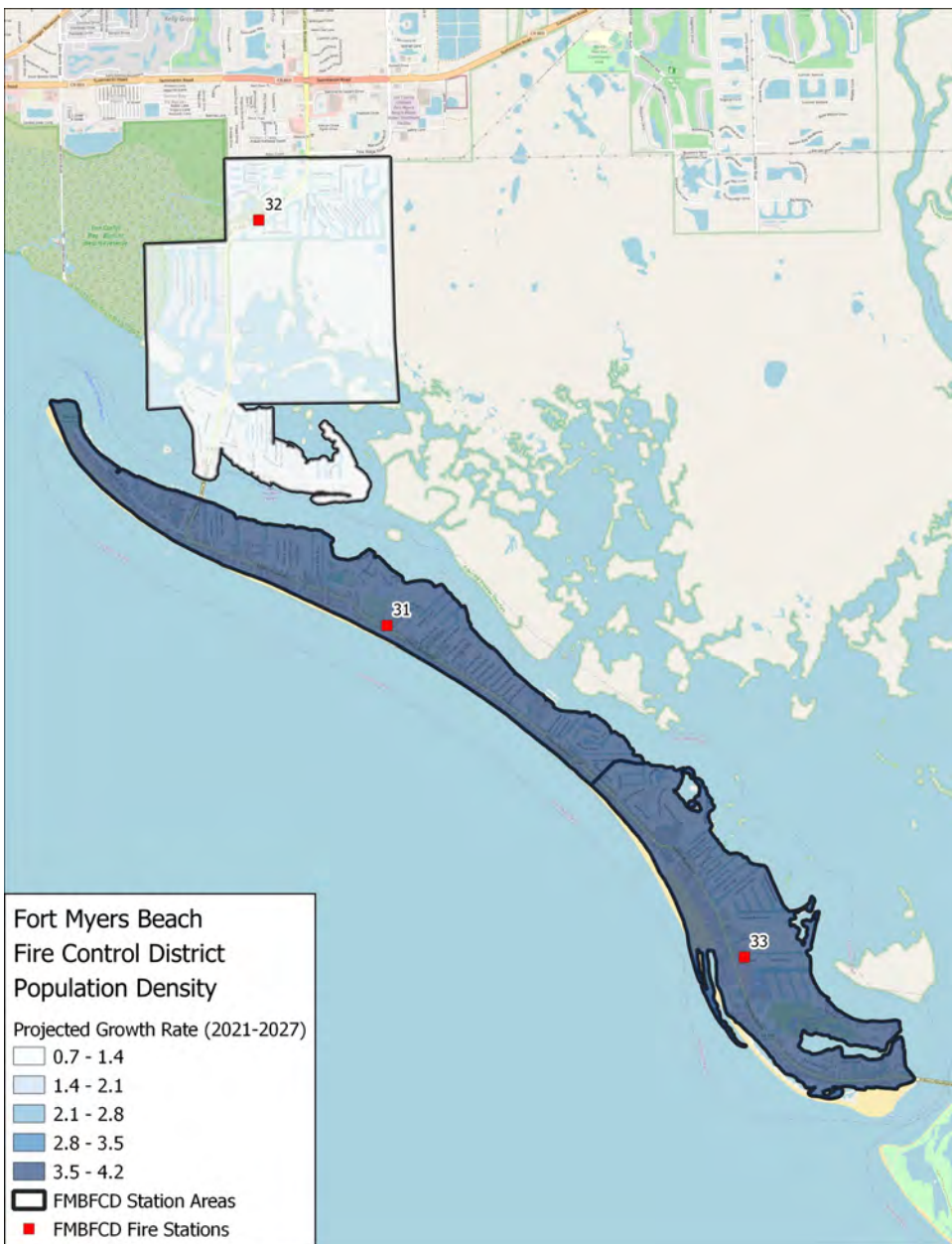
### Population Growth

Lee County Florida is the 9<sup>th</sup> largest county in Florida, and the 2010 Census showed the county's population was 620,449 and has seen a growth of 29.39% during this time. Currently Lee County Florida has an estimated population of 802,791 according to the most recent United States census data. This is an important factor on the impact to the Fire District's population. While the District's growth rate is much smaller, (projected at > 0.2% to 2.7% ) an important factor to remember is the daily average of visitors to the District's jurisdiction. The District on average has around 5,000 visitors a day, not including the fluctuation of seasonal residents.

**All-Hazard Risk Assessment and Response Strategies as it relates to Criterion 2B**

The agency identifies and assesses the nature and magnitude of all hazards and risks within its jurisdiction. Risk categorization and deployment impact considers such factors as cultural, economic, historical, and environmental values, and operational characteristics.

**Figure 11. Annual Projected Growth between 2019-2024**



### Age Demographics<sup>11</sup>

According to the United States Census Bureau, persons under 5 years of age account for 1.1 % of the population in the District, persons under 18 account for 3.7% of the population, and persons over 60 for 71.8% of the population.

Generally, older populations and very young populations are considered to be most vulnerable to the frequency and incidents of fire. In addition, older populations historically utilize EMS services with greater frequency. It is important to understand, what field crews often recognize intuitively, that the distribution of population risks while seemingly uniform across the jurisdiction can be greatly affected by tourism and the 1.8 million visitors a year.

<sup>11</sup> U.S. Census. (2019) retrieved from: [https://data.census.gov/cedsci/table?q=ZCTA5%2033931,%20Florida&g=8600000US33931\\_8610000US33931&tid=ACSTSY2019.S0102](https://data.census.gov/cedsci/table?q=ZCTA5%2033931,%20Florida&g=8600000US33931_8610000US33931&tid=ACSTSY2019.S0102)



## Socioeconomic Characteristics

In the District, growth and age of population are not the sole variables that influence demand for services, additional factors such as socioeconomic and demographic factors can ultimately have a greater influence over demand. For example, median household income in the District was evaluated to determine to what degree does the community have socioeconomically challenged populations.

According to the latest data provided by the U.S. Census Bureau, the median household income in the District is reported at \$35,205.00 with approximately 10.6% of the inhabitants below the poverty level.<sup>12</sup> The data further shows that 58.7% of the population makes \$50,000 dollars or less in yearly income, while 20.1% make \$75,000.00 or more.<sup>12</sup> These types of monetary variability can impact personal healthcare and prevention practices which impact District services.

**Performance Indicator 2A.7**

Significant socioeconomic and demographic characteristics for the response area are identified, such as key employment types and centers, assessed values, blighted areas, and population earning characteristics.

**Figure 12. FMBFCD Jurisdictional Median Household Income by Station Area**



<sup>12</sup> U.S. Census. (2019) retrieved from: <https://data.census.gov/cedsci/table?q=ZCTA5%2033931,%>

**Diversity**

Another cultural factor is Diversity. The District is 96.8% white alone, not Hispanic or Latino, 0.1% African American, 0.2% American Indian, 0.5% Asian, 2.1% Hispanic or Latino, and 0.2% pacific islander.

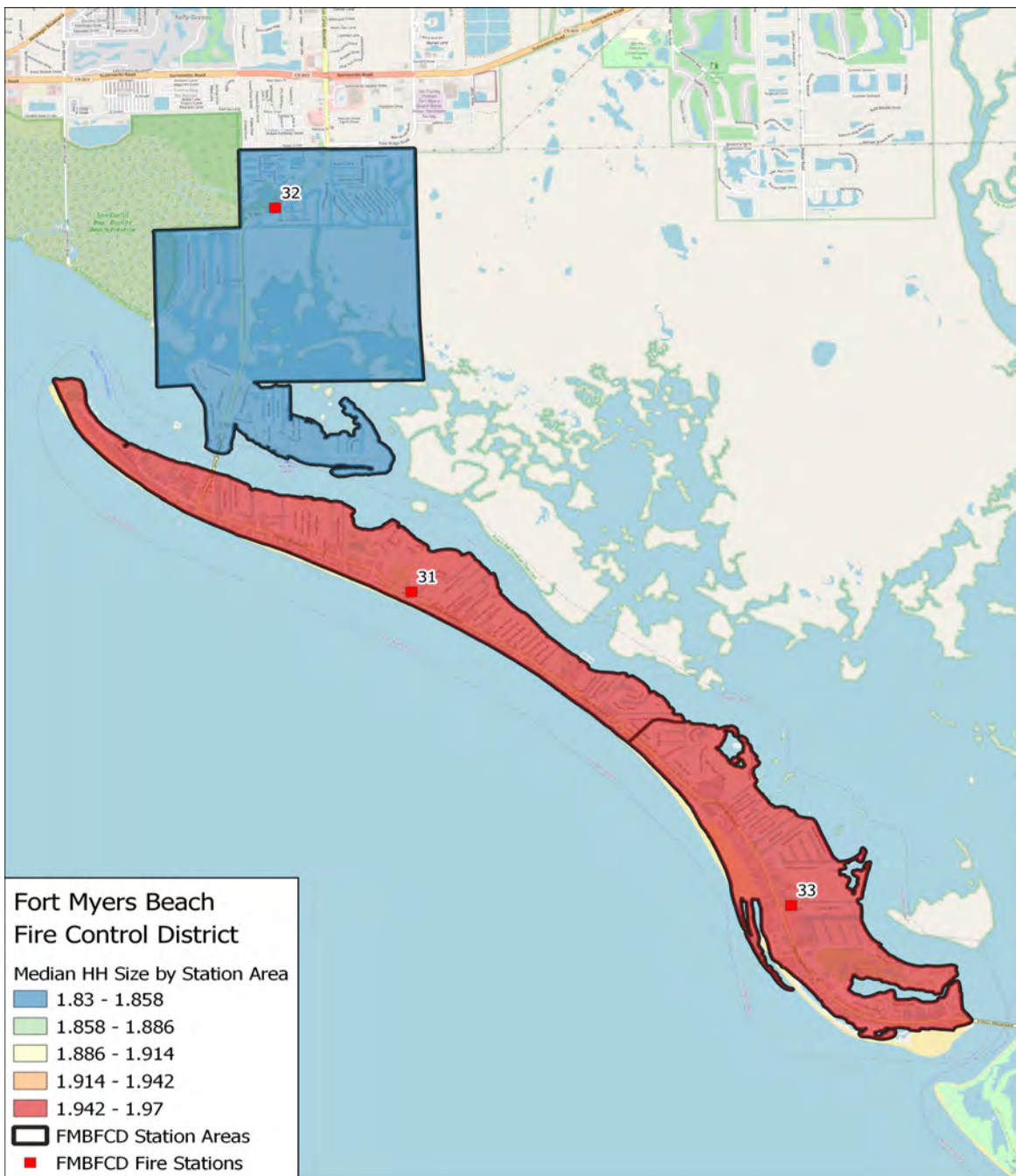
**Household Size**

Household size is another socioeconomic factor, with more densely populated and inhabited areas often posing more life safety risks during certain types of emergencies. The District in the latest Census Data has 5,467 Households of which 3,319 are total families with an average family size of 2.25 across the District’s population.

**Performance Indicator 2A.7**

Significant socioeconomic and demographic characteristics for the response area are identified, such as key employment types and centers, assessed values, blighted areas, and population earning characteristics.

**Figure 13. FMBFCD Median Household Size by Station Area**





## Area Economics

Economic conditions have a direct impact on the District’s revenues and the demand for services. Therefore, the information presented in the financial statements is perhaps best understood when it is considered from the broader perspective of the specific economic environment from around which the District operates.

The Fort Myers Beach economy is an urban-tourism base which services over 1.8 million visitors each year as well as a peak season resident population of over 40,000. Fort Myers Beach is a well-known and highly frequented Spring Break destination for visitors around the world. The town currently is seeing a rise in demand due to the COVID-19 Pandemic. Florida has become a leading choice for remote workers and their relocation from major metropolitan areas. It is estimated that 845 people are moving to the state per day until 2025.

The largest employers in Lee County by industry are Trade, Transportation, and Utilities, Government, Leisure and Hospitality, and Education and Health services. The largest industry in Ft. Myers Beach is Accommodation & Food Services followed by Healthcare and Real Estate Rental & Leasing.<sup>13</sup>

Florida is ranked as one of the best states to do business due to a low cost of labor, low regulations and zero state income tax. In Florida there is...

- NO Corporate Income Tax on limited partnerships
- NO State Personal Income Tax
- NO Corporate Franchise tax on Capital Stock
- NO State-Level Property Tax assessed
- NO Property Tax on Business Inventories
- NO Sales Tax on Manufacturing Machinery & Equipment
- NO Property Tax on Goods-in-Transit for up to 180 days
- NO Sales and Use Tax on Goods Manufactured or Produced in Florida for Export Outside the State
- NO Sales Tax on Purchases of Raw Materials Incorporated in a Final Product for Resale, including Non-Reusable Containers or Packaging
- NO Sales/Use Tax on Co-Generation of Electricity

Skyplex is an example of business growth the District could potentially benefit from. The proposed commercial development at the Southwest Florida International Airport, has 1,150 acres of real estate zoned for multi-use commercial, light industrial and aviation development. Skyplex could potentially deliver a wide range of aviation and commercial possibilities creating a key employment type and center. The property is strategically located in a Foreign Trade Zone at a major international airport with a direct connection to Interstate 75.<sup>14</sup>

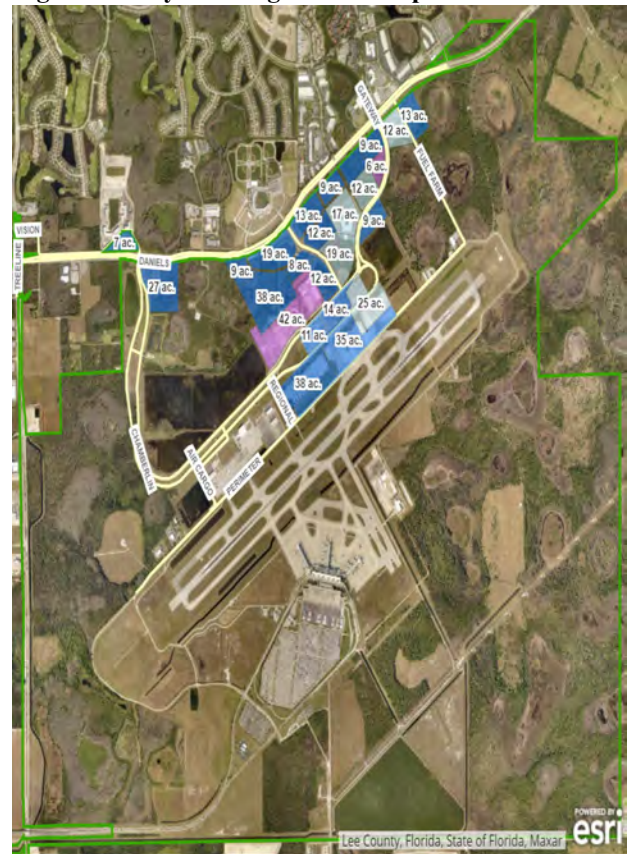
<sup>13</sup> Retrieved from: <https://datausa.io/profile/geo/fort-myers-beach-fl>

<sup>14</sup> Economic Development Information found here: SKYPLEX (arcgis.com)

### Performance Indicator 2A.7

Significant socioeconomic and demographic characteristics for the response area are identified, such as key employment types and centers, assessed values, blighted areas, and population earning characteristics.

Figure 14. SkyPlex targeted Development





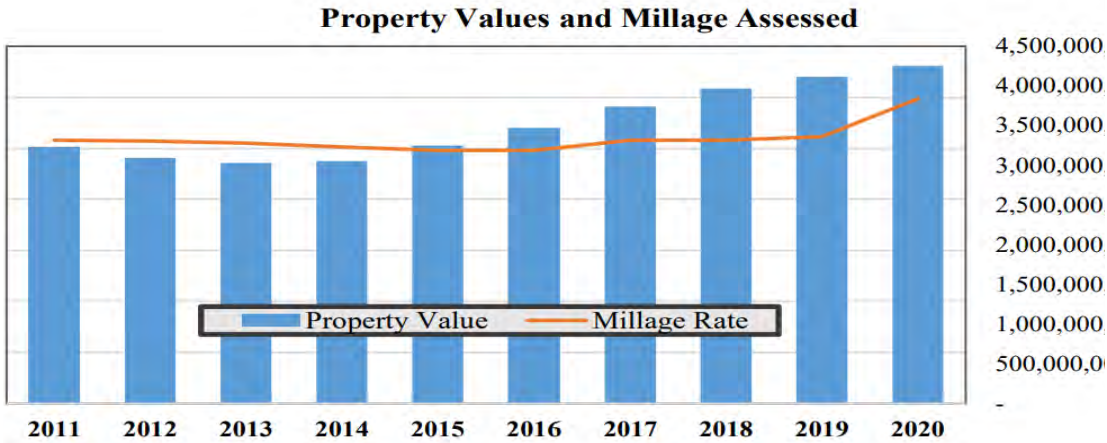
## Revenue<sup>15</sup>

The District’s annual operating budget is primarily funded through property tax collection, fees for services, and impact fees. Property tax revenues tend to be stable, and are a combination of ad valorem which are based on the value of property and non-ad valorem. Impact fees for specific services provided by Fort Myers Beach Fire Control District can fluctuate depending upon need. The current millage rate is 2.9851 which was an increase from the 2019-20 Budget.

**Figure 15. FMBFCD 2020/2021 Budget Specifics**

	<i>Mills</i>
	<b>2.9851</b>
<u>Revenues</u>	
Ad Valorem taxes	12,575,814
Impact fees	5,000
Intergovernmental	28,680
Charges for services	1,060,000
Miscellaneous	240,000
Total Revenue	<u>13,909,494</u>
Fund Balance/Reserves Brought Forward	<u>7,400,000</u>
Total Revenues and Funds Brought Forward	<u><u>21,309,494</u></u>

**Figure 16. Breakdown of District Funding**



The Fort Myers Beach Fire Control District filed for several grants through the Coronavirus Aid, Relief, and Economic Security (CARES) Act for reimbursement of: 1) costs to backfill operational personnel while in quarantine or recovering from illness, 2) costs of personal protective equipment (PPE), 3) cost to decontaminate facilities and apparatus, and 4) recovery of lost transport revenues while the community was closed to vacationing travelers.

While minimal grant awards occurred in 2020, the majority of grant proceeds will likely be funded in 2021. At the request of the Lee County Fire Chiefs Association, the Lee County Board of Commissioners agreed to allocate a portion of their federal Coronavirus Relief Fund (CRF) under the CARES Act, to Special Districts in Lee County.

The District filed the application for a maximum grant opportunity of \$79,760 and will be notified of awards in 2021. For the third consecutive year, the District applied for the Public Emergency Medical Transportation (PMET) grant, allowing for reimbursement of costs to provide transport services to Medicaid patients. This grant aids to bridge the gap between the cost of providing patient transports and the level of reimbursement provided through Medicaid.

<sup>15</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>

### Expenditure Controls and Restrictions

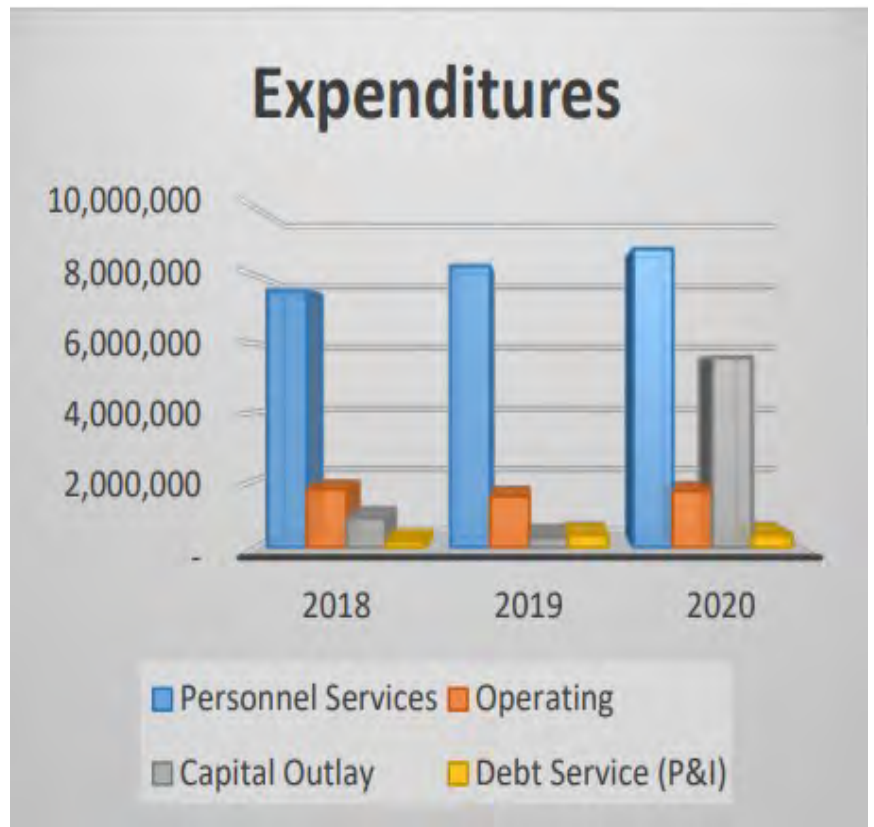
The FMBFCD is a Special District of Florida, which operates by the governance and leadership of a five-member Board of Fire Commissioners. The Board of Fire Commissioners are elected by the Community to serve the District in four-year terms. The Board works with the Fire Chief in establishing vision for the organization, strategic and long range planning objectives, as well as overseeing financial activities.

The District is committed to maintaining a strong general fund balance and has a track record of making hard decisions necessary to do so.

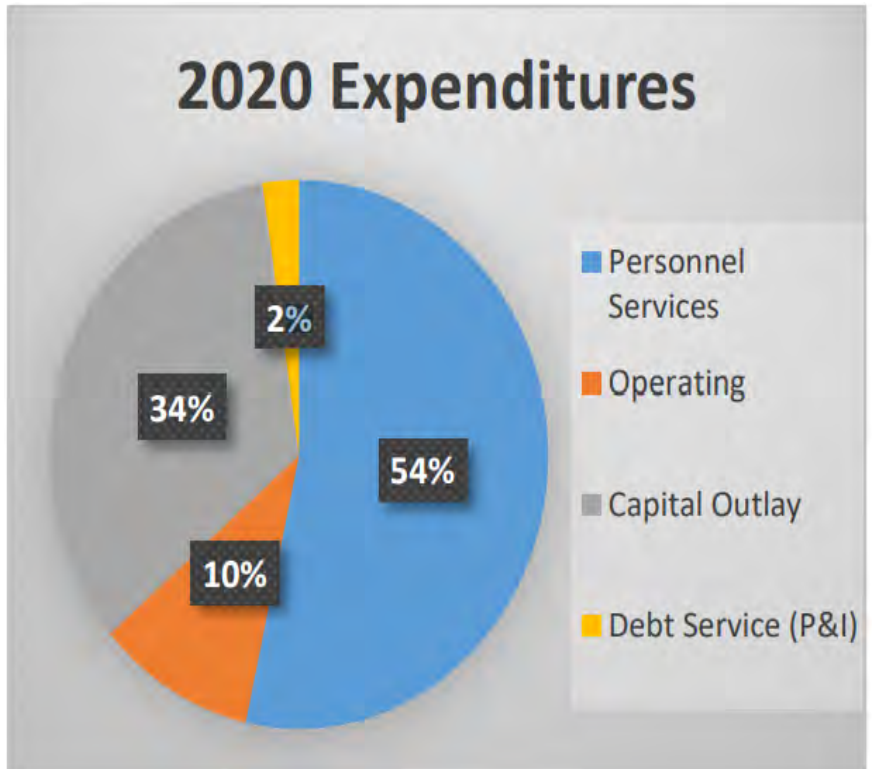
The adopted budget for year ended September 30, 2020 included a millage rate of 2.9851. This millage rate should support an appropriate level of service delivery for the District including a slight increase in operating expenses, provisions for personnel wage increases, and fulfillment of the capital asset sustainment and replacement plan.

The charts illustrate a snapshot of expenditures by categories. Figure 17 is a category comparison to the prior two years Budget Expenditures, while Figure 18 is expressed as the percentage for each individual category in the 2020-2021 Budget.<sup>16</sup>

**Figure 17. 2020 FMBFCD Financial Expenditure Compari-**



**Figure 18. 2020 FMBFCD Expenditure percentage by Category**



<sup>16</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>

## Capital Sustainment Plan

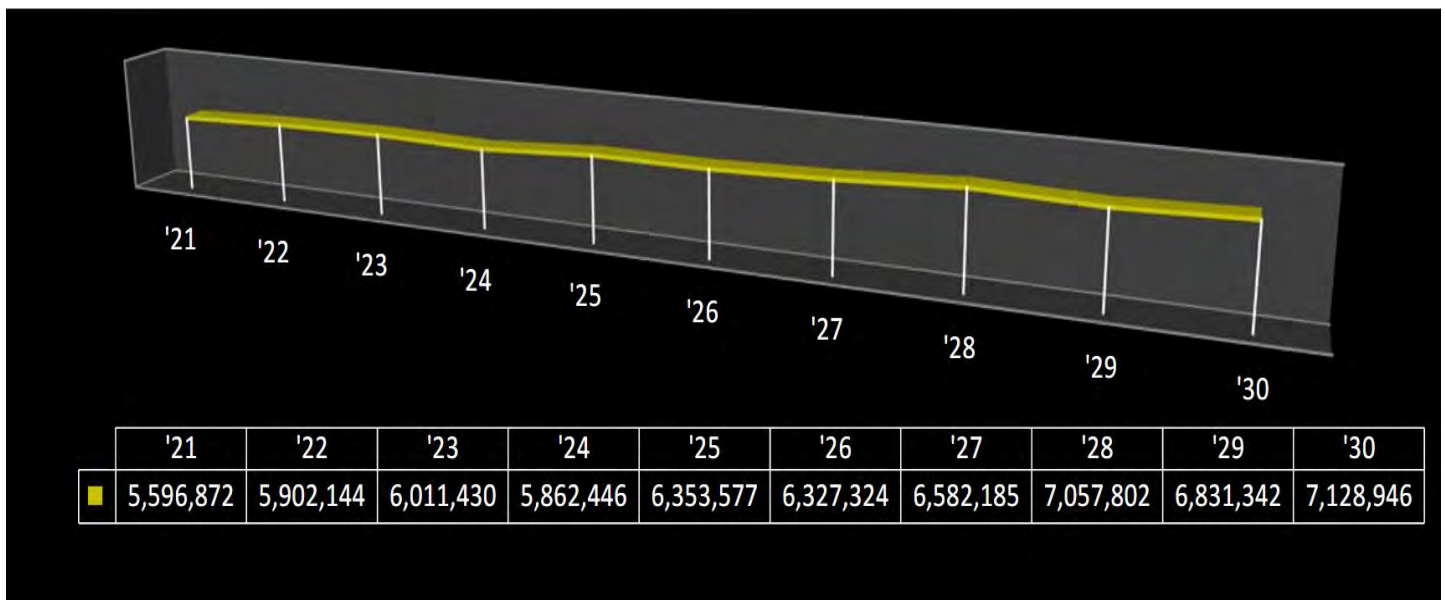
The Capital Sustainment Plan ensures that funding allocations are scheduled to maintain the equipment and tools necessary to provide services. District staff continually assesses replacement data for essential equipment and assets to confirm replacement capability. This allows the organization to plan for key replacement allocations and presents a line item based illustration of funds going into and out of the plan for many years in advance. In July of 2020, the District acquired property located at 2545-2555 Estero Boulevard for the purpose of relocating Fire Station 31 and Fire Headquarters. The funds to purchase the property were taken from the Capital Sustainment Plan with replenishment from planned revenue sources.<sup>17</sup>

Noteworthy capital purchases through September 2020 include:

- Land located at 2455-2555 Estero Boulevard
- Sutphen Aerial Ladder Truck
- Roof Replacement at Fire Station 32
- Two administrative vehicles as part of the scheduled vehicle replacement plan
- Sixteen Motorola Radios
- Training equipment

It should be noted that the Sutphen Aerial Ladder Truck was prepaid in October of 2018 to take advantage of discounts offered by the builder. However, the expenditure was recorded in 2020 when the apparatus was delivered from the factory and placed in service.

**Figure 19. FMBFCD 10 Year Projected Plan Balance**



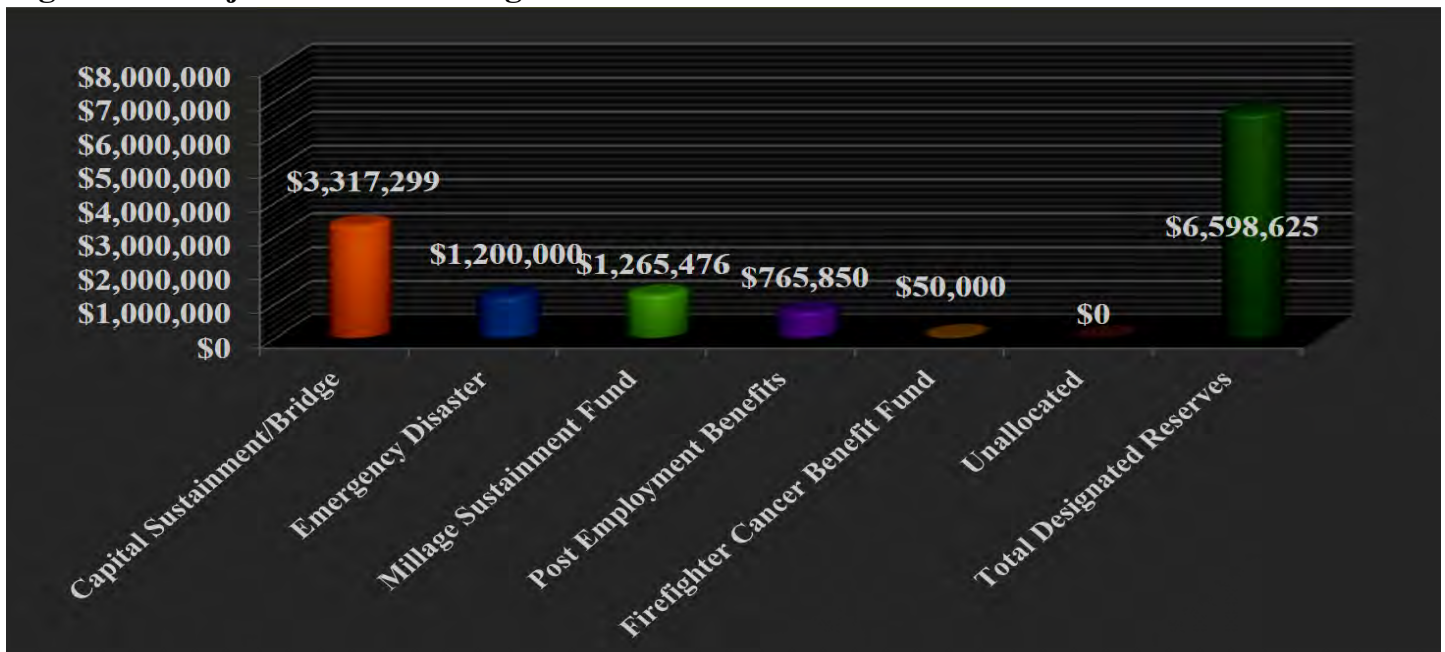
<sup>17</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>



## Reserves and Future Planning<sup>18</sup>

The District assigns reserves designated for specific purposes during the budgeting process each year. The District is required to make appropriations for each fiscal year that do not exceed the amount to be received from taxation and other revenue sources. The Capital Replacement and Sustainment reserve is consolidated with the Operating Bridge. This allows for temporary use of the Capital Replacement and Sustainment reserve for operating purposes during the three month period between October 1st (the beginning of the fiscal year) and receipt of the first substantial tax revenue distribution at the end of November. Consequently, the total reserve is reduced as a result. The District’s reserves represent 46.6 % of the total Operating and Maintenance Budget.

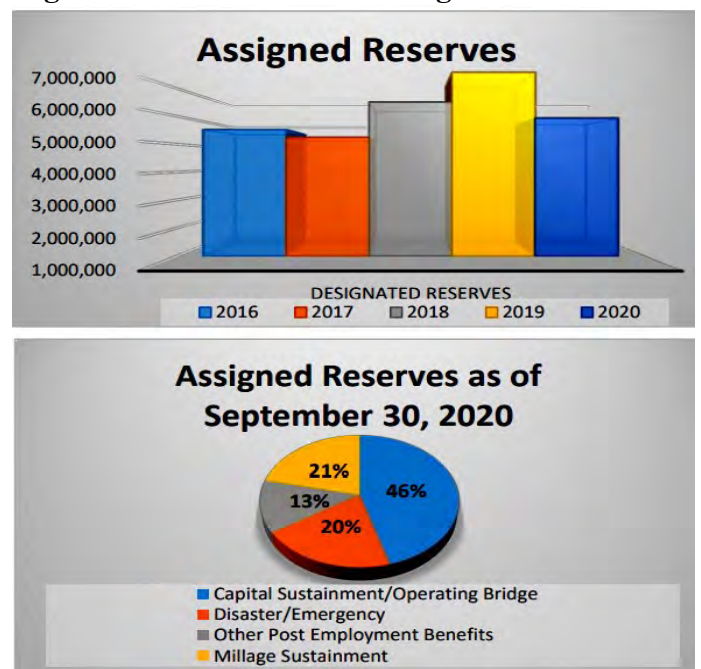
**Figure 20. Projected 2020 Ending Reserve Fund Balances**



**Figure 21. 2020 Operating Budget**

Operating & Maintenance	
Administrative	1,596,550
Operations	11,531,314
Maintenance & Facilities	466,365
Training & Association	192,650
Outreach & Other Services	40,600
Debt Service	332,000
<b>Total Operating</b>	<b>14,159,479</b>

**Figure 22. FMBFCD 2020 Assigned Reserves**



<sup>18</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>

## Human-Made Characteristics

### Development

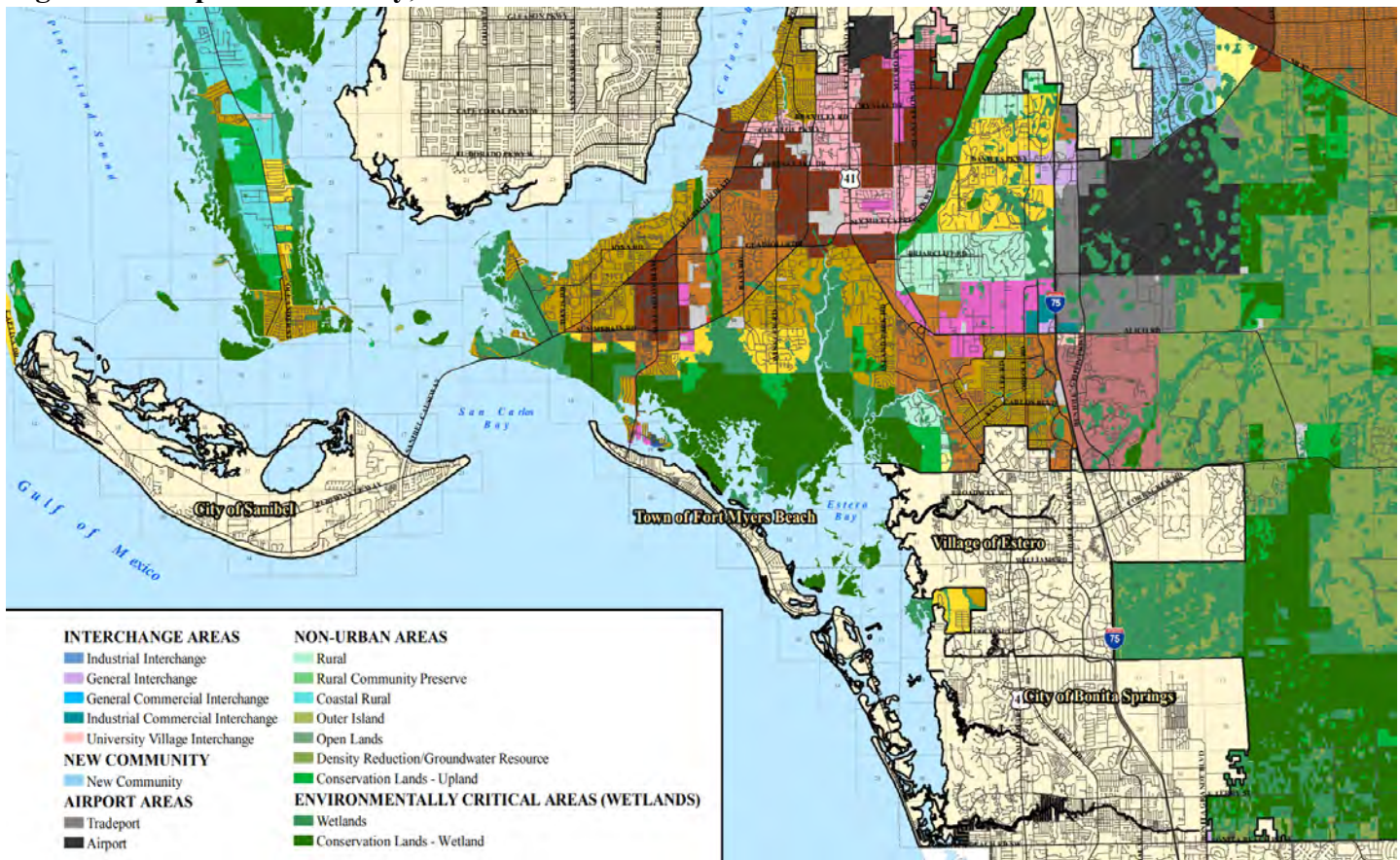
The Town of Ft. Myers Beach maintains a Comprehensive Plan with an effective date of January 1, 1999. The Plan laid out the Town's original vision for future land use development and is currently undergoing an update. Town staff was consulted to identify any potential development changes that would alter the level of risk within the community and ultimately impact the delivery of emergency services from the FMBFCD. Currently, the Town is in the midst of two major developments: 1) a new Margaritaville resort at the base of the bridge on Estero Blvd and Crescent Street, and 2) the infill development of the Bay Beach area and redevelopment of the old Bay Beach golf course. Neither of these developments are expected to substantively alter the community's level of risk.

Lee County's general policy plan has also established several goals for land use that could impact the District. Lee County is consistently ranked one of the nation's job growth leaders, and is home to a diverse business community. The Lee Plan illustrates the 22 Planning Communities which are used to project land uses through the year 2030.

- **GOAL 1: FUTURE LAND USE MAP:** To maintain and enforce a Future Land Use Map showing the proposed distribution, location, and extent of future land uses by type, density, and intensity in order to protect natural and man-made resources, provide essential services in a cost-effective manner, and discourage urban sprawl.<sup>19</sup> (Ordinance No. 94-30)

As shown in Figure below, the District has limited land for future use. The majority of the Barrier Island of the District is close to maximum build out. The land available in the unincorporated mainland of the District has been apportioned for Wetland use and Conservation. Even with new developments mentioned above, there is still a relatively low development growth rate projected for the District.

Figure 23. Map of Lee County, FL Future Land Use<sup>20</sup>



19 Retrieved from: General Policy Plan Information for Lee County, FL retrieved from <https://www.leegov.com/dcd/Documents/Planning/LeePlan/LeePlan.pdf>

20 Retrieved from: Future land use map of Lee County, FL accessed at: <https://www.leegov.com/dcd/Documents/Planning/LeePlan/LeeplanAppendix.pdf>

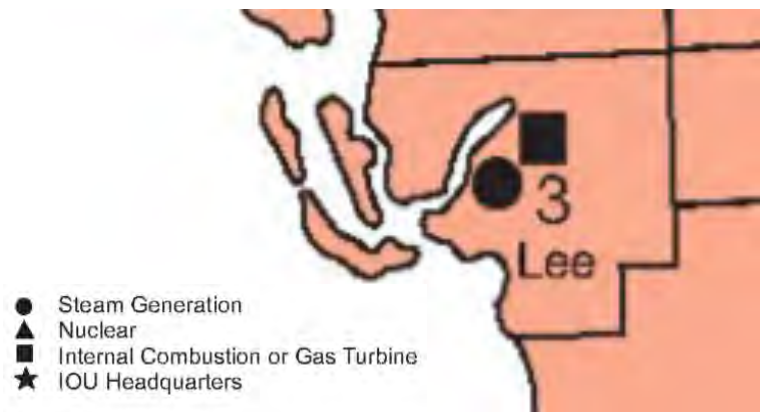


## Infrastructure

### Electric

Florida Power and Light (FPL), is the electricity service provider in the District. FPL is the principal subsidiary of NextEra Energy Inc. The Florida-based power utility company serves roughly 4.9 million accounts and 10 million people in Florida. Figure 28. shows the District is completely within the orange boundary of the FPL service area.

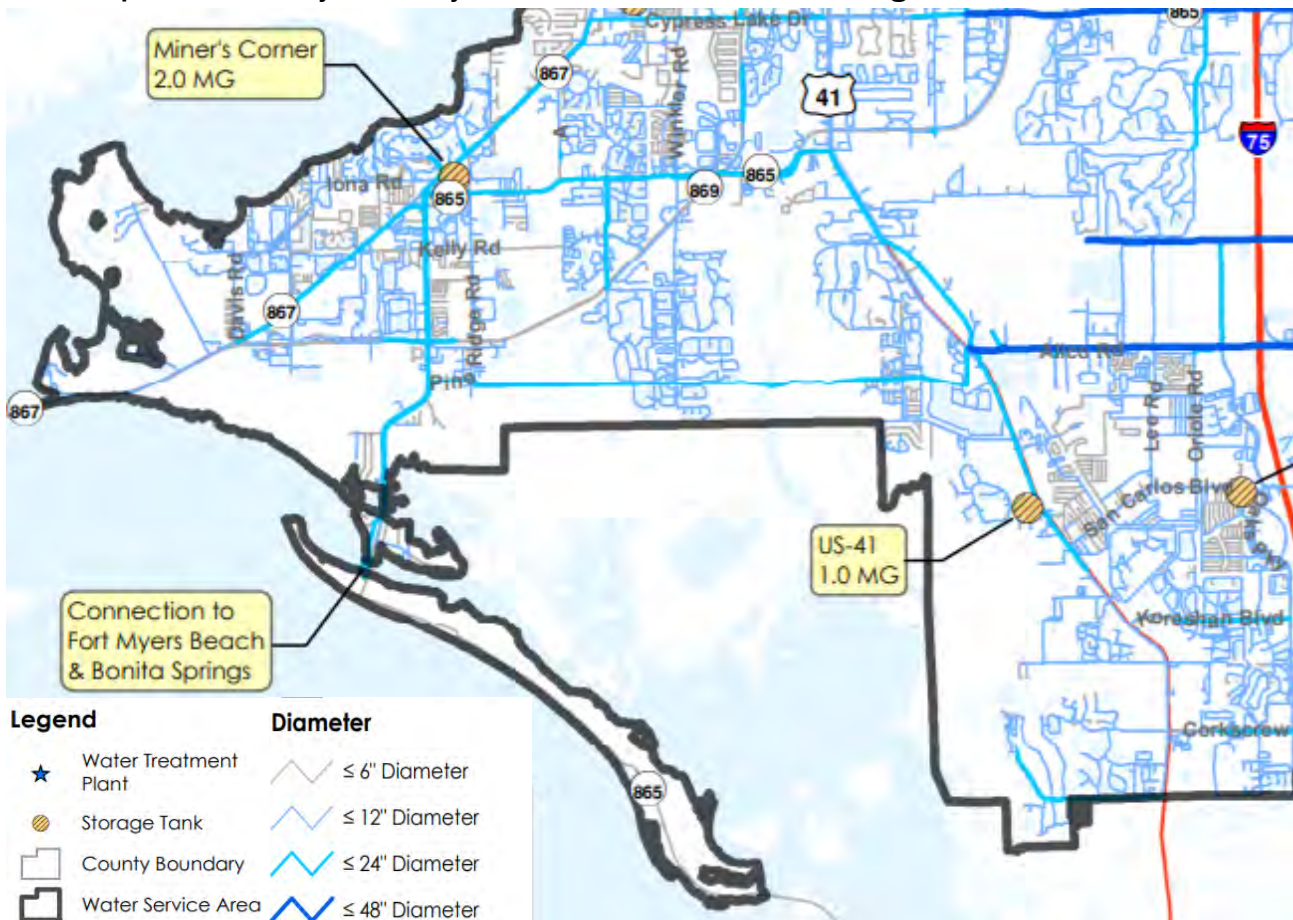
Figure 24. Florida Power and Light Service Area



### Water<sup>21</sup>

Lee County Utilities (LCU) supplies all of the water and water supply infrastructure to the District. LCU owns and operates five water treatment plants (WTP). LCU has a total of ten interconnections with the following surrounding utilities: City of Fort Myers, Cape Coral, and Bonita Springs. These interconnections provide additional reliability in the event of emergencies. The potable water distribution facilities include over 1,434 miles of pipe ranging from 1-inch to 36-inch in diameter, over 85,264 water meters, 27,665 valves, 9,239 fire hydrants, and a total of 35 million gallons of water storage in fifteen active water storage tanks.

Figure 25. Map of Lee County Water System in District and Surrounding Areas



21 [https://www.leegov.com/procurement/Project%20Documents/North%20Lee%20County%20Water%20Treatment%20Plant%20Expansion%20to%2015MGD%20DB200191ANB/2019-Water\\_Master\\_Plan\\_Report\\_DRAFT\\_20191220.pdf](https://www.leegov.com/procurement/Project%20Documents/North%20Lee%20County%20Water%20Treatment%20Plant%20Expansion%20to%2015MGD%20DB200191ANB/2019-Water_Master_Plan_Report_DRAFT_20191220.pdf)

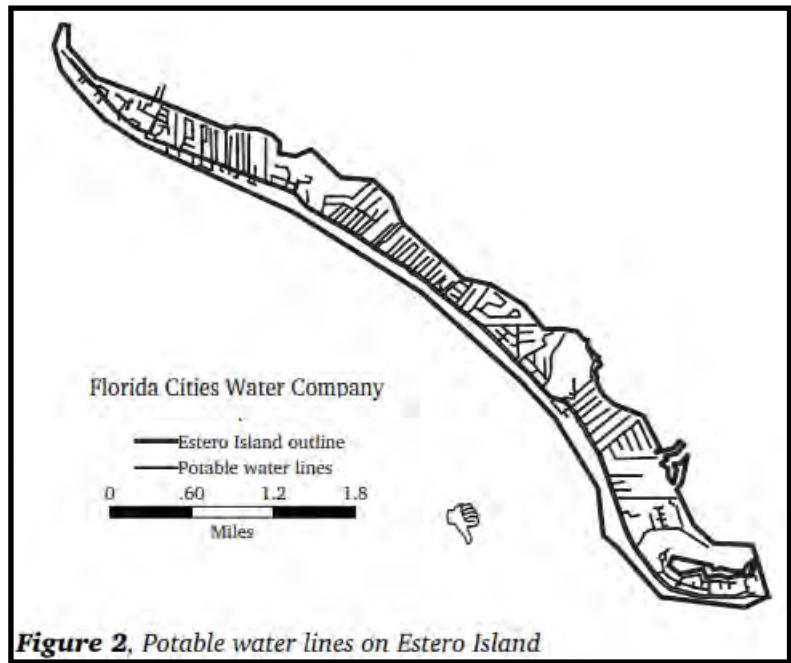
## Infrastructure (continued)

The Town of Fort Myers Beach is a retail provider of drinking water but does not provide other direct utility services. Three major utility services are provided by others:

- Bulk water is provided by Lee County Utilities, a branch of Lee County government;
- Sewer service is provided directly to town residents and businesses by Lee County Utilities; and

### BULK WATER

In August 2001, the Town of Fort Myers Beach entered into a binding contract with Lee County concerning the source of potable water that would be supplied to customers within Town boundaries. The county agreed to be fully responsible for providing a bulk supply of water to the Town, which the Town would then resell to its retail customers.



**Figure 2, Potable water lines on Estero Island**

The county confirmed that its water production and treatment facilities met all state and federal standards (and would meet all future standards), and that the county has and would continue to have the ability to provide sufficient water to the Town for the duration of the agreement (a period of 25 years). The Town agreed not to purchase water from any other source, not to resell this bulk water to any other wholesale customer, and not to construct its own water production and/or treatment facilities.

This contract did not quantify future water demand within the Town, inasmuch as the Town was nearing buildout and little additional demand was anticipated. Continued planning by Lee County Utilities merely assumes that water customers within the Town will require water at the same rates and with the same seasonal patterns as other nearby county water customers.

### SEWER SERVICE

Lee County Utilities, a branch of Lee County government, provides sewer (wastewater) service to the Town of Fort Myers Beach. One of its service areas, known as the Fort Myers Beach/Iona-McGregor Service Area, includes Estero Island, San Carlos Island, and the Iona-McGregor district.

Wastewater collected within the service area is transferred to the Fort Myers Beach Wastewater Treatment Plant where it is treated. A portion of the resulting effluent (after thorough treatment) is redistributed for irrigation purposes.

There are no legal on-site treatment and disposal systems remaining (package treatment plants or septic systems) on Estero Island, and the vast majority if not all structures are connected to the central sewer system in accordance with a mandatory connection policy.

## Major Transportation Features

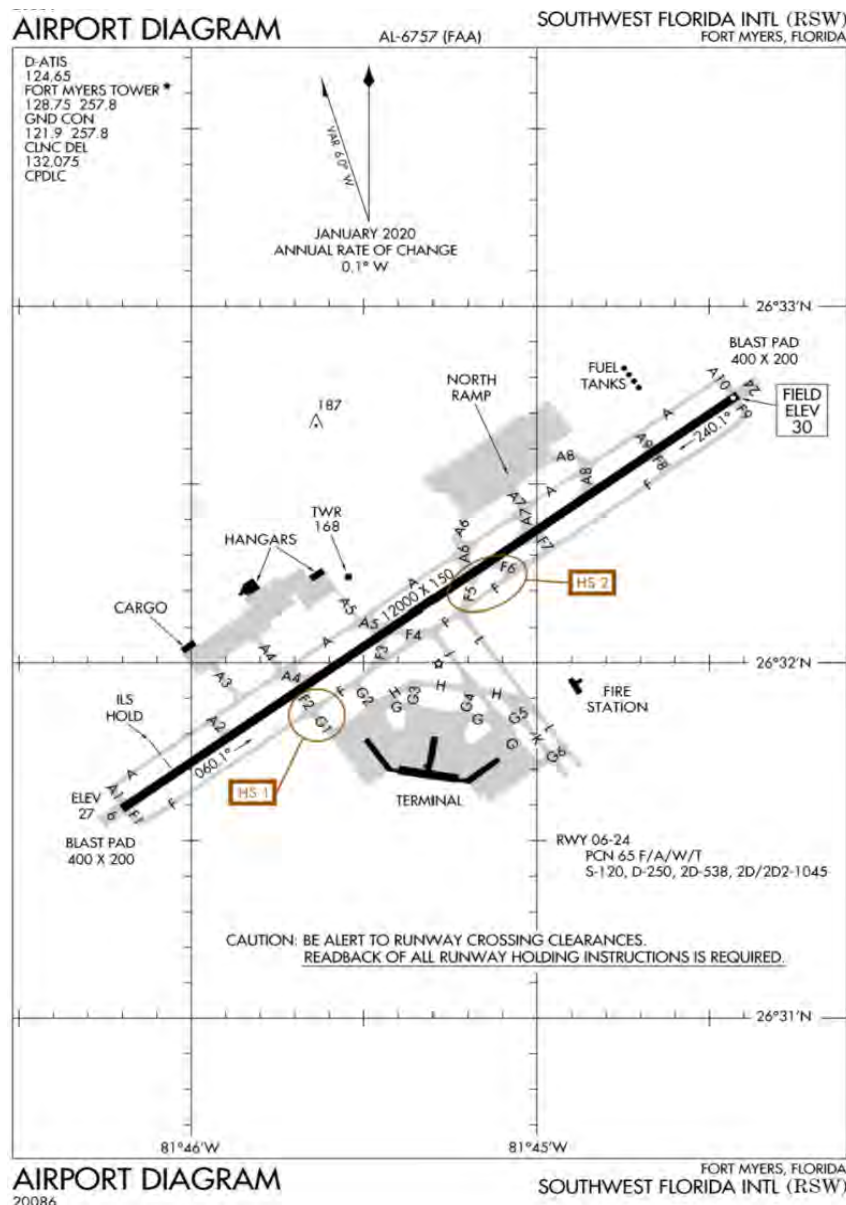
### Airports

Southwest Florida International Airport (RSW), is one of the top 50 airports for passenger traffic in the U.S. and served nearly 6 million passengers in 2020. The airport offers nonstop service throughout the United States, as well as Canada, giving residents and travelers from the Fort Myers Beach Fire Control District convenient access to destinations worldwide. A big part of the energy and growth surrounding Southwest Florida International Airport is from the region it serves including the Town of Fort Myers Beach and its surrounding areas. Located in Fort Myers, the airport serves the Greater Southwest

Figure 26. RSW Airport



Figure 27. Diagram of Southwest Florida International



Florida area, Gulf Islands, as well as other points along Florida's Gulf Coast. Southwest Florida International Airport (RSW). Owned and operated by the Lee County Port Authority, it was certified for operation in May 1983. The Florida Department of Transportation 2018 Economic Impact Study shows the total contribution from airport operations to the region's economy is \$8.4 billion annually.

Southwest Florida International Airport supports over \$83,290 jobs and \$2,846,339,000 in wages to the local area, while offering significant economic contributions to other industries and communities like the Town of Fort Myers Beach by supporting jobs, generating income, and triggering spending at the local, regional, and state level.<sup>22</sup>

22 Retrieved from: [https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/aviation/fdot-eis-executive-summary\\_update.pdf?sfvrsn=e0ce2adb\\_2](https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/aviation/fdot-eis-executive-summary_update.pdf?sfvrsn=e0ce2adb_2)



## Road

State Road (SR) 865 (San Carlos Boulevard) is an urban minor arterial that connects Lee County and the Town of Fort Myers Beach, Florida to the barrier islands of San Carlos and Estero (Florida Department of Transportation (FDOT) Roadway Section Number 12004000). SR 865 serves as the primary evacuation route for the approximately 9,000 permanent full-time residents within the area and is the only access to the area for approximately 11.5 miles (straight line) to the next adjacent bridge to the south that could provide access to the area (Bonita Beach Road/County Road (CR) 865).<sup>23</sup>

Figure 28. S.R 685



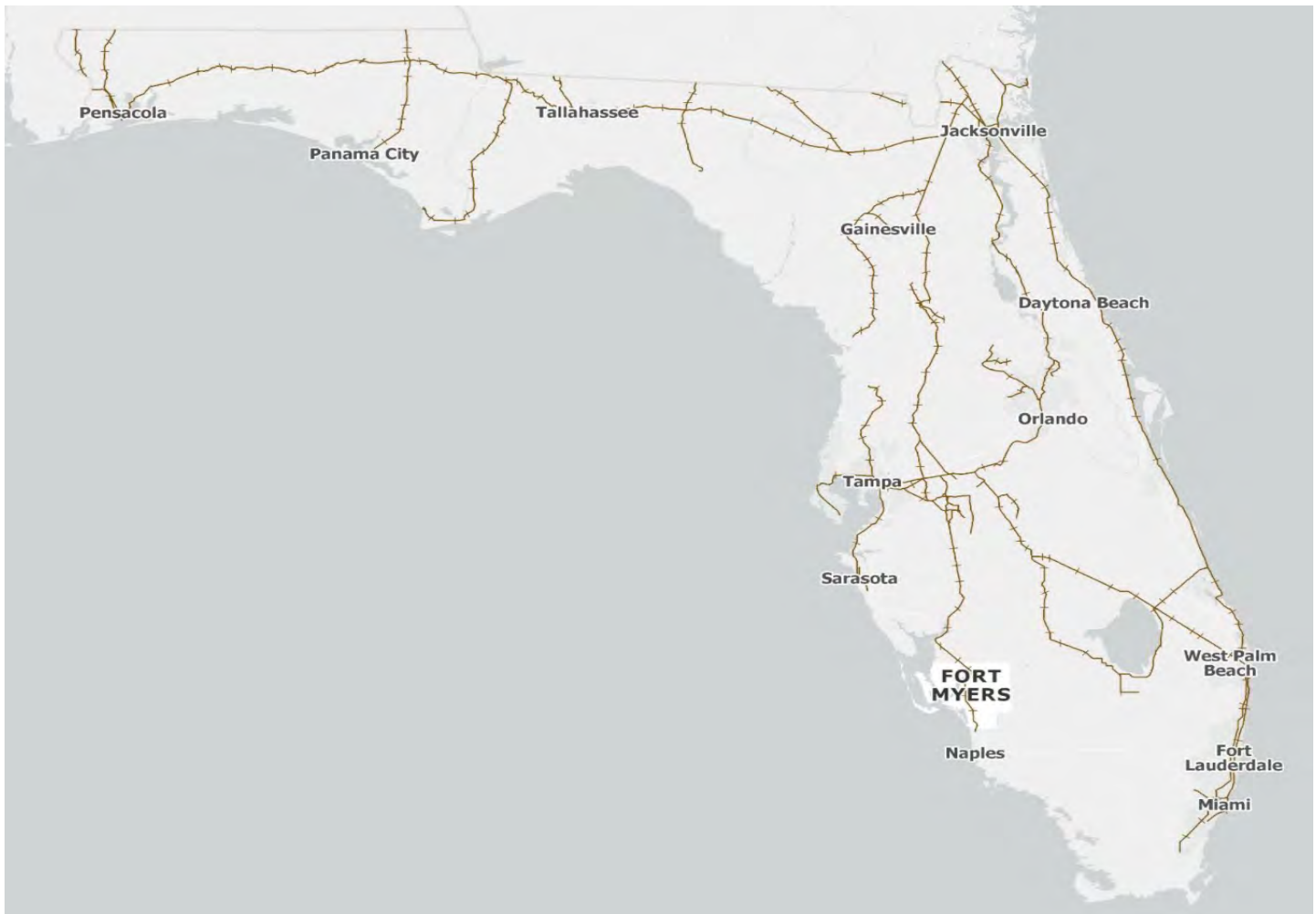
<sup>23</sup> Retrieved from: <http://www.swflroads.com/sr865/sancarlosboulevard/docs/433726-1%20SR%20865%20Final%20Project%20Traffic%20Report%20December%202018.pdf>

## Rail

There have been many efforts to increase rail freight opportunities. However, the outlook for expanded rail freight operations is uncertain at best, since forecasted growth in general freight is expected to be primarily by truck, and the existing condition of the tracks has resulted in speed limitations throughout the corridor.

While the outlook for expanded rail freight operations is uncertain, rail freight remains an important transportation component in Southwest Florida. Although only a limited number of local businesses rely on rail freight, abandoning freight service is difficult due to natural concerns about the future of these community businesses that rely on rail, as well as federal laws and policies that oversee rail systems. The rail corridor is currently controlled by two private entities: CSX and Seminole Gulf Railway. CSX owns the land within the right-of-way. Seminole Gulf Railway has a long-term lease to operate freight rail service in this corridor (with up to 34 years remaining on the lease). Seminole Gulf Railway owns and maintains the tracks and crossings and operates a dinner train in addition to handling freight.<sup>24</sup> The Potential for Business Growth is great for the District, but extremely uncertain at this time.

**Figure 29. Current Operating Railway Lines Florida**



<sup>24</sup> Retrieved from: <https://legis.maps.arcgis.com/apps/MapSeries/index.html?appid=9a080684d3a942f095fb4c1ba1092a2f>

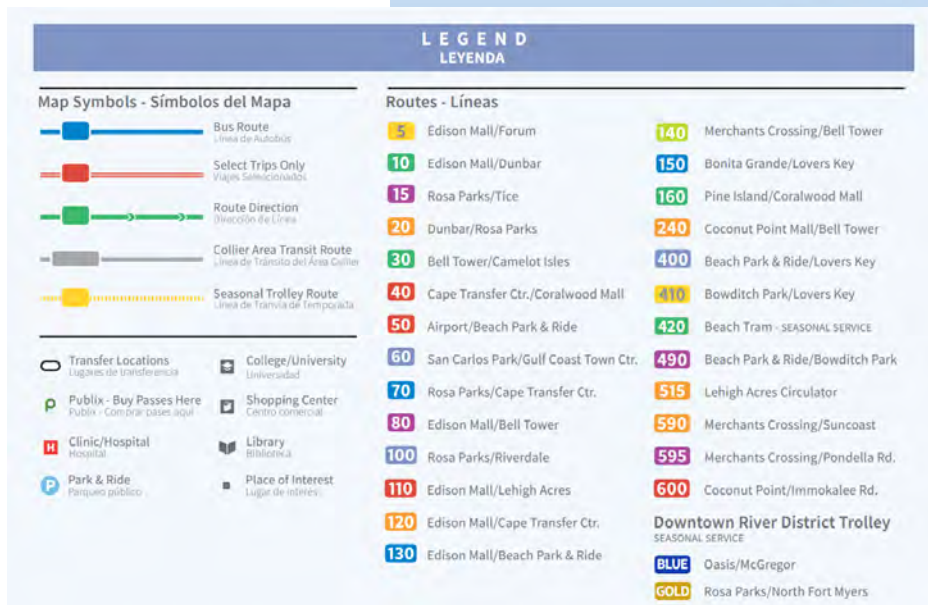
## Public Transportation

Lee County Transit – LeeTran is a department of the Lee County government and proudly provides public transportation, ADA paratransit service, and an employer vanpool program to the community of Lee County. Passengers take about three million individual trips per year on LeeTran’s fixed-bus network. Overall, the customers travel about 16 million miles on LeeTran buses.<sup>25</sup>

LeeTran operates more than 19 stops within the Fort Myers Beach Fire Control District.

LeeTran also operates a trolley route connecting the mainland to Estero Island and Fort Myers Beach, offering a variety of Public Transit for the District.

**Figure 30. Map of LeeTran routes servicing the District**



**Performance Indicator 2A.9**

The agency defines and identifies infrastructure that is considered critical within each planning zone.

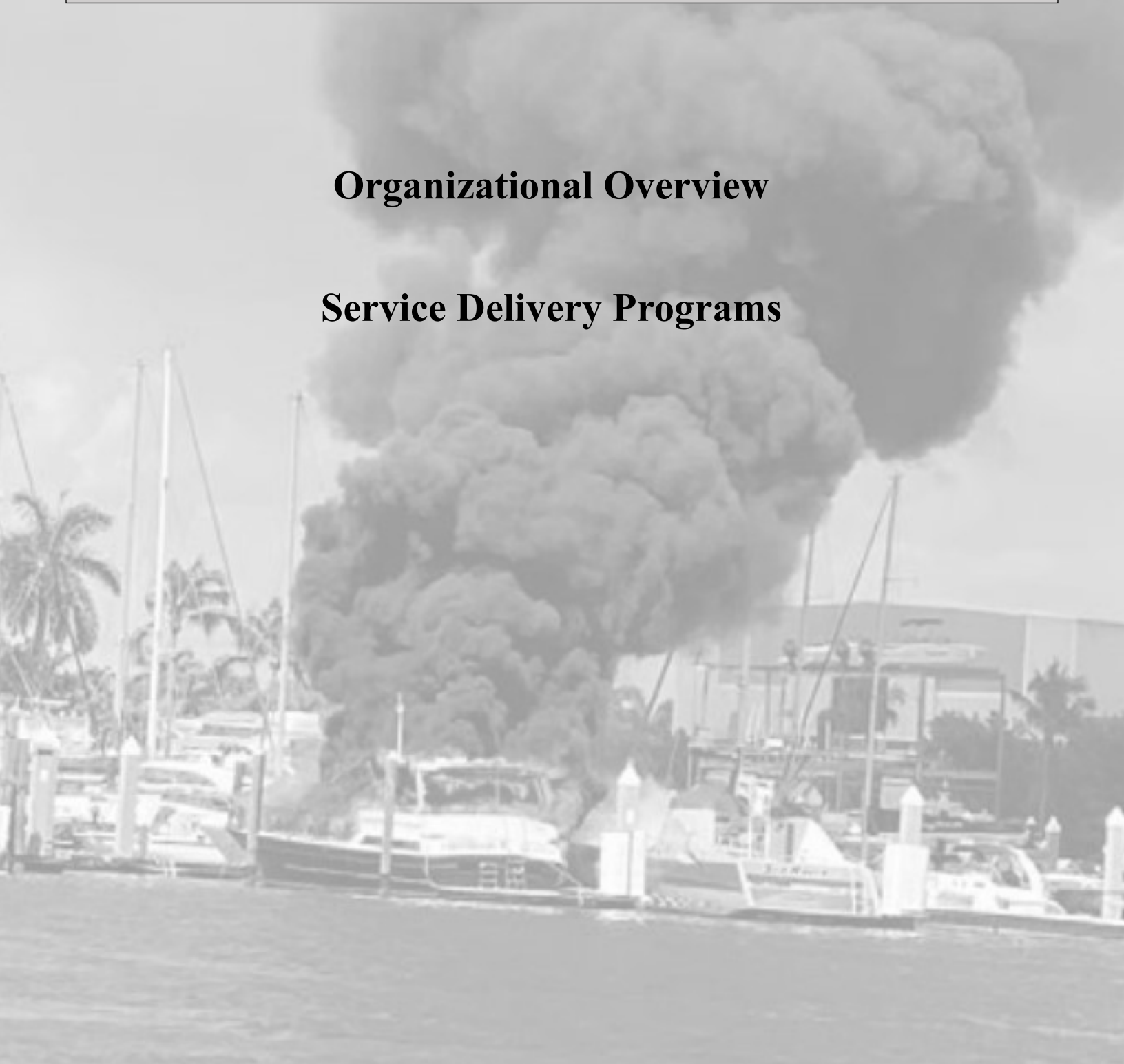
<sup>25</sup> Retrieved from <https://www.leegov.com/lectran/PublishingImages/Lee%20Tran%20System%20Map%202019%20web.pdf>



# **Section B - Description of Agency Programs and Services**

**Organizational Overview**

**Service Delivery Programs**

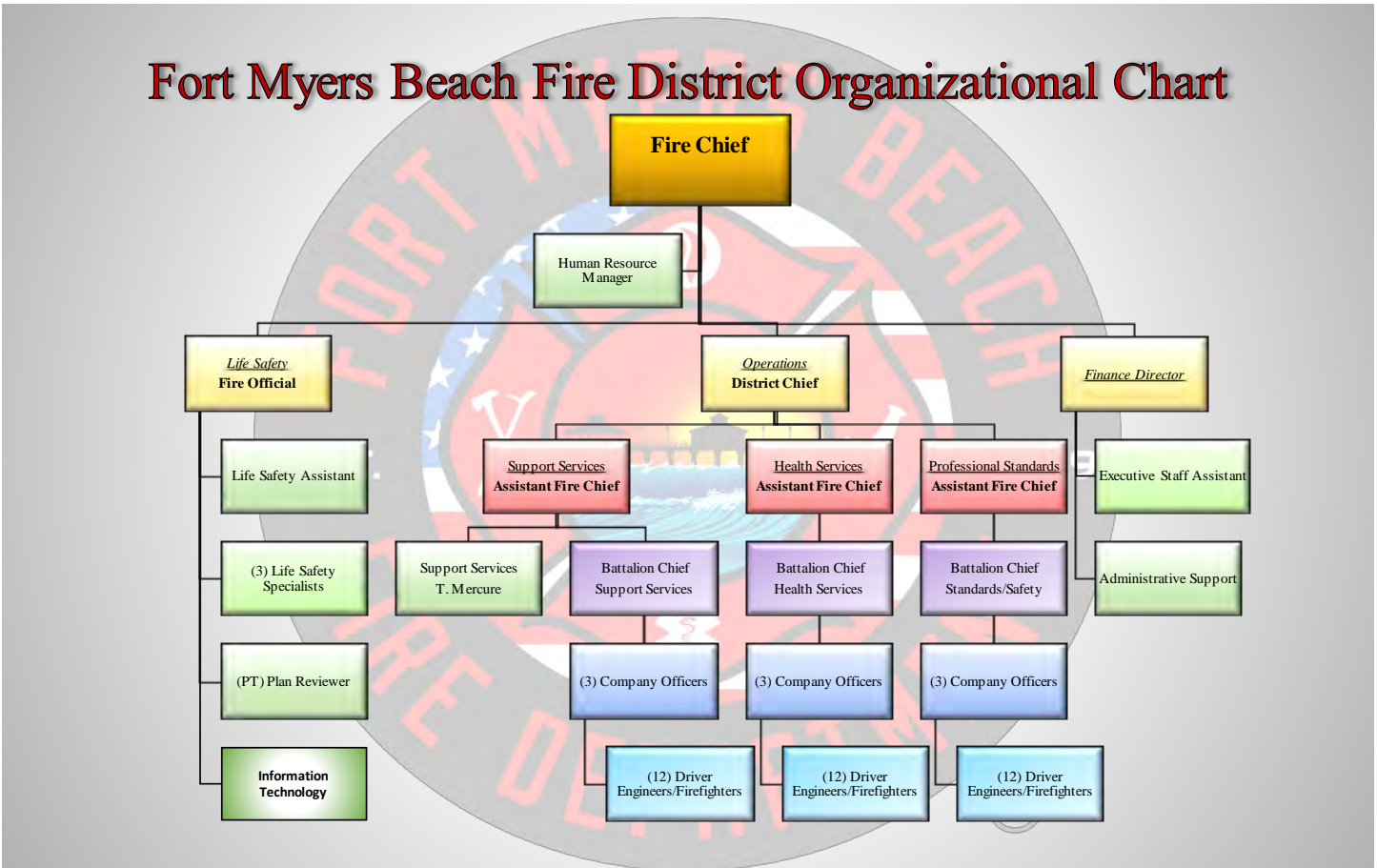


**Organizational Overview**

The Fort Myers Beach Fire Control District (FMBFCD) provides a variety of services to include fire suppression activities, Advanced Life Support (ALS) Emergency Medical Services (EMS), EMS patient transport, hazardous materials response, and a variety of other emergency and non-emergency life safety services. The District provides these services with a daily minimum staffing of 14 personnel divided amongst 3 fire stations.

**Human Resources**

**Figure 1. 2021 Organizational Chart<sup>1</sup>**



The FMBFCD is a Special Independent District of Florida, which operates by the governance of a five-member Board of Fire Commissioners. The Board works with the Fire Chief in establishing the vision for the organization, strategic and long-range planning objectives, as well as overseeing financial activities. The Fire Chief then coordinates with his administrative staff through a paramilitary organizational structure to oversee department functions through three distinct branches:

- **Operations** - Fire /EMS Response Services, Support Services, Health Services and Professional Standards.
- **Life Safety** – Life Safety Division and Information Technology
- **Finance** - Documentation and Policy Management, Benefit Administration, Purchasing Processes, and Budgeting.

The Operations branch is overseen by a District Chief with its three main program areas being overseen by Assistant Chief Officers. The Life Safety branch is overseen by the Fire Official and the Finance branch is overseen by the Finance Director. These executive positions are responsible for the execution of the organization’s mission, vision, and values on a daily and long-term basis to ensure the organization is achieving its goals.

<https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>



## Physical Resources-Apparatus

**Figure 2. FMBFCD Engine 32**



**Engine** A piece of fire apparatus that carries water, medical equipment and tools to the scene of an emergency. The primary function of this crew at fires is to establish a water supply, search for people in the interior of a structure and apply water with hose lines to extinguish the fire. Engines are in service at Fire Stations 31 and 32.

**Figure 3. FMBFCD Truck 33**



**Truck** A piece of fire apparatus with a mounted ladder and platform for performing work or making rescues above grade. The Truck is also capable of providing an elevated stream of water. This vehicle also carries water, medical equipment and tools to an emergency scene and can be assigned the same functions as an Engine Company. Assigned to Fire Station 33, Truck 33 provides coverage to the District's highest concentration of residential high-rise buildings.

**Figure 4. FMBFCD Rescue 33**



**Rescue** This apparatus is equipped for basic or advanced life support medical care. Its primary purpose is to provide diagnostic assessment, treatment, and transport for patients experiencing medical emergencies. Rescues are staffed by Firefighter/Paramedics and Firefighter EMT's and are now an integral part of the fire incident response. Rescues are in service at Fire Stations 32 and 33.

**Figure 4. FMBFCD Battalion 30**



**Battalion Chief** This emergency response vehicle is staffed by a Battalion Chief who oversees emergency responses, line personnel, and some non-emergency programs.

**Physical Resources-Fire Stations**

**Fire Station 31**

3043 Estero Blvd, Fort Myers Beach, FL 33931

**Figure 5. Fire Station 31**



**Fire Station 32**

17891 San Carlos Blvd, Fort Myers Beach, FL 33931

**Figure 6. Fire Station 32**



**Fire Station 33**

121 Lenell Rd, Fort Myers Beach, FL 33931

**Figure 7. Fire Station 33**





## Service Delivery Programs

### Community Risk Reduction<sup>1</sup>

The Community Risk Reduction program at FMBFCD is a system and process in which programs, actions, and services within the community are utilized to prevent injuries; loss of life; loss of property; and damage to the environment. Community Risk Reduction activities identify and prioritize risks and apply resources in a coordinated manner to minimize the probability and severity of occurrence of fire, natural disasters, and human-made disasters. The benefits of a safer community are achieved through 5 E's:

**Education** — Whether firefighters are helping a business owner understand the hazards created by overloading an electrical cord, or reminding senior adults about trip hazards in their home, education is one of the strongest tools used or prevention.

**Engineering** — Through plan review and code compliance activities, engineering controls are often employed to prevent incidents from occurring in the first place. Some of these engineering controls are fire sprinkler systems, hazardous materials spill prevention efforts, heat-regulating systems, and others.

**Enforcement** — Code compliance activities are the backbone of enforcement tools. Largely through state and local adoption of the International Fire Code, fire inspectors and plans examiners regulate risks which can lead to loss of life, property, and the environment.

**Economic Incentive** — Strategic economic incentives are employed to reduce a particular risk within the community.

**Emergency Response** — Community Risk Reduction efforts are aimed at preventing emergency incidents. However, when they do occur, firefighters are strategically placed throughout the community at different fire stations. The risk reduction process helps identify ways for firefighters to respond more effectively to emergency incidents.

Figure 8. Community Risk Reduction 5 E's



<sup>1</sup> Retrieved from: <https://www.usfa.fema.gov/prevention/crr.html>

## Life and Safety Division

Fort Myers Beach Fire Control District provides much more than emergency response to fires, medical events, hazardous material spills and technical rescues. This Division is overseen by the Fire Official, and has five specially trained staff to provide plans review, fire safety inspections, code enforcement, focused public education, and fire investigations.

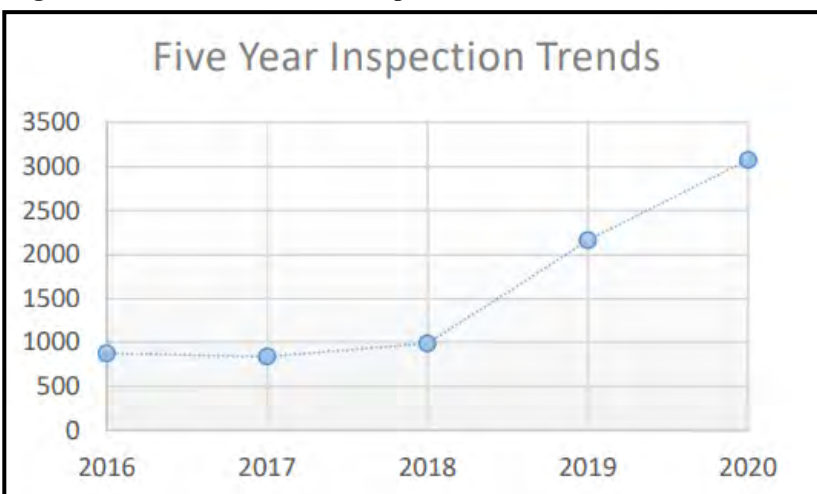
### Public Education

A public education program is in place and directed towards reducing community risks in a manner consistent with the agency’s mission. The program targets specific risks, behaviors, and audiences as identified through incident, demographic, and program data analysis. Programs are in place to identify large loss potential or high risks audiences and partnerships have been fostered to best address those challenging areas within the community. Additionally a variety of programs and information are delivered to the community via the agency’s webpage and social media outlets. Some of the programs delivered include: File of Life, Car Seat Installations, Bicycle Helmet Fittings, Water Safety, Hurricane Preparedness, Community CPR and First Aid, and Blood Pressure Screening

### Plans Review and Inspection

The District provides fire and life safety code enforcement through building plans reviews, permitting, and life safety code fire inspections and enforcement. In 2020, the District completed 446 plans reviews and issued 115 permits. Along with providing this service to the Fort Myers Beach Community, they also provide fire plan review services to the San Carlos Park Fire District and Captiva Island Fire District. In 2020, the Division performed 3,078 inspections, which represented approximately 89,761,985 square feet of inspections, or a total of 1,459 inspection hours alone. This is an increase of 110% in productivity from the previous year<sup>2</sup>.

Figure 9. FMBFCD Five-Year Inspection Trends<sup>2</sup>



### Stakeholder Perception of Safety

Though the organization provides a high level of service and safety, they have endeavored to make sure that the community feels the intent of the safety aspects in a variety of ways. Their goals include measuring the effectiveness of existing community education programs and increasing stakeholder’s actual and perceived sense of safety. Funds are allocated in the budget to achieve many community-wide programs such as car seat safety programs, automated external defibrillator, cardiopulmonary education programs, and fire extinguisher training.

Figure 9. CPR Training



<sup>2</sup>Retrieved from: <https://fmbfire.org/wp-content/uploads/2020/09/FMBFD-2020-2021-Final-Budget-Packet-ADA.pdf>

## Fire Investigation, Origin, and Cause

While the District operates a fire investigation program, the FMBFCD through partnership with the Lee County Fire Chief Association also participates in the Lee County Arson Task Force for regional fire and explosion investigative services.

The company officer is responsible for completing an accurate fire incident report to document the fire cause including the estimated dollar loss associated with damage to building, contents and/or property. A Fire Investigator is not needed in the following circumstances:

- Minor fires where the cause is determined to be accidental
- Scalding burns and minor accidental burn injuries
- Minor grass, fence, or trash fires with no witnesses or suspects
- To hold the scene until another agency or service responds

For fires that fall outside of a company officer's scope of qualifications Fire Investigators are required in all of the following parameters by Department SOP:

- Fire Deaths or serious fire injuries
- All working structure fires
- Fires for which the cause cannot be determined by Command on scene
- Explosions and bombings
- Any fire with evidence of attempted arson
- Car, field, or dumpster fires that have an identified lead or suspect

It is the responsibility of the local Fire Department to initiate a fire cause investigation prior to calling the State Fire Marshal. For fires that fall outside of a Fire Investigators scope of qualifications as outlined and defined in Chapter 69A-Rules of Fire and Arson Investigation, on scene commanders will immediately contact the State Fire Marshal's office through Lee Control under the following circumstances:

- Anytime a Firefighter is injured requiring hospitalization, or a Firefighter is killed combating a fire or otherwise engaged in an act related to the fire.
- Any fire with a direct dollar loss in excess of \$1,000,000
- Any fire involving the suspected failure of a fire suppression or fire detection system
- Any fire involving a civilian death, or an injury that is likely to result in death

In an effort to correct and reinforce the District fire safety message, a new program was instituted called "Community Canvases". After a fire, a team of FMBFCD representatives goes throughout the nearby neighborhoods discussing the causation of the fire, and engaging citizens one-on-one with education and potential mitigation actions<sup>3</sup>.

<sup>3</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>



## Domestic Preparedness

The district operates an all-hazards preparedness program that includes a coordinated multiagency mutual-aid response plan designed to provide the community preparedness and resiliency in response to terrorist threats or attacks, major disasters, and other large-scale emergencies occurring at or in the immediate area.

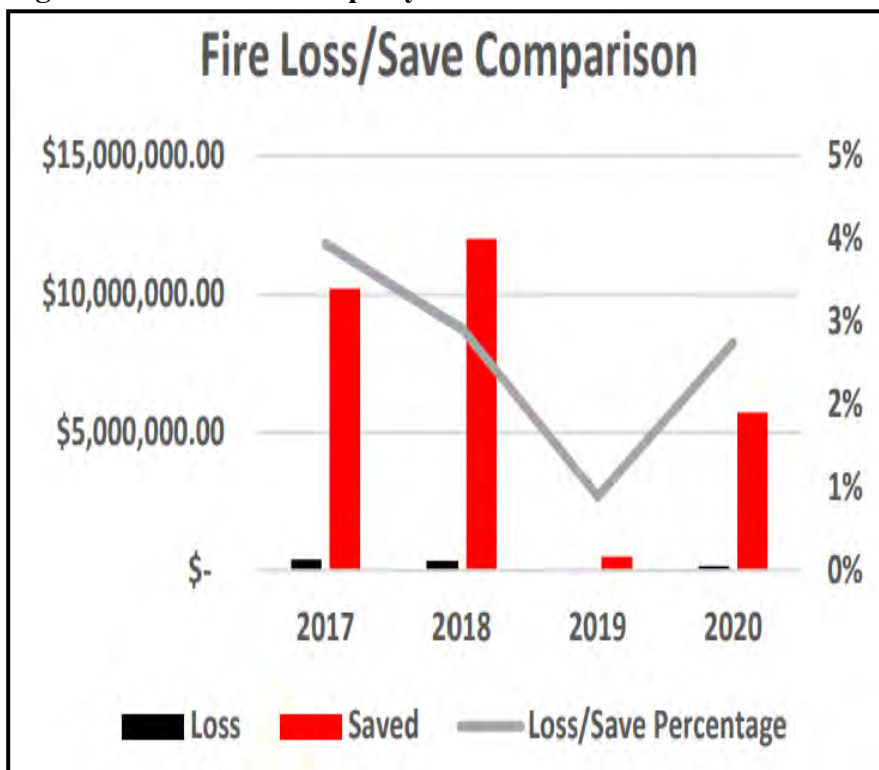
## Fire Suppression

The District provides fire suppression services within the jurisdiction as well as response to requests for service from adjacent municipalities and fire districts. Fire suppression services are provided from three fixed facility fire stations distributed throughout the community. All FMBFCD members are trained as firefighters and emergency medical technicians (EMT) or paramedics. The better part of 2020 included minimal fire loss. Many of the fires in 2020 were small fires extinguished quickly with little to no measurable fire loss or economic impact. An estimated 5.7 million dollars in property was saved in 2020, with approximately \$157,099 in total community wide fire loss. Those combined efforts can be seen in the following Figure 10.

In total, the District operates the following response units:

- 2 fire engine companies (E31,E32)
- 1 aerial company (T33)
- 2 rescue units (advanced life support ALS ambulances, R32, R33)
- 1 Battalion Chief command unit
- 14 Personnel Daily Minimum Staffing

Figure 10. FMBFCD Property Saved and Personnel<sup>3</sup>



<b>Firefighter / Paramedics</b>	<b>30</b>
<b>Driver Engineers</b>	<b>9</b>
<b>Lieutenants / Captains</b>	<b>9</b>
<b>Life and Safety Services Staff</b>	<b>6</b>
<b>Administrative &amp; Support Staff</b>	<b>7</b>
<b>Battalion Chiefs</b>	<b>3</b>
<b>Assistant Chiefs</b>	<b>3</b>
<b>District Chief</b>	<b>2</b>
<b>Fire Chief</b>	<b>1</b>
<b>Total Personnel</b>	<b>70</b>

<sup>3</sup> Retrieved from: <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD.pdf>

## Emergency Medical Services (EMS)

The District provides high quality advance life support (ALS) EMS to the community through ALS first response and patient transport services. In addition to emergency response, the EMS program provides continuing EMS education, training, and all required logistical support needs for the service.

In 1972, FMBFCD was issued a Certification of Public Convenience and Necessity (COPCN). This Certificate allows for the District to license and provide ambulance transport within the District and Lee County, Florida.

This decision marked a significant commitment to improve the health of the community. The District has endeavored to be a high quality provider of emergency medical care to the community from basic through advanced levels of service today.

All firefighters are cross-trained as EMTs or Paramedics, with rigorous training. FMBFCD EMS has produced excellent patient outcomes and patient satisfaction ratings according to the 2021 FMBFCD annual report<sup>4</sup>. These services are provided through the use of two ALS Engines and one ALS Truck who provide closest unit response in the



event the ALS Rescue unit is delayed due to being committed to another incident. The ALS Rescue units provide primary emergency medical response patient care and transport.

Registry to Enhance Survival (CARES) data system. The CARES program helps the agency improve their cardiac arrest practices and measure themselves against other agencies at the State and National level. Finally, the District utilizes the Biospatial platform provided through participation in the Florida Emergency Medical Services Tracking and Reporting System (EMSTARS). This platform provides real time community health surveillance and analysis to help identify areas of risk within the community.

Figure 11. FMBFCD EMS Training



The District participates in a health data exchange (HDE) with Lee Health to provide a bi-lateral flow of patient information for continuous improvement in the EMS program and subsequent patient outcomes. The District utilizes additional resources to drive outcome improvements such as participating in the Cardiac Arrest

Mission Lifeline Award

Figure 12. 2019 Mission Lifeline Award



### Technical Rescue

The District ensures technical rescue services are provided to the community by leveraging regional partnerships with Florida USAR Task Force 6. In doing so, FMBFCD is able to address all potential technical rescue incidents within the community.

### Water Rescue

As an all-hazard response organization, FMBFCD firefighters train each year on a variety of subjects and skill sets to ensure they are prepared to provide an effective and efficient emergency response. The unique barrier island environment requires specialized training specific to incidents occurring in and around their response area. To accomplish this, they utilize the expertise of members to provide specialized training to deliver surface water rescue services.<sup>5</sup> The District also participates in the Lee County Marine Emergency Response Team (MERT) which provides marine rescue and firefighting capabilities throughout the Lee County and the District.

### Hazardous Materials

The District provides hazardous materials (HazMat) response at the awareness level. HazMat response at the operations level and advanced technician level is provided in partnership with the Regional HazMat Team (City of Fort Myers Fire Department). This team requires specialized resources and training to respond to these types of emergencies. Their technical skills and equipment provide them with the ability to detect and/or identify chemical, biological, radiological, and explosive materials. The team utilizes various levels of chemical protective clothing and equipment needed to enter dangerous atmospheres.

### Training Division

The FMBFCD Training Division coordinates and manages all initial, ongoing, and advanced level training to meet State and National requirements, including Firefighter, Driver Engineer, and Fire Officer training. The division also coordinates and develops promotional processes, recruitment and hiring, and provided post incident analyses for major incidents. FMBFCD collaborates with neighboring agencies to conduct Facilities Training where individual as well as company drills on training prepares them for emergency response to a variety of tactical scenarios. In 2020, the agency completed over 18,600 hours of Insurance Services Office (ISO) training (Figure 14).

Figure 13. FMBFCD Logo



Figure 14. FMBFCD 2020 Annual Training Hours



<sup>5</sup> <https://fmbfire.org/wp-content/uploads/2021/05/FMBFD-2020-Annual-Report.pdf>

**Section C - All Hazard**  
**Community Risk Assessment**

**Risk Assessment Process**

**Geospatial Risk Factors**

**Natural Risk Hazards**

**Manmade Hazards**

**Physical Assets Protected**

**Development and Population Growth**

**Historical Service Demand and Probability Analysis**

Wed AM  
60 mph

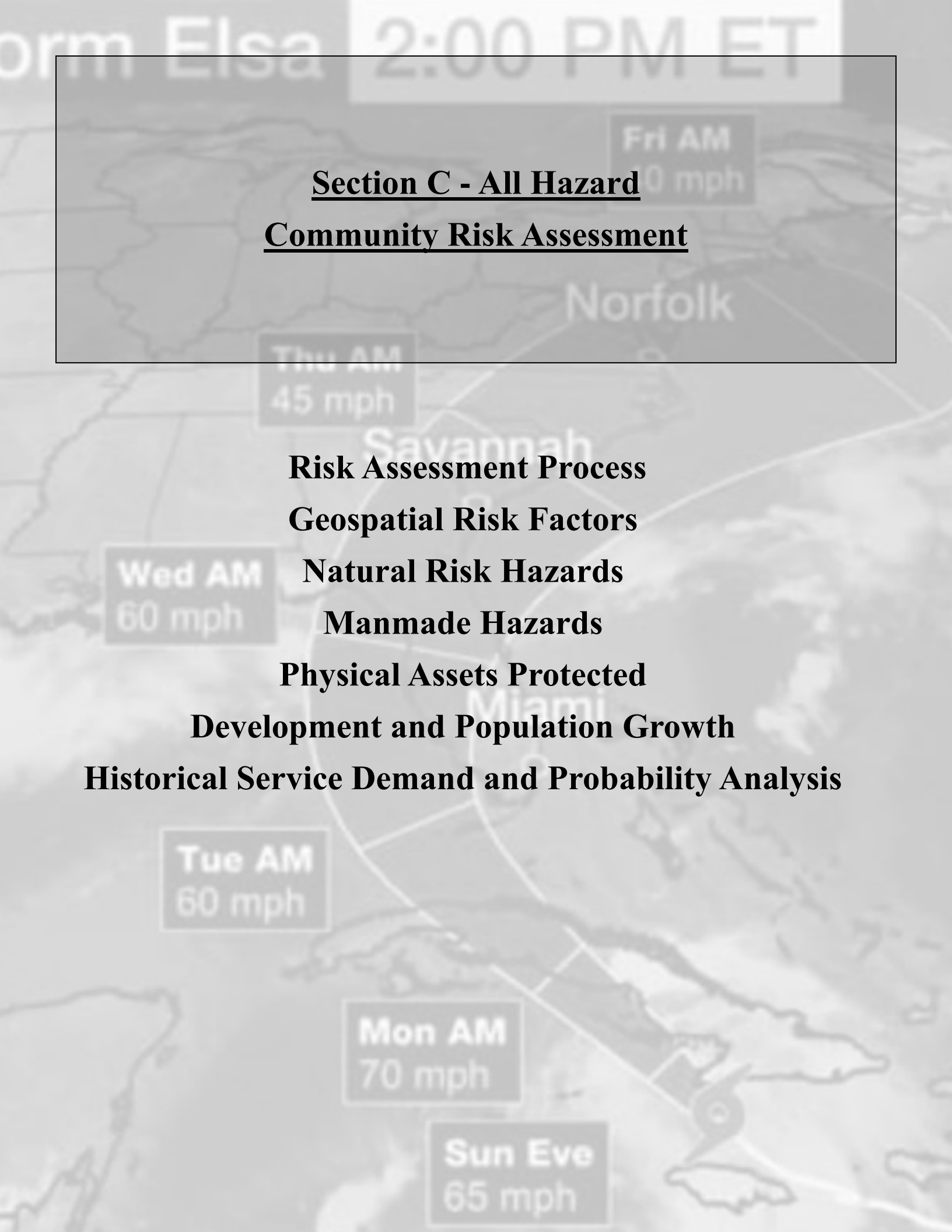
Thu AM  
45 mph

Fri AM  
40 mph

Tue AM  
60 mph

Mon AM  
70 mph

Sun Eve  
65 mph





**Risk Assessment Methodologies**

The purpose of this section is to describe the process used in performing an analysis of the community served and its potential risks using real world factors that are both physical and theoretical. To perform a comprehensive risk assessment, it was necessary to analyze physical, economic, sociologic and demographic aspects of the area served. The factors that drive the service needs are examined in a precise and scientific manner to determine the capabilities necessary to adequately address the risks that are present. The assessment of risk is critical for the determination of the number and placement of resources, and the mitigation measures that are required by the community.

**All-Hazard Risk Assessment and Response Strategies as it relates to Criterion**

The agency identifies and assesses the nature and magnitude of all hazards and risks within its jurisdiction. Risk categorization and deployment impact considers such factors as cultural, economic, historical, and environmental values, and operational characteristics.

The risks that the department faces can be natural or human-made and fall in various locations on the consequence, probability and impact matrix. Where these risks are located on the matrix has a direct impact on how resources are located around the jurisdiction (distribution) and the overall amount of resources required to mitigate the incident (concentration) effectively through the use of the staffing and deployment model.

**Core Competency 2B.1**

The agency has a documented and adopted methodology for identifying, assessing, categorizing and classifying all risks (fire and non-fire) throughout the community or area of responsibility.

**Table 1: MPDS Determinant Risk Classification**

Each of the major natural and manmade risks evaluated received a clearly defined probability and consequence ranking. Service areas that either had little quantitative data, or did not require that level of analysis, were evaluated through both retrospective analysis as well as structured interviews with Department staff members. “Call Type”

Determinant	Risk Classification
A	Low
B	Moderate
C	Moderate
D	High
E	Extreme

variable entries from the 2016-17 to 2019-20 data file from Fort Myers Beach Fire Control District (FMBFCD) were classified into the program areas of EMS, fire, hazmat, mutual aid, and rescue based on departmental leadership decisions, and records were additionally assigned a risk classification based on departmental leadership criteria depending upon available data. Risk classifications were assigned based on determinant, when available, and based on call type when determinant was not available.

**Table 2: Number of Incidents by Program and Risk Rating—2016-17 to 2019-20**

Program	Number of Incidents				Percentage of Incidents <sup>1</sup>			
	Risk Rating			Total	Risk Rating			Total
Low	Moderate	High/Extreme	Low		Moderate	High/Extreme		
EMS	1,676	4,330	3,191	9,197	18.2	47.1	34.7	100.0
Fire	916	876	127	1,919	47.7	45.6	6.6	100.0
Hazmat	3	38	20	61	4.9	62.3	32.8	100.0
Mutual Aid	19	12	0	31	61.3	38.7	0.0	100.0
Rescue	245	37	51	333	73.6	11.1	15.3	100.0
<b>Total</b>	<b>2,859</b>	<b>5,293</b>	<b>3,389</b>	<b>11,541</b>	<b>24.8</b>	<b>45.9</b>	<b>29.4</b>	<b>100.0</b>

<sup>1</sup>“Percentage of Incidents” values reflect percentages within each program row, using the number of incidents per relevant risk rating category as the numerator and the total number of incidents in the corresponding program row as the denominator.

**Risk Assessment Process Cont'd**

CAD call types were then assigned an overall risk classification of Low, Moderate, or High based on a quantitative analysis of the community risk in conjunction with the following overall scoring scale defined by departmental leadership:

**Table 3: Risk Classifications for Records Based on Incident Description – Non-EMS (N = 449)**

Incident Description <sup>1</sup>	Risk Classification
ALARMS	Low
CITIZEN ASSIST	Low
ELECTRIAL HAZARD	Low
ELEVATOR/ESC RESCUE-	Moderate
EMRGNCY-NON-FIRE-GRN	Low
GAS LEAK	High/Extreme
MUTUAL AID	Low
OUTSIDE FIRE	Low
STANDBY	Low
STRUCTURE FIRE - HIG	High/Extreme
Structure Fire - HIGH LIFE HAZARD [HOT]	High/Extreme
Structure Fire - Mobile home, house trailer, portable office	Moderate
Structure Fire - Mobile home, house trailer, portable office [HOT]	High/Extreme
Structure Fire - OVERRIDE	Moderate
Structure Fire - Override [HOT]	High/Extreme
Structure Fire - Residential (multiple) [HOT]	High/Extreme
Structure Fire - Residential (single)	Moderate
Structure Fire - Residential (single) [HOT]	High/Extreme
STRUCTURE FIRE - UNK	Moderate
STRUCTURE FIRE-HIGH	High/Extreme
STRUCTURE FIRE-RESID	Moderate
STRUTURE FIRE-OVERRI	Moderate
UNDERWATER DOMESTIC	High/Extreme
WATER RESCUE	High/Extreme
WATERCRAFT DISTRESS	Moderate

**Risk Assessment Process Cont'd****Table 4: Risk Classifications for Records Based on Incident Description – EMS (N = 1,512)**

Incident Description <sup>1</sup>	Risk Classification
ABDOMINAL PAIN	Low
ALLERGIES REACTIONS/	Low
ASSAULT	Moderate
ASSIGNED SPECIAL DET	Low
BACK PAIN (NON-TRAUM	Low
BREATHING PROBLEMS	High/Extreme
CARDIAC OR RESPIRATO	High/Extreme
Cardiac or Respiratory Arrest / Death	High/Extreme
Cardiac or Respiratory Arrest / Death [HOT]	Moderate
CHEST PAIN (NON TRAU	High/Extreme
CHOKING	High/Extreme
CONVULSIONS / SEIZUR	High/Extreme
DIABETIC PROBLEMS	Moderate
DROWNING (NEAR)	Moderate
Drowning / Near Drowning / Diving / SCUBA Accident	High/Extreme
Drowning / Near Drowning / Diving / SCUBA Accident [HOT]	High/Extreme
DROWNING-ARREST OUT	High/Extreme
EYE PROBLEMS / INJUR	Low
FALLS	Moderate
HEART PROBLEMS / A.I	Moderate
HEAT / COLD EXPOSURE	Moderate
HEMORRHAGE / LACERAT	High/Extreme
OVERDOSE / POISONING	High/Extreme
Overdose / Poisoning (Ingestion)	High/Extreme
Overdose / Poisoning (Ingestion) [HOT]	High/Extreme
Pandemic / Epidemic / Outbreak (Surveillance or Triage)	High/Extreme
PREGNANCY / CHILDBIR	High/Extreme
PSYCHIATRIC / ABNORM	Moderate
SICK PERSON (SPECIFI	Low
STAB / GUNSHOT / PEN	High/Extreme
STROKE (CVA)	Moderate
TRAFFIC / TRANSPORTA	High/Extreme
TRAUMATIC INJURIES (	Moderate
UNCONSCIOUS / FAINTI	High/Extreme
UNKNOWN PROBLEM (MAN	Moderate

**Community Level Risk Assessment**

Risk factors in the community were analyzed with historical and statistical data, and trending was established based on the type of call and location of the incident. General categories of risk included overall geospatial characteristics of the community, natural hazards and manmade hazards.

**Geospatial risk factors**

- Political Boundaries
- Growth Boundaries
- Construction Limitations
- Topography and Response Barriers
- Critical Infrastructure
- Electrical
- Water System
- Emergency Communications
- Rural Interface

**Natural Hazards**

- Coastal Erosion
- Flood
- Severe Weather
- Contagious Diseases
- Wildfire

**Human-made risk hazards**

- Airport
- Passenger and Freight Rail Lines
- Road Networks
- Fires
- EMS
- Hazardous Materials
- Technical Rescue

**Core Competency 2B.6**

The agency assesses critical infrastructure within the planning zones for capabilities and capacities to meet the demands posed by the risks.

**Core Competency 2B.4**

The agency’s risk identification, analysis, categorization, and classification methodology has been utilized to determine and document the different categories and classes of risks within each planning zone.

**Figure 1: Hazard Events for Lee County<sup>1</sup>**

Hazards Type	Period of Record	Total Events
Coastal Flooding (Storm Surge)	1996 - Present	4
Drought/ Extreme Heat	1996 - Present	4
Flood	1996 - Present	48
Freeze/ Extreme Cold	1996 - Present	16
Hurricane Wind Damage	1996 - Present	15
Thunderstorm Winds / Lightning / Hail	1955	372
Tornado	1950 - Present	134
Wildfire	1996 - Present	13
<b>Total</b>		<b>606</b>

1 Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)



## Geospatial Risk Factors

**Low Risk**

**Low Probability**

**Low Consequence**

### Political and Growth Boundaries

The District boundaries are not expected to change significantly, other than through mergers or regional consolidation efforts. From this perspective, increases in population density may only serve to eventually require a greater concentration of resources to meet the demand rather than expanding the distribution model. In other words, if the District does not anticipate creating a larger geographic coverage area through annexations, the likely result of population growth will require additional resources within the existing distribution model rather than by expanding the number of stations.





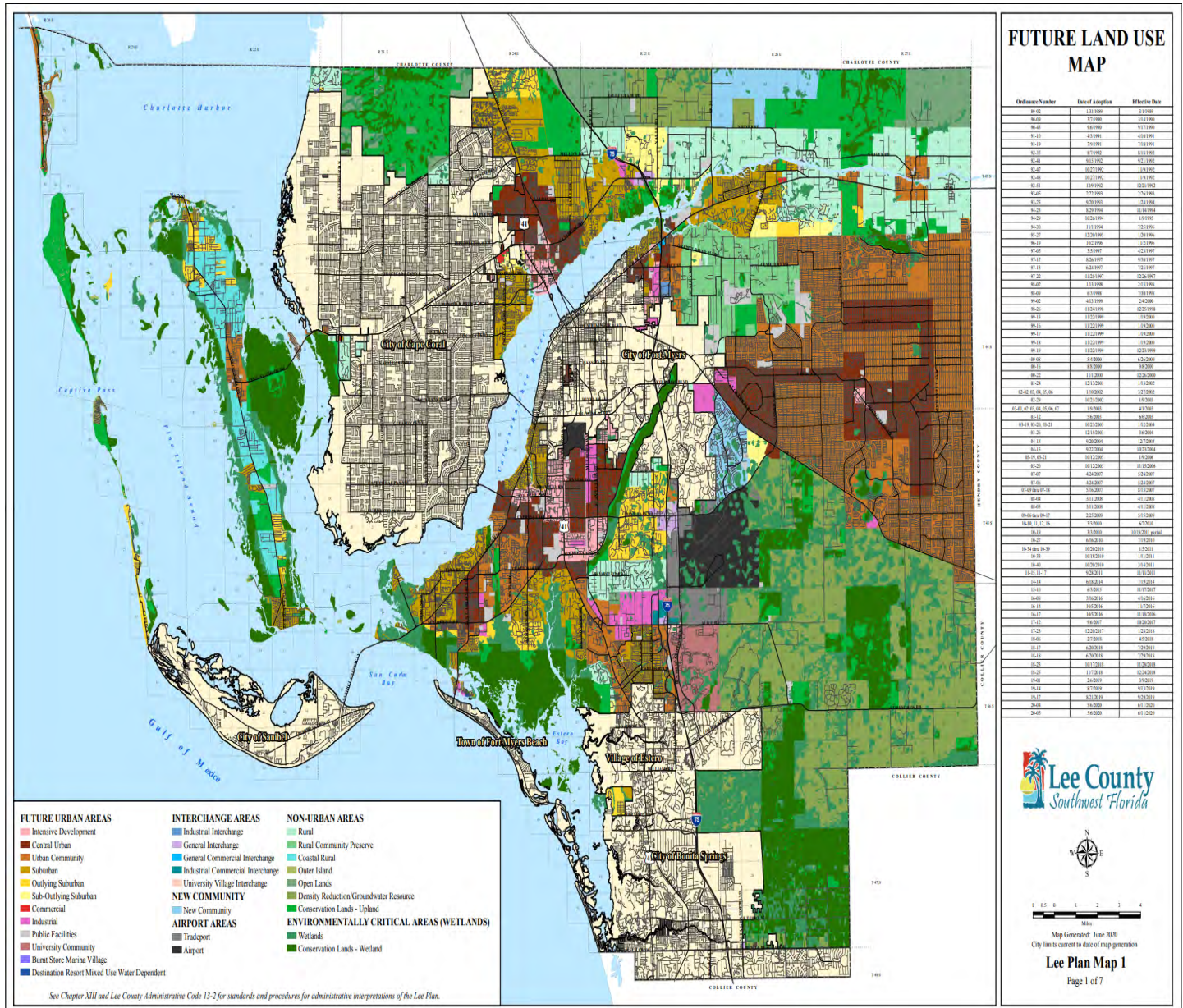
**Low Risk**

**Low Probability**  
**Low Consequence**

**Construction Limitations**

The future land use map demonstrates that limitations have been accounted for, and that generally new growth is not occurring at a rapid rate within the District, in fact growth will be limited due to the current level of build-out on the Barrier Island and the limit mainland portion of the District. Currently, the Town is in the midst of two major developments: 1) a new Margaritaville report at the base of the bridge on Estero Blvd and Crescent Street, and 2) the infill development of the Bay Beach area and redevelopment of the old Bay Beach golf course. Neither of these developments are expected to substantively alter the community's level of risk. The Town of Ft. Myers Beach is currently undertaking an effort to update its Comprehensive Pan.

**Figure 1 Future Land Use Map Lee County<sup>2</sup>**



2 <https://www.leegov.com/dcd/Documents/Planning/LeePlan/LeeplanAppendix.pdf>



**Moderate Risk**

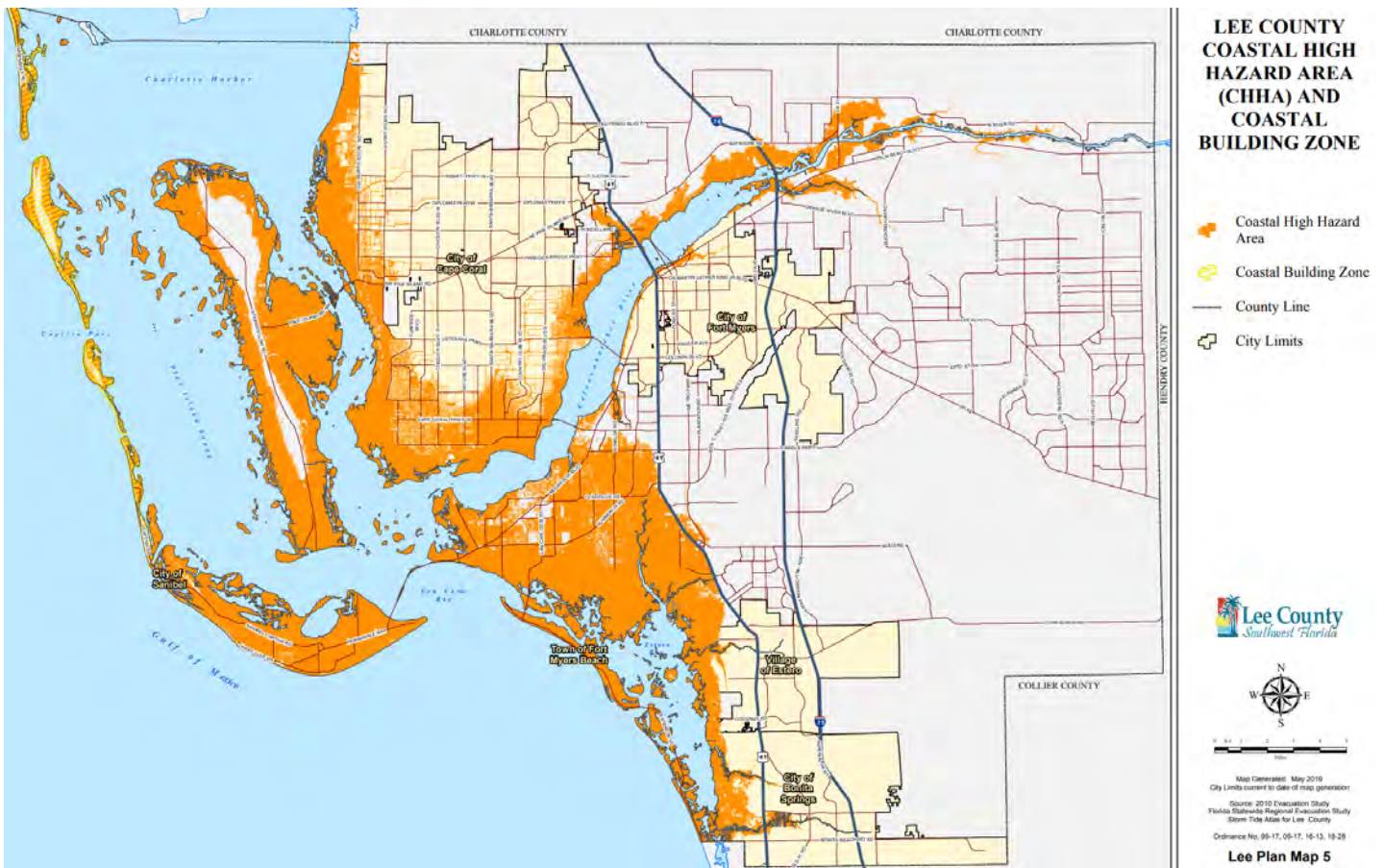
**High Probability**

**Low Consequence**

## Topography—Response Barriers

Primarily response barriers are associated with interaction with coastal areas, water ways and barrier islands that may be inhibited during secondary events such as severe weather, flooding, and storm surge. Much of the District is low-lying coastal area with an elevation ranging from 3-10 feet above sea-level. The major part of the District is a barrier island with a singular roadway for ingress and egress.

**Figure 7 Lee County Topography**





**Moderate Risk**

**High Probability**

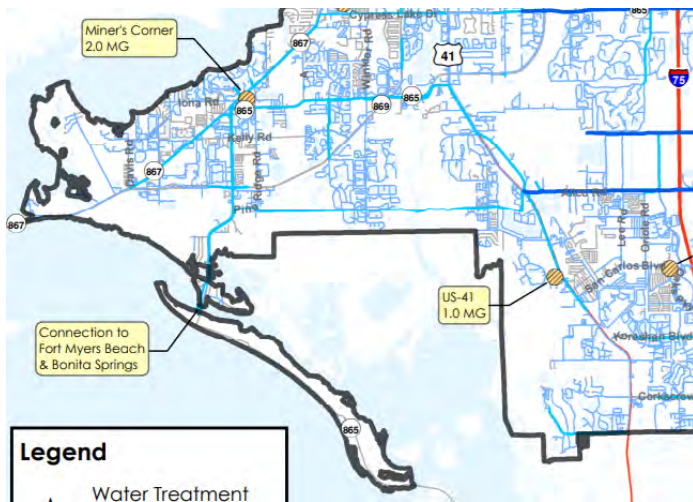
**Low Consequence**

**Critical Infrastructure**

**Overview**

Failure of critical public or private utility infrastructure can result in a temporary loss of essential functions and/or services that last from just a few minutes to days or more at a time. Public and private utility infrastructure provides essential life supporting services such as: electric power, natural gas, heating and air conditioning, water, sewage disposal and treatment, storm drainage, communications and transportation.

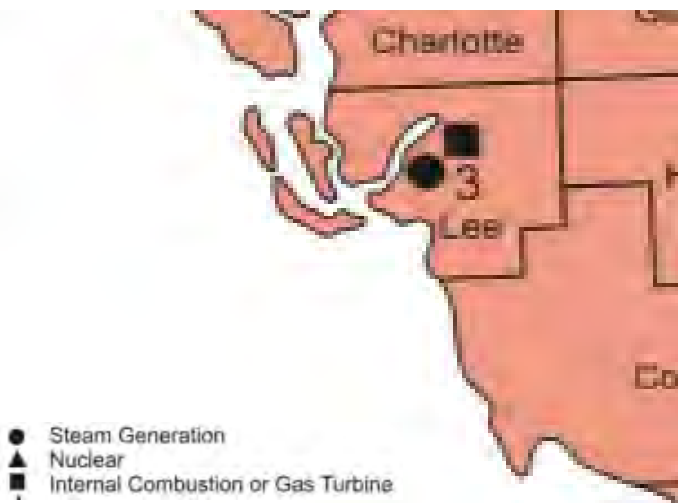
**Figure 2 Water Distribution**



**Figure 3 Water Treatment**



**Figure 4 FPL Electric Service**



**Figure 5 Transportation—Major Road**



**Moderate Risk**

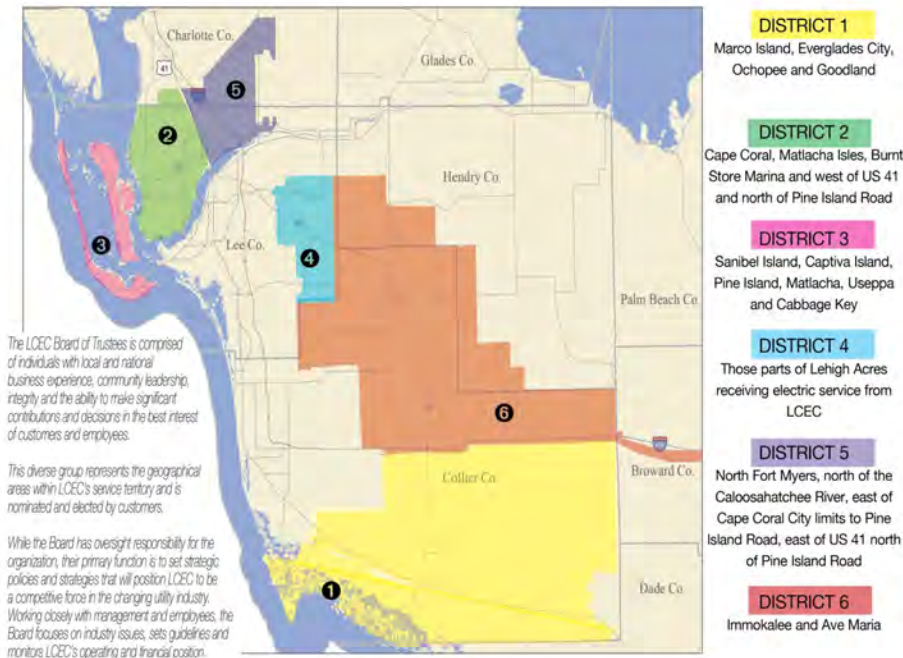
**High Probability**

**Low Consequence**

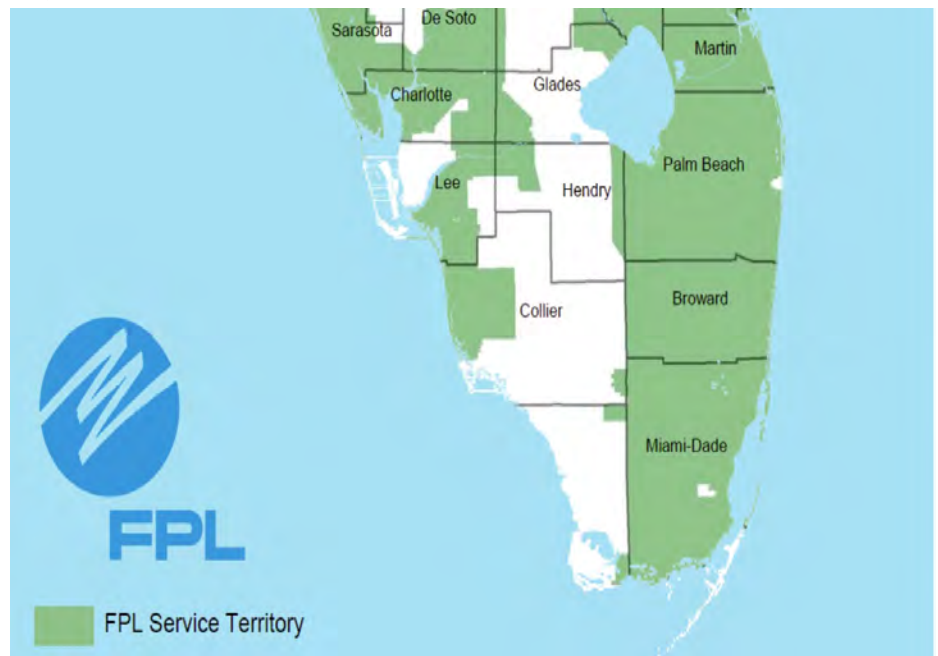
**Electrical Power Grid**

The District falls within the Florida Power and Light (FPL) Service area, but could be impacted by surrounding electrical services provided by the Lee County Electric Cooperative. FPL maintains a better than 99% service electrical service reliability.

**Figure 5 Lee County Electric Cooperative Service Area**



**Figure 6 FPL Service Area**



**Moderate Risk**

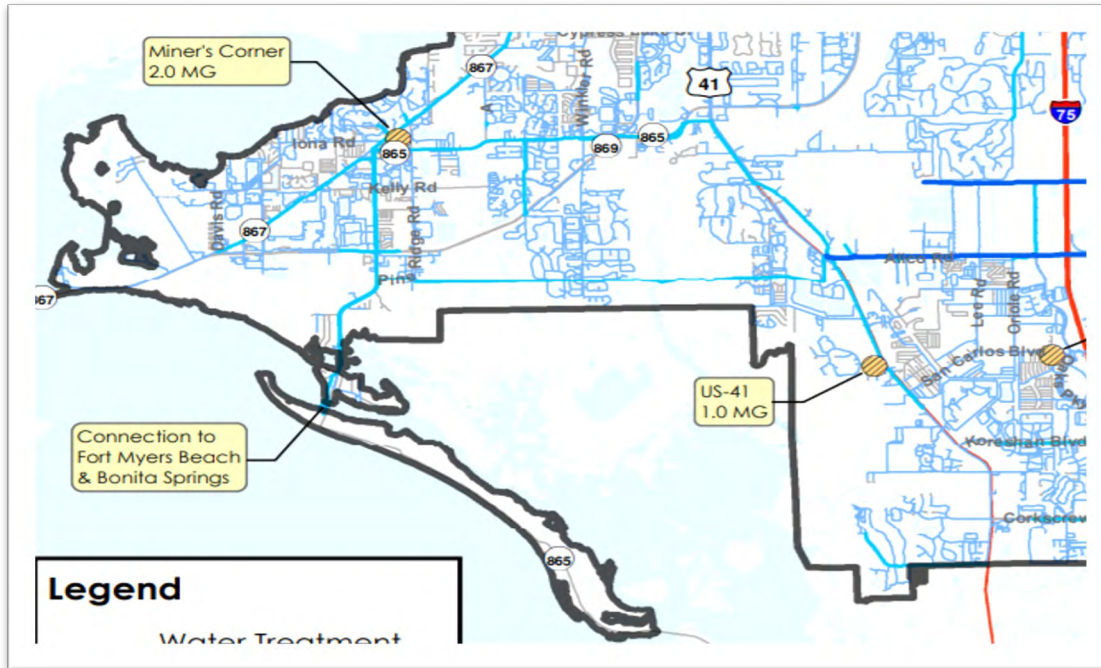
**High Probability**

**Low Consequence**

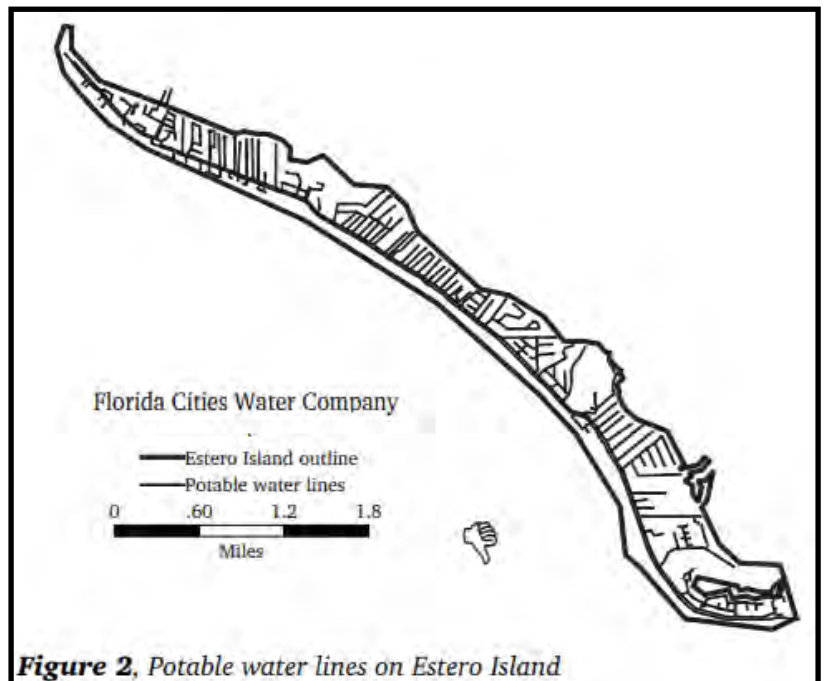
## Water System

Lee County Utilities (LCU) supplies all of the water and water supply infrastructure to the District. LCU owns and operates five water treatment plants (WTP). LCU has a total of ten interconnections with the following surrounding utilities: City of Fort Myers, Cape Coral, and Bonita Springs.

**Figure 5 Fort Myers Beach connection to LCU**



**Figure 6 Potable water lines on Estero Island**



**Figure 2, Potable water lines on Estero Island**



**Low Risk**

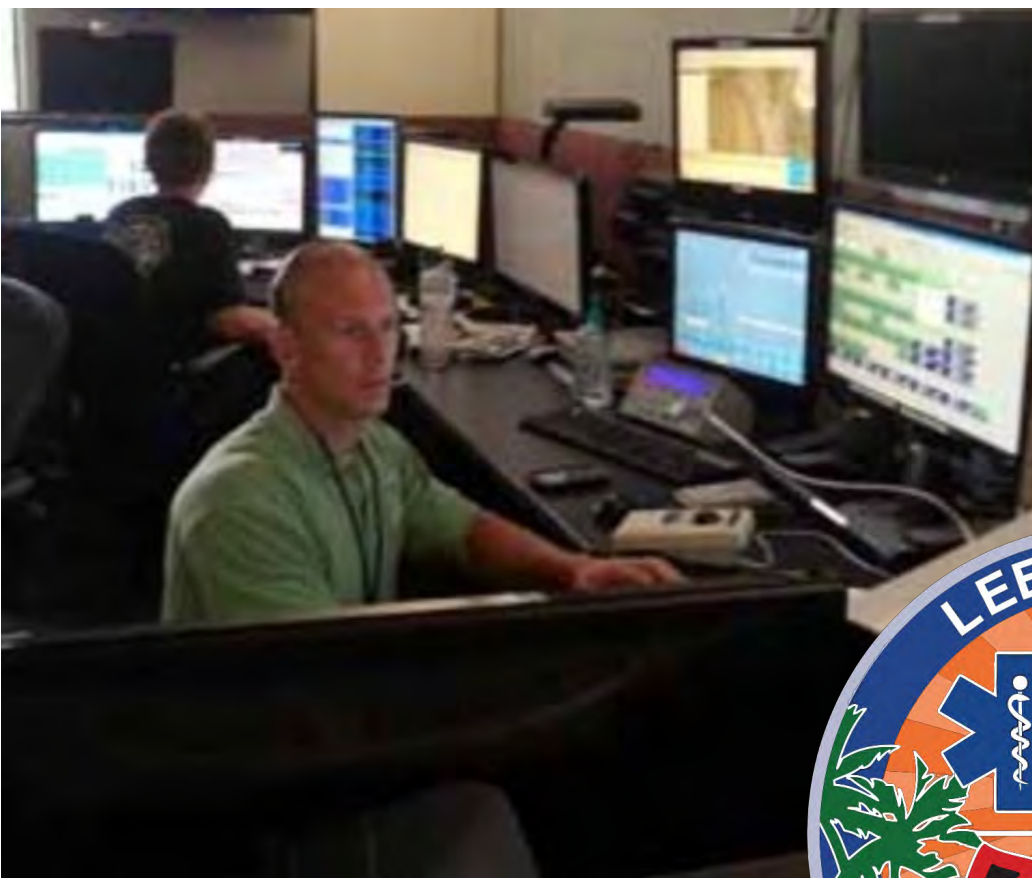
**Low Probability**

**Low Consequence**

## Emergency Communications

The Lee County Sheriff's Office (LCSO) functions as the Primary Public Safety Answering Point (PSAP) for the District. All law enforcement calls are handled direct by the LCSO communications center. Calls for Fire and EMS are transferred to a Secondary PSAP, Lee County Emergency Dispatch Center (Lee Control). Lee Control serves all of Lee County including the incorporated areas for EMS ambulance calls. All fire and rescue related calls are one button transferred from the Primary PSAP to the Secondary Lee Control PSAP with the exception of the City of Cape Coral. The Lee County Emergency 9-1-1 System is managed by the Lee County Division of Public Safety through the E 9-1-1 Program Manager.

**Figure 7 Lee Control Dispatcher**

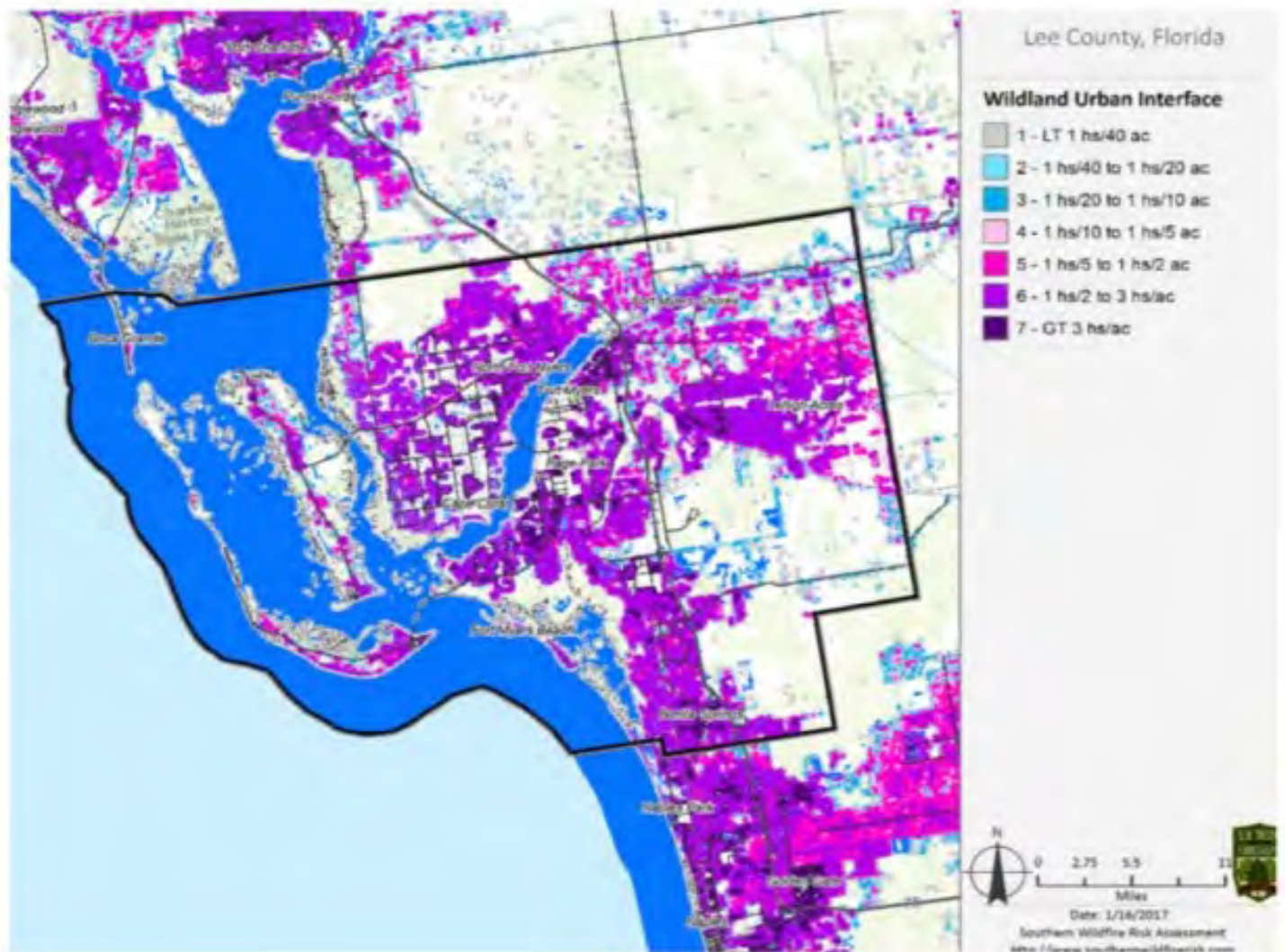




**Low Risk****Low Probability****Low Consequence****Rural Interface**

Wild, or undeveloped, lands and any surrounding urban areas (WUI - wildland-urban interface) are most at risk to fires. Potential risks include destruction of land, property, and structures as well as injuries and loss of life. Although rare, deaths and injuries usually occur at the beginning stages of wildfires when sudden flare-ups occur from high wind conditions. In most situations, however, people have the opportunity to evacuate the area and avoid bodily harm. Financial losses related to wildfires include destroyed or damaged houses, private facilities and equipment, loss of commercial timber supplies, and local and State costs for response and recovery. The District itself has a very limited risk of WUI as most of the District is built out. There is a limited area of wildland around station 32 where it butts up to San Carlos Bay Bunch Preserve and Estero Bay Preserve. Assessment of the rural interface risk is provided below.

**Figure 7: Lee County Wildland Urban Interface<sup>3</sup>**



<sup>3</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)

## Natural Risk Hazards

**Low Risk**

**Low Probability**

**Low Consequence**

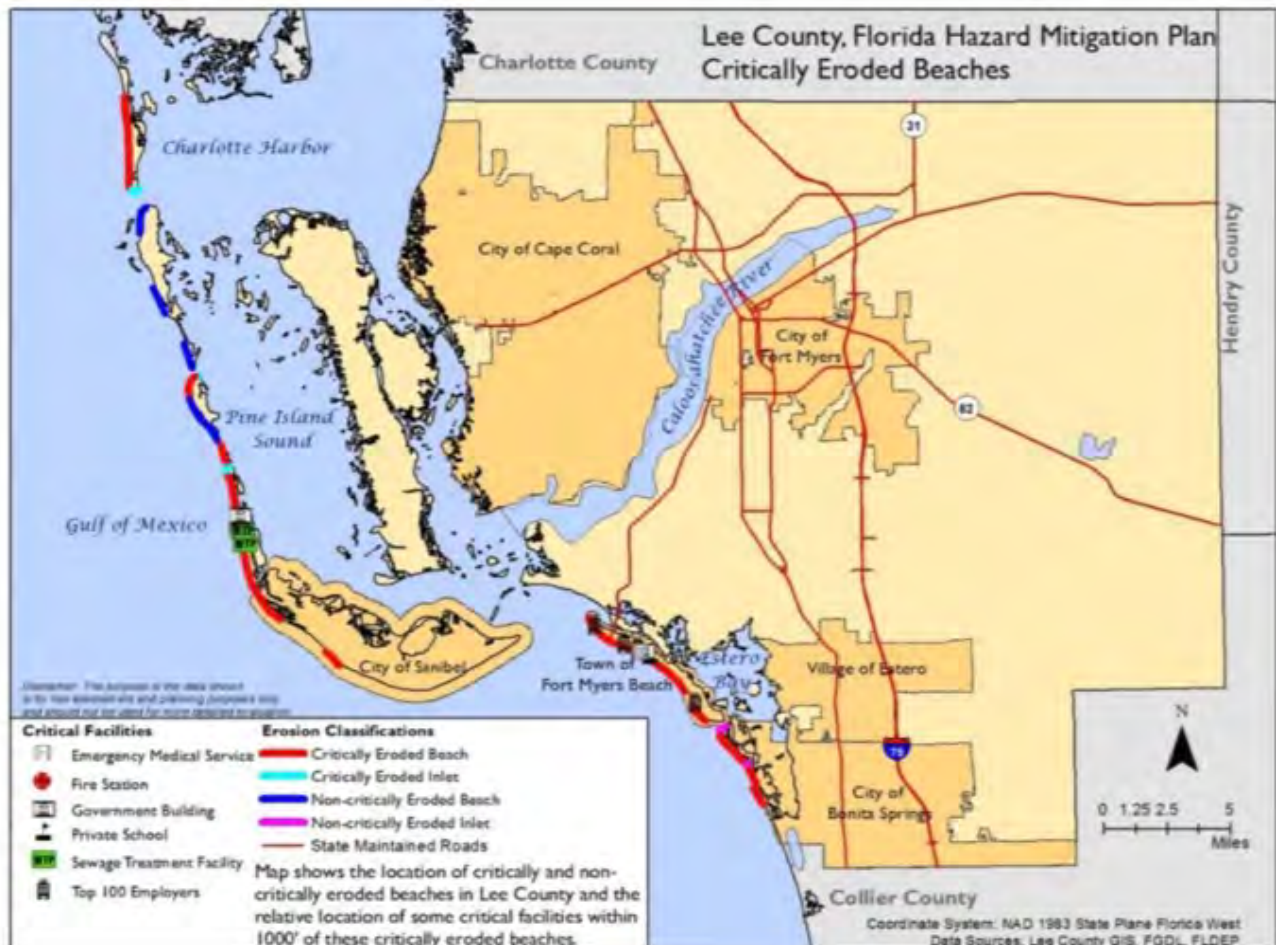
## Coastal Erosion

In the United States, coastal erosion is responsible for roughly \$500 million per year in coastal property loss, including damage to structures and loss of land. To mitigate coastal erosion, the federal government spends an average of \$150 million every year on beach nourishment and other shoreline erosion control measures.

The Town of Fort Myers Beach will receive approximately \$1.3 million for designing and permitting for beach re-nourishment, erosion monitoring, as well as beach and shoreline maintenance as part of 10 inter-local agreements approved by the Lee County Board of County Commissioners for \$3.56 million worth of beach projects and maintenance work throughout the county.

The projects are being funded through tourist development taxes, administered by the Lee County Visitors and Convention Bureau. The Gulf Beaches are Lee County's most attractive feature and are considered to be its number one economic asset.

**Figure 8: Lee County Critically Eroded Beaches<sup>4</sup>**



<sup>4</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)



**High Risk****High Probability****High Consequence****Flood Events**

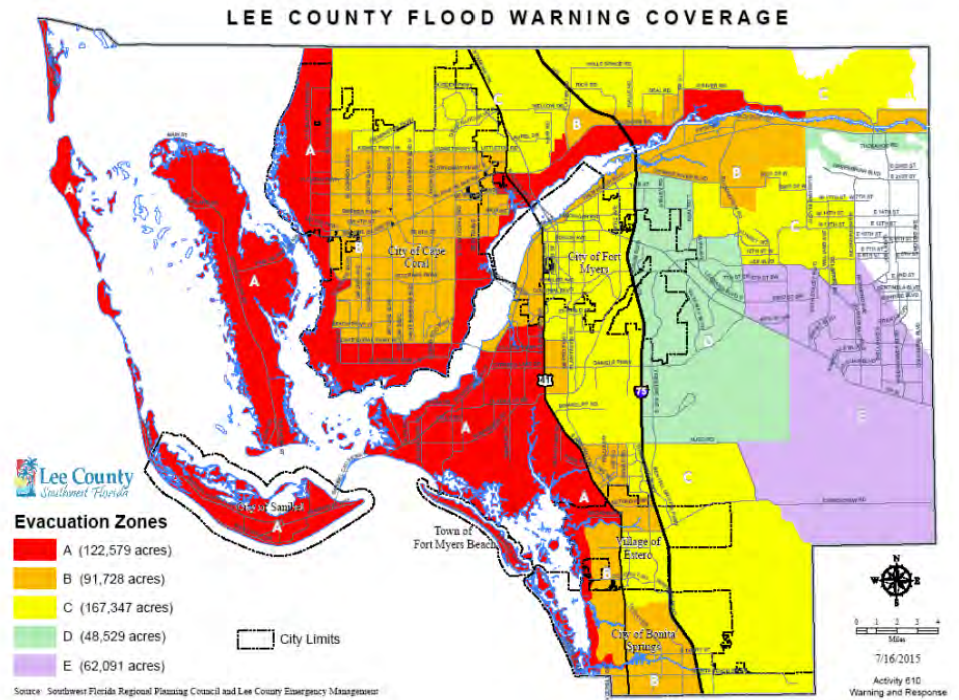
Floods are the most common natural disaster, damaging public health and safety, as well as economic prosperity. Between 1980 and 2013, the United States suffered more than \$260 billion in flood-related damages, according to FEMA. Storm surge, heavy downpours, extensive development and even sea level rise in coastal areas can increase the risk of flooding.

Lee County experienced two historic rainstorms in 2017 between the dates of August 25 and September 10, INVEST 92L and Hurricane Irma. While these two storm events covered a great deal of the County, some areas received more than 20 inches of rain during this short period of time. Rainfall at this intense level coupled with Hurricane Irma's storm surge exceeded the carrying capacity of our natural and manmade drainage features. Consequently, the County is working on its stormwater system using the multi-phased approach

Immediately after Irma, the county identified and removed trees and other debris from waterways that were potentially impeding flow. This was the first phase of the county's multi-faceted approach to mitigate ongoing and future flooding. This work continued through 2017 and 2018.

For Phase 2, the county contracted with four local consultant engineering firms to assist with the assessment of heavily impacted watersheds and establish an inventory of remedial measures.

Data from this effort, completed in March 2018, enabled the county to proceed with early activities that provided relief prior to the 2018 rainy season and the foundation to scope the Phase 3 Flood Mitigation Plan currently under development. The Phase 3 goal is to establish a plan to reduce flooding on a larger regional scale.

**Figure 9: Lee County Flood Zone Map<sup>5</sup>**

<sup>5</sup> Retrieved from: <https://www.leegov.com/dcd/Documents/FloodMapping/ApprovedPPI.pdf>

**High Risk**

**High Probability**

**High Consequence**

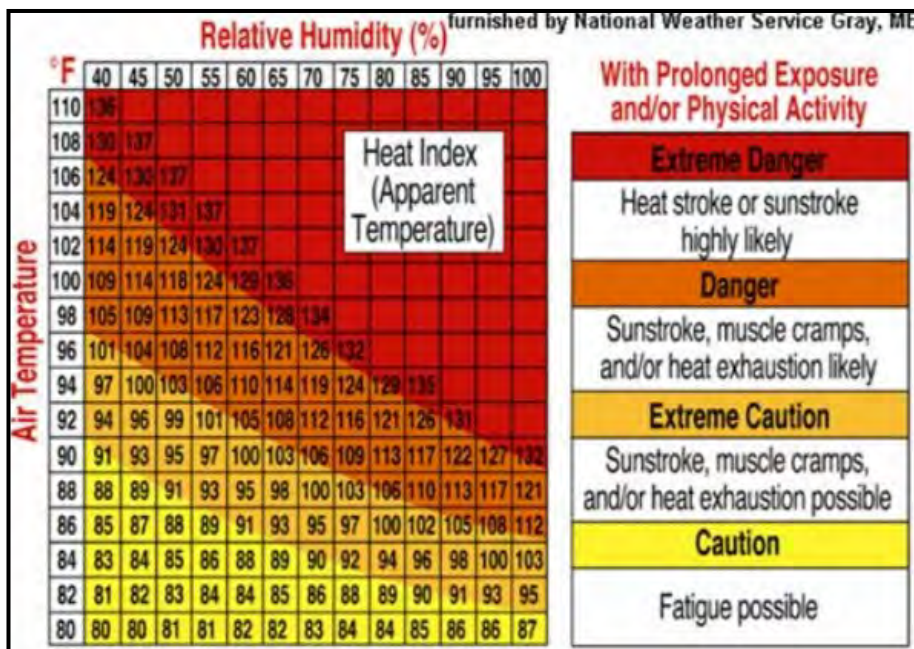
**Severe Weather**

Residents of the District are familiar with severe weather. High winds and torrential rains with tropical cyclones, or just daily tropical thunderstorms, are a regular occurrence. They can cause millions of dollars in property damage and sometimes even take lives. Storms not only knock out electricity, they often leave live power lines across roadways and topple trees into homes. The most vulnerable populations include the elderly and people living with life-threatening medical conditions.



The District is also vulnerable to temperature extremes. Extreme heat is a summer phenomenon that usually involves temperatures over 100°F for a period of several days. The “heat index” or “apparent temperature” is often used to measure how hot the air “feels” based on temperature and humidity. The index can be used as an indicator of potential health effects. Extreme heat events have normally occurred in early summer. The impact of these events can affect the local population, tourism industry, and agricultural industry. The NOAA NCEI Storm Events Database has recorded four occurrences of extreme heat events in Lee County since 1998, with three in June 1998 and a fourth in June 2009. Temperatures in these events increased to above 100 degrees.

**Figure 10: NWS Heat Index Chart<sup>6</sup>**



Although much more unlikely, extreme cold can cause power blackouts and place vulnerable populations at risk. During the harsh winter of 1989-1990, 26 Floridians died of hypothermia. Because of normally mild temperatures, Florida homes often lack adequate heating and insulation and the Florida outdoor lifestyle, leads to danger for those not prepared. Lee County has experienced 61 freeze type events since 1996.

<sup>6</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)



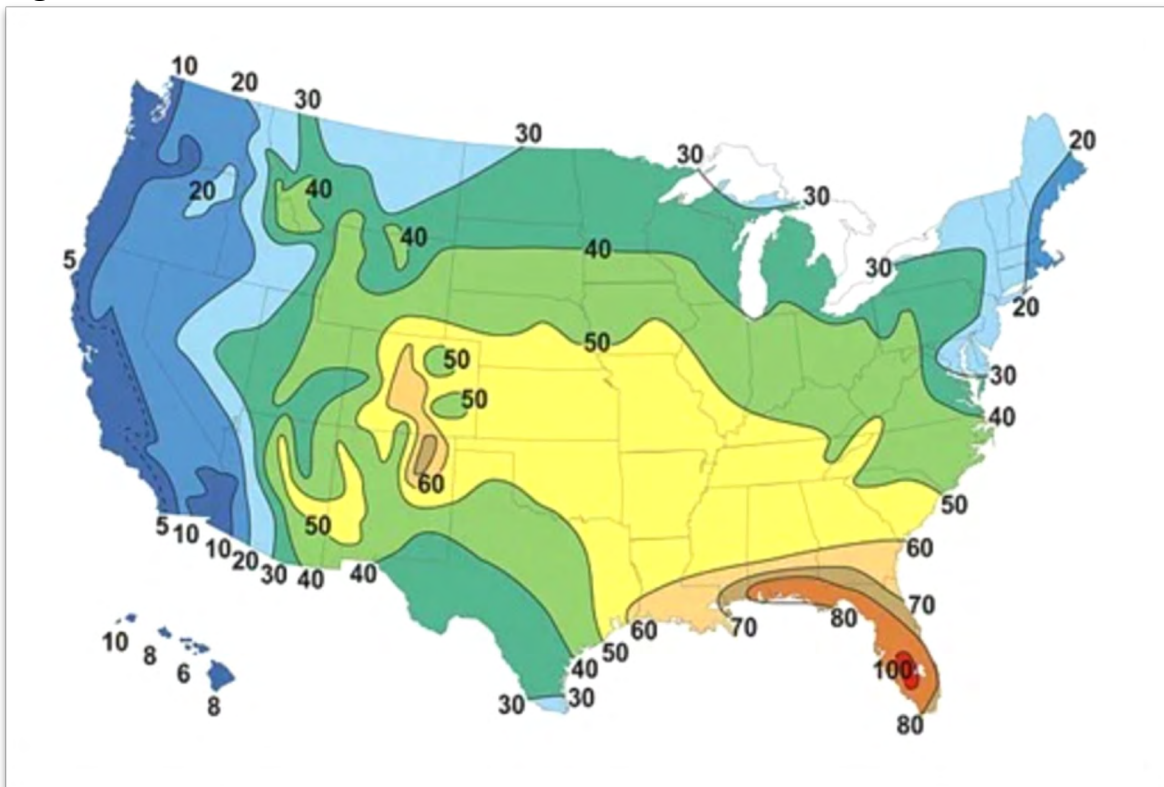
**High Risk****High Probability****High Consequence****Lightning / Thunderstorms****Lightning**

Lightning occurs with every thunderstorm and, on average, Florida sees around 70-100 days a year with at least one thunderstorm in the state. Because of Florida's vulnerability to thunderstorms and lightning, lightning is one of the most deadly weather hazards in the Sunshine State. In the United States, there are an estimated 25 million lightning flashes each year. In an average year, Florida sees around 1.4 million of these lightning strikes. This makes Florida the "Lightning Capital of the United States."

**Thunder Storms**

Of the estimated 100,000 thunderstorms that occur each year in the United States, about 10% are classified as severe. The National Weather Service considers a thunderstorm severe if it produces hail the size of a U.S. quarter or larger or winds of 58 mph or stronger. Severe thunderstorms are known to cause significant damage to well-built structures or cause bodily harm. These strong storms can also produce frequent and dangerous lightning, flooding and tornadoes. On average, the interior sections of central Florida receive the most thunderstorms with nearly 100 plus days per year. However, thunderstorms are also frequent along coastal areas which average 80 to 90 days per year. There have been 209 thunderstorm wind events, 51 Lightning strikes and 111 Hail events recorded in Lee County according to the NCEI Storm Events Database.

**Figure 11: NWS Heat Index Chart<sup>7</sup>**



<sup>7</sup> Retrieved from: <https://www.floridadisaster.org/hazards/thunderstorms/>

**High Risk**

**High Probability**

**High Consequence**

# Hurricanes

Hurricanes are among nature's most powerful and destructive phenomena. On average, 12 tropical storms, six of which become hurricanes form over the Atlantic Ocean, Caribbean Sea, or Gulf of Mexico during the hurricane season which runs from June 1 to November 30 each year. Over a typical 2-year period, the U.S. coastline is struck by an average of three (3) hurricanes, one of which is classified as a major hurricane (winds of 111 mph or greater). The dangers associated with Hurricanes is vast and listed below:

- **STORM SURGE** - A hurricane can produce destructive storm surge, which is water that is pushed toward the shore by the force of the winds. This advancing surge combines with the normal tides to inundate normally dry land in feet of water. The stronger the storm, the higher the storm surge.
- **INLAND FLOODING** - In the last 30 years, inland flooding has been responsible for more than half the deaths associated with tropical cyclones in the United States.
- **HIGH WINDS** - Hurricane-force winds can destroy poorly constructed buildings and mobile homes. Debris such as signs, roofing material, and small items left outside become flying missiles in hurricanes.
- **TORNADOES** - Hurricanes can produce tornadoes that add to the storm's destructive power. Tornadoes are most likely to occur in the right-front quadrant of the hurricane.

Based on historic data from the NCEI Storm Events Database, the probability of a land falling hurricane in Lee County for a given year is 1 every 2-3 years. For tropical storms, the probability is 1 every 1-2 years. This does not mean that it is not possible for hurricanes and tropical storms to appear more frequently in Lee County. For instance, Lee County encountered 3 hurricanes in 2004 and 2 in 2005.<sup>8</sup>

**Recent notable storms include:**

2004, August 13th: Hurricane Charley's core moves in just north with 145mph winds.

2005, October 24th: Hurricane Wilma comes in approx. 40 miles to the south with 125mph. Many trees, signs and debris in streets but not any worse than from Charley in 2004.

2017, September 10th: Hurricane Irma passes just 10 miles east while moving north with 100mph winds causing minor damage with 3.28 ft. storm tide.



<sup>8</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)

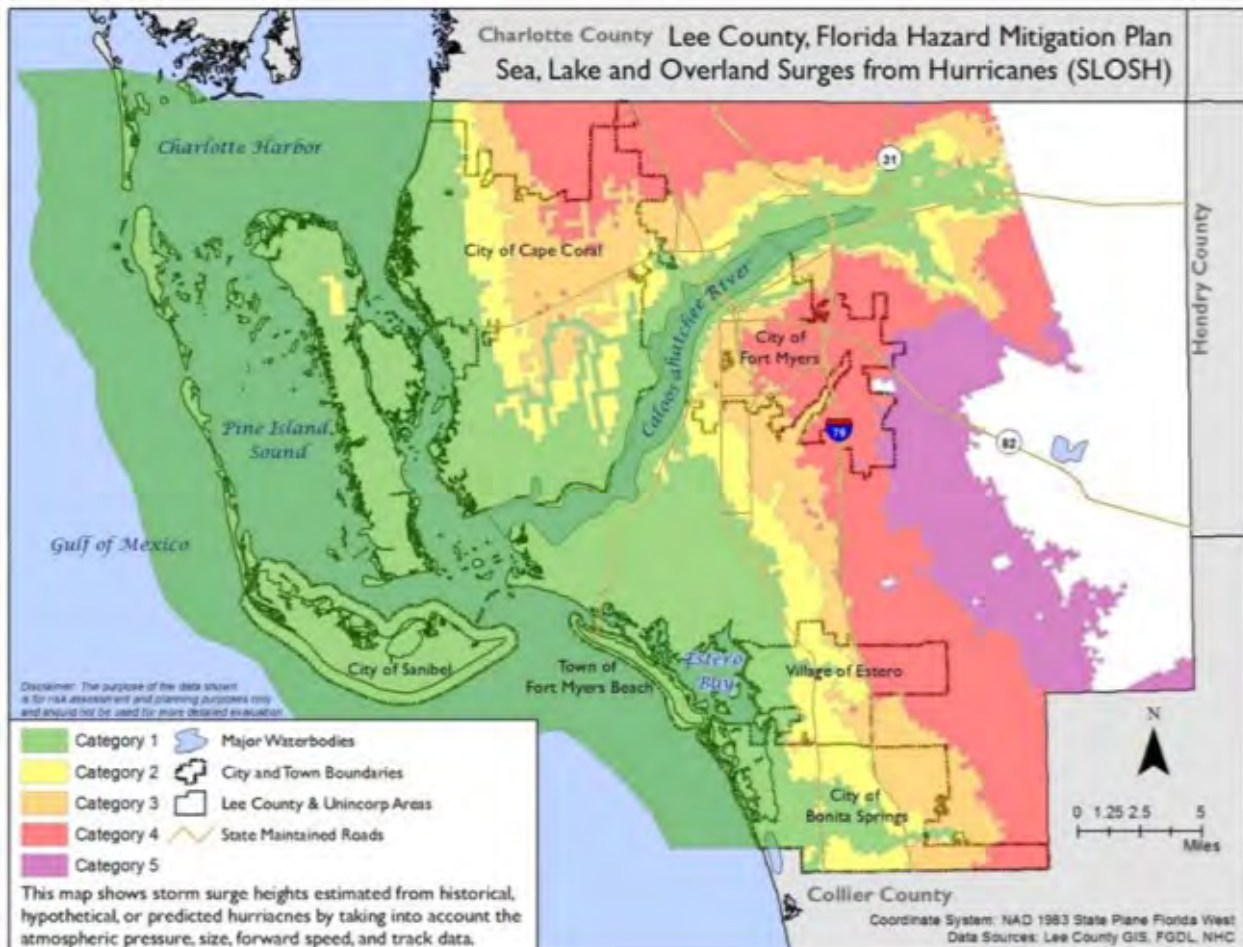
**Moderate Risk****High Probability****Low Consequence****Storm Surge**

Coastal flooding associated with tropical storms and hurricanes is the result of storm surge, water (not waves) that is pushed toward the shore by the force of the storm winds. Storm surge inundation zone data is available from two sources: (1) SLOSH surge maps are developed in conjunction with the preparation of regional hurricane evacuation studies, and (2) TAOS surge maps which are provided to Florida counties. These 2 sources use different models for predicting storm surge flooding.

The regional hurricane evacuation study maps are based on the Sea, Lake, and Overland Surges from Hurricanes (SLOSH) model developed by the National Weather Service. The boundaries of the evacuation zones are based on the surge zones, but modified to facilitate ready identification of zone boundaries.

The District is by and large part of a chain of islands with numerous inlets and large expanses of water that form a barrier to the mainland. Thus, the District is particularly susceptible to tidal and storm surge flooding due to coastal storm events with storm surge. A storm surge of just 4-feet can cause major structural flooding, loss of life, and major beach erosion.<sup>9</sup>

**Figure 12: Storm Surge Inundation Zones by Hurricane Category<sup>9</sup>**



<sup>9</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)



**High Risk**

**High Probability**

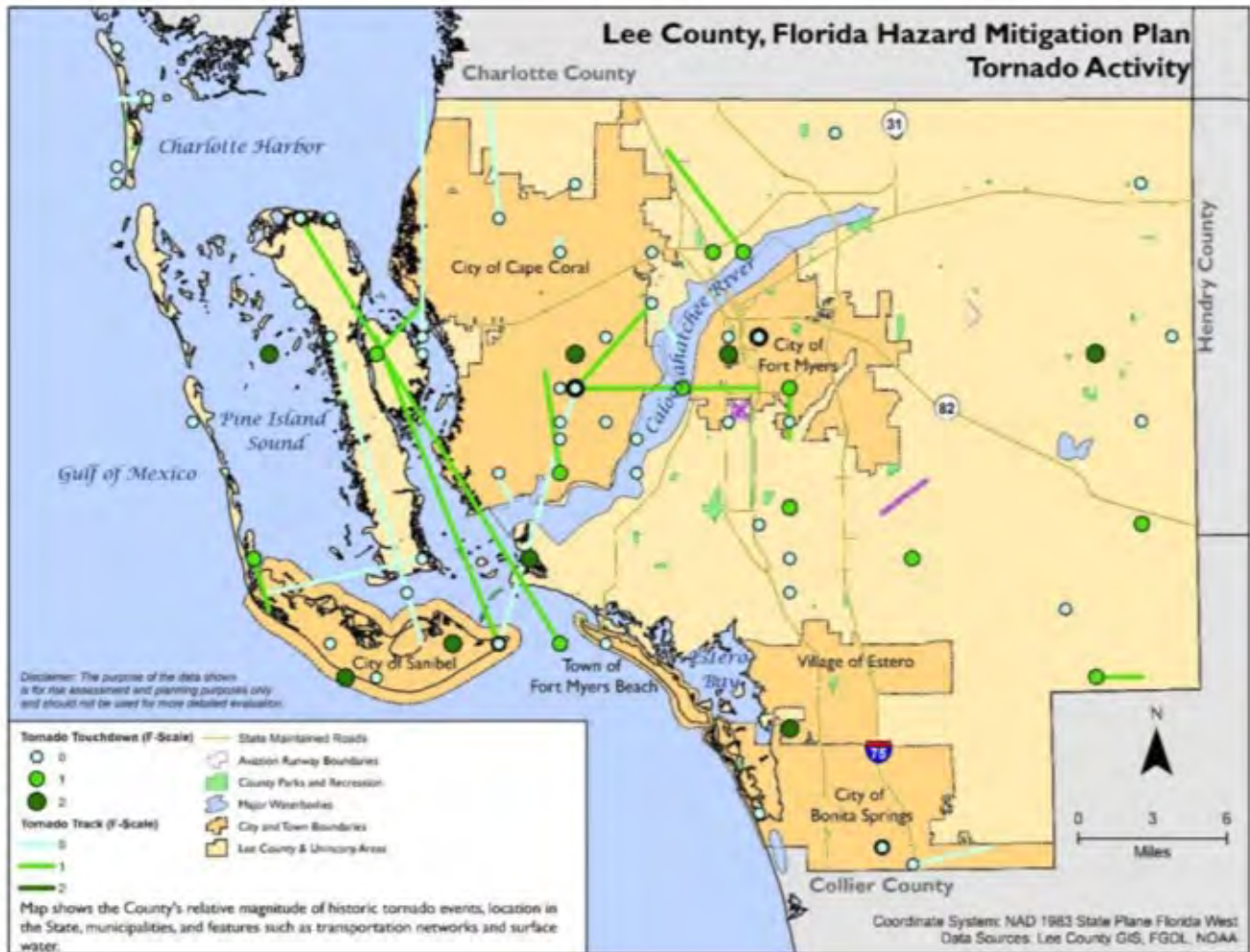
**High Consequence**

**Tornado**

Tornadoes in Florida can form in a variety of ways, and in all seasons. However, many of Florida's tornadoes occur in the Spring and Summer months. Summer season tornadoes (June-September) typically occur along strong sea breeze boundary collisions, as well as from tropical cyclones. Spring season tornadoes (February-May) can be more powerful and deadly as they are spawned from severe supercells along a squall line ahead of a cold front. These types of tornadoes are also possible in the fall and winter months (October-January). Florida tornado climatology shows us that strong to violent tornadoes are just as likely to occur after midnight as they are in the afternoon.

There has been a total of 108 tornadoes and 31 waterspouts in Lee County according to the NCEI since 1950. There is no recorded history of a tornado with a classification greater than F2 striking in Lee County. Of the tornado events that have occurred in Lee County, 68.5% of them were F0 tornadoes and 20.4% of them were classified as F1 tornadoes. The majority of the tornado events that occur in Lee County are events that are likely to cause only moderate damage.<sup>10</sup>

**Figure 13: Tornado Activity in Lee County<sup>10</sup>**



<sup>10</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)

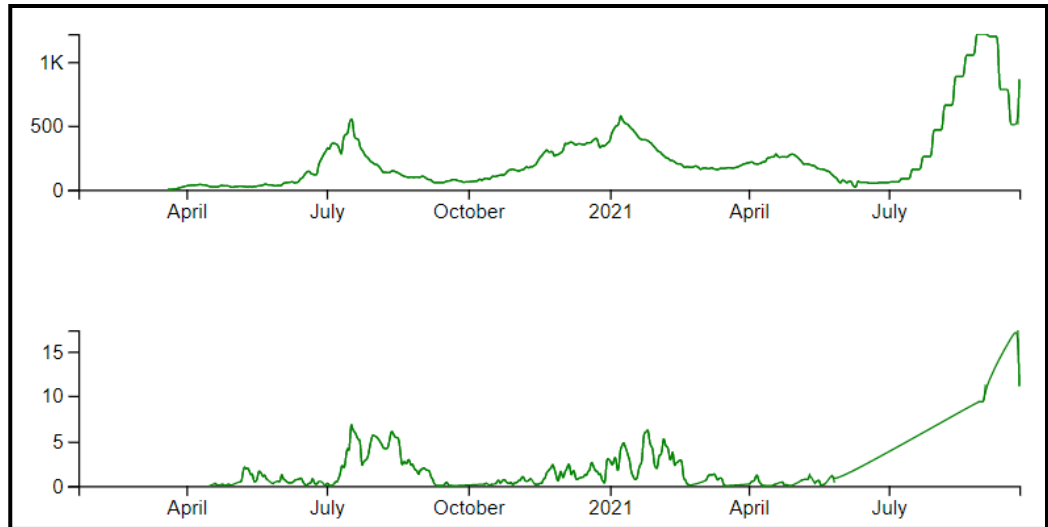


**High Risk****High Probability****High Consequence****Contagious and Chronic Disease****Contagious Disease**

The Florida Department of Health in Lee County (DOH-Lee) is one of 67 Public Health Departments under the governance of the integrated Florida Department of Health (DOH). Although DOH-Lee is a state agency, it maintains a very strong partnership with Lee County Government. DOH-Lee is organized into a number of program areas that focus on the surveillance, prevention, detection and treatment of the most significant health and environmental issues within the county. The major services provided by DOH-Lee include Infectious Disease Services which provides for HIV/AIDS Surveillance, Prevention and Patient Care, Sexually Transmitted Diseases (STD), Tuberculosis Control (TB), Epidemiology and Disease Control, Rabies Control and Hepatitis. Most notably, these efforts have included the surveillance and response to the COVID-19 pandemic.

To ensure the health and safety of the community, when a contagious disease is confirmed in a place where people are in close contact (such as schools, daycares, and nursing homes), DOH-Lee follows up with the people who might be exposed to the disease as a result.

Thanks to vaccines, medical care, clean water, and safe food sources and handling, deadly diseases are more rare in the District than ever before. However, the District has not avoided the impact of the COVID-19 pandemic. As of October 2021, Lee County had recorded more than 126,000 cases of COVID-19 and more than 1,519 deaths. New diseases also pose a threat, as they can develop and spread rapidly.

**Figure 13: COVID-19 Cases and Deaths in Lee County<sup>11</sup>****Chronic Disease**

Chronic diseases, including heart disease, stroke, cancer, and diabetes, rank among the most common, costly, and preventable of all health problems throughout the United States. In 2020, Lee County was ranked 16th out of the 67 counties in Florida for Health Outcomes and 15th out of 67 for Health Factors. The five leading causes of death in Lee County Florida were: 1) Cancer, 2) Heart Disease, 3) Unintentional Injury, 4) Respiratory Disease, and 5) Stroke.<sup>12</sup>

According to the CDC, nearly 1 out of every 2 adults has at least 1 chronic illness and 7 out of 10 deaths among Americans each year are due to chronic diseases. Access to high-quality and affordable prevention measures, including screening and appropriate follow-up care, are also essential steps in disease prevention. As of 2020, 85.7% of Lee County Residents had health insurance coverage and 13.6% of the county population has a disability.<sup>12</sup>

<sup>11</sup> Retrieved from: <https://covid.cdc.gov/covid-data-tracker/#county-view>

<sup>12</sup> Retrieved from: <https://www.hpcswf.com/wp-content/uploads/2020/03/Lee-County-Health-Profiles-2020.pdf>

**Moderate Risk**

**High Probability**

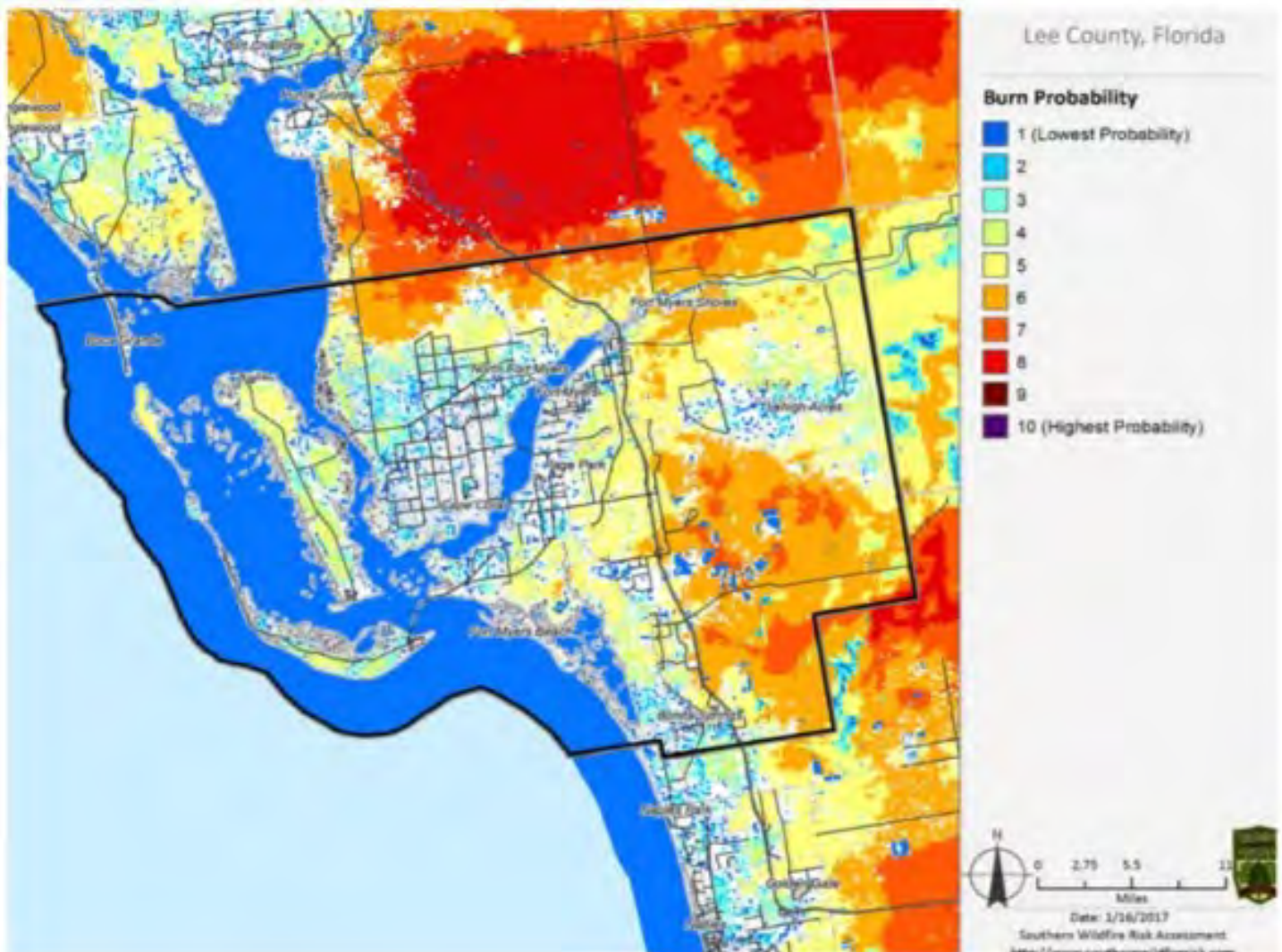
**Low Consequence**

**Wildfires**

Each year, thousands of acres of wildland and many homes are destroyed by fires that can erupt at any time of the year from a variety of causes, including arson, lightning, and debris burning. Adding to the fire hazard is the growing number of people living in new communities built in areas that were once wildland. This growth places even greater pressure on the state's wildland firefighters. As a result of this growth, fire protection becomes everyone's responsibility. Drought conditions and other natural disasters increase the probability of wildfires by producing fuel in both urban and rural settings.

All jurisdictions within Lee County are vulnerable to Wildfires. The probability of occurrence is estimated to be every 5 years. The figure below demonstrates the the FMBFCD has a relatively low wildfire risk compared with the remainder of the County

**Figure 14: Lee County, Florida Burn Probability<sup>13</sup>**



<sup>13</sup> Retrieved from: [https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL\\_LeeCounty\\_LMS2017.pdf](https://www.leegov.com/publicsafety/Documents/Emergency%20Management/FINAL_LeeCounty_LMS2017.pdf)



## Human-made Risk Hazards

**Moderate Risk**

**High Probability**

**Low Consequence**

# Transportation Network

### Aviation

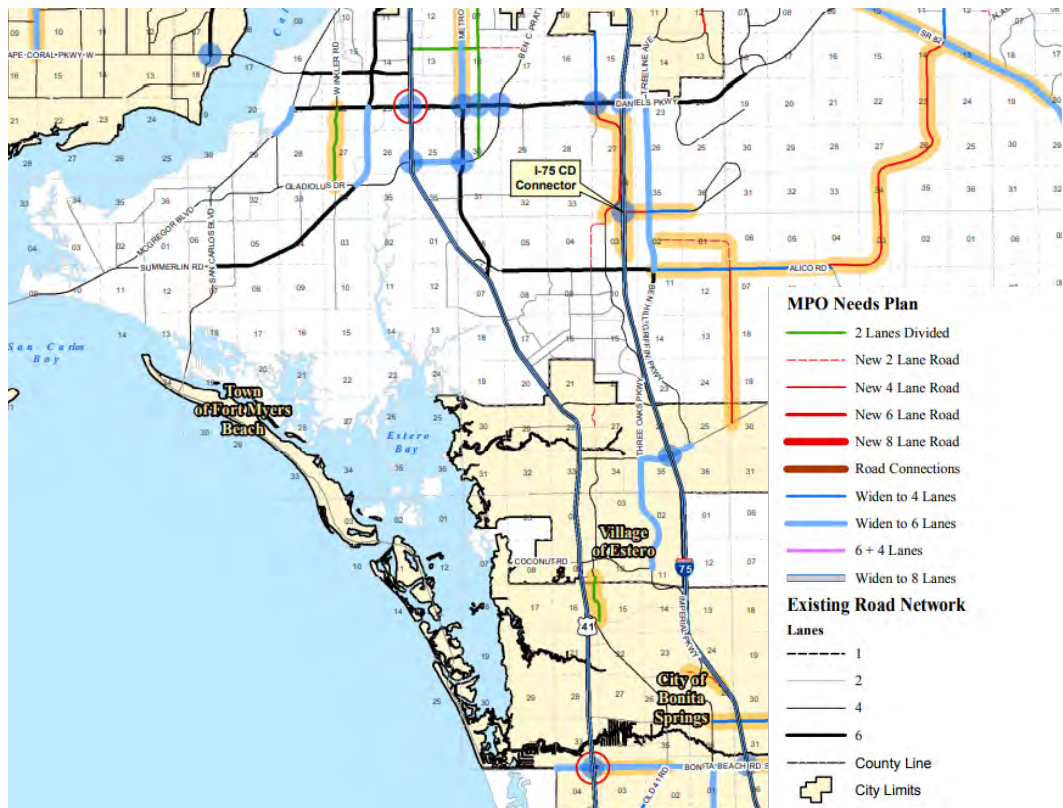
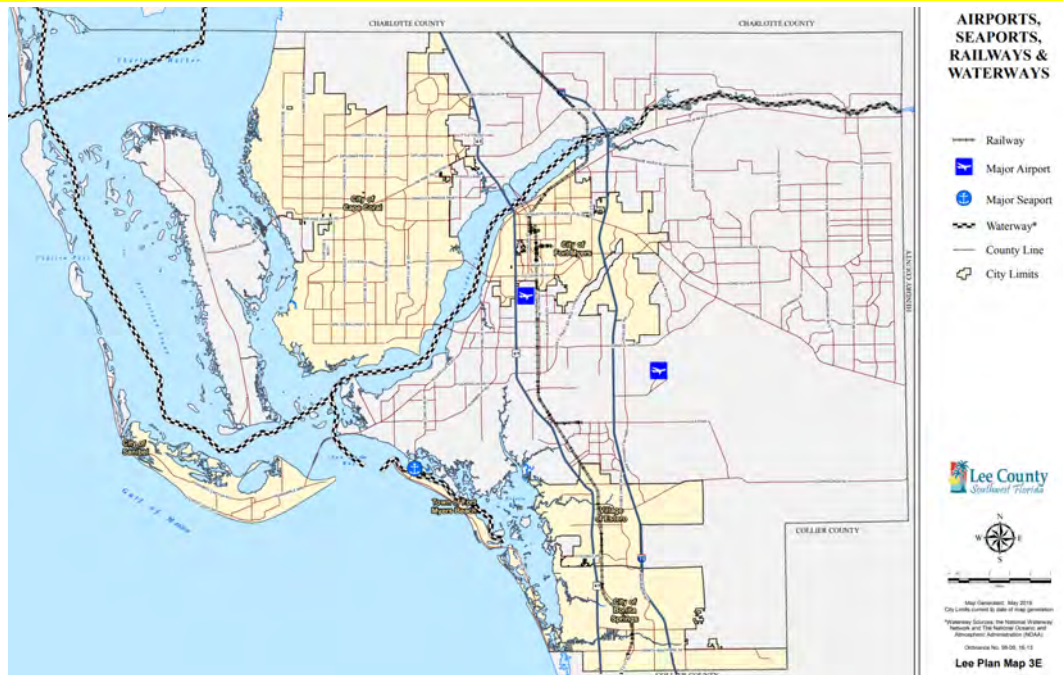
Southwest Florida International Airport (RSW), operated by the Lee County Port Authority (LCPA), was certified for operation in May 1983. RSW is one of the top 50 airports for passenger traffic in the U.S. and served nearly 6 million passengers in 2020.

### Railroad

There is limited railroad transit within the County, but no rail routes within the District.

### Roadway

State Road 865 (San Carlos Boulevard) is an urban minor arterial that connects Lee County and the Town of Fort Myers, Florida to the barrier islands of San Carlos and Estero. SR 865 serves as the primary evacuation route for residents of Ft. Myers Beach. Several bridges connect the various portions of the district. Therefore, the inherent risk of motor vehicle accidents, vehicle fires, and hazardous materials





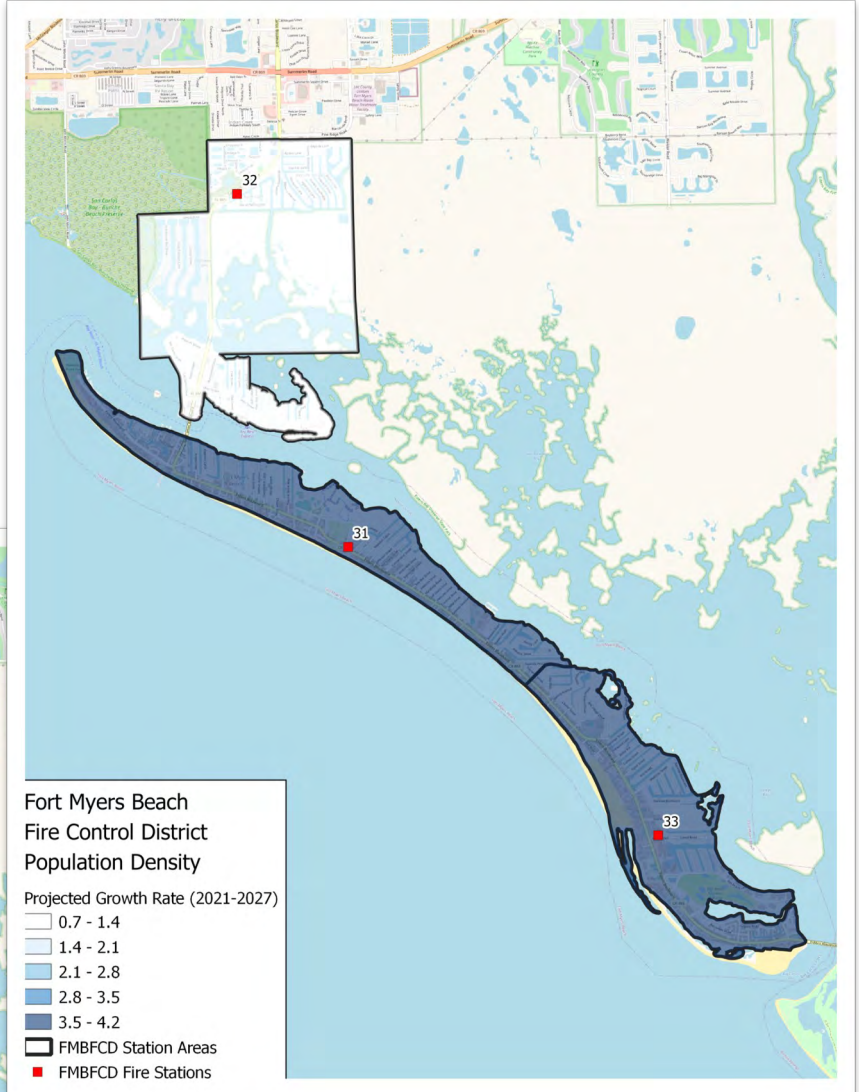
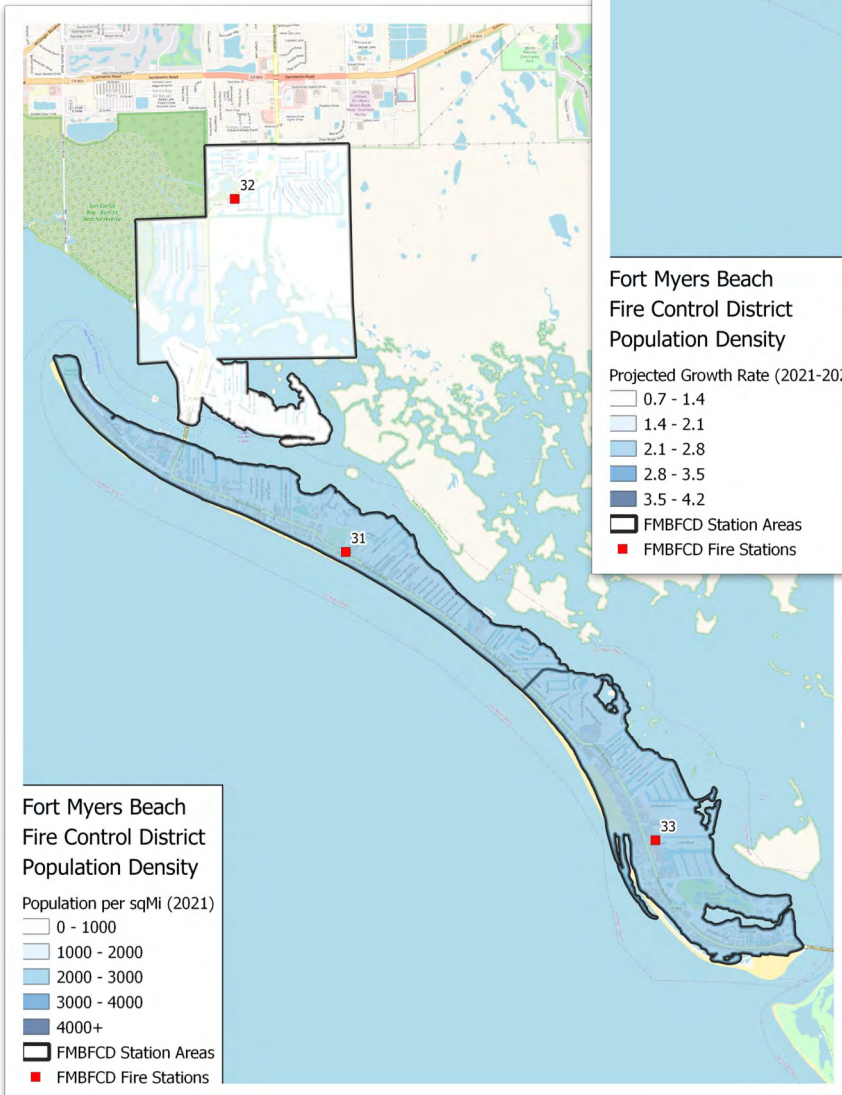
**Low Risk**

**Low Probability**

**Low Consequence**

**Population Growth**

The projected population growth rate from 2021-2027 is 3.5-4.2% for the majority of the census block areas in the District..



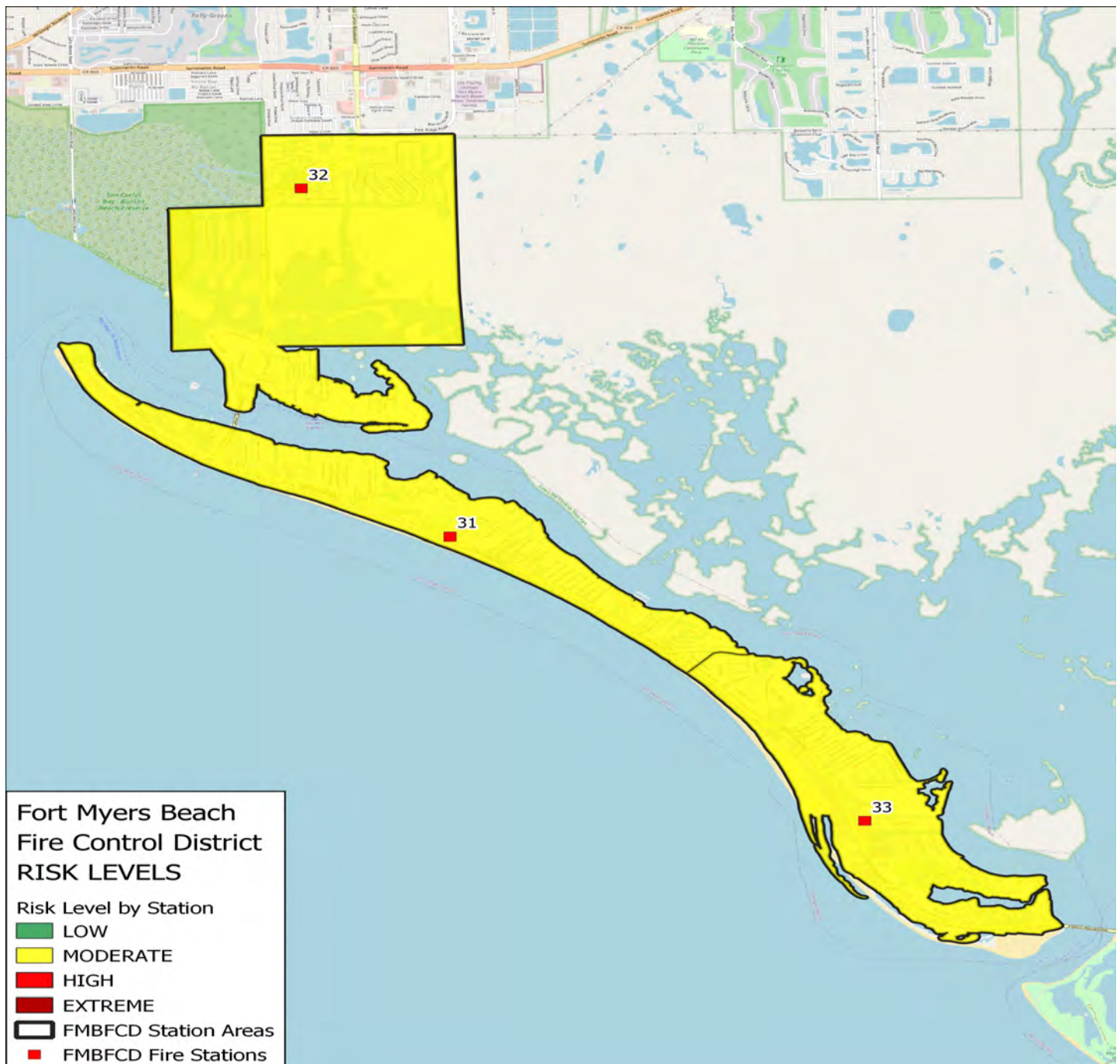
The majority of census block areas in the District have population densities of up to 3,000 people per square mile, a critical factor to watch as population numbers continue to rise.

## First Due Station Area Summary Risk Rating

Viewing risk at multiple levels is a best practice within the fire service. Much of the risk in this section is viewed at a jurisdictional level and then moving to first due districts as the main lens, turning to the most granular view; individual risk ratings for buildings located within a community.

Below is the First due zone ratings for FMBFCD, indicating that all three stations are considered moderate risk, following factors:

- Population density
- Median household income
- Unemployment rate
- Square miles
- Median age
- Percentage of home greater than 50 years old
- Number of moderate/high risk occupancies,
- Community Demand
- Call concurrency rate



**Risk Scoring by First Due Station**

Once all first due stations were assigned scores for all three variables—average census variables score or “Homogenized Risk (R)” score, “Community Demand (D)” score, and “Call Concurrency (C)” score, the values were placed into a formula to yield a final risk score, as follows:

Risk Class	Community Demand (D)		Call Concurrency (C)		Homogenized Risk (R)		Total Risk Score $\sqrt{\frac{(DC)^2 + (DR)^2 + (RC)^2}{2}}$
	Value	Scale (Calls)	Value	Scale (%)	Value	Scale (Occupancies)	
Extreme	≥10	≥4,050	≥10	≥ 22.5	≥10	≥10	≥99.5
High	7 to 9	≥ 2,700 and < 4,049	7 to 9	≥ 15 and < 22.5	7 to 9	≥ 7 and <10	≥ 44.55 and < 99.5
Moderate	4 to 6	≥ 1,350 and < 2,700	4 to 6	≥ 7.5 and < 15	4 to 6	≥4 and < 7	≥ 12 and < 44.5
Low	1 to 3	< 1,350	1 to 3	≥0 and < 7.5	1 to 3	< 4	< 12

First Due Station	Component Risk Scores for Census Variables							Census Average Score	2016-17 to 2019-20 Call Data					Final Scoring	
	Population Density	Median Household Income	Unemployment Rate	Square Miles	Median Age	Percentage of Homes > 50 Years	Number of Moderate-/High/Extreme-Risk		Total Number of Calls	Average Number of Calls per Period	Demand Risk Score	Call Concurrency Rate	Concurrency Risk Score	Final Risk Score	Final Risk Level
31	6	5	2	3	7	7	10	5.71	5,492	1,373.0	4	17.7	6	33.72	Moderate
32	2	7	1	8	8	4	8	5.43	2,110	527.5	2	10.6	4	18.07	Moderate
33	6	5	2	4	7	7	10	5.86	3,124	781.0	2	12.6	5	23.40	Moderate

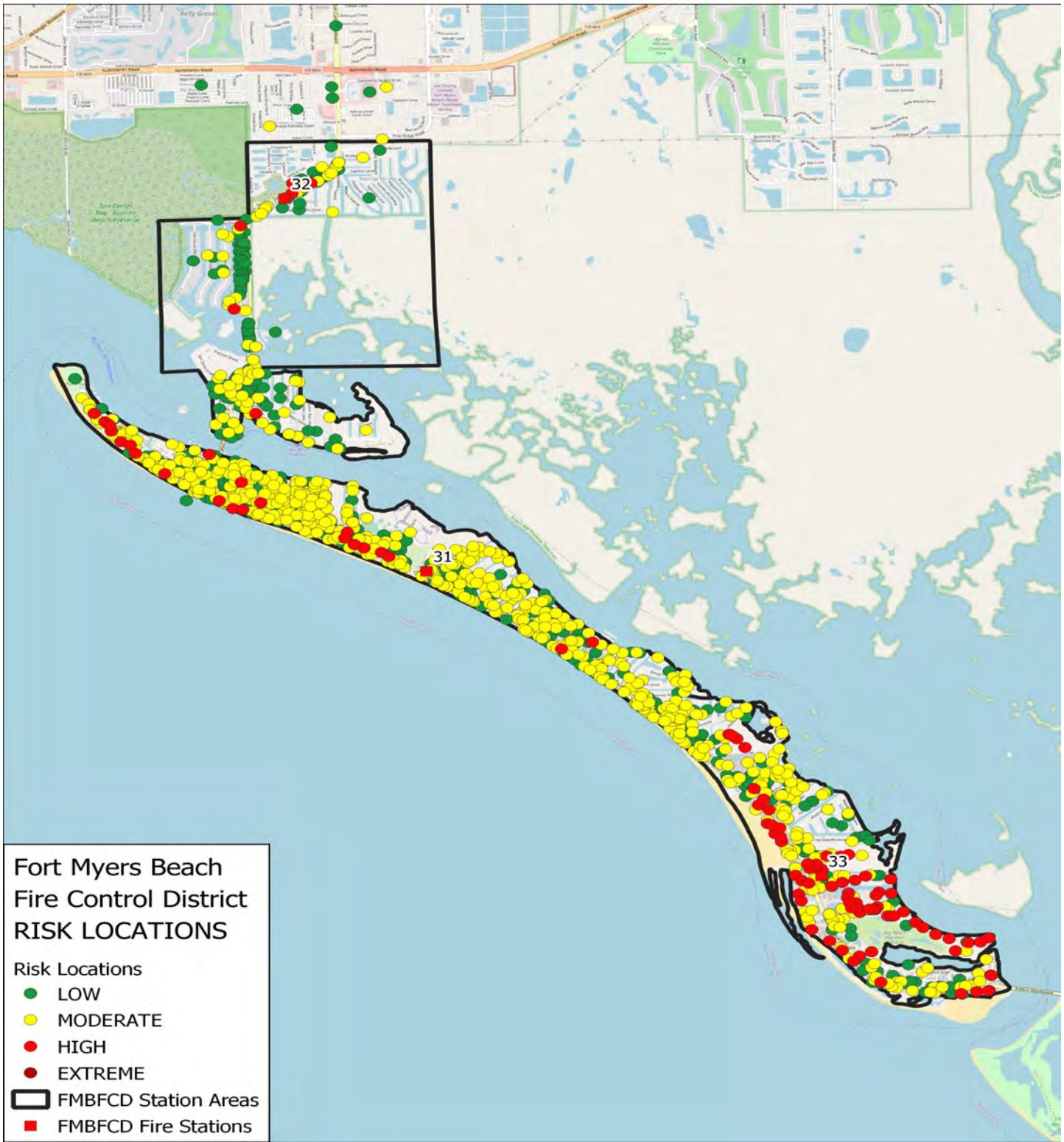


## Physical Assets Protected

Sufficient data was available from the internal inspection records that provided specific building occupancy information. Individual buildings were rated by multiple variables such as number of stories, location, stories below grade, construction class, and the **presence of automatic sprinklers**. Although this information was utilized throughout the risk assessment process and calculations, the map below shows specific locations of rated occupancies and the respective risk severity.

Performance Indicator 2B.5

Fire protection and detection systems are incorporated into the risk analysis.



## Critical Tasking Methodology for Fire, EMS, HazMat and Technical Rescue

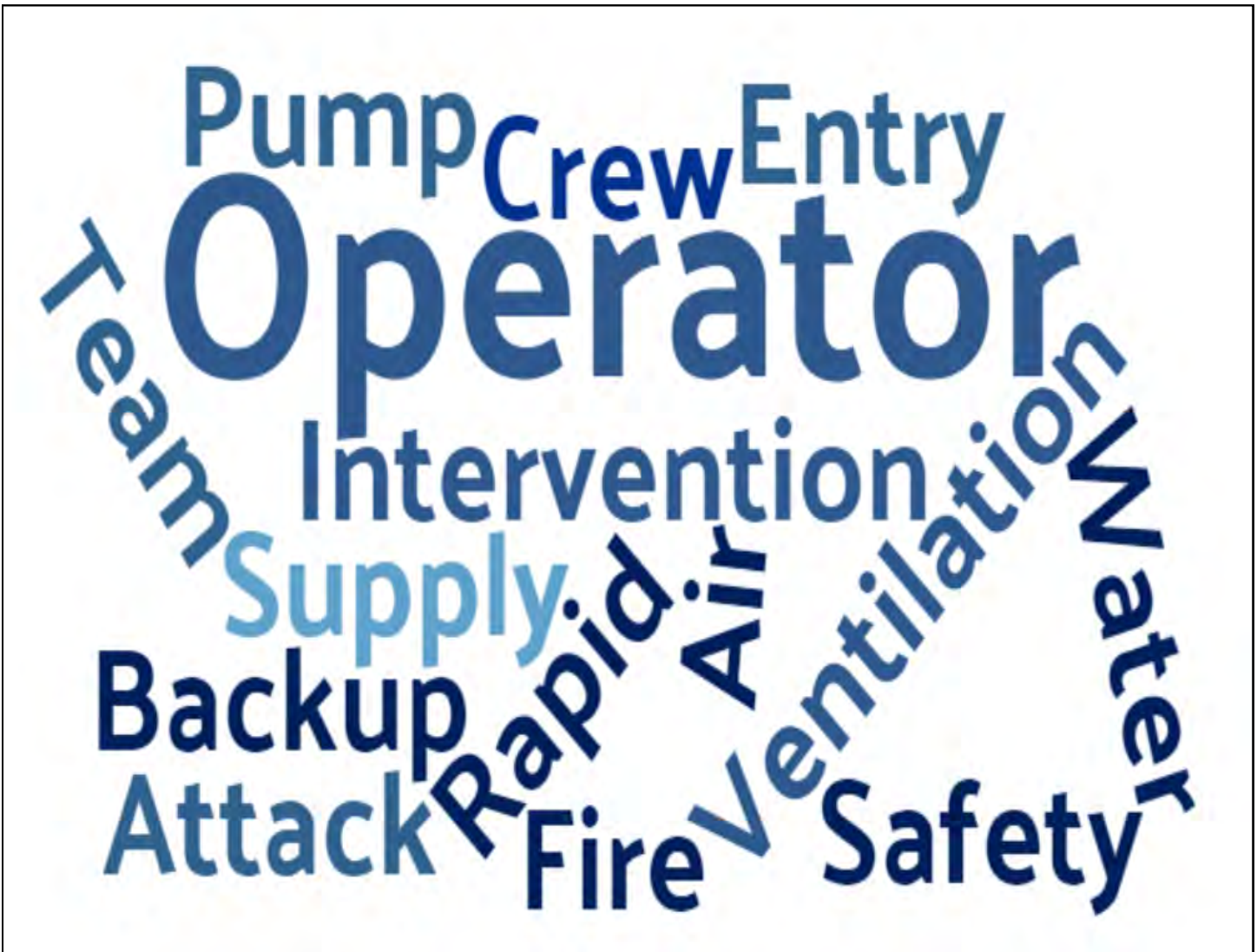
The department utilizes annual risk assessment and critical tasking review meetings for the fire, EMS, hazardous materials, and technical rescue programs to determine and document categories and classes of risks throughout the District.

### Core Competency 2C.4

A critical task analysis of each risk category and risk class has been conducted to determine first due and effective response force capabilities and a process is in place to validate and document the results.

These meetings are also used to assess whether the current effective response force (ERF) can perform the critical tasking necessary to mitigate the hazards associated with each hazard and risk level. The department uses after action reviews for structure fires, technical rescues, and hazardous material incidents to evaluate the effectiveness of first due and initial assignments in achieving incident goals.

The EMS program evaluates hands on training activities for critical tasking, and monitors metrics such as return of spontaneous circulation (ROSC) to assess the effectiveness of initial assignments for cardiac arrest incidents. Changes to critical tasking and ERF's are documented in annual updates to the standards





**High Risk**

**High Probability**

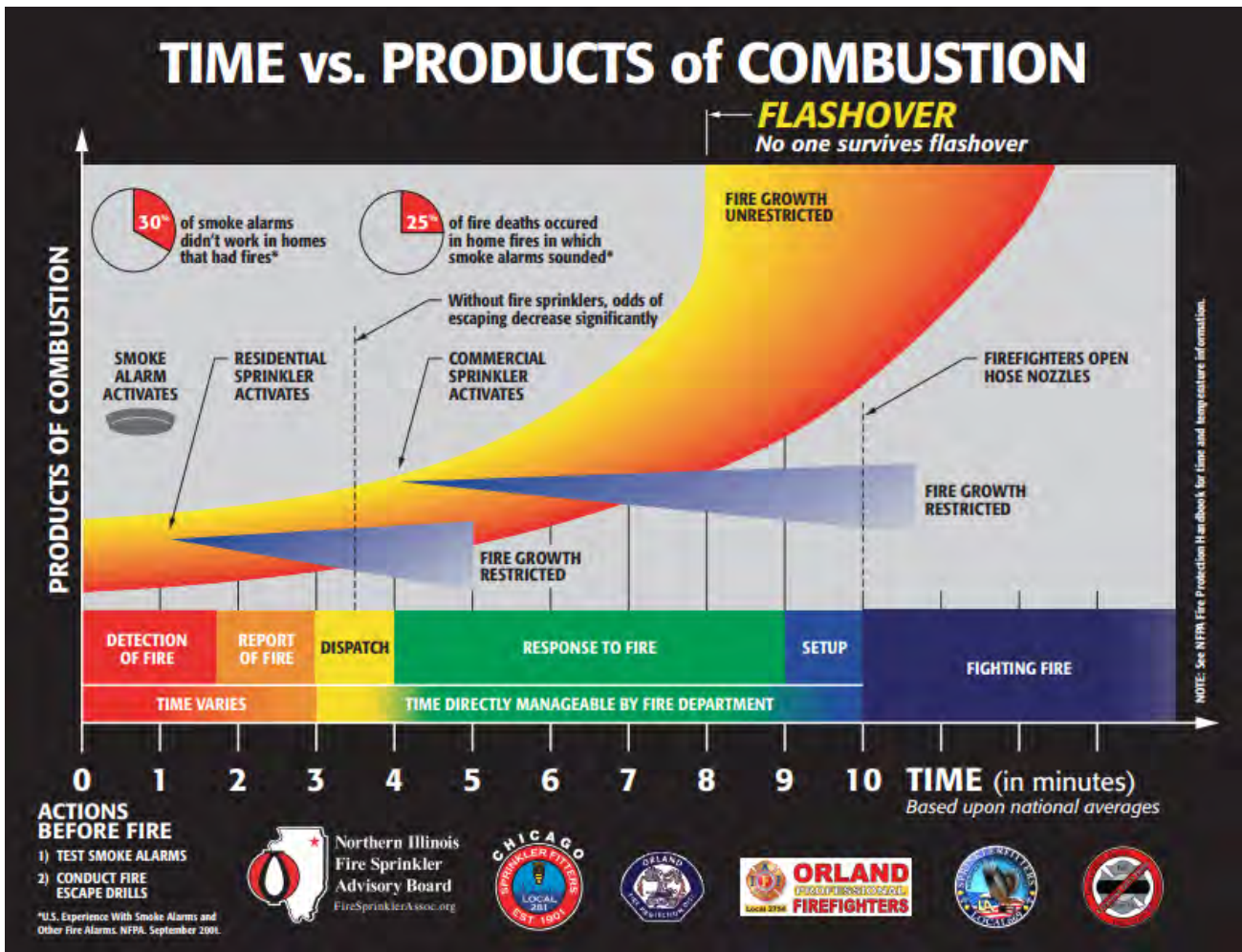
**High Consequence**

# Structure Fires

Fire suppression is one of the most visible response services that a fire department provides, and at the very core of our existence. As evidenced by the flashover curve and exacerbated by modern furnishings and construction methods, fires are an extremely time sensitive emergency.

The agency has classified the risk of fires into three main categories: low, moderate, and high. These rankings are applied to individual occupancies and to areas of like type buildings.

Recent studies by Underwriter’s Laboratories (UL) have found that in compartment fires such as structure fires, flashover occurs within four minutes in modern fire environment. In addition, the UL research has identified an updated time temperature curve due to fires being ventilation-controlled rather than fuel-controlled as represented in the traditional time temperature curve. While this ventilation-controlled environment continues to provide a high risk to unprotected occupants to smoke and high heat, it does provide some advantage to property conservation efforts, as water may be applied to the fire prior to ventilation and the subsequent flashover.



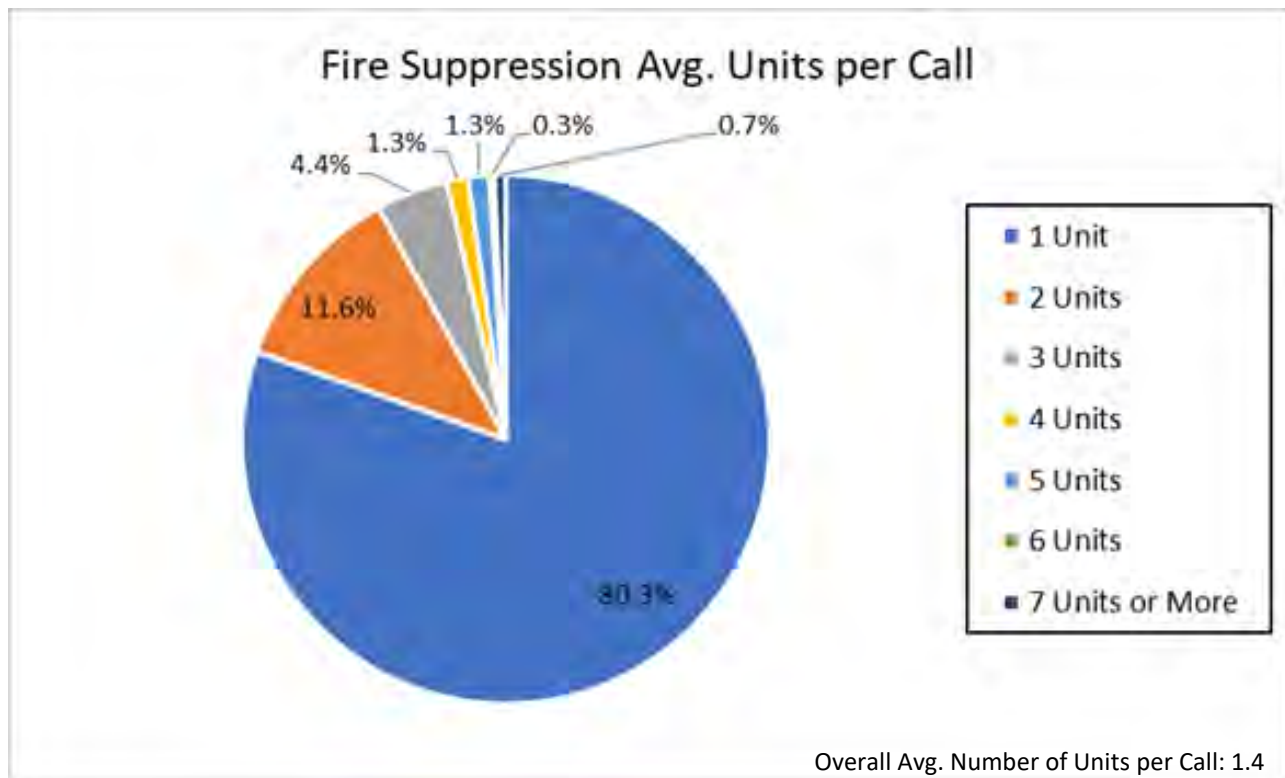


Section C - All-Hazard Community Risk Assessment

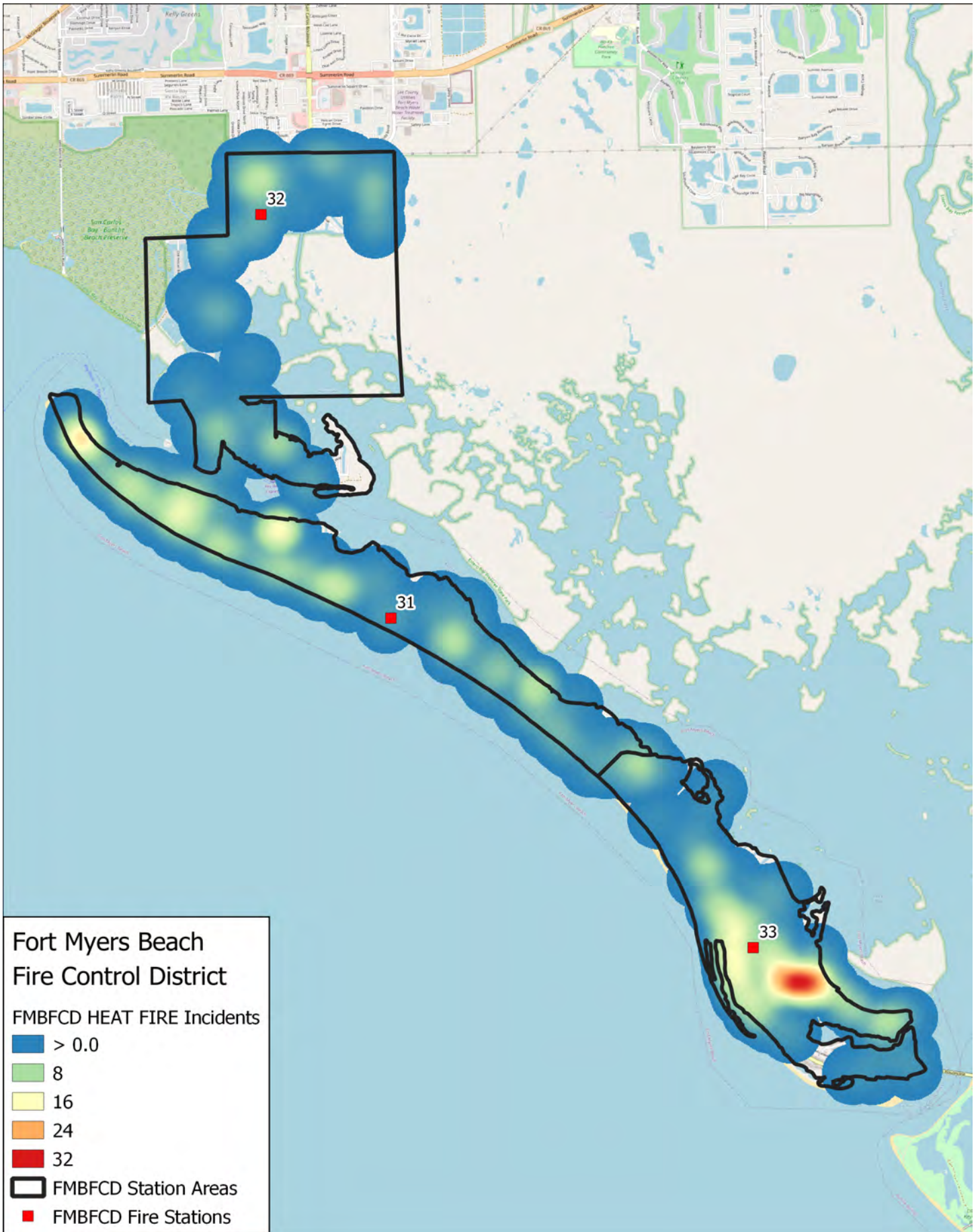
Hour of Day	Number of Calls	Average Calls per Day	Call Percentage
0	19	0.05	3.1
1	12	0.03	2.0
2	10	0.03	1.7
3	12	0.03	2.0
4	15	0.04	2.5
5	11	0.03	1.8
6	12	0.03	2.0
7	20	0.05	3.3
8	24	0.07	4.0
9	45	0.12	7.4
10	46	0.13	7.6
11	29	0.08	4.8
12	31	0.08	5.1
13	40	0.11	6.6
14	41	0.11	6.8
15	34	0.09	5.6
16	30	0.08	5.0
17	32	0.09	5.3
18	31	0.08	5.1
19	36	0.10	5.9
20	23	0.06	3.8
21	19	0.05	3.1
22	20	0.05	3.3
23	14	0.04	2.3
<b>Total</b>	<b>606</b>	<b>1.7</b>	<b>100.0</b>

Day of Week	Number of Calls	Average Calls per Day	Call Percentage
Sunday	72	1.4	11.9
Monday	73	1.4	12.0
Tuesday	89	1.7	14.7
Wednesday	98	1.9	16.2
Thursday	97	1.9	16.0
Friday <sup>1</sup>	87	1.6	14.4
Saturday <sup>1</sup>	90	1.7	14.9
<b>Total</b>	<b>606</b>	<b>1.7</b>	<b>100.0</b>

Month	Number of Calls	Average Calls per Day	Call Percentage
January	40	1.3	6.6
February	60	2.1	9.9
March	35	1.1	5.8
April	35	1.2	5.8
May	51	1.6	8.4
June	42	1.4	6.9
July	61	2.0	10.1
August	49	1.6	8.1
September	60	2.0	9.9
October	68	2.2	11.2
November	49	1.6	8.1
December	56	1.8	9.2
<b>Total</b>	<b>606</b>	<b>1.7</b>	<b>100.0</b>



The distribution and concentration of fire related incidents are provided in the heat map presented below.



**Critical Tasking and Effective Response Forces for Fire Incidents**

**General Description** - The agency approaches response to fires in a tiered fashion. Below is the description of what a low, moderate, or high response is, with corresponding critical tasking in the Effective Response Force for Fires table.

**Low** – This type of fire is a low risk/value incident such as a dumpster, car, or simple brush fire and other investigations or citizen assists for Alpha and Bravo level incidents. It requires a single unit with pumping capability and three personnel and a Battalion Chief to effectively respond and mitigate.

**Moderate** – This is a trouble alarm, outside fire, electrical hazard, and other investigations such as odor of smoke, or water flow alarms for Charlie level incidents typically responded to with a single engine, a truck, and a Battalion Chief for a total of seven personnel.

**High** – Fire calls within the Delta or Echo level of risk such as structure fires, including high-rise fires, commercial industrial occupancies or other buildings requiring additional personnel to accomplish multiple simultaneous tasks for high acuity incidents. This type of response calls for five apparatus; typically three engines, one ladder truck, and a Battalion Chief for a total of 13 personnel.

Effective Response Force for Fire Incidents			
Task	High—D/E	Moderate—C	Low—A/B
Command	1	1	1
Safety	1	1*	1*
Investigation/Extinguishment		2	1
Pump Operation	1	1	1
Fire Attack 1	2		
Fire Attack 2			
Water Supply	1		
Search / Forcible Entry	2	2	
Ventilation	1	1	
Back-up Line	2		
On-Deck / RIC	2		
Medical Standby / Rehab			
ERF Personnel	13	7	3
ERF Vehicles	5	3	1

\* For low or moderate risk incidents, the command and safety tasks may be combined in one position.

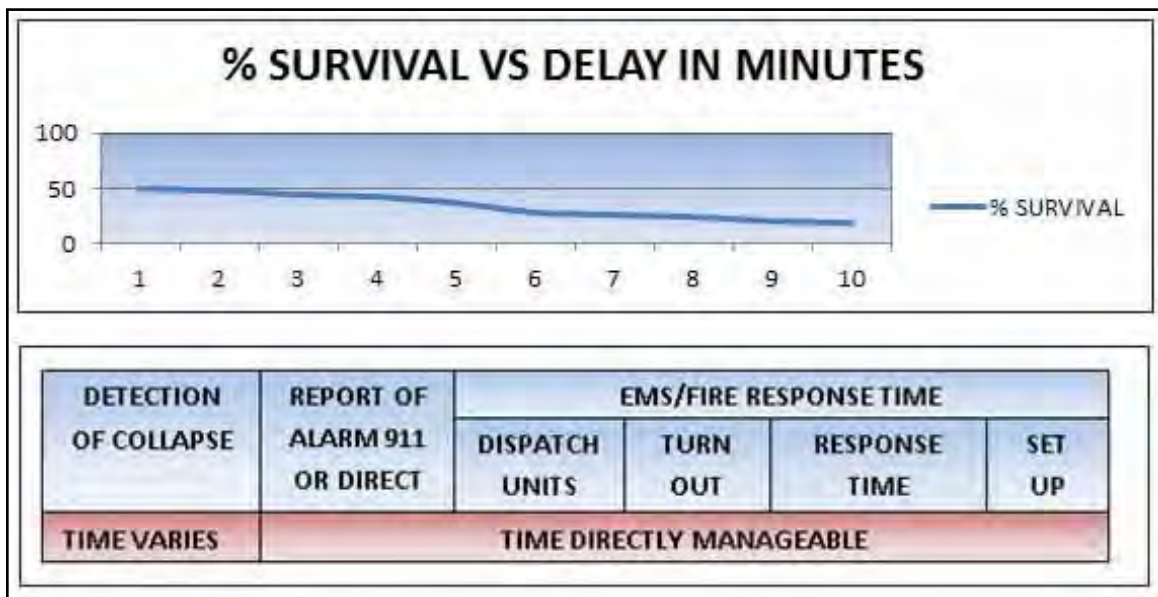


**Moderate Risk****High Probability****Low Consequence****Emergency Medical Services**

Time is a critical element when responding to true medical emergencies, with the chance of survival for a cardiac arrest dropping precipitously with every passing minute.

The potential survival rate for cardiac arrests, which is one of the most serious medical emergencies an individual can experience, is only about 50% by the time a fire apparatus leaves the station, making prevention efforts a crucial piece of achieving positive patient outcomes.

When evaluating the steady rise in emergency medical calls over the last few decades, it is readily apparent that the workload demand of these calls will continue to rise. The agency is actively working with community partners to reduce or eliminate many of the lower risk/severity calls for help by channeling the patient into a more appropriate method of care.



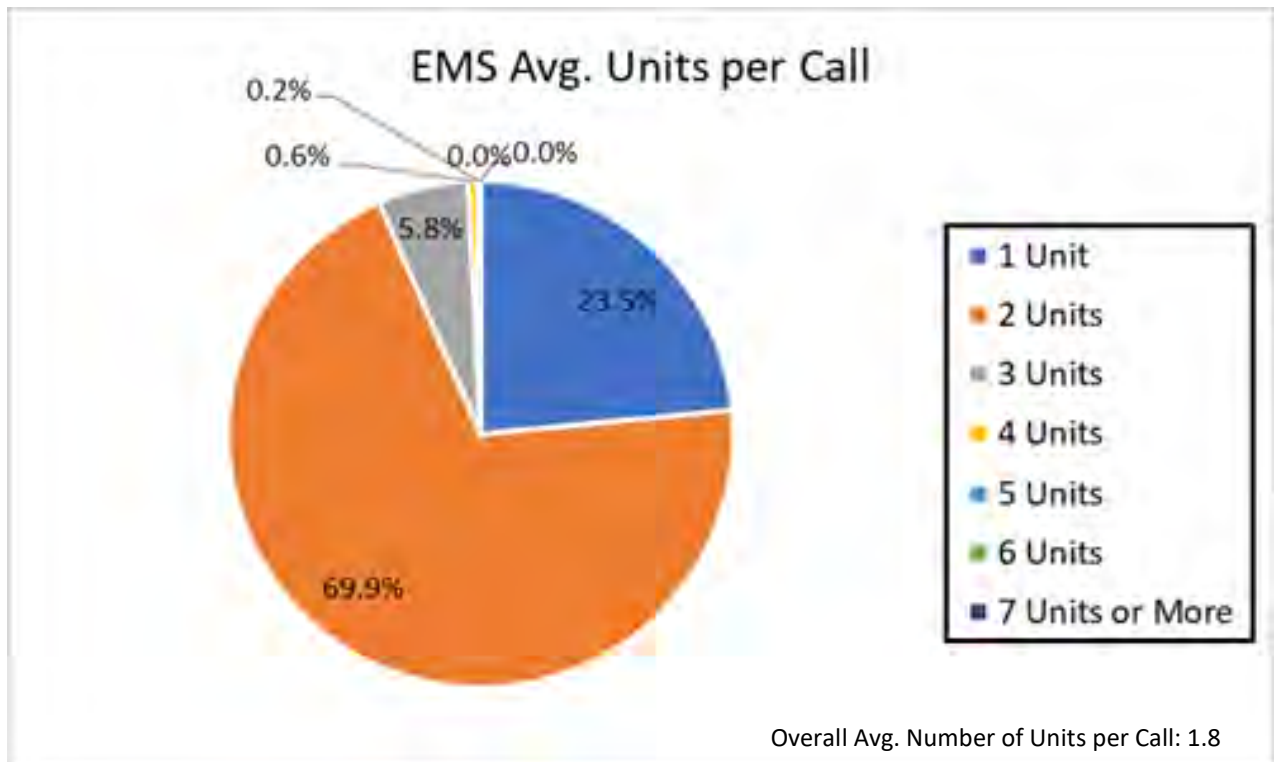
Call Category	Number of Responding Units							Total
	1	2	3	4	5	6	7 or More	
Cardiac and Stroke	98	213	20	0	0	0	0	331
Difficulty Breathing	75	123	11	0	0	0	0	209
Drowning	1	3	4	0	1	0	0	9
Fall and Injury	102	413	29	2	0	0	0	546
Illness and Other	162	636	24	1	0	0	0	823
MVC	55	36	40	9	3	0	0	143
Overdose and Psychiatric	15	70	6	0	0	0	0	91
Seizure and Unconsciousness	79	252	11	3	0	0	0	345
<b>Total</b>	<b>587</b>	<b>1,746</b>	<b>145</b>	<b>15</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2,497</b>
<b>Percentage</b>	<b>23.5</b>	<b>69.9</b>	<b>5.8</b>	<b>0.6</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>100</b>

Section C - All-Hazard Community Risk Assessment

Hour of Day	Number of Calls	Average Calls per	Call Percentage
0	69	0.19	2.8
1	58	0.16	2.3
2	58	0.16	2.3
3	43	0.12	1.7
4	37	0.10	1.5
5	42	0.11	1.7
6	52	0.14	2.1
7	58	0.16	2.3
8	97	0.27	3.9
9	133	0.36	5.3
10	129	0.35	5.1
11	140	0.38	5.6
12	129	0.35	5.1
13	152	0.42	6.1
14	156	0.43	6.2
15	150	0.41	6.0
16	169	0.46	6.7
17	145	0.40	5.8
18	141	0.39	5.6
19	131	0.36	5.2
20	151	0.41	6.0
21	112	0.31	4.5
22	79	0.22	3.2
23	76	0.21	3.0
<b>Total</b>	<b>2,507</b>	<b>6.8</b>	<b>100.0</b>

Day of Week	Number of Calls	Average Calls per Day	Call Percentage
Sunday	359	6.9	14.3
Monday	329	6.3	13.1
Tuesday	367	7.1	14.6
Wednesday	352	6.8	14.0
Thursday	338	6.5	13.5
Friday <sup>1</sup>	359	6.8	14.3
Saturday <sup>1</sup>	403	7.6	16.1
<b>Total</b>	<b>2,507</b>	<b>6.8</b>	<b>100.0</b>

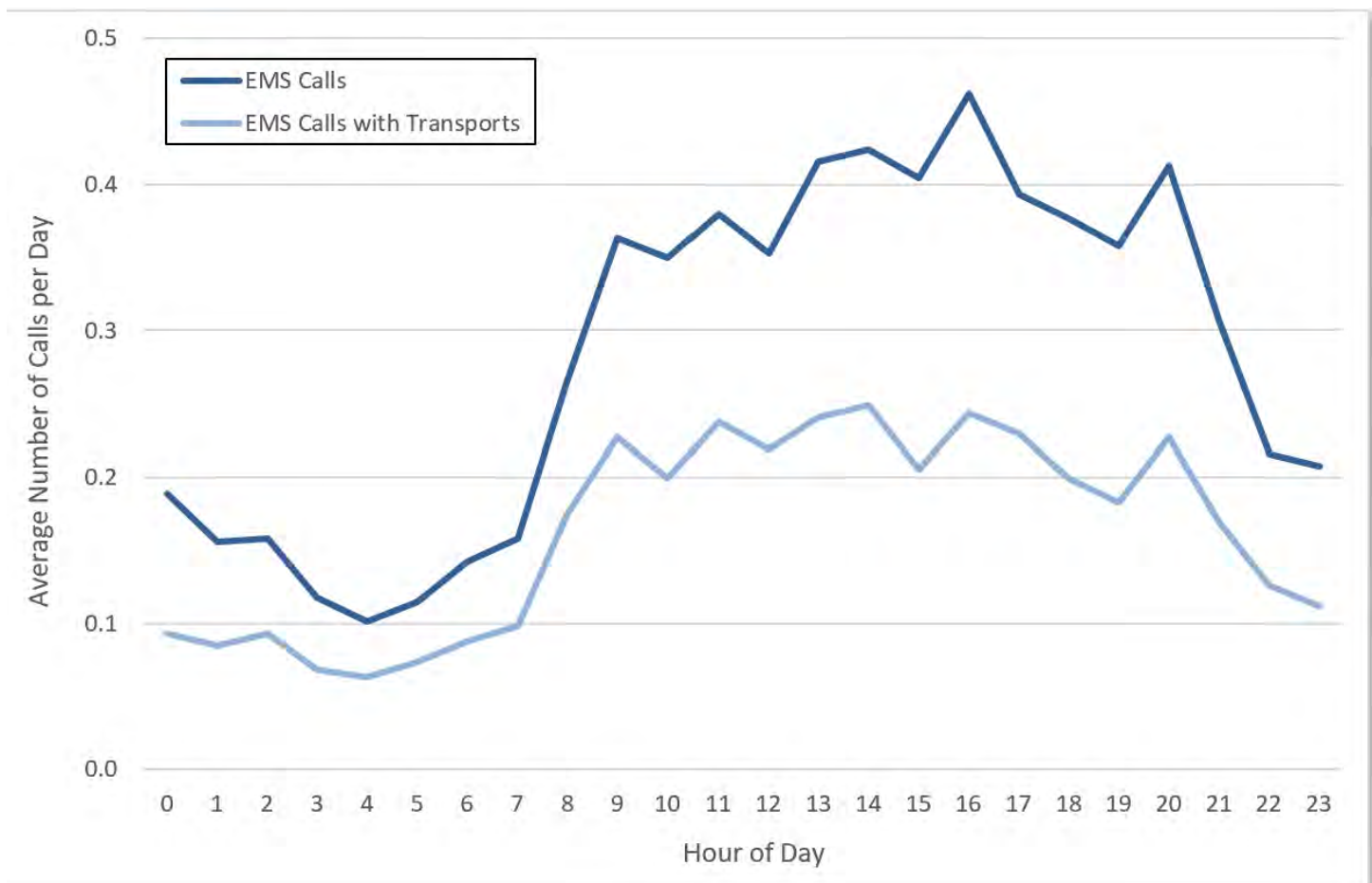
Month	Number of Calls	Average Calls per Day	Call Percentage
January	292	9.4	11.6
February	286	9.9	11.4
March	241	7.8	9.6
April	122	4.1	4.9
May	175	5.6	7.0
June	234	7.8	9.3
July	189	6.1	7.5
August	165	5.3	6.6
September	153	5.1	6.1
October	198	6.4	7.9
November	225	7.5	9.0
December	227	7.3	9.1
<b>Total</b>	<b>2,507</b>	<b>6.8</b>	<b>100.0</b>



The number of EMS calls with at least one response indicating a patient transport totaled 1,428 (1,428 of 2,497 total EMS calls; 57.2% transport rate; averaging 3.9 transport EMS calls per day).

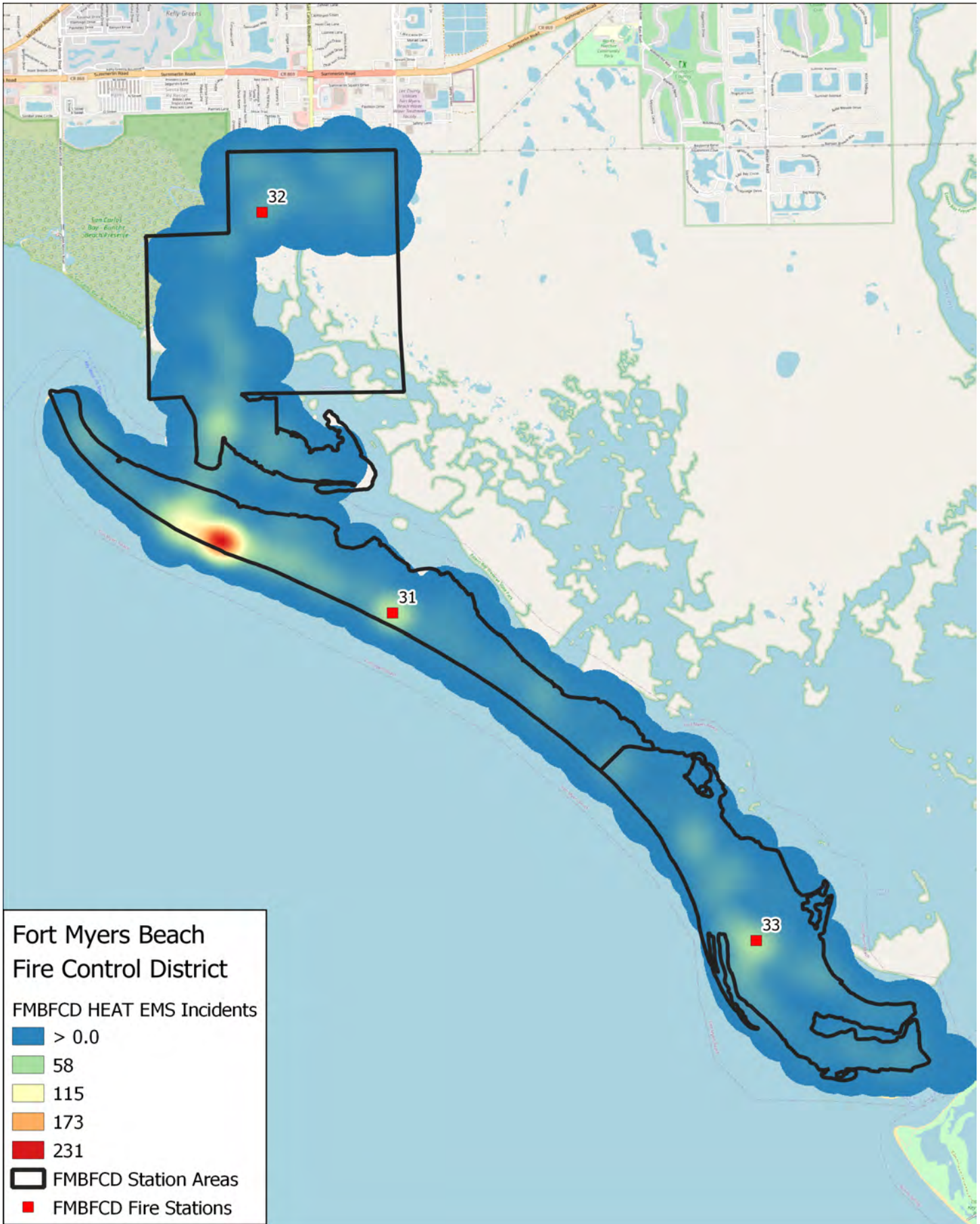
Call Category	Non-Transport		Transport		Total Number of Calls	Transport Rate (%)
	Average Call Duration (Minutes)	Number of Calls	Average Call Duration (Minutes)	Number of Calls		
Cardiac and Stroke	31.8	111	69.7	220	331	66.5
Difficulty Breathing	26.2	71	68.5	138	209	66.0
Drowning	36.2	4	68.3	5	9	55.6
Fall and Injury	20.9	229	67.3	317	546	58.1
Illness and Other	17.4	364	64.3	459	823	55.8
MVC	20.7	104	74.1	39	143	27.3
Overdose and Psychiatric	29.9	36	58.2	55	91	60.4
Seizure and Unconsciousness	22.8	150	66.6	195	345	56.5
<b>Total</b>	<b>21.6</b>	<b>1,069</b>	<b>66.6</b>	<b>1,428</b>	<b>2,497</b>	<b>57.2</b>

The variation of total EMS requests and EMS transport requests followed a similar pattern. The busiest period for EMS transport requests occurred at 1400, with 911 EMS transport calls. The peak transport rate occurred at 0800, wherein 64 of 97 EMS calls (66.0%) resulted in one or more patients being transported.





The distribution and concentration of EMS related incidents are provided in the heat map presented below.



### Critical Tasking and Effective Response Forces for EMS Incidents

**General Description** - The agency approaches an emergency medical incident in a tiered fashion. Below is the description of what a low, moderate, or high response is, with corresponding critical tasking in the Effective Response Force for EMS table. Risk classifications were determined from the Medical Priority Dispatch System (MPDS) call determinants within the internationally researched call triage process.

**Low – Incidents within the Alpha level of risk.** This type of medical incident constitutes the vast majority of responses and consists of an Engine or Truck, and a Rescue responding with five personnel.

**Moderate** – Incidents within the Bravo or Charlie level of risk. This type of medical incident includes breathing problems, chest pain discomfort, seizures, or diabetic problems without the lost of pulse or respirations. This would also include motor vehicle crashes without major trauma. At least two units respond to this type of incident to accomplish the critical tasks needed in a timely manner. Engine or Truck and a Rescue with five personnel.

**High** – Incidents within the Delta or Echo level of risk. This level of medical emergency includes cardiac or respiratory arrest, imminent child birth, falls over 10 ft., obese patients requiring lifting assistance, or traumatic injuries. At least two units respond to this type of incident to accomplish the critical tasks needed in a timely manner. Engine or Truck, and a Rescue with five personnel.

Effective Response Force for EMS Incidents			
Task	High—D/E	Moderate —B/C	Low—A
Command Safety	1	1*	1*
ALS Patient Assessment/Treatment	3	2	
BLS Patient Assessment/Treatment			1
Patient Information	1	1	1
<b>ERF Personnel</b>	<b>5</b>	<b>3 (2)</b>	<b>2 (3)</b>
<b>ERF Vehicles</b>	<b>2</b>	<b>2</b>	<b>2</b>

\* For low and moderate risk incidents, the command, safety, and patient information tasks may be combined in one position.

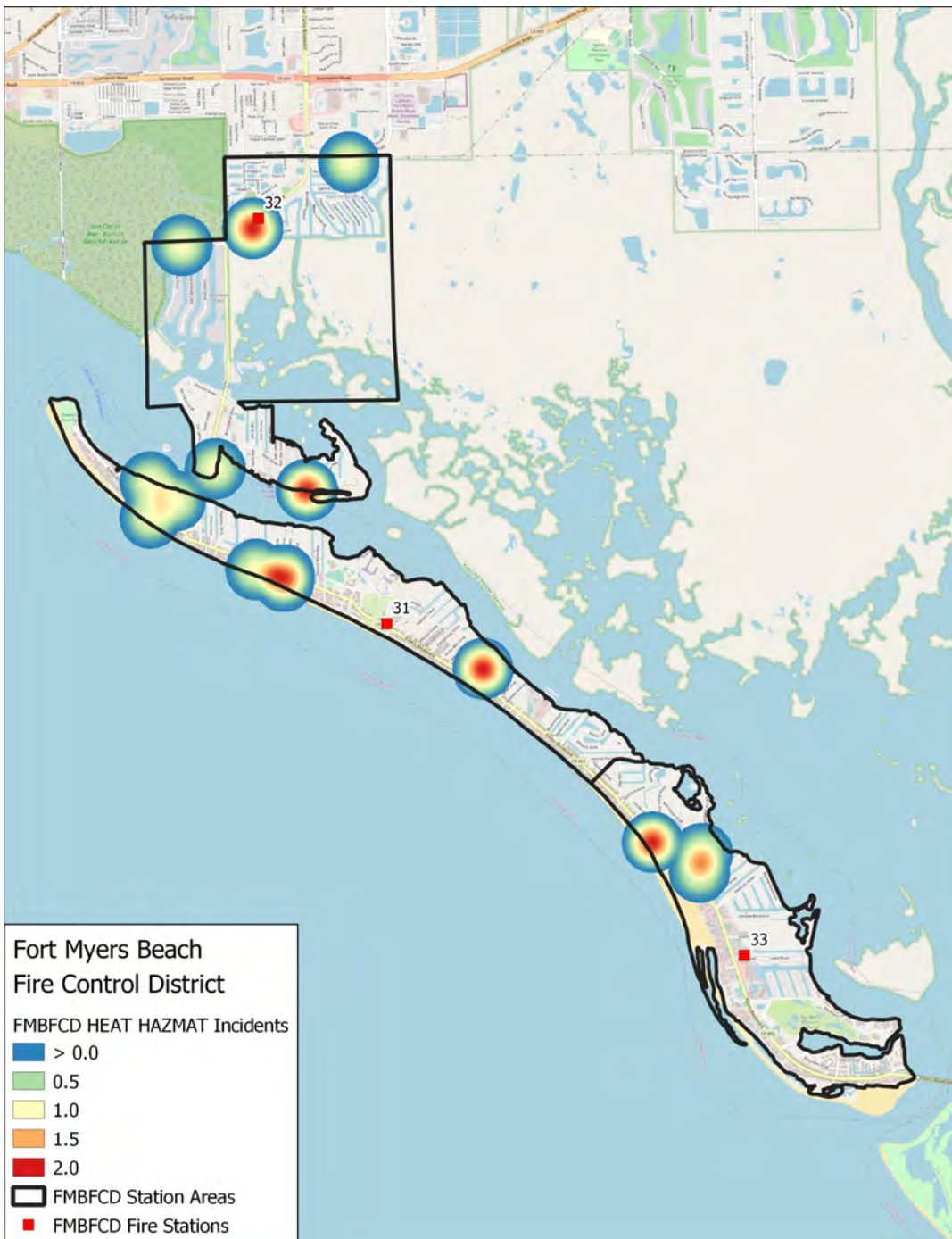
**Special Risk**

**Low Probability**

**High Consequence**

**Hazardous Materials**

The potential release of hazardous materials exists wherever that material may be located. A higher potential for release coincides with storage sites at fixed facilities and along transportation routes, such as major roadways and rail lines. Hazardous materials are chemical substances which, if released or misused, can pose a threat to people, property, or the environment. These chemicals are used in industry, agriculture, medicine, research, and consumer goods.



As many as 500,000 products pose physical or health hazards and can be defined as "hazardous chemicals." Each year, over 1,000 new synthetic chemicals are introduced. Hazardous materials come in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. These substances are most often released as a result of transportation accidents or because of chemical accidents in manufacturing plants. Hazardous materials are contained and used at fixed sites and are shipped by all modes of transportation, including transmission pipelines.



## Critical Tasking and Effective Response Forces for HazMat Incidents

**General Description** - The agency approaches a hazardous materials response in a tiered fashion. Below is the description of what a low, moderate, or high response is, with corresponding critical tasking in the Effective Response Force table.

**Low** – Small spills of less than 5-gallons from a passenger type vehicle of common hydrocarbon materials such as gasoline, fuel oil or diesel fuel. The material can be diked or absorbed utilizing equipment normally carried on a first due engine, rescue or ladder/platform company. Small spills of antifreeze, transmission fluid, etc. at the scene of a motor vehicle accident would also fall under this category within the Alpha risk level. This is responded to by a single engine with three personnel and a Battalion Chief .

**Moderate** – Large spills over 5-gallons of common hydrocarbon materials such as gasoline, fuel oil, or diesel fuel from a large commercial vehicle within the Bravo or Charlie risk level. This level of response requires a total of seven personnel assembled with a first due company, a battalion chief, and a response vehicle with specialized hazardous materials equipment with at least one hazmat technician.

**High** – Confirmed or unconfirmed chemical spill, leak or release; Chemical, Biological, Radiological, Nuclear, or Explosive (CBRNE) incidents within the Delta or Echo risk level. This level of call requires a minimum of **5** hazmat technicians to establish a total effective response force of 13 personnel. Equipment required is the first due unit, a battalion chief, two additional suppression units, and a Hazmat specialty unit. Additional suppression units may be required to accomplish ancillary tasks unrelated to the primary hazardous materials issue.

Effective Response Force for Hazmat Incidents			
Task	High—D/E	Moderate—B/C	Low—A
Command	1	1	1*
Safety	1	1*	
Air Monitoring	1	1	
Recon	1	1	
HazMat Group Supervisor	1		1
HazMat Safety	1		
Entry Team Leader	1*	1*	
Entry Team	2	2	3
Backup Team	2		
Decon	2		
Research			
ALS Treatment			
ALS Triage			
Support	1	1	
Technical Assistance		1	
<b>ERF Personnel</b>	<b>13</b>	<b>7</b>	<b>4</b>
<b>ERF Vehicles</b>	<b>5</b>	<b>3</b>	<b>2</b>

\* For low and moderate risk incidents, the command, safety, and team leader tasks may be combined in one position. For high risk incidents, team leaders may be combined in team total.

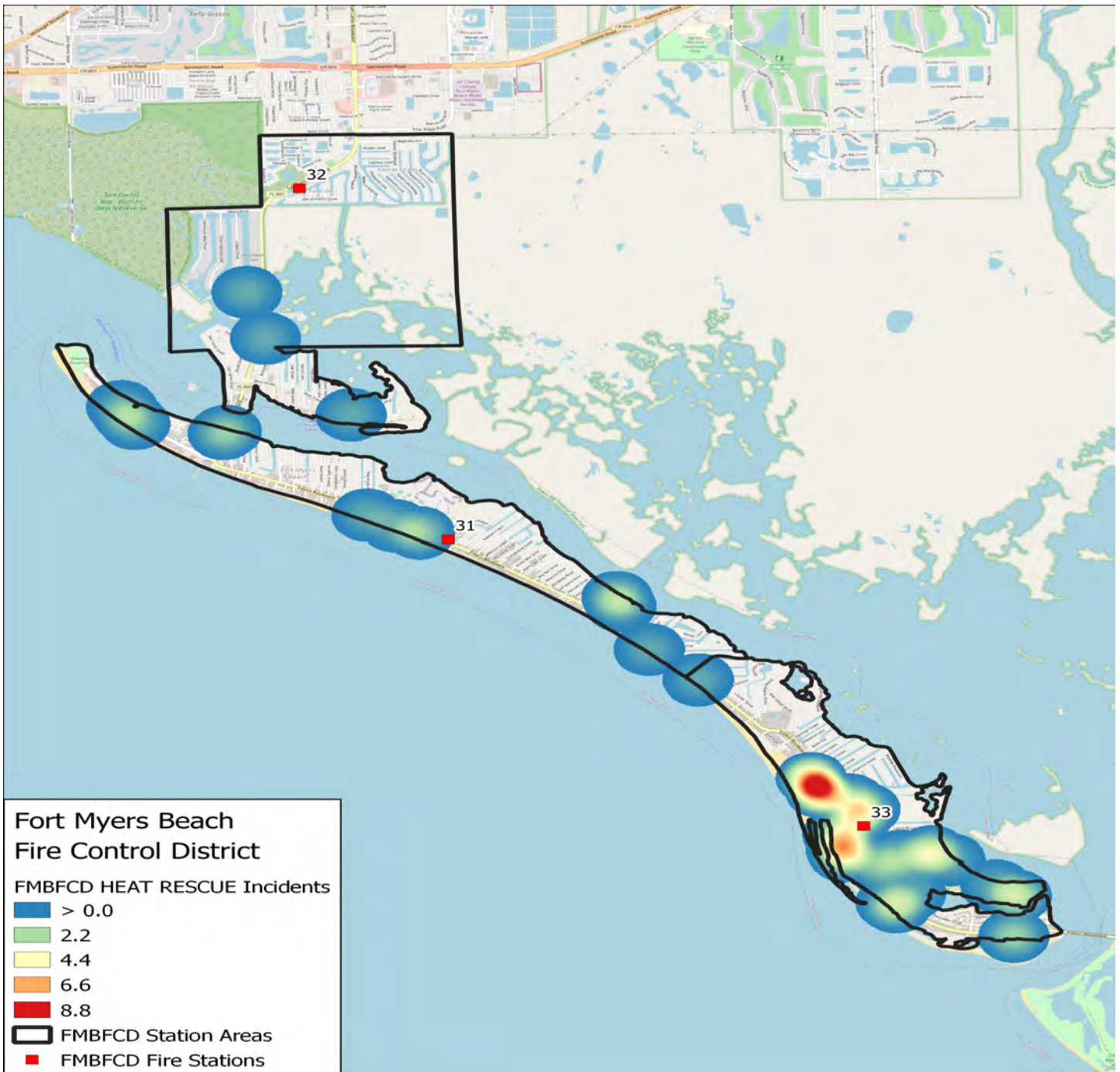
**Special Risk**

**Low Probability**

**High Consequence**

**Technical Rescue - Collapse, Confined Space, High Angle, Trench, Water Rescue**

Technical rescue is a relatively broad term and includes responses to a wide variety of incidents such as water rescue, confined space rescue, high angle rescues, and structural collapse. Similar to the analyses for hazardous materials, the demand for technical rescue services is low in relation to fire or EMS calls within the service area.



### Critical Tasking and Effective Response Forces for Rescue Incidents

**General Description** - The agency approaches a technical response incidents in a tiered fashion. Below is the description of what a low, moderate, or high response is, with corresponding critical tasking in the Effective Response Force table.

**Low** – Low risk incidents may include elevator malfunctions with/without occupants inside, elevator alarms, and other simple low risk investigations within the Alpha risk level. This is responded to by a single engine with 3 personnel.

**Moderate** – Moderate risk incidents may include elevator incidents with an unknown situation, escalator incidents with no injuries, entrapment with unknown situation, high angle rescue with unknown situation, and other lower risk investigation level incidents within the Bravo and Charlie risk levels. This is responded to by six (6) personnel spread among a single engine, a rescue, and a Battalion Chief.

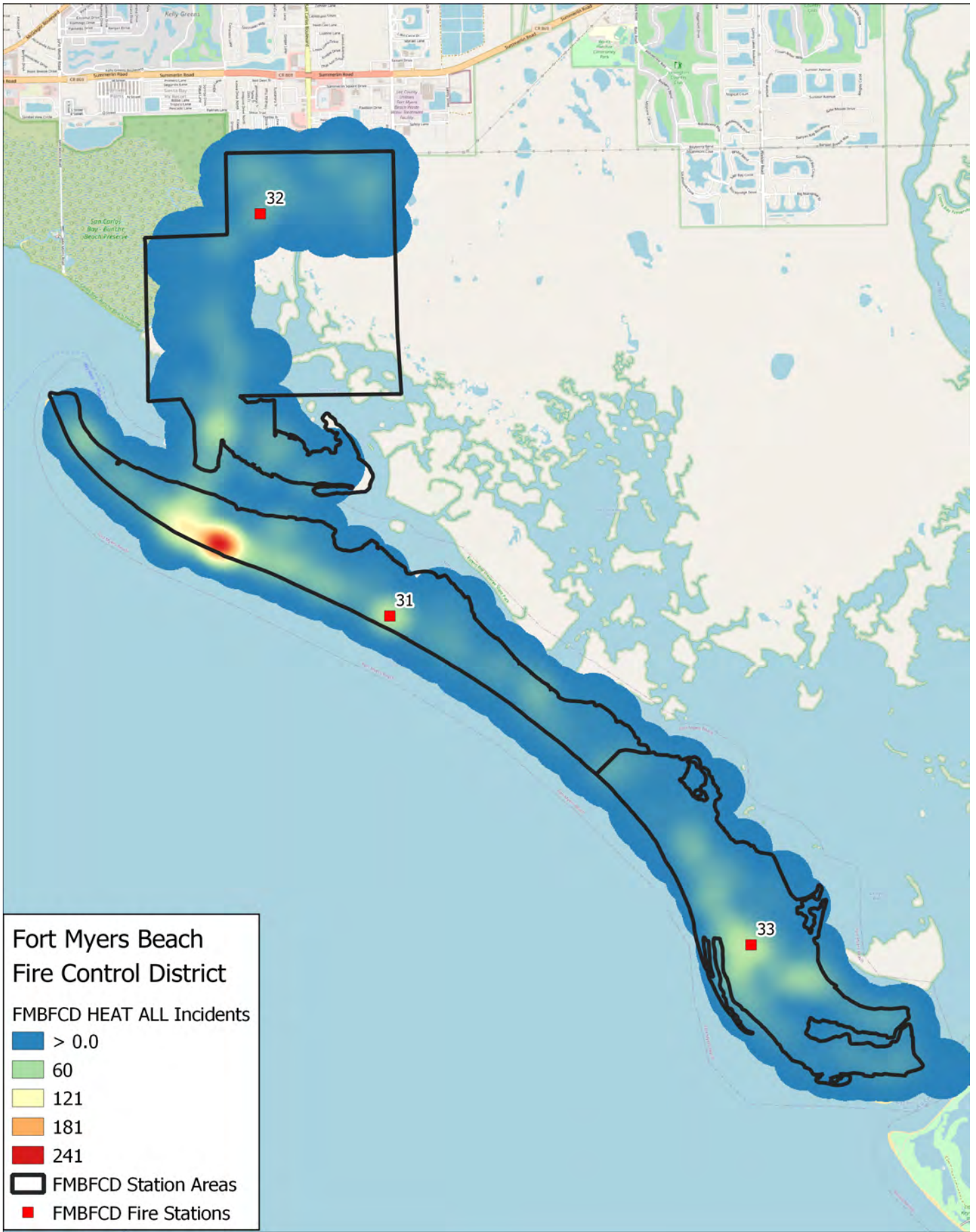
**High** – High risk incidents may include incidents such as confined space and structural collapse with entrapment. This response requires 13 personnel among five units. Resources include a Battalion Chief, a technical rescue unit, two engines, and a ladder truck.

Effective Response Force for Rescue Incidents			
Task	High—D/E	Moderate—B/C	Low—A
Command	1	1	1
Triage	1	2	2
Safety	1	1*	1*
Rescue Group Supervisor	1		
Rescue Safety Officer	1*		
ALS Treatment	2	1	
Entry/Rescue Team	2	2	
Entry Team Leader	1*		
Backup Team	2		
Air Monitoring	1		
Shoring/Stabilization	2		
Support			
<b>ERF Personnel</b>	<b>13</b>	<b>6</b>	<b>3</b>
<b>ERF Vehicles</b>	<b>5</b>	<b>3</b>	<b>1</b>

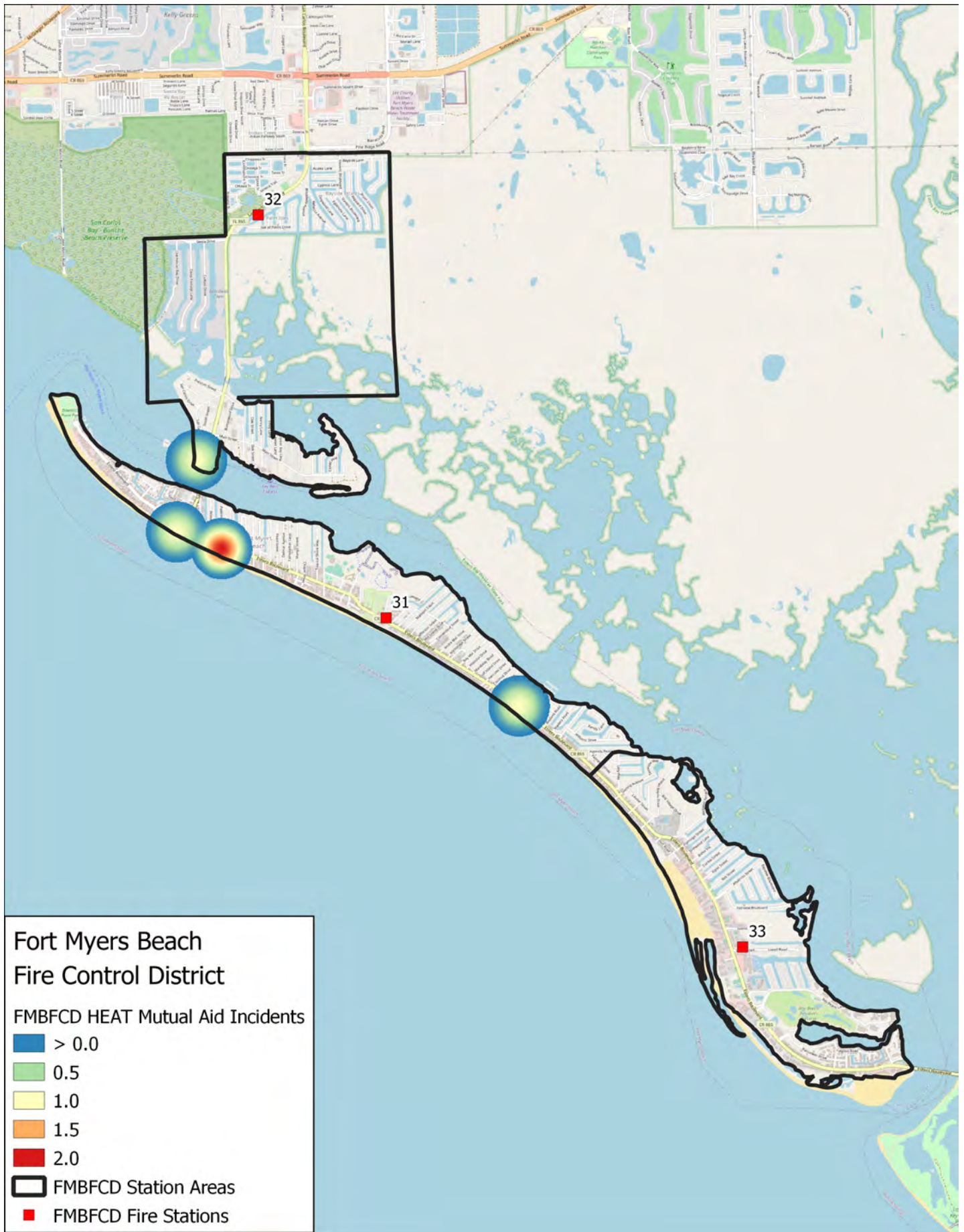
\* For low and moderate risk incidents, the command, safety, and team leader tasks may be combined in one position. For high risk incidents, team leaders may be combined in team total.



The distribution and concentration of all incidents are provided in the heat map presented below.

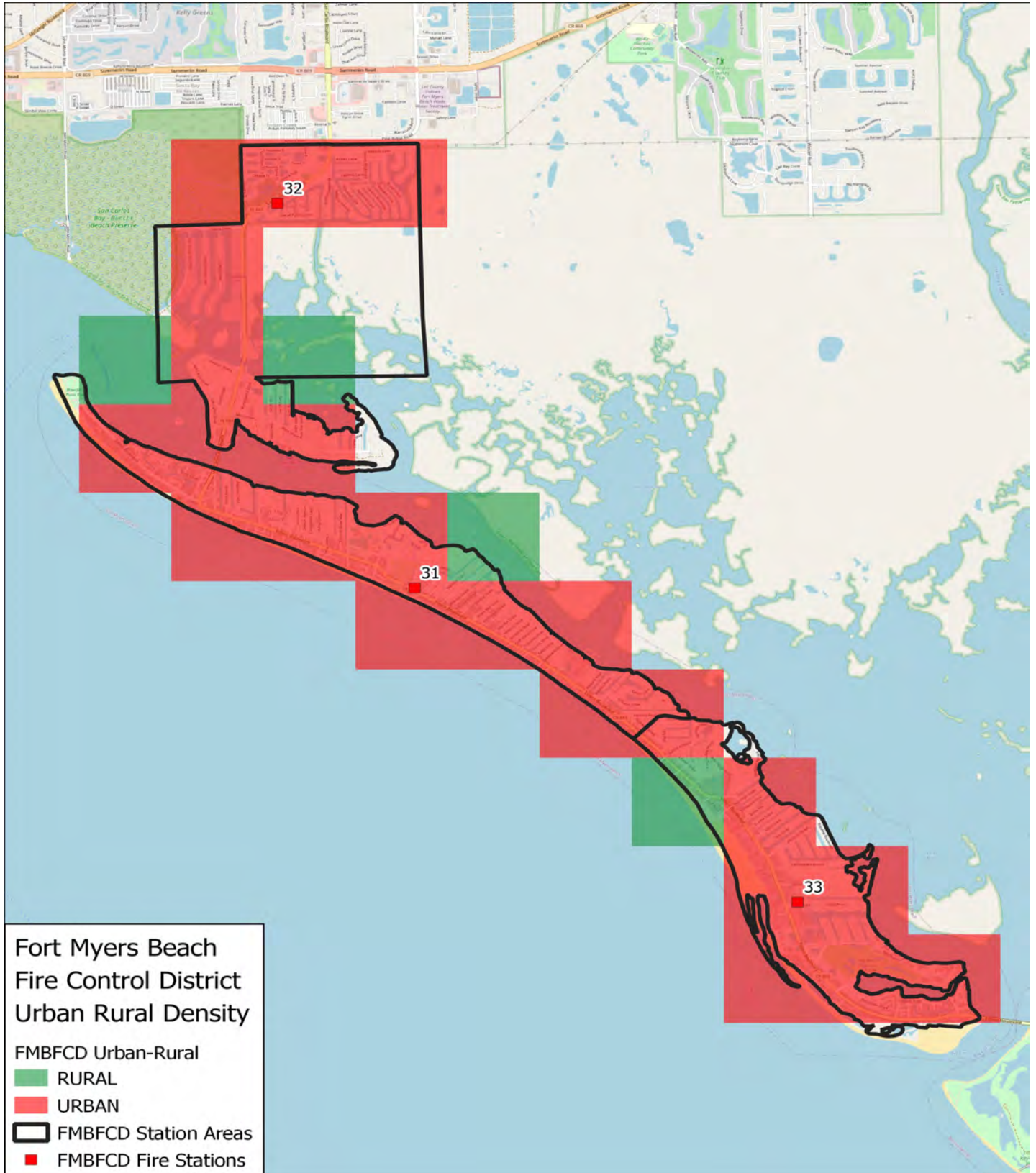


The distribution and concentration of mutual-aid incidents are provided in the heat map presented below.





Additionally, call density was calculated on the relative concentration of incidents based on approximately 0.5-mile geographic areas as well as the adjacent 0.5-mile areas. The results demonstrate an urban and rural designation based on call density for services and not based on population. The red areas are designated as urban service areas and the green areas are designated as rural service areas. Any area that is not colored has less than one call every six months in the 0.5- mile area and the adjacent areas.





## Section D - Community Feedback

**Community Feedback**



## Strategic Planning Process<sup>1</sup>

As fire districts have advanced their level of professionalism to meet the increasing demands for excellence and efficiency in service delivery, strategic plans have become a method to meet the needs of area residents. Strategic plans allow for policy makers such as the Fire Commission and staff, to balance goals and trade-offs. These plans are also a way to establish transparency and communicate priorities, constraints, and future goals. In addition, achieving efficiency and effectiveness means that Districts find ways to leverage their activities in a way that can achieve maximum outcomes.

### Performance Indicator 2B.7

The agency engages other disciplines or groups within its community to compare and contrast risk assessments in order to identify gaps or future threats and risks.

To accomplish this, FMBFCD engaged Dr. Margaret Banyan of Public Solutions, LLC to facilitate a process that would move the District toward a strategy for the next three years.

Three guiding questions were used to identify priorities and activities for the current planning process:

1. What are the current Strengths, Weaknesses, Opportunities, and Threats facing the FMBFCD?
2. What has changed over the past several years since the 2018-2021 Strategic Plan that should inform our future thinking?
3. How do we implement a measurement strategic that will track our progress over time?

### Strategic Planning and FMBFCD

This process was adapted to meet the specific needs of FMBFCD. It was designed to be inclusive and consider all stakeholders: FMBFCD Commission, employees, leadership, non-profit organizations, businesses, and community members. This effort is consistent with the approach taken in other jurisdictions and fire agencies, both in the SW Florida region and nation-wide. Strategy is evolutionary, meaning that as the organization learns what works and what does not, it adapts and changes. As a result, so must a Strategic Plan. An important feature of this plan is its usefulness for implementation at different District levels. This makes the plan both a short-term tool for accountability as well as a longer term measurement framework.

Stakeholder feedback was gathered over a series of focus engagements as displayed below:

Data Collection and Report Development Task	Date
Presentation to Fire Commission with Feedback	August 2021
Fire Commission Individual Interviews	August – September 2021
Focus Group: Senior Leadership Team (various)	August- December 2021
Shift Personnel One-on-One Interviews	September 2021
Focus Group: Public Agency Partners	November 2, 2021
Focus Group: Administrative Staff	November 9, 2021
Focus Group: General Community	November 30, 2021
Focus Group: Business Groups	December 1, 2021
Online Community Survey	November – December 2021
Results Analysis	December 2021
Plan Draft and Approval	December 2021 – January 2022

<sup>1</sup> Taken from the 2022-2025 Ft. Myers Beach Fire Department Strategic Plan;

## Stakeholder Analysis

The planning process involves internal and external stakeholders to develop its conclusions. What follows is a summary of the priorities, expectations, concerns, and feedback from both stakeholders these were generated from the focus groups, interviews, and online community surveys.

### Core Competency 3B.3

The agency solicits feedback and direct participation from internal and external stakeholders in the development, implementation and evaluation of the agency's goals and objectives.

### Internal Stakeholders

The internal stakeholder group process focused on developing an assessment of the usefulness of a strategic plan through a departmental SWOT analysis. The discussion of opportunities and threats was accompanied by consideration of initiatives that might better meet those threats. Internal stakeholders were categorized as the Fire Commission, Administrative and support staff, Senior Leadership team, and Shift Personnel. This analysis summarized the results of the focus groups categorized by topic. Most areas showed overlap among the focus groups, and a consistent message that, while the department is doing very well, there is a need to focus on funding to support employees, equipment, and infrastructure to ensure sustained excellence in service in the short and long term.

### External Stakeholders

The following discussion of external stakeholder findings reports on feedback from the general community, public agencies, and businesses. Throughout the discussions with community members, businesses, and public agencies, as well as the online survey, there was alignment among priorities.

### Performance Indicator 2D.10

The agency interacts with external stakeholders and the AHJ at least once every three years to determine the stakeholders' and AHJ's expectations for types and levels of services provided by the agency.

The following outlines the top priorities of community members in the three areas of services, expenditures, and operations:

**Service and Service Delivery:** Response Time for Medical and Fire Emergencies constituted the top two priorities for the community. Many community members recognized the importance of focusing on emergency response as the core mission of the District. Planning to mitigate the impacts of other disasters constituted the third service-related priority. Business and public agency focus groups indicated general agreement that response is the core issue for the District and noted support for collaborative efforts that enhance service delivery.

**Expenditures:** Expenditures to enhance service delivery continued to be the highest priority for community members. This is consistent with the significant concern for response time. The second priority for the community in the area of expenditures was existing facility maintenance, followed by additional water rescue sources. These priorities aside, there was a clear desire for the District to continue to exercise fiscal responsibility and that expenditures should enhance service delivery and be cost effective.

**Operations:** Retaining quality personnel and staffing the agency continue to be a high priority for community members, followed by ensuring financial stability for the District. The linkage between personnel and high quality services is an important foundation of the community feedback and was noted throughout the survey responses.

These priorities were consistent among other several questions embedded in the community survey and focus groups. For example, the survey used ranking questions to further identify priorities. These questions asked about how respondents would spend \$100 of their income on various services. Through these questions, the emphasis continued to be on the enhancement of emergency response and personnel recruitment/retention. Other feedback such as purchasing equipment, collaborative training, cooperative programs, traffic mitigation, and educational efforts are generally a means to the end of providing high quality services.



## Organizational SWOT Analysis

### Organizational Strengths (SWOT)

- Longstanding record of meeting community needs through response, education, and involvement
- Collaborative partnerships and good community relationships (residents, businesses, and public agencies)
- Organized and cross-trained leadership team
- Cohesive Fire Commission with a focus on governance
- Clarity of direction through on-going planning and implementation
- Community risk reduction and life-safety operations
- Equipment and apparatus are in good shape
- Financially sound (long term capital sustainment planning) with good tax base
- Professional staff
- Good image of District with support for personnel
- Prepared and well-trained line personnel who are prepared to take on challenges
- Increased health and wellness programs for line personnel



### Organizational Weaknesses (SWOT)

- Divisions between line staff and District leadership
- Declining morale and negative culture
- Inconsistent communication and education throughout the organization: Fire Commission, leadership, and line personnel
- Employee turnover and staffing problems
- Employee burnout
- Lack of personnel with training and education to take on new leadership positions
- Lack of line personnel meaningful experience with fires and fire training
- Gaps in training and communication
- Need for succession planning
- Public resistance to increased fees
- Traffic and growth that impacts transport time and loss of capacity to transport additional patients

### Organizational Opportunities (SWOT)

- Redevelopment potential for limited additional tax base
- Changing demographic composition of resident and tourist population
- Technology change offers new options for rescue and response
- Signed labor contract and ability to improve morale and labor-management relations
- Increased ability to recruit employees with experience as Florida population grows
- Enhanced relationship(s) with the public through remote technologies and electronic communications
- New fire station with opportunities for meeting community needs, increased collaborative spaces, community meeting rooms, training rooms / center, and consolidated functions

### Organizational Threats (SWOT)

- Redevelopment density where critical infrastructure is already at capacity
- Increases in population means increases in service demand and risk
- Development and redevelopment implications for District resources
- Job market, ability to attract new employees, and changing expectations of new hires
- Traffic and implications for response time and delays
- Long term funding sustainability
- Implications for tax base due to limited build out of District properties
- Uncertainty in pandemic trajectory on staffing, existing personnel morale, and safe operations
- Changing climate and water quality issues presents future challenges for service demands
- Increasing cyber security threat landscape and impacts on operations

### Acknowledgements

#### The Community of Fort Myers Beach, FL

Focus Group Attendees

Survey Respondents

#### Board of Fire Commissioners

Larry Wood, Chair

John Bennett

Ron Fleming

Jim Knickle

Jacki Liszak

#### Fire Chief

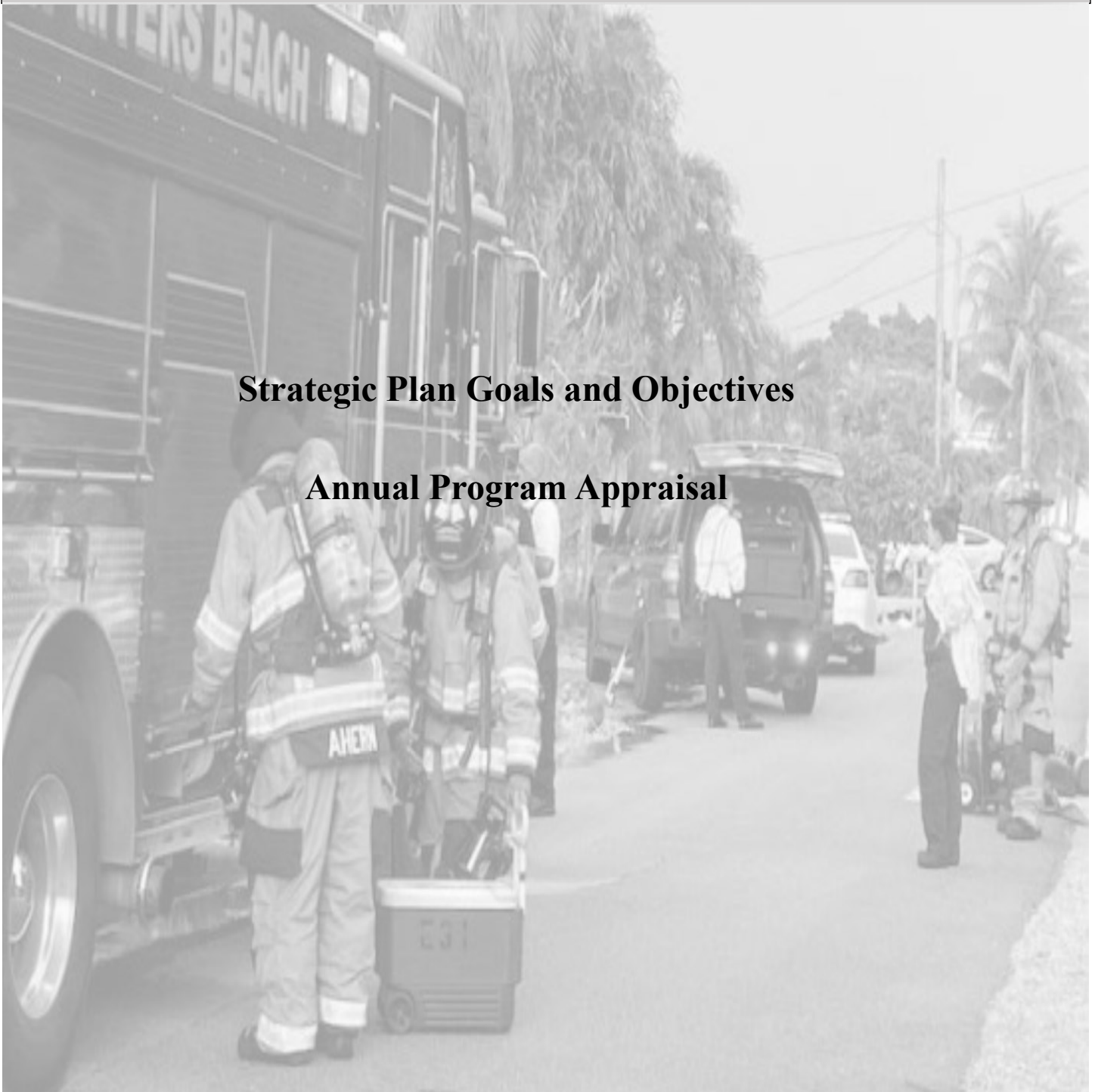
Chief Ronald Martin

**Fort Myers Beach Fire Control District  
Employees**

## **Section E - Program Goals and Objectives**

**Strategic Plan Goals and Objectives**

**Annual Program Appraisal**





## Program Goals and Objectives<sup>1</sup>

The major programmatic goals and objectives for FMBFCD have been captured in the latest strategic plan which covers 2022-2025. The goals, objectives, and associated tasks have been organized into 11 Goals:

### Goal Based Plan: Objective and Tasks

**Goal 1:** Achieve excellence in stakeholders ‘perception of safety’

**Objective 1.a:** Measure effectiveness of existing education program to increase stakeholder’s actual and perceived sense of safety (car seat program, AED, & CPS programs, etc.)

**Tasks:**

- Identify opportunities for innovative program delivery to meet community needs
- Conduct evaluation of existing public education programming
- Update education program based on evaluation findings

**Goal 2:** Increase opportunities for stakeholder engagement

**Objective 2.a:** Increase educational and preparedness programs throughout the community

**Tasks:**

- Evaluate the need and opportunities for increased staffing to enable implementation of educational programs and community risk reduction activities
- Fund staffing consistent with needs identified

**Objective 2.b:** Develop and sustain forums for community access

**Tasks:**

- Evaluate and implement opportunities for remote and/or recorded access to Fire Commission meetings

**Goal 3:** Implement financial and revenue strategy to sustain current and meet future needs

**Objective 3.a:** Implement long term system of contributions and withdraws to maintain capital infrastructure and organizational health

**Tasks:**

- Continue to monitor revenue to fund capital and operational needs based on existing 5-year plan
- Assess options for enhanced service delivery, including fee-based system

**Objective 3.b:** Monitor funds and plan for facility replacement

**Tasks:**

- Monitor station funding plan and adjust as needed

**Objective 3.c:** Assess costs and benefits of additional resources

**Tasks:**

- Conduct cost-benefit analysis of additional resources for service delivery (e.g., fire boat and/or other resources)

<sup>1</sup> Taken from the 2018-2021 Ft. Myers Beach Fire Department Strategic Plan

**Goal 4:** Achieve operational efficiency

**Objective 4.a:** Develop and implement an Information Technology (IT) plan to support internal and external District operations and administration

**Tasks:**

- Develop IT Plan including software and hardware priority needs in stations and vehicles; address system security, budget requirements, training, and timeframes
- Evaluate adopted technology for efficiency and effectiveness. Fund, monitor, and update plan

**Objective 4.b:** Develop and implement a cyber security resilience plan

**Tasks:**

- Develop a cybersecurity risk assessment and mitigation plan, including strategies to protect critical data
- Develop and implement a cyber security program and management plan to achieve cyber resilience

**Goal 5:** Reduce community risk

**Objective 5.a:** . Develop, refine, and update emergency response plans

**Tasks:**

- Work with Lee County Division of Public Safety, Town of Fort Myers Beach, and Lee County Sheriff and other stakeholders to refine emergency response plans, including active shooter (all hazard plan update)
- Evaluate opportunities to incorporate emergency plans into District operations

**Objective 5.b:** Respond to operational changes as suggested by the Standards of Cover and Community Risk Reduction analysis and plans

**Tasks:**

- Review, finalize, and adopt SOC and CRR plan(s)
- Develop plans and staffing necessary for implementation of SOC and CRR

**Goal 6:** Efficiently and effectively respond to emergencies

**Objective 6.a:** Ensure adequate protective equipment and turnout gear for emergency responders

**Tasks:**

- Maintain inventory and replacement schedule for PPE needs
- Respond to legislative and industry standards for additional/new PPE
- Fund and procure equipment

**Objective 6.b:** Ensure efficient and effective vehicle replacement and maintenance

**Tasks:**

- Continue to update vehicle replacement plan (Initial 5-Year Capital Asset Plan) and revisit timeframe for replacement (including monitoring useful life of certain types of vehicles).

**Goal 7:** Achieve excellent communication throughout the District

**Objective 7.a:** Provide forums for enhanced organizational communication

**Tasks:**

- Identify and implement methods to ensure consistent and continuity in communication practices

**Goal 8:** Achieve excellence as a high-performing organization

**Objective 8.a:** Develop consistency in personnel management policy and practice

**Tasks:**

- Standardize, update, and revise, and create consistency among organizational policies, procedures, and documents

**Objective 8.b:** Address employee culture

**Tasks:**

- Develop an internal work group to collaborate and implement opportunities for meaningful workplace engagement
- Engage labor partners in implementing measures to enhance employee morale and solving organizational culture challenges
- Develop opportunities for labor – management communication and collaboration

**Objective 8.c:** Complete organizational performance review as mandated by the Florida Statute, Section 191.003

**Tasks:**

- Complete performance review as outlined and mandated by FL Statutes
- Implement improvement measures as suggested by performance review

**Goal 9:** Recruit and train for excellence throughout the workforce

**Objective 9.a:** Recruit for excellence in the workforce

**Tasks:**

- Develop and implement formal recruiting and evaluation plan consistent with mission, vision, values, and behaviors
- Implement, evaluate, and monitor plan consistent with succession objectives

**Objective 9.b:** Ensure all employees meet job performance requirements through fire and medical training in core competencies

**Tasks:**

- Define standards and requirements to be achieved
- Evaluate compliance with training standard (by the employee)
- Develop and implement annual training plan to ensure compliance
- Monitor and evaluate progress

**Objective 9.c:** Ensure all employees have opportunity for growth and development

**Tasks:**

- Create opportunities for District mentoring and leadership development

**Goal 10:** Ensure capacity to meet staffing needs at all levels of the organization

**Objective 10.a:** Develop and implement leadership and personnel retention and succession plan

**Tasks:**

- Assess position vacancies in the short, medium, and long term(s)



**Goal 11:** Utilize a strategic planning and performance management system to guide the organization to perform at a high standard

**Objective 11.a:** . Finalize 2022-2025 Strategic Plan to guide District operations and ensure continuous improvement

**Tasks:**

- Finalize and adopt updated 2022-2025 Strategic Plan
- Evaluate and report District activities based on Strategic Plan
- Update and approve annual work plan and Strategic Plan in coordination with the annual budget; incorporating new objectives, tasks, and timelines as warranted

**Objective 11.b:** Assess financial strategies to ensure both long term sustainability an excellent service

**Tasks:**

- Continuously monitor opportunities to sustain and improve operations and meet organizational priorities

## Annual Program Appraisal

### Measuring Performance

There are two approaches to measuring performance. The first measures accomplishment of the objectives described in the Strategic Plan. However, because the plan requires regular review and revision to keep up with accomplishments and environmental changes, a second approach is also required. The second approach measures performance of the District outcomes.

This can also be known as “Performance Measures.” Performance measures are designed to assess the outcomes of the District’s activities and how it achieves its mission. Performance measures allow the District to create targets and regularly assess its methods, budget alignment, and communicate effectively with the public. They can be reported in the Annual Report, on the District’s webpage, or used in an email newsletter. Ideally, performance measures should remain consistent over time to ensure that there is standardization from year-to-year. Ultimately, they should assess inputs, outputs, efficiency, service quality, and outcomes.

As documented in Goal 11, Florida Statutes, Chapter 189.0695 recently mandated a performance review process. This process requires fire districts to contract with an independent entity to conduct a performance review covering a variety of factors, such as purpose and goals, goals and objectives for programs, service delivery, alternative service delivery, comparison of programs, revenues and costs of programs, extent to which goals and objectives have been achieved, factors that contributed to failure to meet goals, and recommendations for statutory or budgetary changes to improve the special district. Performance measures that are developed as part of the strategic planning process should identify the most appropriate performance measures that will meet both the statutory requirements and be useful for the priorities established in the FMBFCD Strategic Plan. Because more clarity and guidance are forthcoming relative to the state-required process, final performance measures (if needed) should be developed following the submission of the state-required performance review.

#### Core Competency 5A.7

The agency conducts a formal and documented program appraisal, at least annually, to determine the program’s impacts and outcomes, and to measure performance and progress in reducing risk based on the community risk assessment/standards of cover.

#### Core Competency 5E.3

The agency conducts a formal and documented program appraisal, at least annually, to determine the impacts, outcomes, and effectiveness of the program, and to measure its performance toward meeting the agency’s goals and objectives.

#### Core Competency 8B.6

The agency conducts a formal and documented program appraisal, at least annually, to determine the program’s effectiveness and compliance with meeting the needs of the organization.

#### Core Competency 2C.6

The agency identifies outcomes for its programs and ties them to the community risk assessment during updates and adjustments of its programs, as needed.

## **Section F - Current Deployment and Performance**

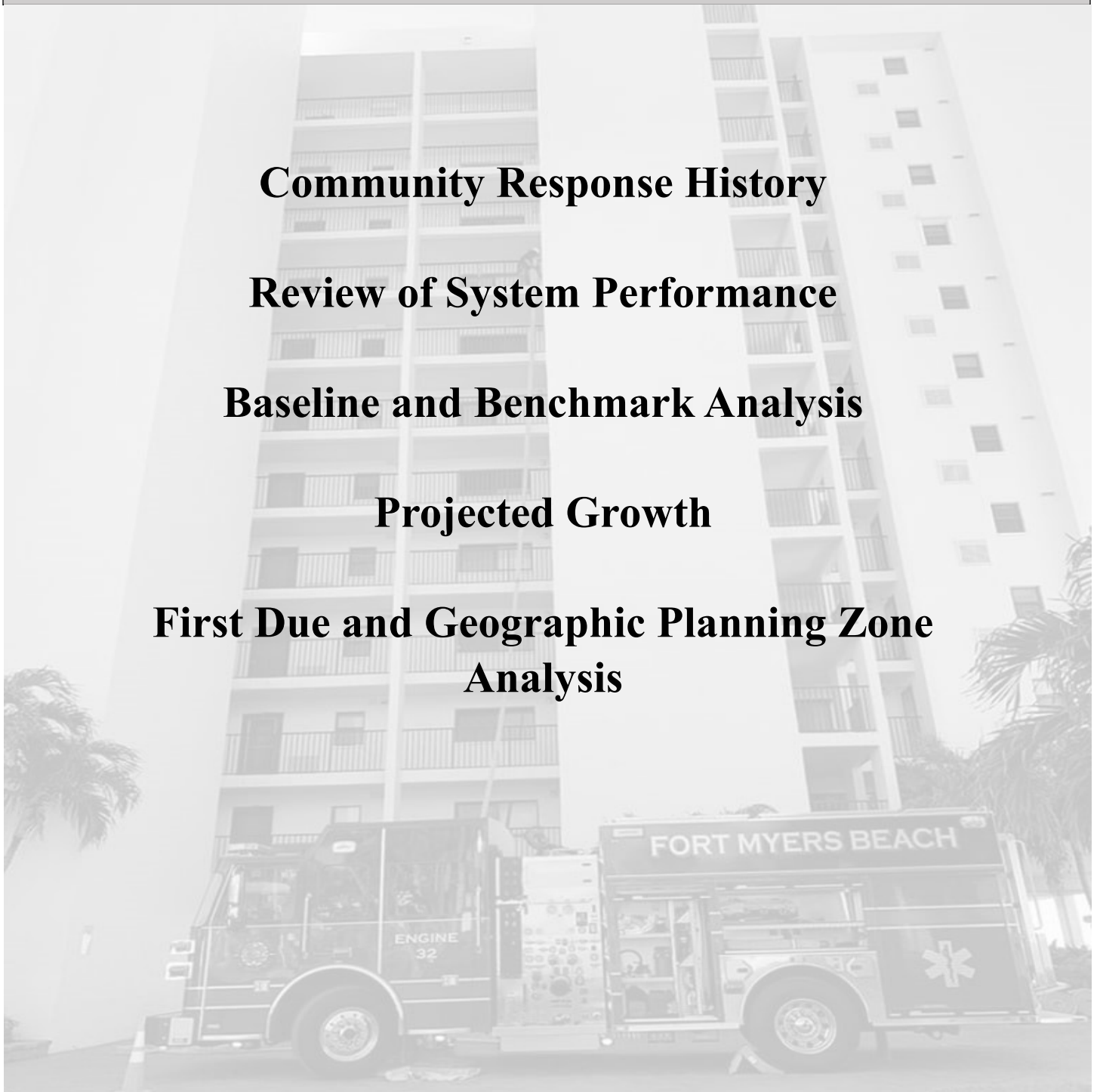
**Community Response History**

**Review of System Performance**

**Baseline and Benchmark Analysis**

**Projected Growth**

**First Due and Geographic Planning Zone  
Analysis**



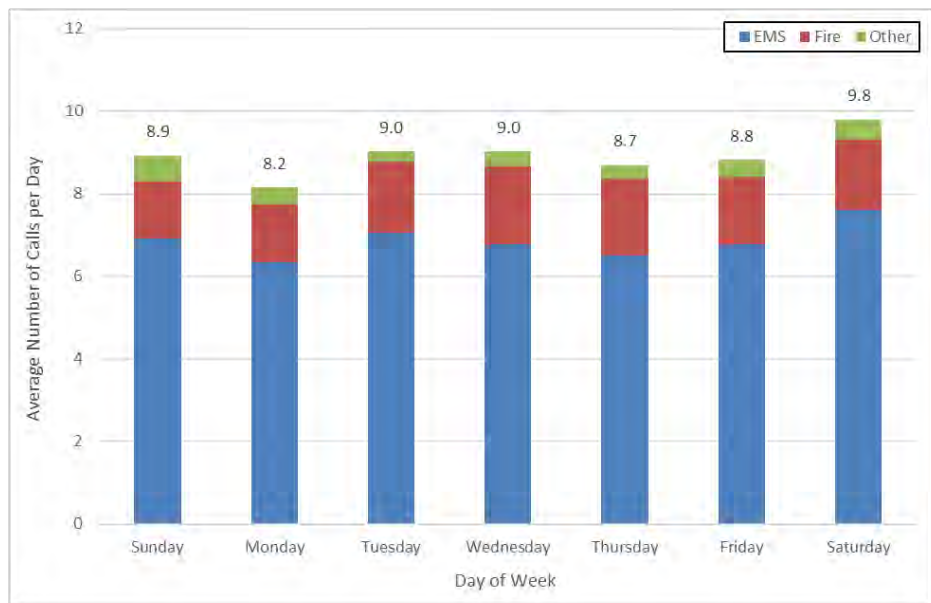
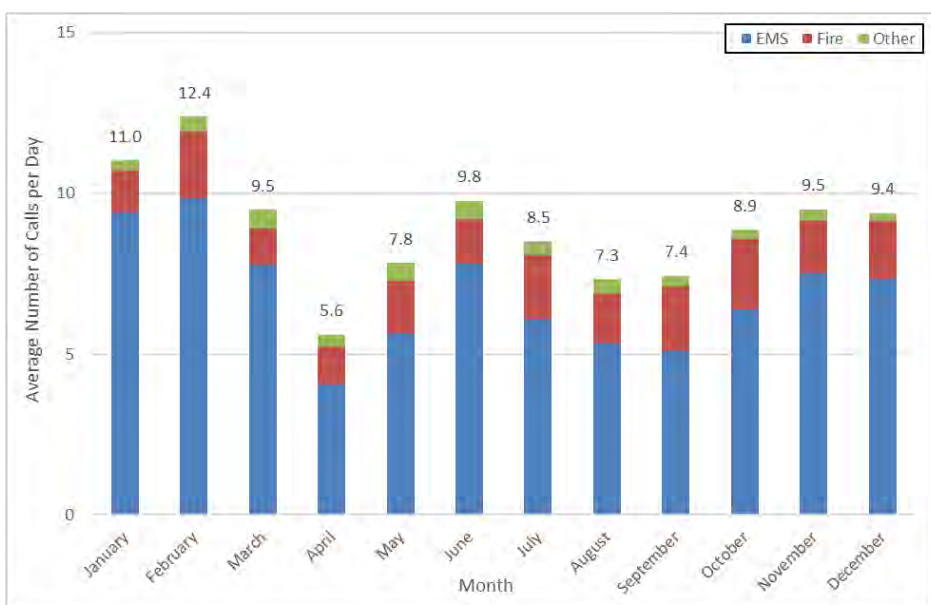


## Community Response History

Call Category	Reporting Period			
	2016-17	2017-18	2018-19	2019-20
EMS Total	2,500	2,097	2,094	2,507
Fire Total	484	398	440	606
Hazmat Total	11	16	10	24
Mutual Aid Total	3	7	9	12
Rescue Total	81	94	65	115
Total	3,079	2,612	2,618	3,264
Average Calls per Day <sup>2</sup>	8.4	7.2	7.2	8.9
YoY Growth	N/A	-15.20%	0.20%	24.70%

## Community Response History Discussion

FMBFCD answers approximately 3,079 emergency calls per year, with a variable dispersion with regards to type of call and month of year demonstrating 'seasonal periods' of demand for the District. Mondays are the lowest call volume day for fires, EMS, and other calls which include mutual aid, and Saturdays have the highest call volume.



### Performance Indicator 2B.2

The historical emergency and nonemergency service demands frequency for a minimum of three immediately previous years and the future probability of emergency and nonemergency service demands, by service type, have been identified and documented by planning zone.

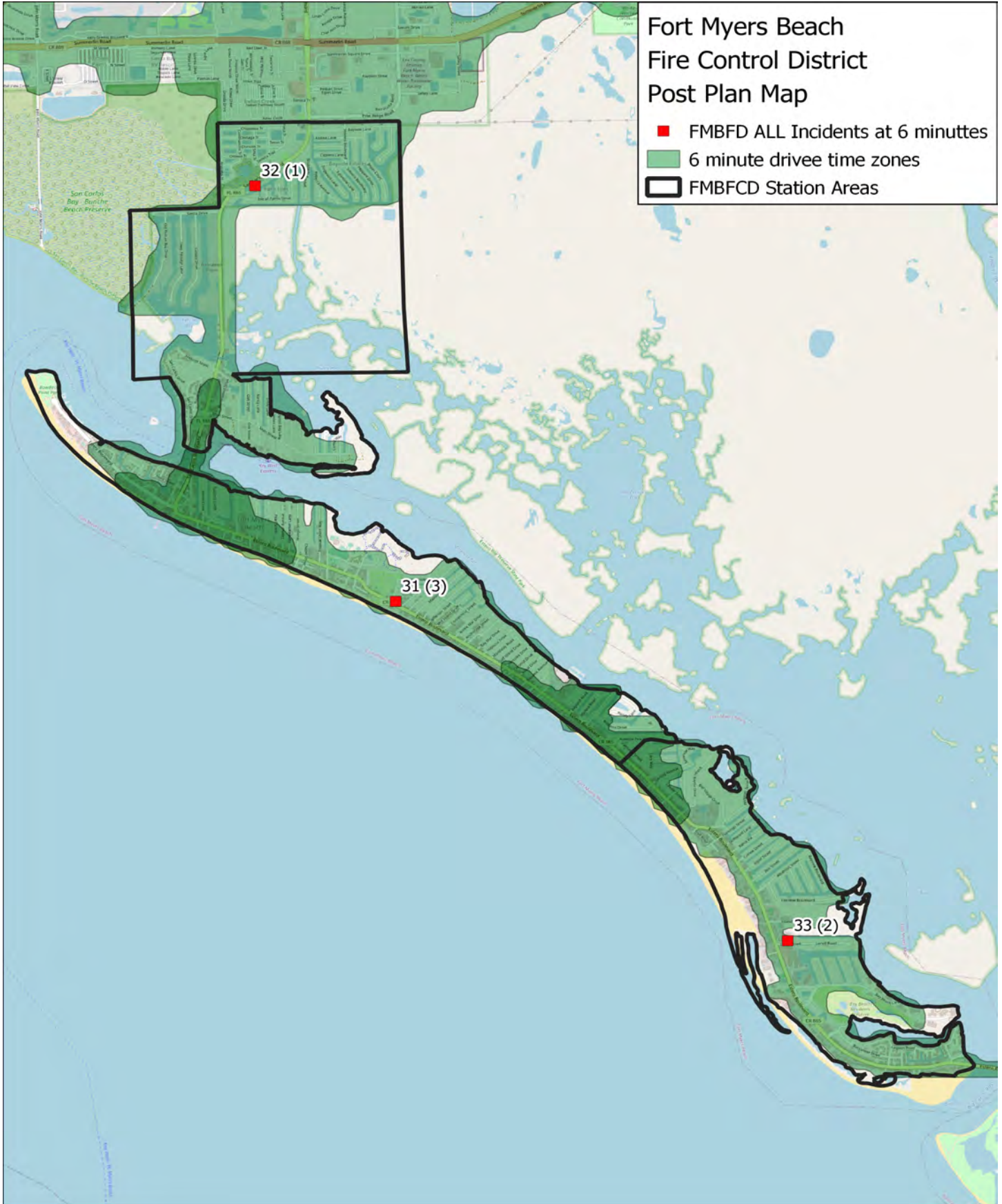
### Current Deployment and Performance as it relates to Criterion 2C:

The agency identifies and documents the nature and magnitude of the service and deployment demands within its jurisdiction. Based on risk categorization and service impact considerations, the agency's deployment practices are consistent with jurisdictional expectations and with industry research. Efficiency and effectiveness are documented through quality response measurements that consider overall response, consistency, reliability, resiliency, and outcomes throughout all services areas. The agency develops procedures, practices, and programs to appropriately guide its

### Core Competency 2C.1

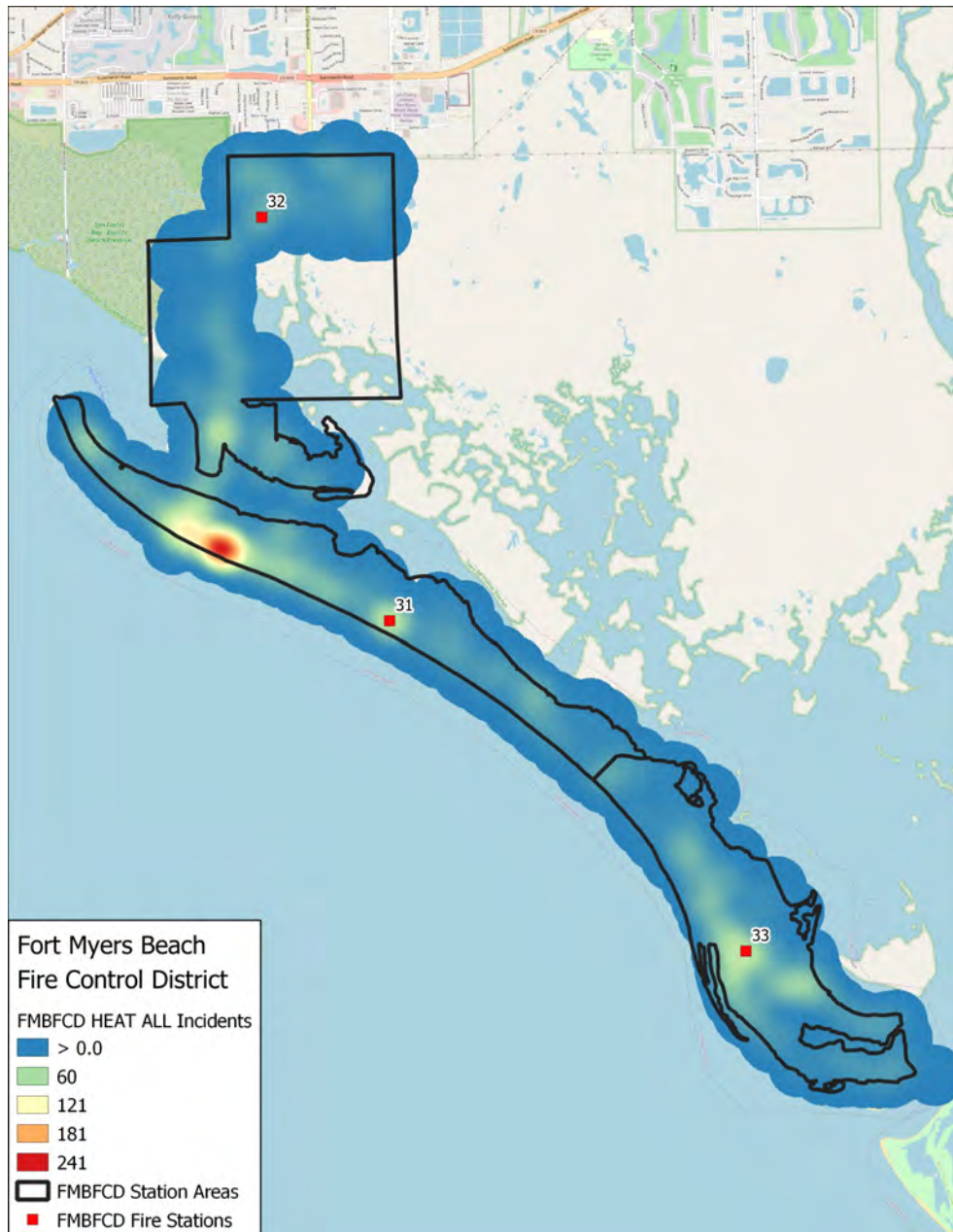
Given the levels of risks, area or responsibility, demographics, and socioeconomic factors, the agency has determined, documented, and adopted a methodology for the consistent provision of service levels in all service program areas

**Distribution – Geographical Drive Time Analysis** shows a 6 minute drive time (in green) and giving a good visual depiction of who can get where within the specified amount of time.



**Distribution – Percent of Incidents Captured by Station** shows that 91.85% of the incidents are covered by first due districts within 6-minutes travel time.

Rank	Station	Station Capture	Total Capture	Percent Capture
1	32	1,273	1,273	51.12%
2	33	677	1,950	78.31%
3	31	337	2,287	91.85%



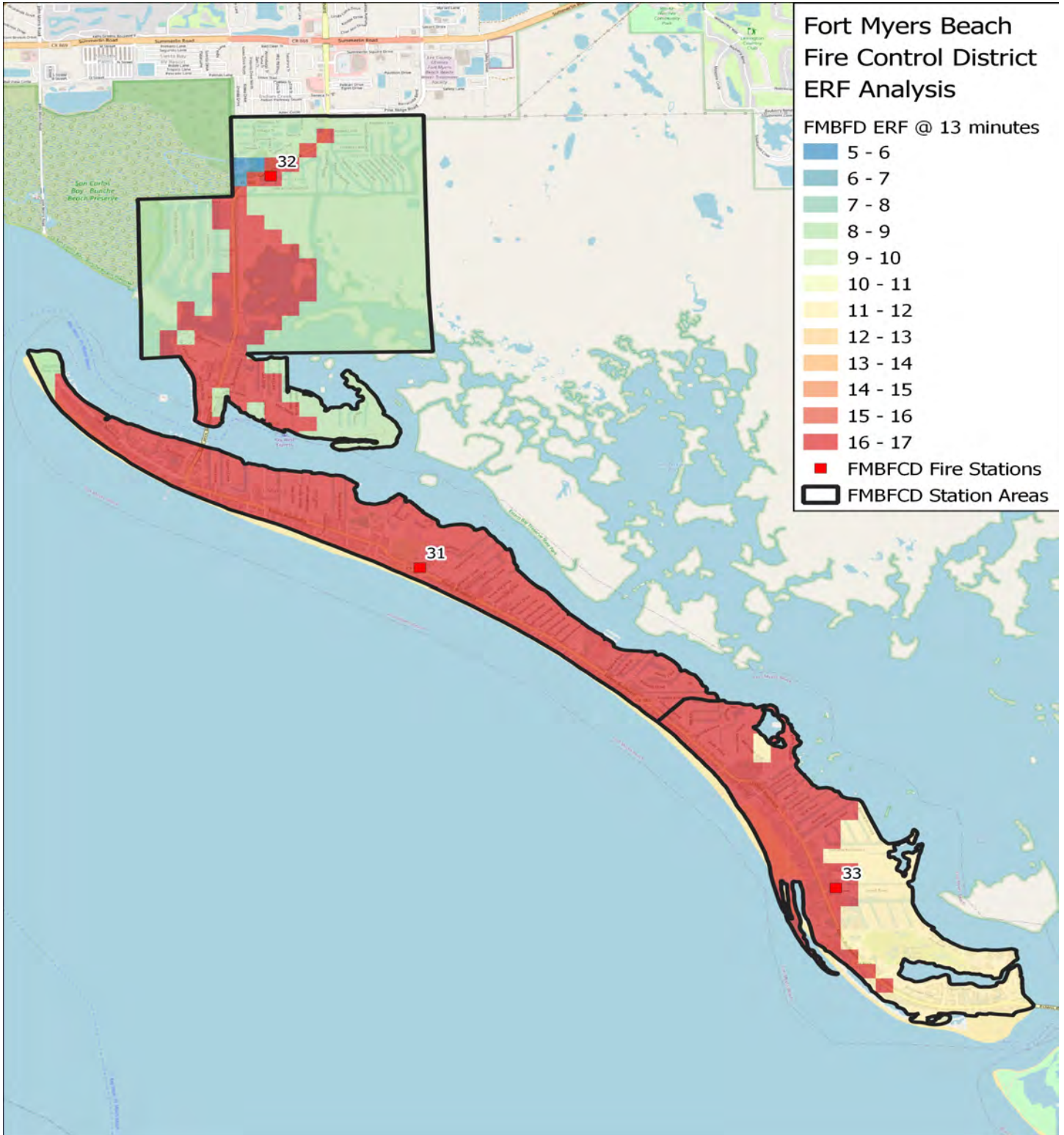
**Distribution – Heat Map Analysis Indicating Increased Frequency of Incidents.** Station 31 has the highest density of emergency incidents as compared to neighboring districts.



### Concentration (Effective Response Force Analysis)

ERF Travel Time Objective	Citywide Coverage
8-Minute	4.10%
10-Minute	17.86%
13-Minute	52.00%

These analyses are modeled using GIS data in order to more accurately assess capabilities. The tabular data demonstrates the saturation for ERF at various travels times for the district-wide coverage with a 13-person ERF. The mapping is representative of the concentration of personnel within 13-minutes utilizing FMBFCD resources.

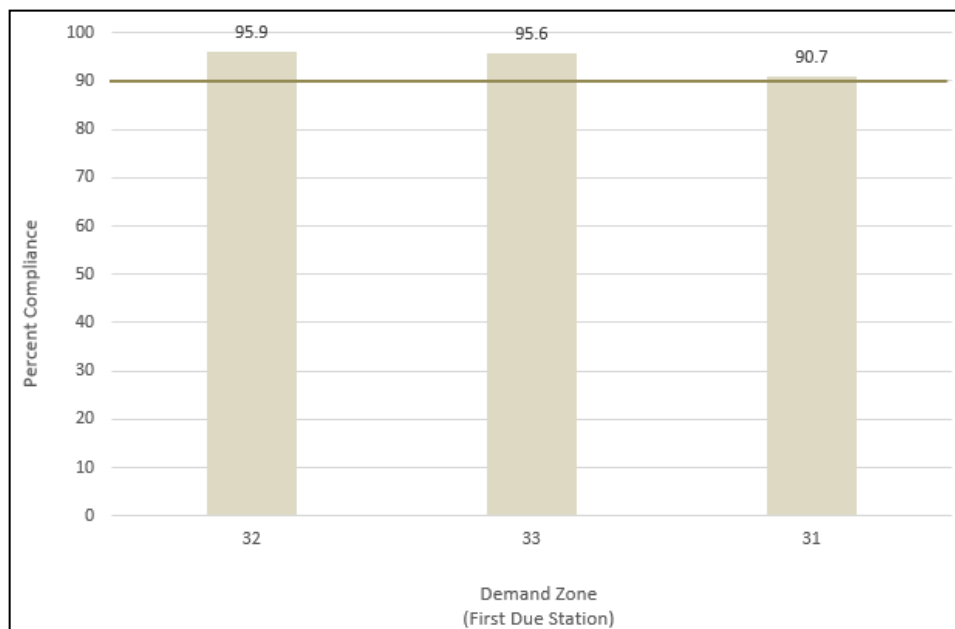


## Reliability Analysis -Department Wide

The first step in assessing the reliability of the deployment model or system performance is to understand the department’s availability to handle the requests for service that occur within the jurisdiction. **FMBFCD is available to respond to 99.3% of the requests for service that are originating within the jurisdiction**, with a total of 17 incidents responded to by other agencies with no FMBFCD units responding.

## Reliability Analysis –First Due Zone

The reliability of the distribution model is a factor of how often the response model is available and able to respond to the call within the assigned demand zone. If at least one unit from the first due zone is able to respond to a call, we consider the station is able to response to the call within the assigned demand zone. Utilizing the department’s Fire Station Demand Zones (FDZ), analyses reveal that all FMBFCD stations are capable of meeting their demand for services at the 90th percentile. In other words, when requests for service are received by a FMBFCD station, it is available to answer the call nine out of ten times. It is considered both best practice and the most reliable measure to perform at the 90th percentile as indicated by the line in the Figure below. This analysis utilized all dispatched calls within the jurisdiction and the performance included all assigned units to the specific FDZ. Finally, a matrix is provided to assess where units responded to other first due station areas.



Demand Zone (First Due Station)	Responding Unit’s Assigned Station			Total <sup>1</sup>	% Compliance
	31	32	33		
31	1,093	713	338	1,205	90.7
32	92	539	56	562	95.9
33	103	64	675	706	95.6
Outside of FMBFD	92	628	88	745	--
<b>Total</b>	<b>1,380</b>	<b>1,944</b>	<b>1,157</b>	<b>3,218</b>	--

<sup>1</sup>“Total” values may not equal the sum of the cell values across columns per row because units from multiple stations may have responded to a call within the given

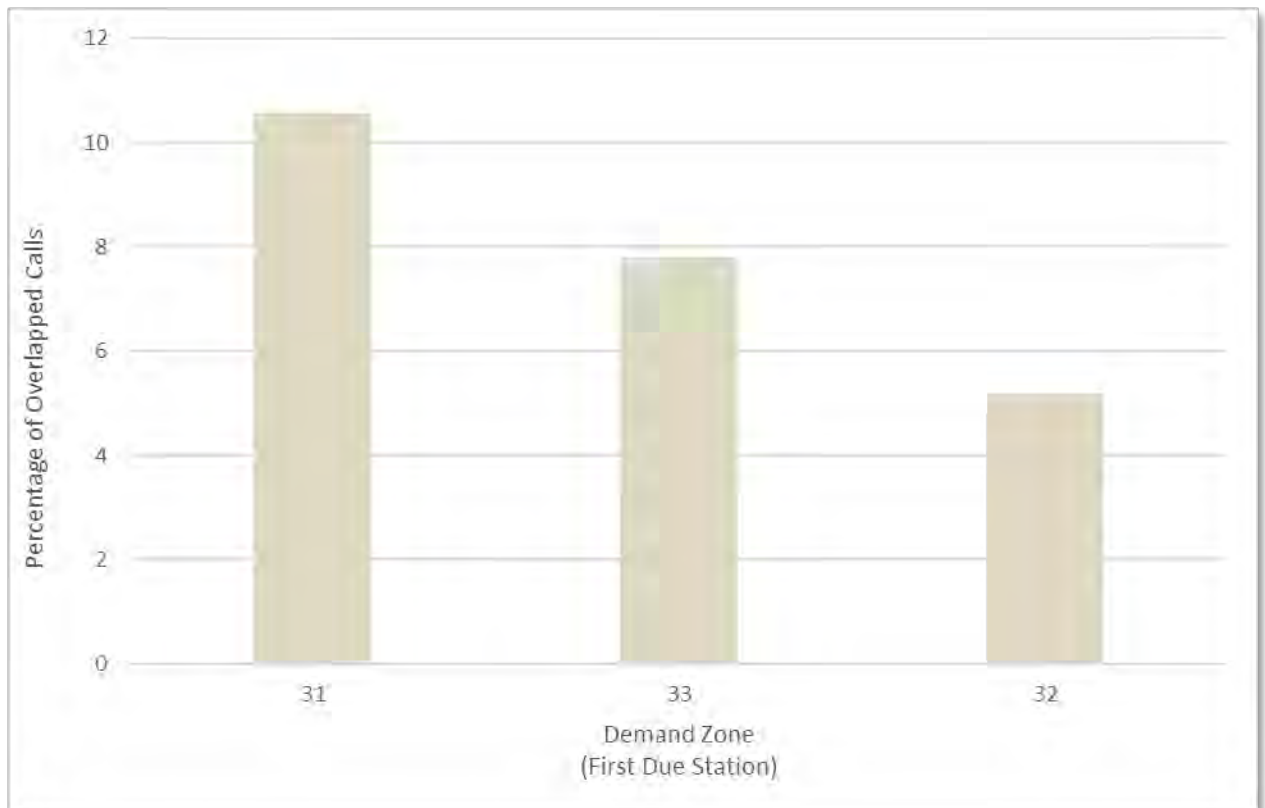
## Overlapped (Simultaneous) Incidents

Overlapped or simultaneous calls are defined as another call being received in a demand zone (or first due station's area) while one or more calls are already ongoing for the same demand zone (or first due station's area). For example, if there is a call in station 31's zone, and before the call is cleared, another call occurs within station 31's zone, the second call would be captured as an overlapped or simultaneous call.

Understanding the percentage of overlapped calls may help to determine the number of units to staff for each station. In general, the larger the call volume for a demand zone, the greater the likelihood of overlapped calls occurring. The distribution of the demand throughout the day will impact the chance of having overlapped calls. Additionally, the duration of a call plays a significant role; the longer it takes to clear a request, the greater the likelihood of having an overlapping request.

Station 31's demand zone had the highest percentage of overlapped calls during 2019-20 for overall calls (10.5%), EMS calls (9.6%), and fire calls (.7%). This means that during the period of an active station 31 call, there is a 10.5% chance that another incident in station 31's area will occur. In other words, at least 89.5% of the time, the station can respond to an incident, mitigate the incident, and return to available status prior to a second or greater call has occurred. Station 33 has the second highest call concurrency rate at 7.8%. Station 32 had the lowest call concurrency rate at 5.2%.

Demand Zone (First Due Station)	Overlapped Calls	Total Calls	Percentage of Overlapped Calls
31	127	1,205	10.5
32	29	562	5.2
33	55	706	7.8

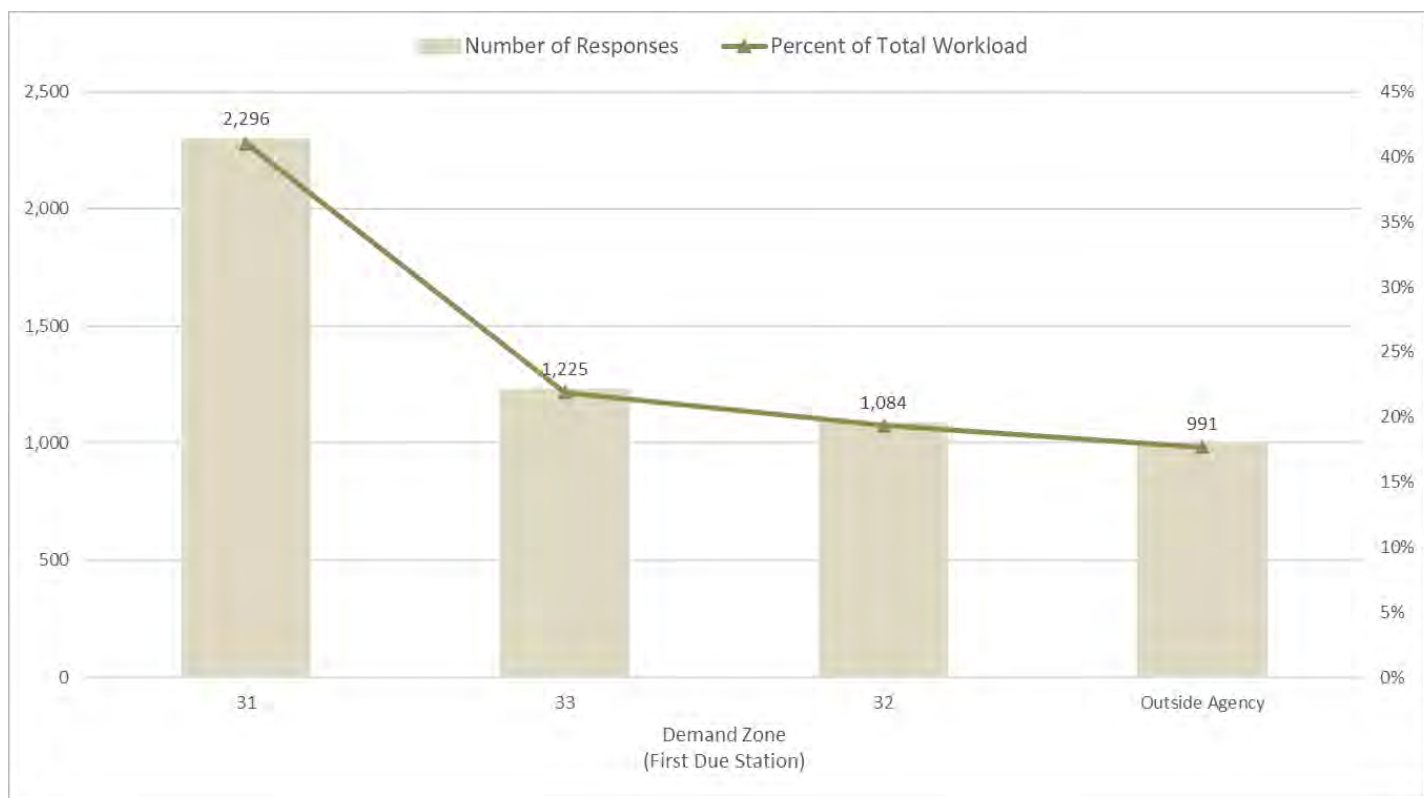




Section F - Current Deployment and Performance—District-wide

Demand Zone (First Due Station)	Number of Calls Incoming to Demand Zone	Number of Responses Made by Department in Demand Zone	Percent of Department Workload	Cumulative Percent of Department Workload
31	1,205	2,296	41	41
32	562	1,084	19.4	60.4
33	706	1,225	21.9	82.3
Outside Agency	745	991	17.7	100
<b>Total</b>	<b>3,218</b>	<b>5,596</b>	<b>100</b>	<b>100</b>

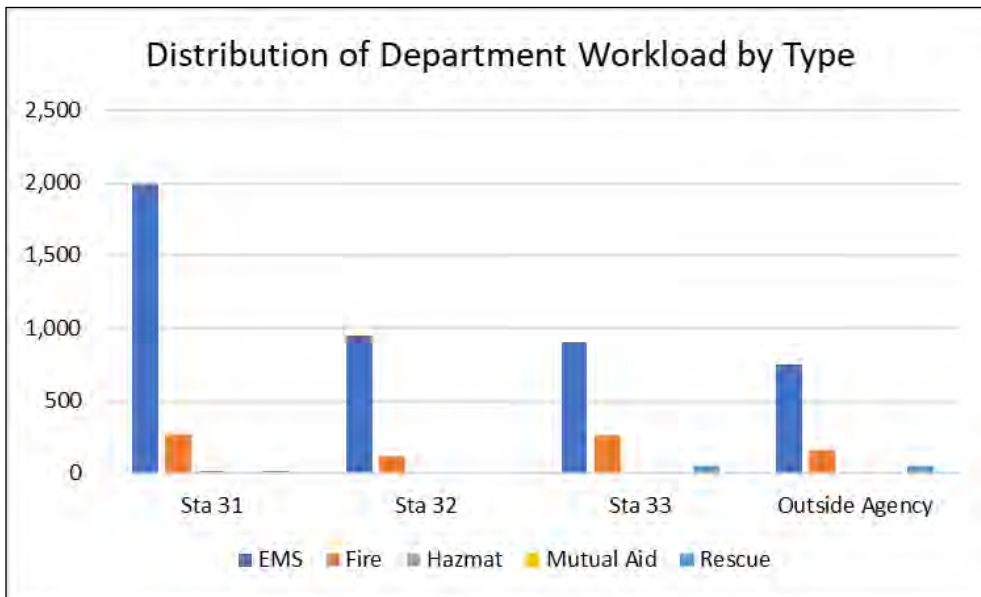
Station 31 provides for 41% of the department’s workload, followed by station 33 at 21.9%. In fact, all three stations collectively account for about 82% of the FMBFCD’s workload. Automatic aid is an essential partnership to account for times when FMBFCD or its neighboring agencies need assistance. Thus, as a result of these arrangements, nearly 18% of the District’s workload occurs outside of its jurisdictional boundaries.



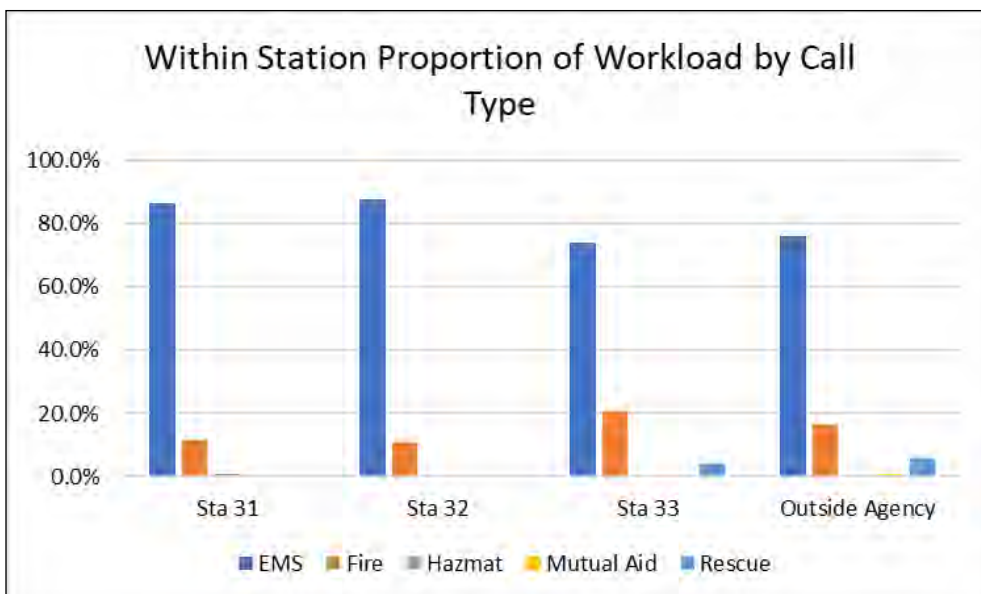
## Workload Demand

Demand Zone (First Due Station)	Program					Total
	EMS	Fire	Hazmat	Mutual Aid	Rescue	
31	1,984	271	18	7	16	2,296
32	951	118	8	2	5	1,084
33	906	257	9		53	1,225
Outside Agency	753	165	5	10	58	991
<b>Total</b>	<b>4,594</b>	<b>811</b>	<b>40</b>	<b>19</b>	<b>132</b>	<b>5,596</b>

As with most organizations, the majority of emergency responses are EMS related at 78%.



Automatic aid represents a substantial portion of the District's work load when compared to that of Stations 32 and 33.



Stations 31 and 32 have the highest within station demand for EMS .

## Apparatus Deployed Hours

Across all jurisdictions, all units assigned to FMBFCD made 5,596 responses, and were busy on calls for a total of 2,986.2 hours during 2019-20. Overall, average busy minutes per response was 32.1 minutes, and average number of responses per call was 1.7. Within FMBFCD's jurisdiction, all units assigned to FMBFCD made 4,605 responses, and were busy on calls for a total of 2,491.5 hours. Average busy minutes per response was 32.5 minutes, and average number of responses per call was 1.9. Outside of FMBFCD's jurisdiction, FMBFCD units made 991 responses to 745 calls, and were busy on these calls for a total of 494.6 hours. Average busy minutes per response was 30.0 minutes, and average number of responses per call was 1.3.

Jurisdiction	Program	Number of Calls	Number of Responses	Average Responses per Call	Total Busy Hours	Responses with Time Data	Average Busy Minutes per Response	Average Calls per Day	Average Responses per Day
All	EMS	2,497	4,594	1.8	2,499.40	4,582	32.7	6.8	12.6
	Fire	594	811	1.4	365.4	811	27	1.6	2.2
	Hazmat	23	40	1.7	11.2	40	16.7	0.1	0.1
	Mutual Aid	12	19	1.6	66.7	18	222.4	0	0.1
	Rescue	92	132	1.4	43.5	132	19.8	0.3	0.4
	<b>Total</b>	<b>3,218</b>	<b>5,596</b>	<b>1.7</b>	<b>2,986.20</b>	<b>5,583</b>	<b>32.1</b>	<b>8.8</b>	<b>15.3</b>
Within FMBFD	EMS	1,932	3,841	2	2,144.50	3,831	33.6	5.3	10.5
	Fire	455	646	1.4	307.2	646	28.5	1.2	1.8
	Hazmat	18	35	1.9	9.7	35	16.6	0	0.1
	Mutual Aid	5	9	1.8	9.7	9	64.4	0	0
	Rescue	63	74	1.2	20.5	74	16.6	0.2	0.2
	<b>Total</b>	<b>2,473</b>	<b>4,605</b>	<b>1.9</b>	<b>2,491.50</b>	<b>4,595</b>	<b>32.5</b>	<b>6.8</b>	<b>12.6</b>
Outside of FMBFD	EMS	565	753	1.3	354.9	751	28.4	1.5	2.1
	Fire	139	165	1.2	58.2	165	21.2	0.4	0.5
	Hazmat	5	5	1	1.5	5	17.5	0	0
	Mutual Aid	7	10	1.4	57	9	380.3	0	0
	Rescue	29	58	2	23.1	58	23.9	0.1	0.2
	<b>Total</b>	<b>745</b>	<b>991</b>	<b>1.3</b>	<b>494.6</b>	<b>988</b>	<b>30</b>	<b>2</b>	<b>2.7</b>



**Apparatus Deployed Hours cont.**

Across all jurisdictions, Station 32 was the busiest station during 2019-20 based on number of responses made by units assigned to the station (2,499 responses), and based on total busy hours (1,425.0 hours; 47.7% of departmental busy hours). Station 33 was the second busiest station with 1,554 responses made by units assigned to the station for a total of 995.7 busy hours during 2019-20.

Notably, units assigned to Station 32 spent approximately 25.6% of their busy time (364.7 of 1,425.0 total hours) responding to calls outside of the FMBFCD jurisdiction. Units assigned to Stations 31 and 33 spent approximately 13.7% and 5.3% of their busy time, respectively, responding to calls outside of the FMBFCD jurisdiction.

Jurisdiction	Station	Number of Responses Made by Units Assigned to Station	Responses with Time Data	Total Busy Hours	Average Busy Minutes per Response	Percentage of Total Busy Hours
All	31	1,543	1,543	565.5	22.0	18.9
	32	2,499	2,490	1,425.0	34.3	47.7
	33	1,554	1,550	995.7	38.5	33.3
	<b>Total</b>	<b>5,596</b>	<b>5,583</b>	<b>2,986.2</b>	<b>32.1</b>	<b>100.0</b>
Within FMBFD	31	1,431	1,431	487.8	20.5	19.6
	32	1,719	1,712	1,060.3	37.2	42.6
	33	1,455	1,452	943.4	39.0	37.9
	<b>Total</b>	<b>4,605</b>	<b>4,595</b>	<b>2,491.5</b>	<b>32.5</b>	<b>100.0</b>
Outside of FMBFD	31	112	112	77.6	41.6	15.7
	32	780	778	364.7	28.1	73.7
	33	99	98	52.3	32.0	10.6
	<b>Total</b>	<b>991</b>	<b>988</b>	<b>494.6</b>	<b>30.0</b>	<b>100.0</b>

## Workload by Station and Unit

The station-level demand is more reflective for deployment decisions, and the unit-level workload, along with an Unit Hour Utilization analyses presented later, will help evaluate the utilization of physical apparatus, and assist with apparatus procurement or maintenance decisions.

Across all jurisdictions, Station 32 was the busiest station during 2019-20 based on number of responses made by units assigned to the station (2,499 responses), and based on total busy hours (1,425.0 hours; 47.7% of departmental busy hours). Station 33 was the second busiest station with 1,554 responses made by units assigned to the station for a total of 995.7 busy hours during 2019-20.

ALS Rescue 32 was the busiest unit in the District with 1,405 responses. The busiest Engine was FBE31 with 1,204 responses followed by FBE32 with 1,094 responses.

Station	Unit	Unit Type	Number of Responses	Responses with Time Data	Total Busy Hours	Average Busy Minutes per Response
31	FB01	Admin	7	7	7.4	63.0
	FB02	Admin	30	30	54.6	109.2
	FB03	Admin	19	19	21.1	66.5
	FB04	Admin	10	10	1.9	11.6
	FB05	Admin	15	15	18.0	72.1
	FBBC30	Battalion Chief	242	242	72.8	18.0
	FBD31	Support	2	2	2.0	60.0
	FBE31	Engine	1,204	1,204	383.3	19.1
	FBSU31	Support	14	14	4.5	19.2
	<b>Total</b>			<b>1,543</b>	<b>1,543</b>	<b>565.5</b>
32	FBE32	Engine	1,094	1,089	336.3	18.5
	FBR32	ALS	1,405	1,401	1,088.7	46.6
	<b>Total</b>			<b>2,499</b>	<b>2,490</b>	<b>1,425.0</b>
33	FBE33	Engine	263	263	87.4	19.9
	FBE39	Engine	1	0	--	--
	FBR33	ALS	784	782	724.2	55.6
	FBSU33	Support	5	5	2.3	28.0
	FBTK33	Truck	501	500	181.8	21.8
	<b>Total</b>			<b>1,554</b>	<b>1,550</b>	<b>995.7</b>

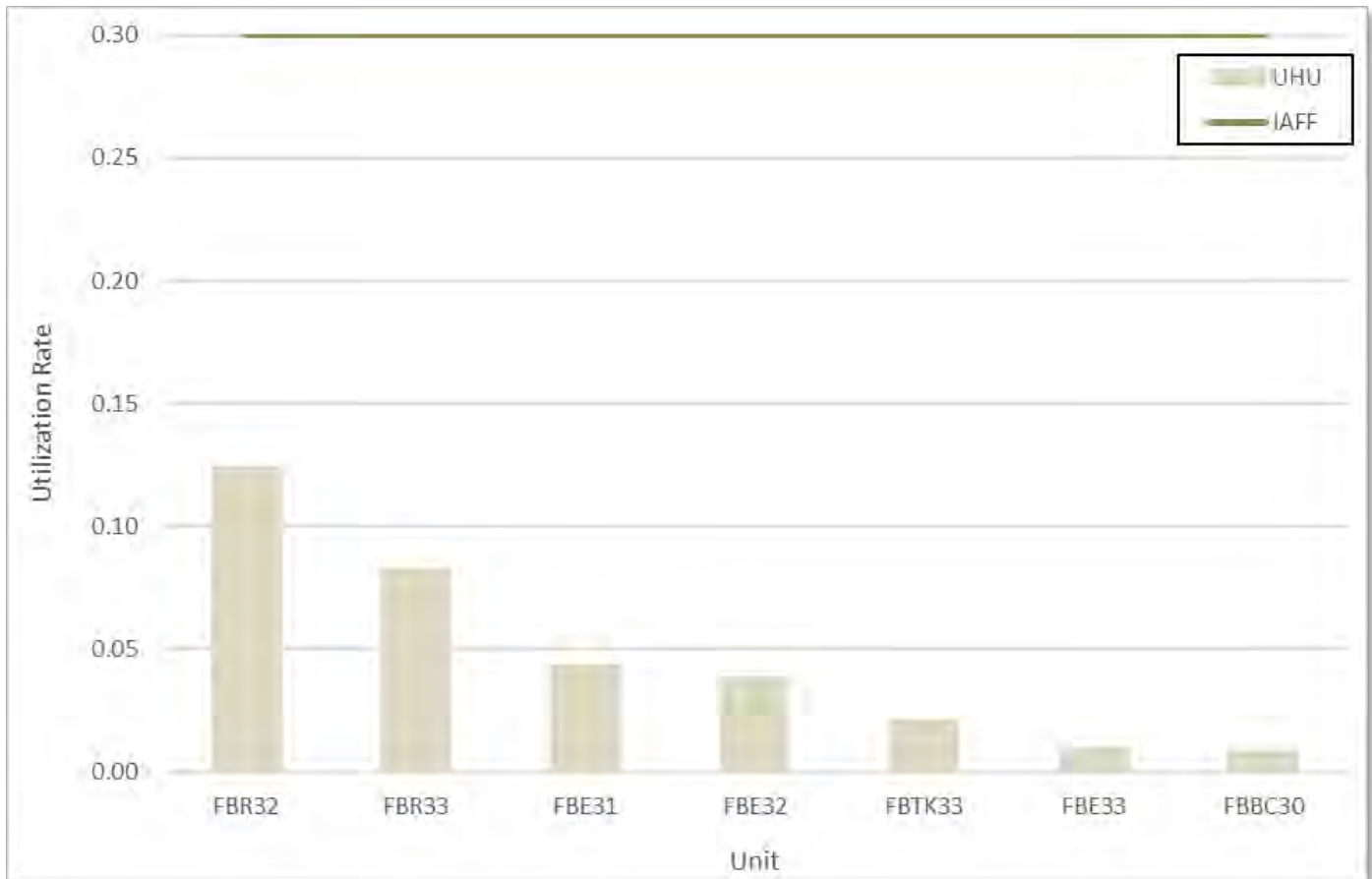
### Unit Hour Utilization

The number of calls responded to primarily address the wear and tear on the apparatus. Another measure, time on task, is necessary to evaluate best practices in efficient system delivery and consider the impact workload has on personnel. Unit Hour Utilization (UHU) determinants were developed by mathematical model. This model includes both the proportion of calls handled in each major service area (Fire, EMS, Hazmat, and Rescue) and total unit time on task for these service categories in 2019. The resulting UHU's represent the percentage of the work period (24 hours) that is utilized responding to requests for service.

Station	Unit ID	UHU Value	Total Busy Hours
31	FBBC30	0.01	72.8
	FBE31	0.04	383.3
32	FBE32	0.04	336.3
	FBR32	0.12	1,088.7
33	FBE33	0.01	87.4
	FBR33	0.08	724.2
	FBTK33	0.02	181.8

The International Association of Fire Fighters (IAFF) recommends that 24-hour units do not surpass a 0.30, or 30% workload threshold. This would equate to approximately 7.2 hours of the 24-hour period. These thresholds take into consideration the necessity to accomplish non-emergency activities such as training, health and wellness, public education, and fire inspections.

The District is currently operating within the boundaries of nationally recommended best practices with respect to workload. Overall, the department is performing at or below 0.12, or 11%. The most utilized unit is the Rescue 32 in Station 32, at 0.12. Rescue 33 is the second most utilized at 8%. At the current workload utilization rates, the department workload should have a limited impact on their level of readiness or system performance.





## Workload by Demand Zone-First Due Zone

Another method for assessing the effectiveness of the distribution model is to analyze the demand for services across the department, wherein workload is assessed at the demand zone level (i.e., FMBFCD “First Due Station,” otherwise “Outside Agency”). The highest volume of incoming calls occurred for Station 31 (1,205 calls). Station 31 also had the highest volume of responses made by departmental units to the area (2,296 responses), requiring 41.0% of FMBFCD’s total responses.

Demand Zone (First Due Station)	Number of Calls Incoming to Demand Zone	Number of Responses Made by Department in Demand Zone	Percent of De- partment Work- load	Cumulative Percent of Department Workload
31	1,205	2,296	41	41
32	562	1,084	19.4	60.4
33	706	1,225	21.9	82.3
Outside Agency	745	991	17.7	100
<b>Total</b>	<b>3,218</b>	<b>5,596</b>	<b>100</b>	<b>100</b>

Workload was also analyzed by demand zone (first due zone) and incident type.

Demand Zone (First Due Station)	Program					Total
	EMS	Fire	Hazmat	Mutual Aid	Rescue	
31	1,984	271	18	7	16	2,296
32	951	118	8	2	5	1,084
33	906	257	9		53	1,225
Outside Agency	753	165	5	10	58	991
<b>Total</b>	<b>4,594</b>	<b>811</b>	<b>40</b>	<b>19</b>	<b>132</b>	<b>5,596</b>

**Fire**

One of the most visible outcomes of a fire and rescue service is the percentage of property and contents saved during the course of a structural fire. The following tables shows the number of fires responded to by FMB-FCD over the previous three years, along with property and contents lost, property and contents saved, and overall save rate %.

Description	2018	2019	2020
<b>Number of Structure Fires</b>	10	1	5
<b>Property and Contents Lost</b>	\$390,075	\$500	\$70,500
<b>Property and Contents Saved</b>	\$47,180,451	\$426,154	\$2,459,000
<b>Save %</b>	99.2%	99.9%	97.2%

**EMS**

Many factors contribute to the survival of out-of-hospital cardiac arrest including EMS response time, experience/case volume of the paramedic, layperson CPR, age/health of patient, type of rhythm encountered, etc. However, one outcome has generally been accepted as a positive marker of EMS system performance; Return of Spontaneous Circulation (ROSC). Global rates of ROSC for out of hospital arrests hover just under 30%.

Description	2018	2019	2020
<b>Cardiac Arrests</b>	14	19	27
<b>FMBFD ROSC %</b>	57%	37%	30%

**Hazmat**

Fortunately hazardous materials incidents are generally a relatively rare occurrence, although when they do occur, the impacts can be devastating to not only the people involved but the environment as well. FMBFCD responded to 32 hazardous materials events over the last three years. During these responses, an estimated 5,000 people were potentially impacted and 320 gallons of product were successfully stopped from exiting their containers or entering storm drains

**Event Outcomes****Performance Indicator 2B.3**

Event outputs and outcomes are assessed for three (initial accrediting agencies) to five (currently accredited agencies) immediately previous years.

**Technical Rescue**

Much like hazardous materials incidents, fortunately technical rescue incidents are rare as compared to EMS or Fire calls, but usually people's lives are on the line during these low frequency, high risk events. Over the past three years, FMBFCD responded to 0 technical rescue incidents, potentially saving 0 lives from injuries sustained during trench collapses, water rescues, or while trapped in high angle locations.

**Community Risk Reduction**

There is not a single CRR measure that defines program success, but generally speaking the number and severity of fires (including dollar loss as measured above in the Fire outcome area) and injuries or deaths are the ultimate outcomes of a program. FMBFCD has seen a slight decline in structure fires over the past three years with 10, 1, and 5 fires occurring over 2018, 2019, and 2020 respectively.

## Benchmark and Baseline Statements and Tables

The District has established benchmark performance objectives and baseline measurements for four major categories of emergency responses including fires, emergency medical services, hazardous materials and technical rescue incidents. These objectives and measures are also tailored by risk level classification for low, moderate, and high risks, including the amount of personnel required (effective response force) to perform the required critical tasking that aligns with both the needs of the incident and departmental policies and standard operating guidelines.

In simple terms, the benchmark is the desired level of performance and the baseline is the current level of performance. Rather than using averages for response times, these goals are measured against 90% fractals, aligning with best practices in the fire industry for both the Center for Public Safety Excellence and National Fire Protection Association standards. This measurement style affords a much more accurate view of performance.

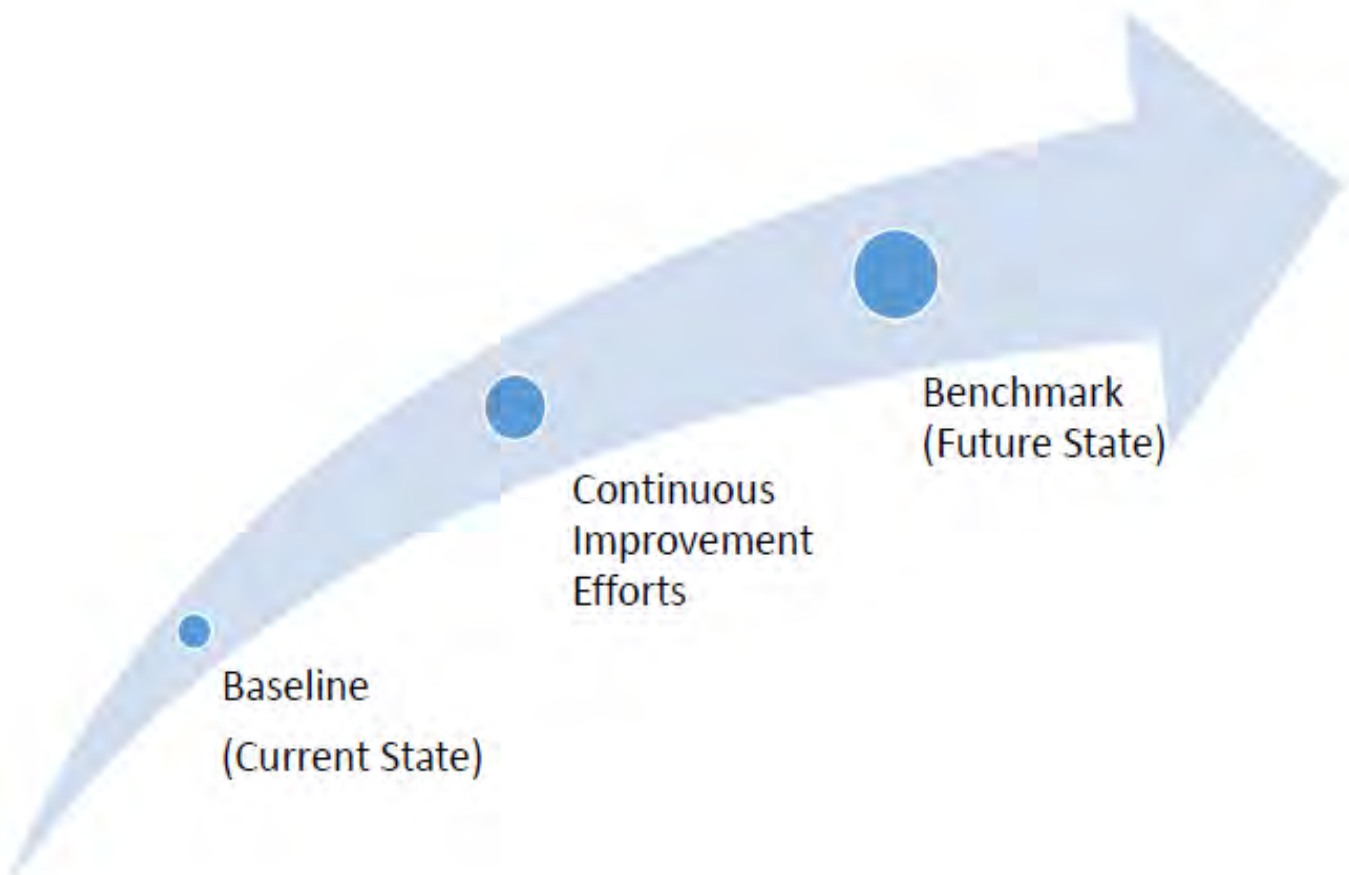
The benchmark statements and baseline charts all reflect current departmental practices. Historic data presented in the baseline charts represents actual incident data from 2016-17 to 2019-20. Automatic Baseline data is only available for certain risk levels for each of the four incident types, due to some risk levels not happening frequently enough to produce valid data. These are clearly noted within each table and the corresponding baseline statements.

### Core Competency 2C.5

The agency has identified the total response time components for delivery of services in each service program area and found those services consistent and reliable within the entire response area.

### Performance Indicator 2C.7

The agency has identified the total response time components for delivery of services in each service program area and assessed those services in each planning zone.





## Performance Statements - Fire Suppression

### Benchmark Statements

For **all fire incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, shall be 8-minutes and 52-seconds. The first due unit shall be capable of establishing command, sizing up the incident, utilize appropriate tactics in accordance with departmental standard operating guidelines, develop an initial action plan, extend an appropriate hose line and begin initial fire attack or rescue.

For **moderate risk fires**, the 90th percentile of total response time for the arrival of the effective response force, consisting of seven personnel, shall be 16-minutes and 39-seconds. The effective response force shall have the capability to establish command, investigate, stabilize hazards, provide for necessary extinguishment, and restore or stabilize systems in accordance with departmental standard operating guidelines after developing an initial action plan.

For **high risk fires**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 personnel, shall be 16-minutes and 39-seconds. The effective response force shall have the capability to establish command, provide an uninterrupted water supply, advance an attack line and backup line for fire control, place elevated streams into service, establish a rapid intervention crew, complete forcible entry and ventilation, conduct primary and secondary searches, control utilities and perform salvage and overhaul operations. These critical tasks shall be done in a safe manner in accordance with department standard operating guidelines.

## Performance Statements - Fires

### Baseline Statements

For **all fires** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, was 9-minutes and 51-seconds. The first due unit is capable of establishing command, sizing up the incident, utilizing appropriate tactics in accordance with departmental standard operating guidelines, developing an initial action plan, extending an appropriate hose line and beginning initial fire attack or rescue.

Low-Risk Fire – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:15	1:23	1:27	1:02	1:25
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:35	2:36	2:49	2:23	2:22
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	7:18	7:28	6:51	6:50	8:47
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	9:51	9:49	9:31	9:31	12:01
			n=596	n=175	n=160	n=184	n=77
		Rural					
	Total Response Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural	N/A	N/A	N/A	N/A	N/A

For **moderate risk fires**, the 90th percentile of total response time for the arrival of the effective response force, consisting of seven personnel, was 18-minutes and 30-seconds. The effective response force has the capability to establish command, investigate, stabilize hazards, provide for necessary extinguishment, and restore or stabilize systems in accordance with departmental standard operating guidelines after developing an initial action plan.

Moderate-Risk Fire – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:57	4:01	2:30	1:12	1:14
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:47	3:02	2:54	2:44	2:33
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	8:54	6:43	6:48	8:45	13:19
		Rural					
	Travel Time ERF Concentration	Urban	14:38	11:17	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	11:42	9:59	9:40	11:11	15:48
			n=642	n=152	n=141	n=168	n=181
		Rural					
	Total Response Time ERF Concentration	Urban	18:30	15:25	N/A	N/A	N/A
		Rural	n=36	n=27	n=5	n=4	n=0

## Performance Statements - Fires

### Baseline Statements

For **high risk fires**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 personnel, was not statistically relevant due to the fact that only three incidents occurred where the ERF was assembled. The effective response force has the capability to establish command, provide an uninterrupted water supply, advance multiple attack lines and backup lines for fire control, place elevated streams into service, establish a rapid intervention crew, complete multiple forcible entry and ventilation procedures, and conduct primary and secondary searches. These critical tasks are done in a safe manner in accordance with department standard operating guidelines.

High/Extreme-Risk Fire – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	4:12	4:26	4:41	5:29	4:08
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	3:03	4:12	3:37	N/A	2:44
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	8:17	5:48	9:39	N/A	13:14
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	11:37 n=78	9:19 n=25	12:49 n=12	13:15 n=10	18:06 n=31
		Rural					
	Total Response Time ERF Concentration	Urban	N/A n=3	N/A n=3	N/A n=0	N/A n=0	N/A n=0
		Rural					



## **Performance Statements - Emergency Medical Services (EMS)**

### **Benchmark Statements**

For all **emergency medical services incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of two firefighters, shall be 7-minutes and 4-seconds. The first due unit shall be capable of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating basic life support measures in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

For **moderate risk EMS incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of five personnel, shall be 10-minutes and 46-seconds. The effective response force shall be capable of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating advanced life support measures in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

For **high risk EMS incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of five personnel, shall be 10-minutes and 13-seconds. The effective response force shall be capable of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating advanced life support measures in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

## Performance Statements - Emergency Medical Services (EMS)

### Baseline Statements

For all **emergency medical services incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of two firefighters, was 7-minutes and 51- seconds. The first due unit is capable of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating basic life support measures in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

Low-Risk EMS – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:08	1:06	1:17	1:05	N/A
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:10	2:19	2:14	1:55	N/A
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	5:41	5:53	5:37	5:34	N/A
		Rural					
	Travel Time ERF Concentration	Urban	9:07	8:48	10:24	9:28	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	7:51 n=1,126	7:52 n=505	7:52 n=341	7:44 n=280	N/A n=0
		Rural					
	Total Response Time ERF Concentration	Urban	11:25 n=807	10:58 n=338	12:06 n=252	11:49 n=217	N/A n=0
		Rural					

For **moderate risk EMS incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of five personnel, was 11-minutes and 58-seconds and is the commensurate with the first due unit distribution for moderate risk. The effective response force is capable of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating advanced life support efforts in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

Moderate-Risk EMS – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:05	1:11	1:07	0:59	1:01
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:09	2:15	2:18	1:59	2:02
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	5:40	5:27	5:24	5:47	6:01
		Rural					
	Travel Time ERF Concentration	Urban	9:41	8:52	9:14	9:06	11:20
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	7:49 n=3,853	7:47 n=949	7:43 n=892	7:37 n=948	8:01 n=1,064
		Rural					
	Total Response Time ERF Concentration	Urban	11:58 n=2,756	11:42 n=669	11:47 n=660	11:17 n=693	13:21 n=734
		Rural					

## Performance Statements - Emergency Medical Services (EMS)

### Baseline Statements

For **high risk EMS incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of five personnel, was 11-minutes and 21-seconds. The effective response force has the capability of establishing command, sizing up the incident, conducting an initial patient assessment, obtaining vitals and patient medical history, initiating advanced life support efforts in accordance with departmental standard operating guidelines and transferring to, or assisting in, transport to an appropriate health care facility.

High/Extreme-Risk EMS – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:07	1:06	1:08	1:01	1:10
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:09	2:16	2:18	2:00	1:55
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	5:49	5:16	5:22	5:20	7:24
		Rural					
	Travel Time ERF Concentration	Urban	9:02	8:48	7:48	9:25	10:28
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	7:58 n=2,863	7:37 n=753	7:47 n=596	7:24 n=642	9:24 n=872
		Rural					
	Total Response Time ERF Concentration	Urban	11:21 n=2,143	11:11 n=575	10:23 n=464	11:34 n=506	12:39 n=598
		Rural					

## **Performance Statements - Hazardous Materials**

### **Benchmark Statements**

For all **hazardous materials incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, shall be 8-minutes and 52-seconds. The first due unit shall be capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, isolating the hazard, and calling for appropriate assistance if needed.

For **moderate risk hazardous materials incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of seven personnel, shall be 16-minutes and 39-seconds. The effective response force shall be capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, isolating the hazard, and calling for appropriate assistance if needed.

For **high risk hazardous materials incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 personnel, including a minimum of five hazardous materials technicians, shall be 16-minutes and 39-seconds. The units will be capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, researching the hazard, isolating the hazard, initiating mitigation efforts, establishing decontamination actions, and acting as a liaison with other agencies and private sector businesses or residents involved.



## Performance Statements -Hazardous Materials

### Baseline Statements

For all **hazardous materials incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, was not statistically relevant due to the fact that there were only two incidents with a first due unit arrival. The first due unit is capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, isolating the hazard, and calling for additional resources if needed.

Low-Risk Hazmat – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	N/A n=2	N/A n=0	N/A n=1	N/A n=1	N/A n=0
		Rural					
	Total Response Time ERF Concentration	Urban	N/A n=0	N/A n=0	N/A n=0	N/A n=0	N/A n=0
		Rural					

For **moderate risk hazardous materials incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of seven personnel, was not statistically relevant due to the fact that there were zero incidents with an ERF arrival. The ERF is capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, isolating the hazard, and calling for additional resources if needed.

Moderate-Risk Hazmat – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:37	N/A	2:55	N/A	0:47
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:39	N/A	3:10	N/A	2:08
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	6:47	N/A	6:38	N/A	9:56
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	9:31 n=29	N/A n=3	9:43 n=10	N/A n=5	11:31 n=11
		Rural					
	Total Response Time ERF Concentration	Urban	N/A n=0	N/A n=0	N/A n=0	N/A n=0	N/A n=0
		Rural					

## Performance Statements -Hazardous Materials

### Baseline Statements

For **high risk hazardous materials incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 personnel, was not statistically relevant due to the fact that there were zero incidents with an ERF arrival. The ERF is capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, researching the hazard, isolating the hazard, initiating mitigation efforts, establishing decontamination actions, and acting as a liaison with other agencies and private sector businesses or residents involved.

High/Extreme-Risk Hazmat – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	3:42	N/A	N/A	N/A	N/A
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:48	N/A	N/A	N/A	N/A
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	5:00	N/A	N/A	N/A	N/A
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	10:29 n=16	N/A n=5	N/A n=4	N/A n=3	N/A n=4
		Rural					
	Total Response Time ERF Concentration	Urban	N/A n=0	N/A n=0	N/A n=0	N/A n=0	N/A n=0
		Rural					

## Performance Statements - Technical Rescue

### Benchmark Statements

For all **technical rescue incidents** (low, moderate, and high), the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, shall be 10-minutes and 35-seconds. The first due unit shall be capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, denying access to bystanders, and calling for appropriate assistance from outside agencies if needed.

For **moderate risk technical rescue incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of six personnel, shall be 16-minutes and 39-seconds. The ERF shall be capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, denying access to bystanders, and calling for appropriate assistance from outside agencies if needed.

For **high risk technical rescue incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 personnel, shall be 16-minutes and 39-seconds. The units shall be capable of establishing command, performing an assessment of the incident, and initiating mitigation activities such as isolating the hazard, deploying primary and belay rope systems, stabilizing the trench and/or structure, and setting up a safe operating zone to perform patient assessment and treatment.

## Performance Statements - Technical Rescue

### Baseline Statement

For **low risk technical rescue incidents**, the 90th percentile of total response time for the arrival of the first due unit, staffed with a minimum of three firefighters, was 11-minutes and 46-seconds. The first due unit is capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, denying access to bystanders, and calling for appropriate assistance from outside agencies if needed.

Low-Risk Rescue – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	1:54	1:56	1:21	2:13	N/A
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:12	1:52	2:17	2:20	N/A
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	9:01	8:27	9:34	8:58	N/A
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	11:46 n=143	10:11 n=48	11:52 n=52	12:02 n=43	N/A n=0
		Rural					
	Total Response Time ERF Concentration	Urban		N/A	N/A	N/A	N/A
				N/A	N/A	N/A	N/A
		Rural					

For **moderate risk technical rescue incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of six responders, was not statistically relevant due to the fact that there were zero incidents with an ERF arrival. The ERF is capable of establishing command, sizing up the incident, developing an incident action plan in accordance with departmental standard operating guidelines, denying access to bystanders, and calling for appropriate assistance from outside agencies if needed.

Moderate-Risk Rescue – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	3:28	N/A	N/A	N/A	3:48
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:01	N/A	N/A	N/A	2:05
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	9:21	N/A	N/A	N/A	14:47
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	11:50 n=24	N/A n=4	N/A n=7	N/A n=3	18:26 n=10
		Rural					
	Total Response Time ERF Concentration	Urban		N/A n=0	N/A n=0	N/A n=0	N/A n=0
		Rural					



## Performance Statements - Technical Rescue

### Baseline Statement

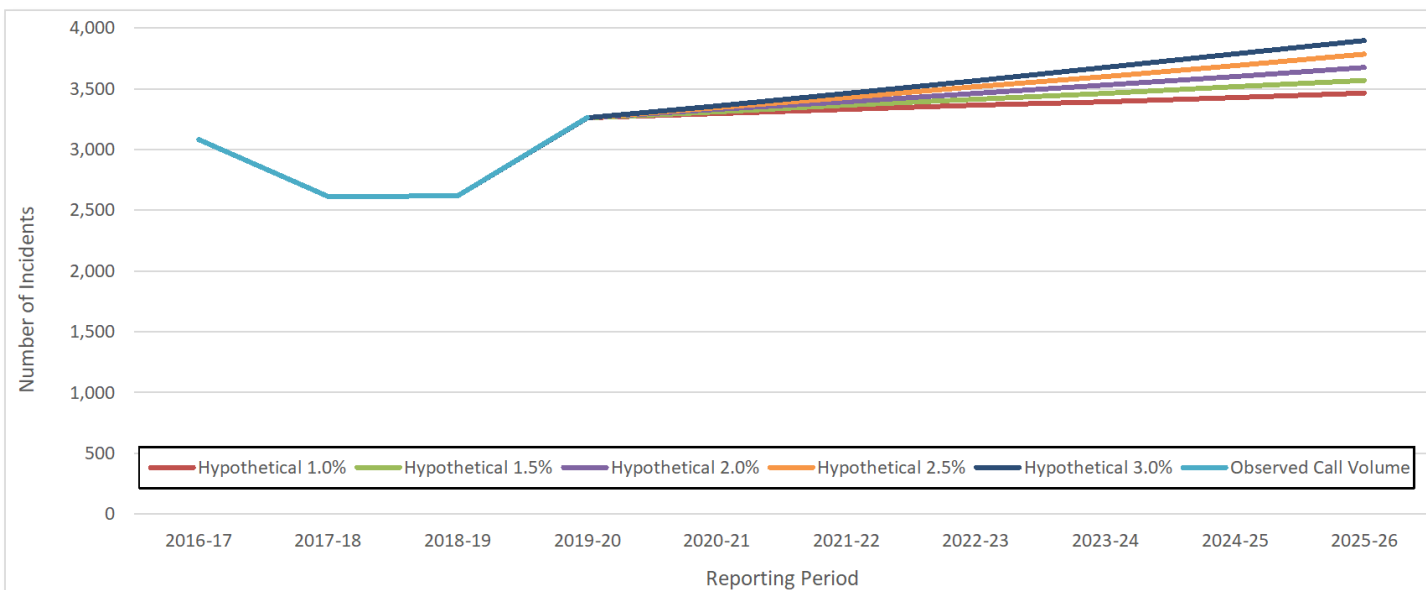
For **high risk technical rescue incidents**, the 90th percentile of total response time for the arrival of the effective response force, consisting of 13 responders, was not statistically relevant due to the fact that zero incidents occurred where the ERF was assembled. The ERF is capable of establishing command, performing an assessment of the incident, and initiating mitigation activities such as isolating the hazard, deploying primary and belay rope systems, stabilizing the trench and/or structure, and setting up a safe operating zone to perform patient assessment and treatment.

High/Extreme-Risk Rescue – 90 <sup>th</sup> Percentile Times – Baseline Performance			2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20
<b>Alarm Handling</b>	Pick-up to Dispatch	Urban	5:31	N/A	N/A	N/A	6:40
		Rural					
<b>Turnout Time</b>	Turnout Time 1 <sup>st</sup> Unit	Urban	2:17	N/A	N/A	N/A	1:49
		Rural					
<b>Travel Time</b>	Travel Time 1 <sup>st</sup> Unit Distribution	Urban	7:21	N/A	N/A	N/A	13:34
		Rural					
	Travel Time ERF Concentration	Urban	N/A	N/A	N/A	N/A	N/A
		Rural					
<b>Total Response Time</b>	Total Response Time 1 <sup>st</sup> Unit on Scene Distribution	Urban	11:26 n=32	N/A n=8	N/A n=6	N/A n=4	18:32 n=14
		Rural					
	Total Response Time ERF Concentration	Urban	N/A n=0	N/A n=0	N/A n=0	N/A n=0	N/A n=0
		Rural					

## Projected Growth

The available data set included four reporting periods of data, representing reporting periods 2016-17 to 2019-20. During that time, calls for FMBFCD services increased from 3,079 to 3,264, with an average growth rate of 1.96% per year. The figure below depicts observed call volume during the last four reporting periods and various hypothetical growth scenarios over the next six reporting periods. These projections should be used with caution due to the variability in growth observed across prior calendar years. In all cases, data should be reviewed annually to ensure timely updates to projections.

Assuming that future demands may not be reasonably distributed across the various stations in the system, the system may ultimately require a redistribution of workload and ultimately reinvestment in resources to meet the growing demand. While the system should be evaluated continuously for performance and desired outcomes, the department should specifically re-evaluate workload and performance indicators for every 500-call increase to ensure system stability.



With respect to the long-term sustainability of the current deployment model, it will remain accurate for as long as the jurisdiction's overall coverage area has not expanded. In other words, if the city's square mileage remains, then the deployment strategy will be sustainable indefinitely with respect to the coverage area.

As other variables such as population density or socioeconomic status change over time, there may be a need for a higher concentration of resources necessary to meet the growing demand for services, but not additional stations.

The most prominent reason that the geographic distribution model would need to be updated is for changes in traffic impedance that significantly limit the historical average travel speed. Monitoring travel time performance, system reliability, and call concurrency will provide timely feedback for changes in the environment that could impact the distribution model.

# Section F - Current Deployment and Performance

## at the First Due Station Area

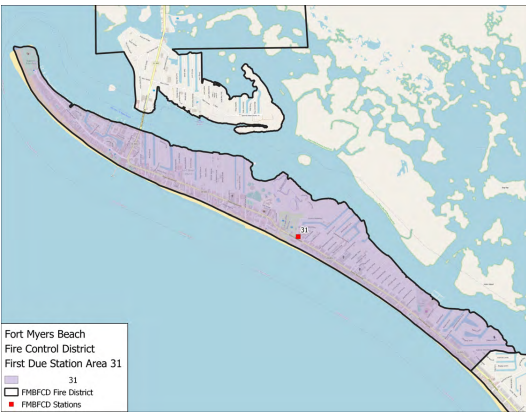


## First Due Station Area Analysis

Taking a more granular approach, each of FMBFCD’s stations received a comprehensive analysis including twenty unique figures, tables, and maps displaying data to highlight the planning zones, risk, and past performance on all types of emergency incidents. Below is a master legend to assist in navigating the large amount of analysis on the following pages.

**Core Competency 2C.7**

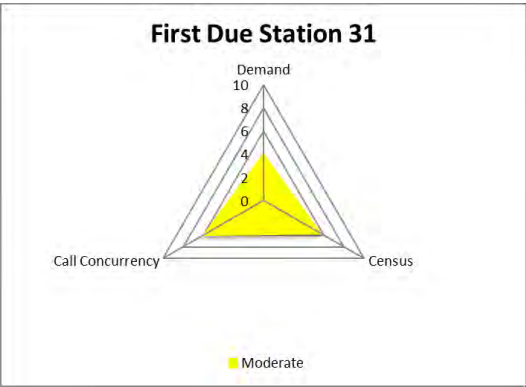
The agency has identified the total response time components for delivery of services in each service program area and assessed those services in each planning



**First Due Station Area** - This page contains a basic overview of the city and contains a map which shows the station first due areas in relation to the organization’s boundaries, units based out of the stations with full or cross staffing, and an overall station risk rating based upon risk, demand, and call concurrency.



**Geographical Risk Assessment** - The first due station areas were utilized for geographic planning zones. Zones are defined, along with their respective risk classifications, in addition to risk rankings of specific structures within the first due station area.



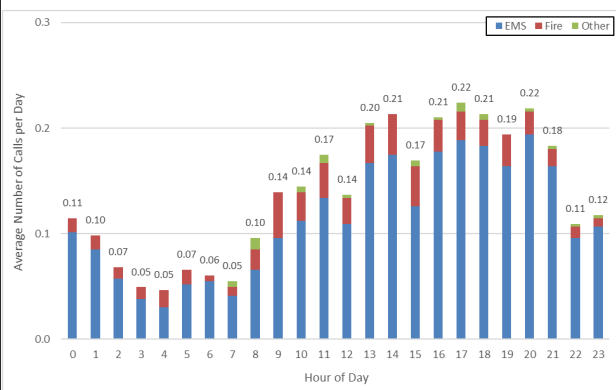
**3D Risk Assessment** - Risk for each first due station area was evaluated by incident type (fire, EMS, hazmat, and technical rescue) and by demand, call concurrency, and risk; providing a comprehensive and visual way to ascertain the risk of certain incident types within the first due station areas. The 3D model graphically shows the relative impact each variable has on the overall risk score.



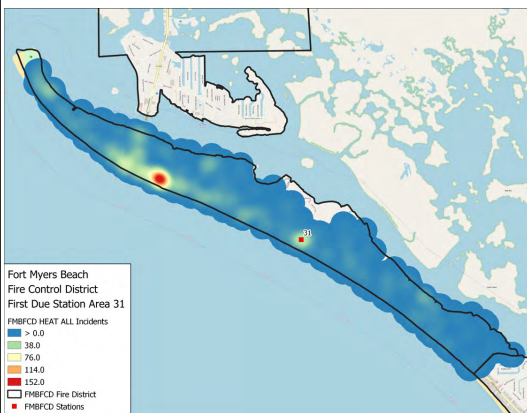
### Station Level Analysis cont'd

Station 31 First Due Area Incidents by Call Category	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
<b>EMS Total</b>	<b>1,387</b>	<b>1,143</b>	<b>1,122</b>	<b>995</b>	<b>4,647</b>
<b>Fire Total</b>	<b>177</b>	<b>155</b>	<b>177</b>	<b>190</b>	<b>699</b>
<b>Hazmat Total</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>28</b>
<b>Mutual Aid Total</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>17</b>
<b>Rescue Total</b>	<b>19</b>	<b>43</b>	<b>26</b>	<b>13</b>	<b>101</b>
<b>Total</b>	<b>1,591</b>	<b>1,355</b>	<b>1,336</b>	<b>1,210</b>	<b>5,492</b>

**Historical Data Analysis** - Four years of data for FMBFCD was evaluated by station, including number of incidents, number of unit responses, and baseline response times.



**Temporal Analysis** - This graph shows the frequency of incidents within the first due station areas by hour of day and incident type, a very useful set of data when making deployment decisions.

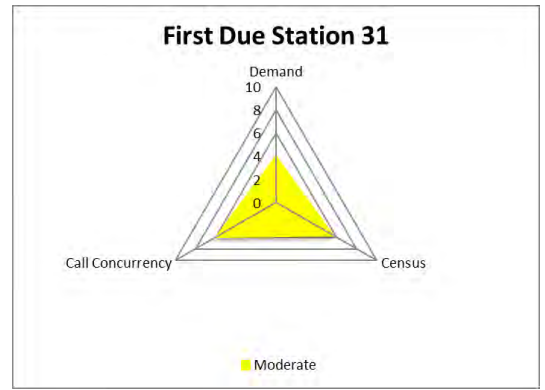


**Response Data** - This heat map of incidents shows the historical incident volume across the first due station area. Six distinct heat maps show relative frequency and geospatial intensity of the incidents for all calls, fire, EMS, Haz-mat, rescue, and mutual aid.

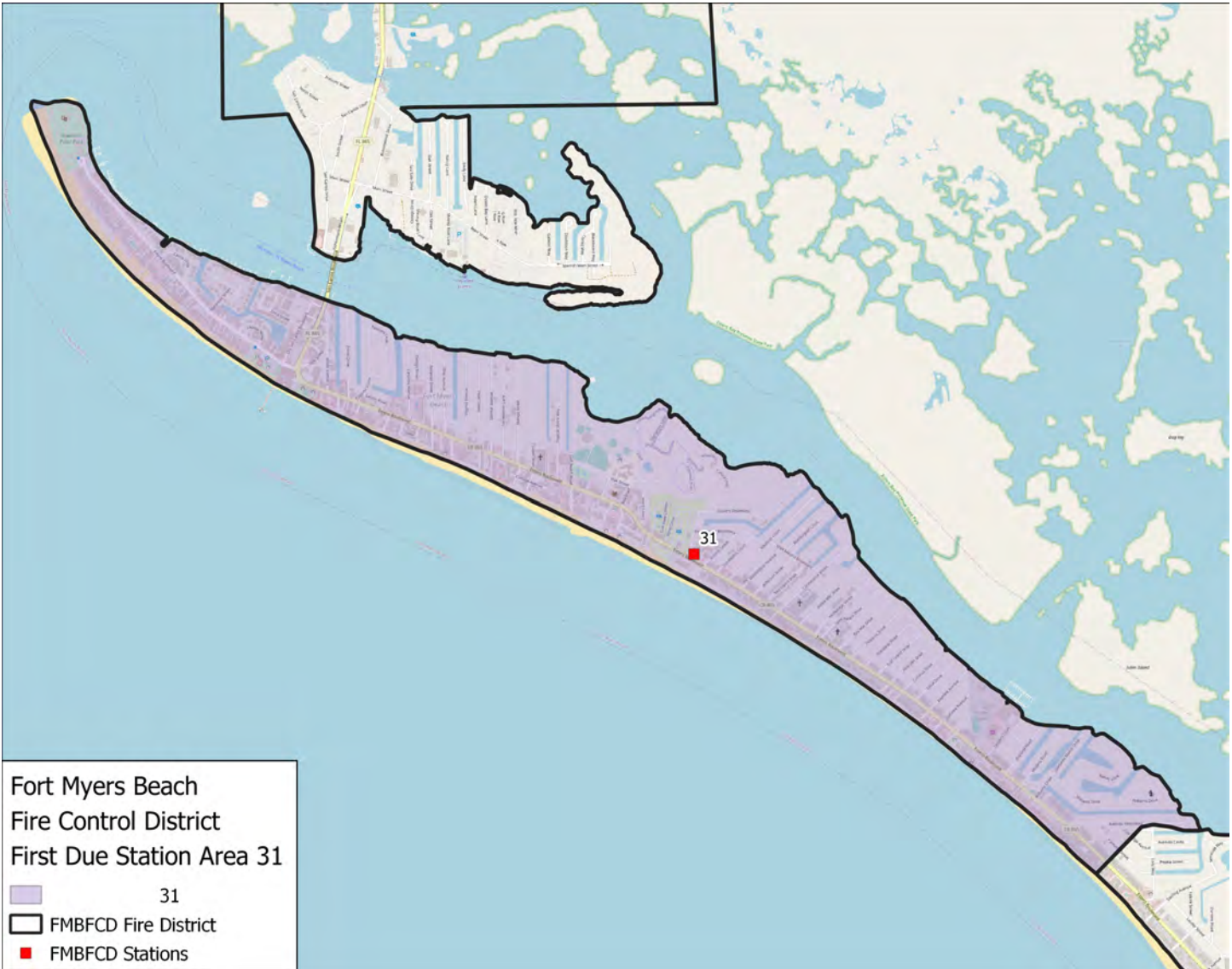


**Concentration** - This map shows the ability to assemble an effective response force (ERF) within an thirteen minute travel time in the first due station areas.

Station	Unit Identifier	Unit Type
31	BC30	Batt. Chief
	E31	Engine



Station 31 staffs two primary units; Engine and Battalion Chief. The first due station area has moderate overall jurisdictional risk level and is adjacent to Stations 32 and 33 lying in the middle of the District.



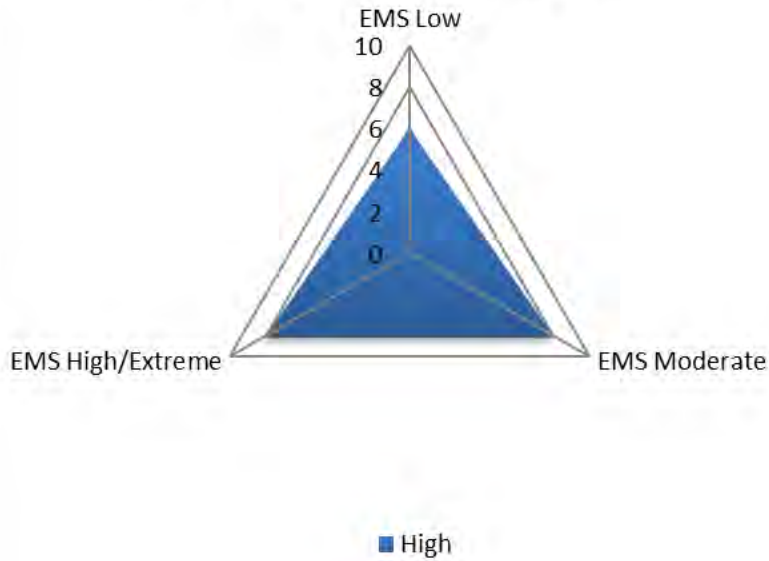
### Risk Analysis

Risk of individual building locations is represented by the small circles and shaded to indicate risk level. Building risks are located throughout the first due station area. The overall first due station area is a moderate risk area.

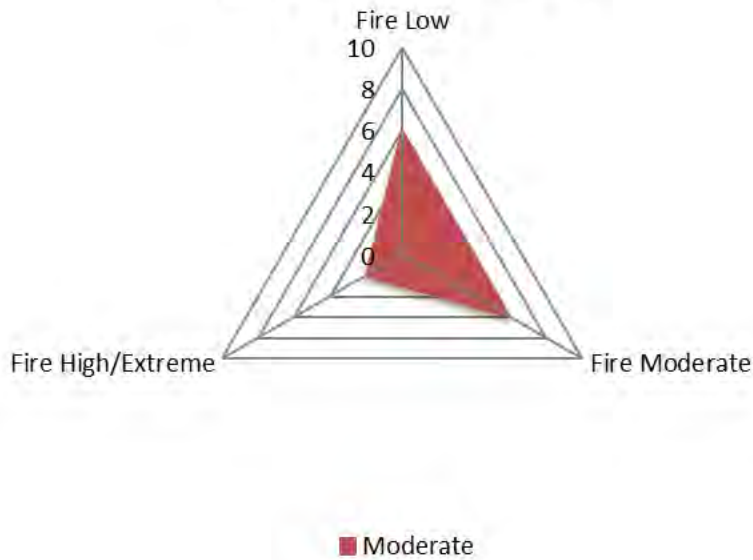




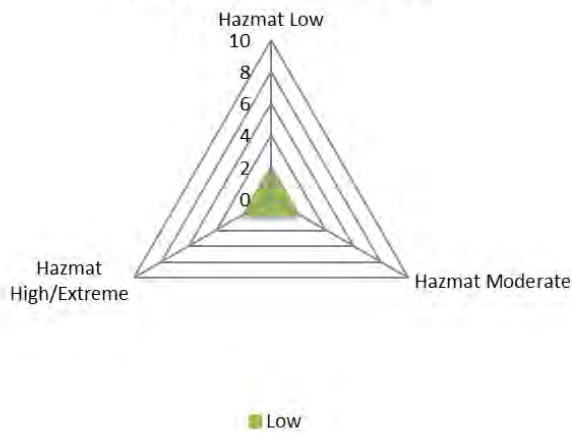
### First Due Station 31



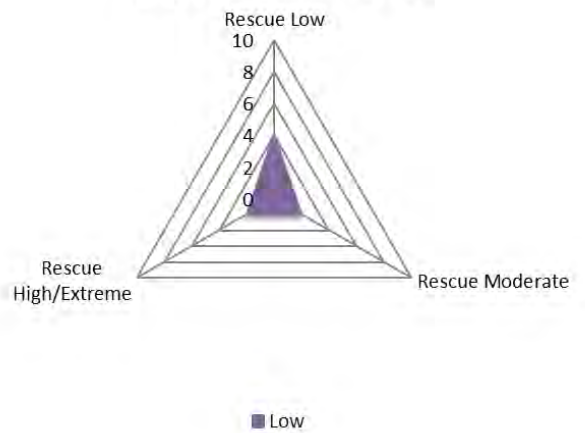
### First Due Station 31



### First Due Station 31



### First Due Station 31





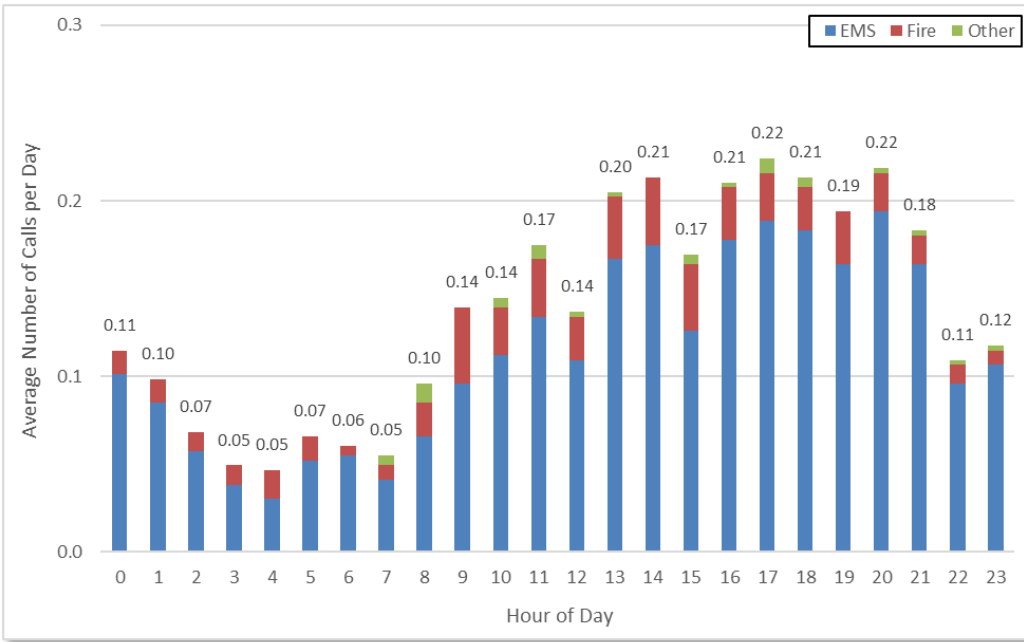
## Station 31 First Due Area Historical Data Analysis

Station 31 First Due Area Incidents by Call Category	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
<b>EMS Total</b>	<b>1,387</b>	<b>1,143</b>	<b>1,122</b>	<b>995</b>	<b>4,647</b>
<b>Fire Total</b>	<b>177</b>	<b>155</b>	<b>177</b>	<b>190</b>	<b>699</b>
<b>Hazmat Total</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>8</b>	<b>28</b>
<b>Mutual Aid Total</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>4</b>	<b>17</b>
<b>Rescue Total</b>	<b>19</b>	<b>43</b>	<b>26</b>	<b>13</b>	<b>101</b>
<b>Total</b>	<b>1,591</b>	<b>1,355</b>	<b>1,336</b>	<b>1,210</b>	<b>5,492</b>

Unit ID	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
FB01	20	12	16	7	55
FB02	5	12	14	30	61
FB03	30	11	8	19	68
FB04	13	7	6	10	36
FB05	7	1	4	15	27
FBA31	616	419	0	0	1,035
FBA39	0	0	3	0	3
FBBC30	432	283	230	242	1,187
FBD31	109	6	5	2	122
FBE31	1,549	1,257	1,222	1,204	5,232
FBE39	0	7	204	0	211
FBR31	16	0	2	0	18
FBR39	0	0	1	0	1
FBSU31	3	1	1	14	19
<b>Total</b>	<b>2,800</b>	<b>2,016</b>	<b>1,716</b>	<b>1,543</b>	<b>8,075</b>
<b>Average Responses per Day</b>	<b>7.7</b>	<b>5.5</b>	<b>4.7</b>	<b>4.2</b>	<b>5.5</b>

First Due Station 31: 1 <sup>st</sup> Arriving Baseline		2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20	2016-17 to 2019-20 Benchmark	2016-17 to 2019-20 Compliance
<b>Alarm Handling</b>		1:09	1:15	1:12	1:03	1:03	1:04	88.1
<b>Turnout Time</b>		2:16	2:22	2:24	2:10	2:04	2:02	83.8
<b>Travel Time</b>	Urban	6:00	5:56	6:135:43	6:13	6:17	5:28	84.4
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Re- sponse Time</b>	Urban	8:10	8:13	8:03	8:18	8:12	7:30	82.8
		<i>n</i> = 4,599	<i>n</i> = 1,366	<i>n</i> = 1,162	<i>n</i> = 1,192	<i>n</i> = 879		
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A		

Color coding legend:   fill = 90%;   fill = 70% to < 90%;   fill < 70%

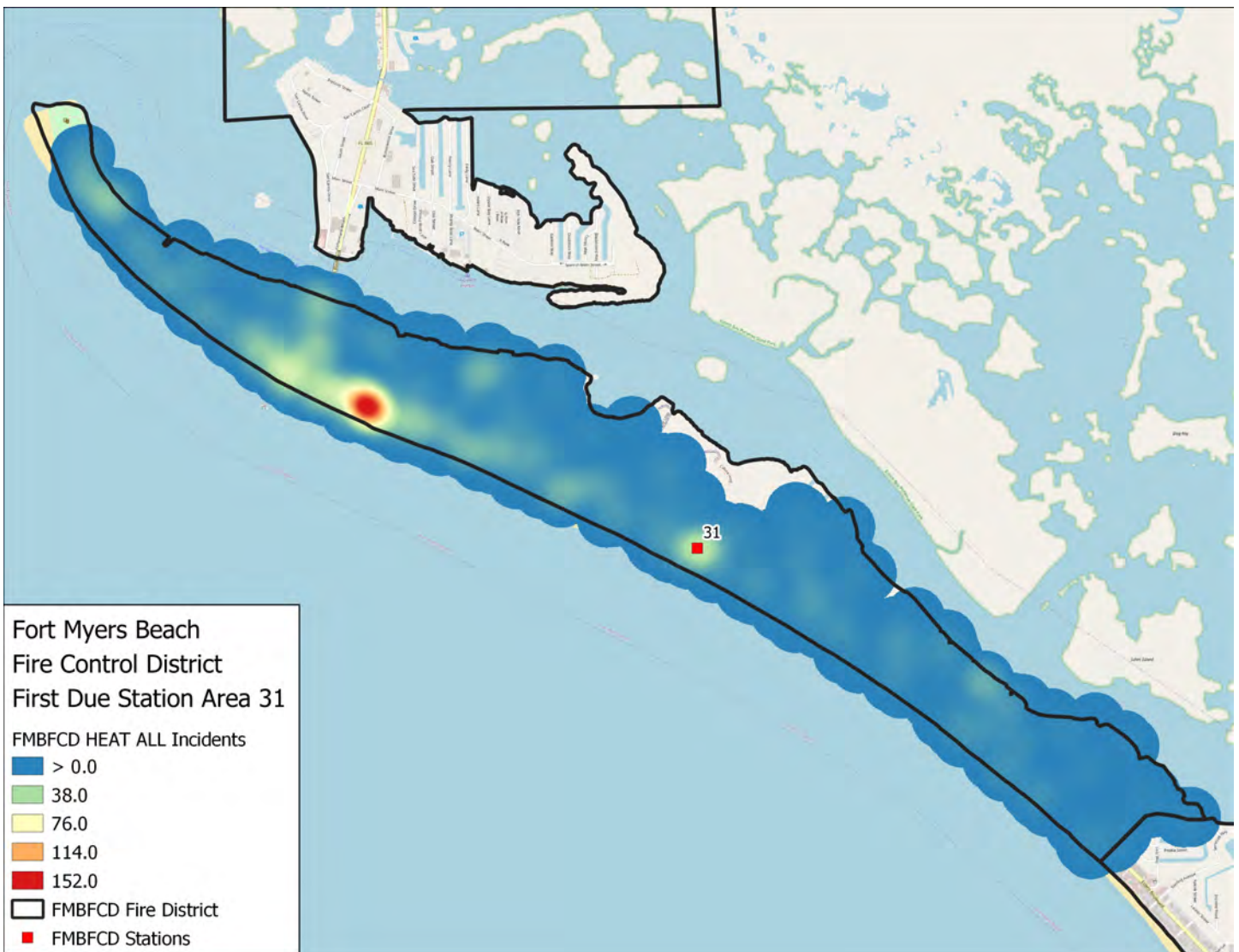


### Temporal Analysis

Incident volume by time of day by type of call shows Station 31’s busiest times are from 1 pm to 8 pm.

### Overall Hot Spot Map

Shows the most call volume in the northwestern parts of the first due station area.



### Fire Hot Spot Map

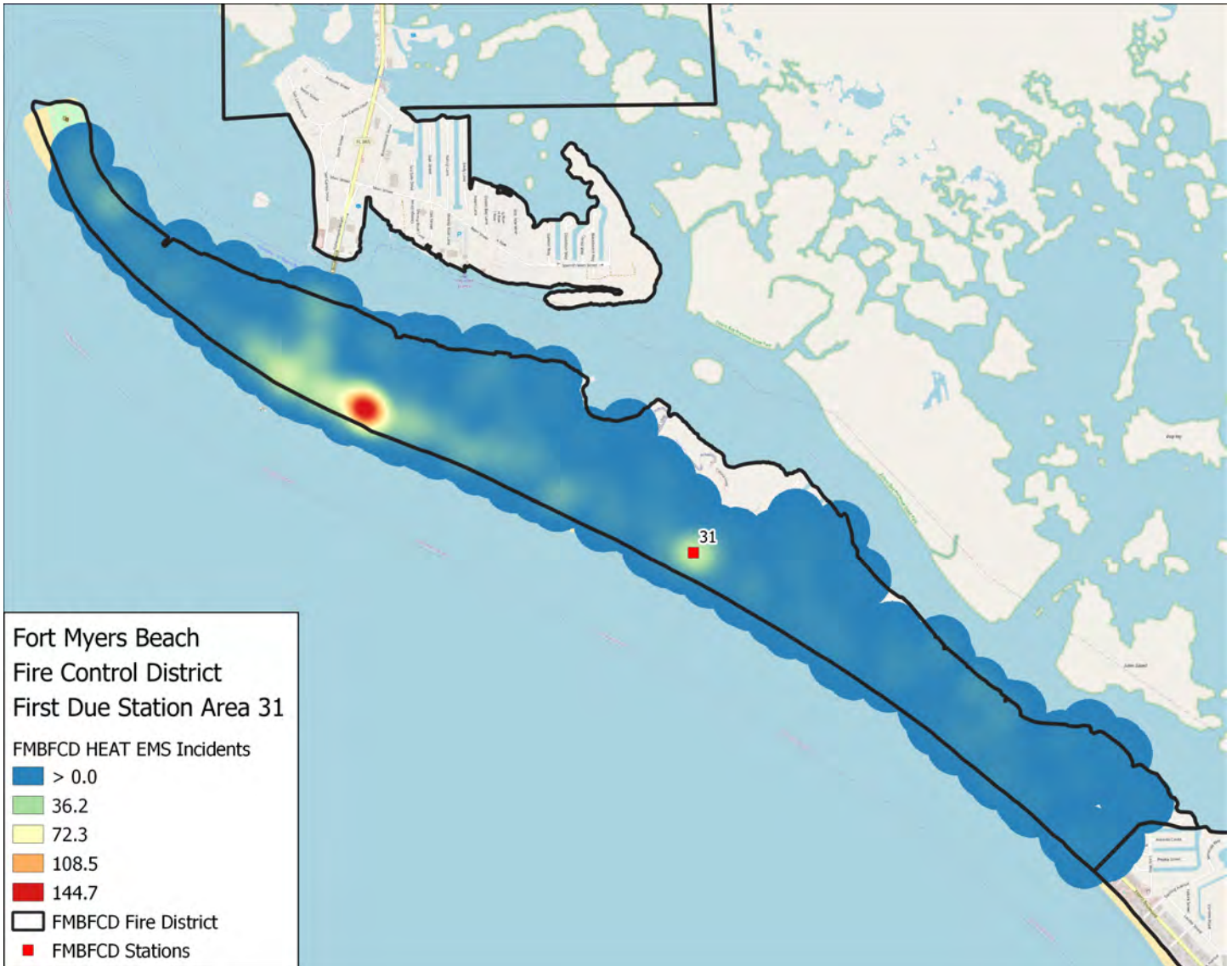
Most of the call volume for fire related calls is located northwest of the Station.





### EMS Hot Spot Map

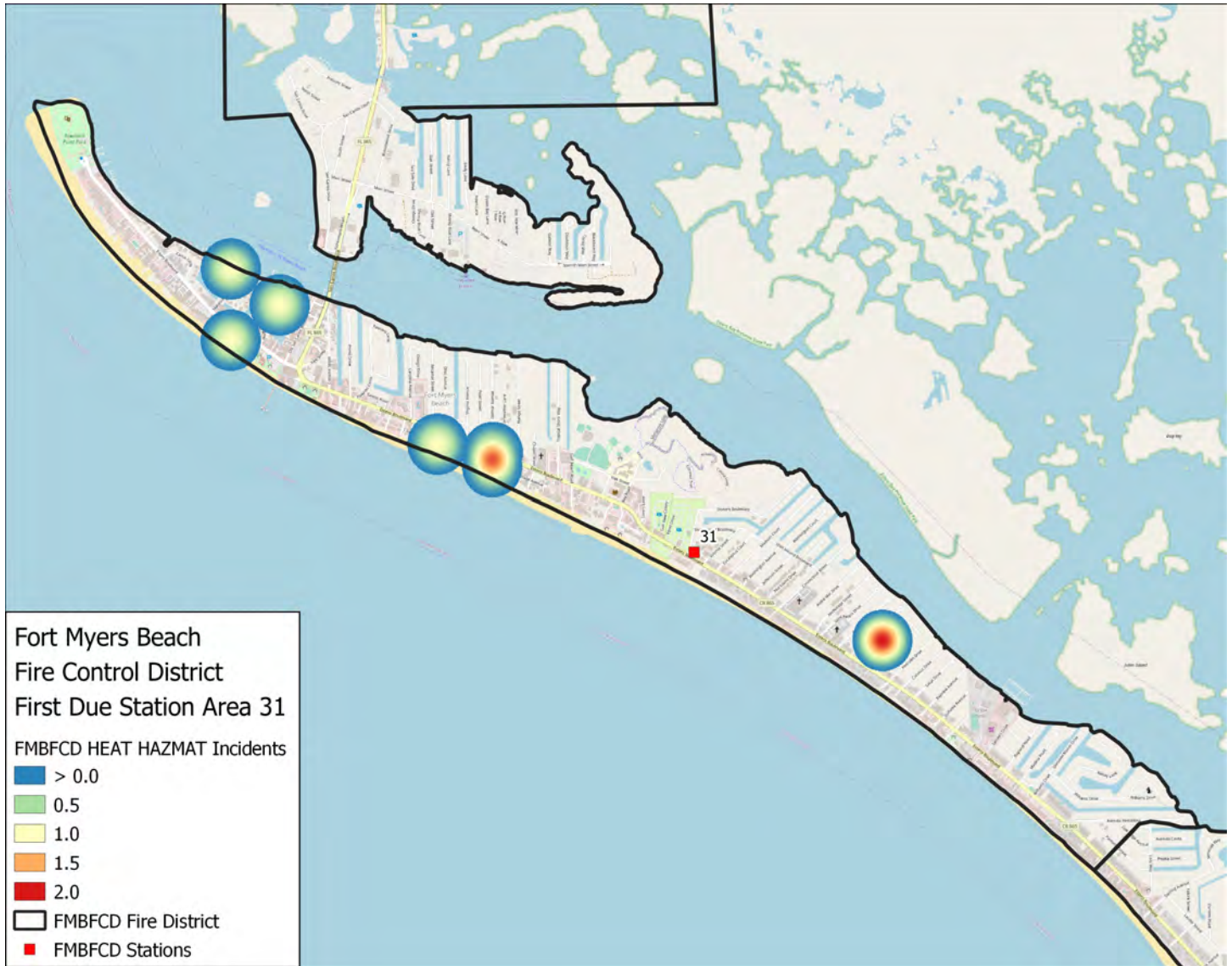
Shows the highest call volume for EMS related calls is located northwest of the station.





### HazMat Hot Spot Map

The greatest concentration of hazardous materials incidents occurred northwest and south of the station.



### Rescue Hot Spot Map

Rescue related incidents have the highest concentration along the coastlines of the station's area.



### Mutual Aid Hot Spot Map

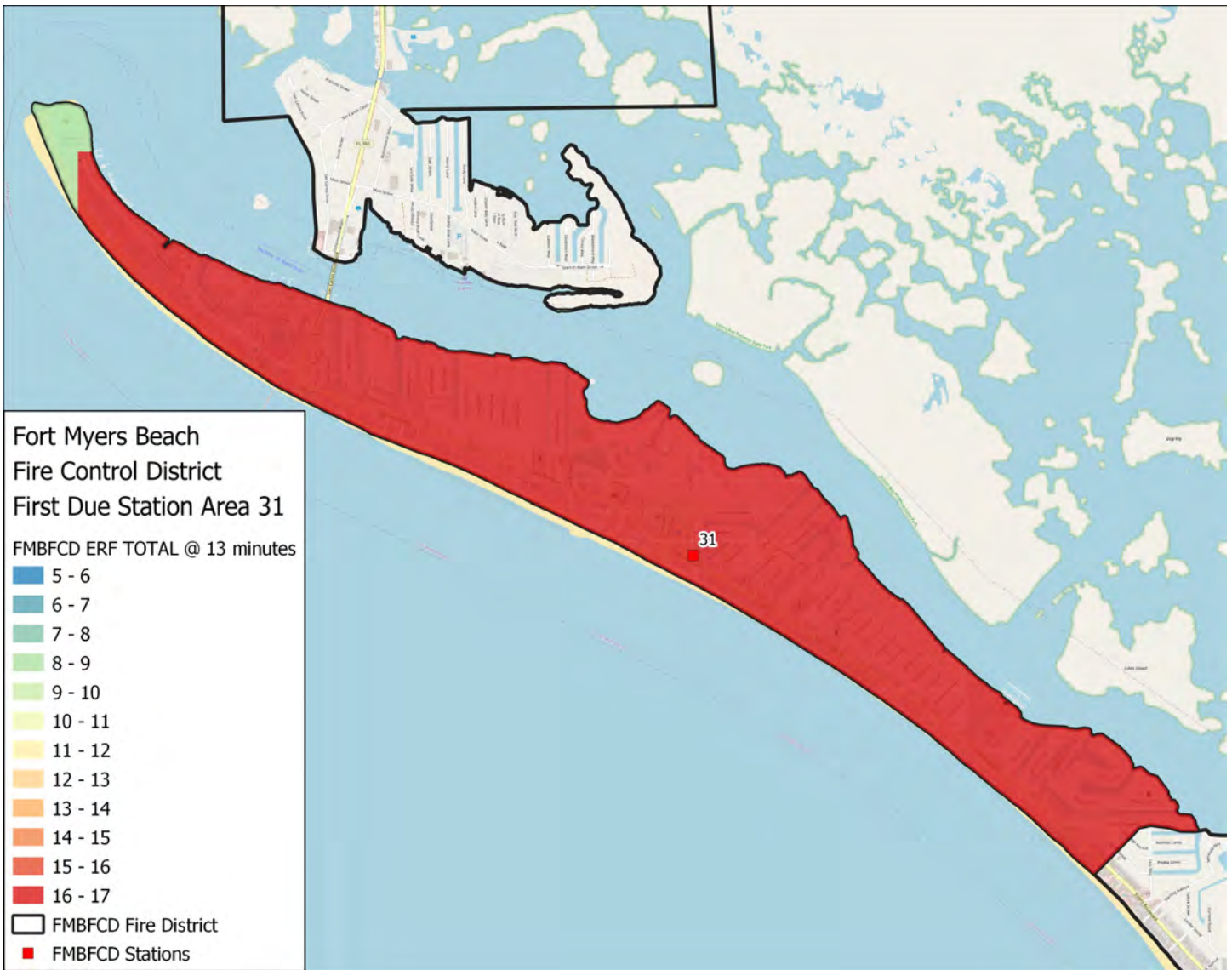
Mutual aid incidents are concentrated relatively consistently within the first due station area, with a concentration northwest and southeast of the station.





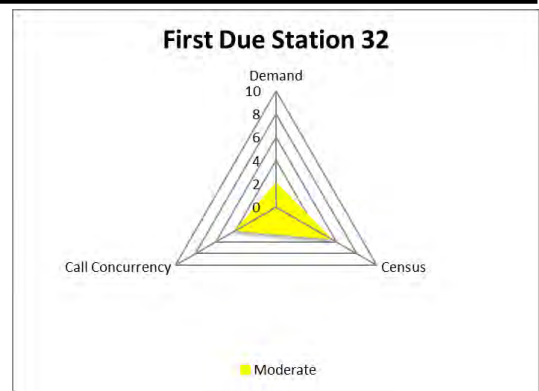
Section F- Current Deployment and Performance—First Due Station Area

ERF Travel Time	ERF 3	ERF 5	ERF 7	ERF 13
8-Minute	100.00%	95.87%	95.87%	16.46%
10-Minutes	100.00%	100.00%	100.00%	70.20%
13-Minutes	100.00%	100.00%	100.00%	97.49%

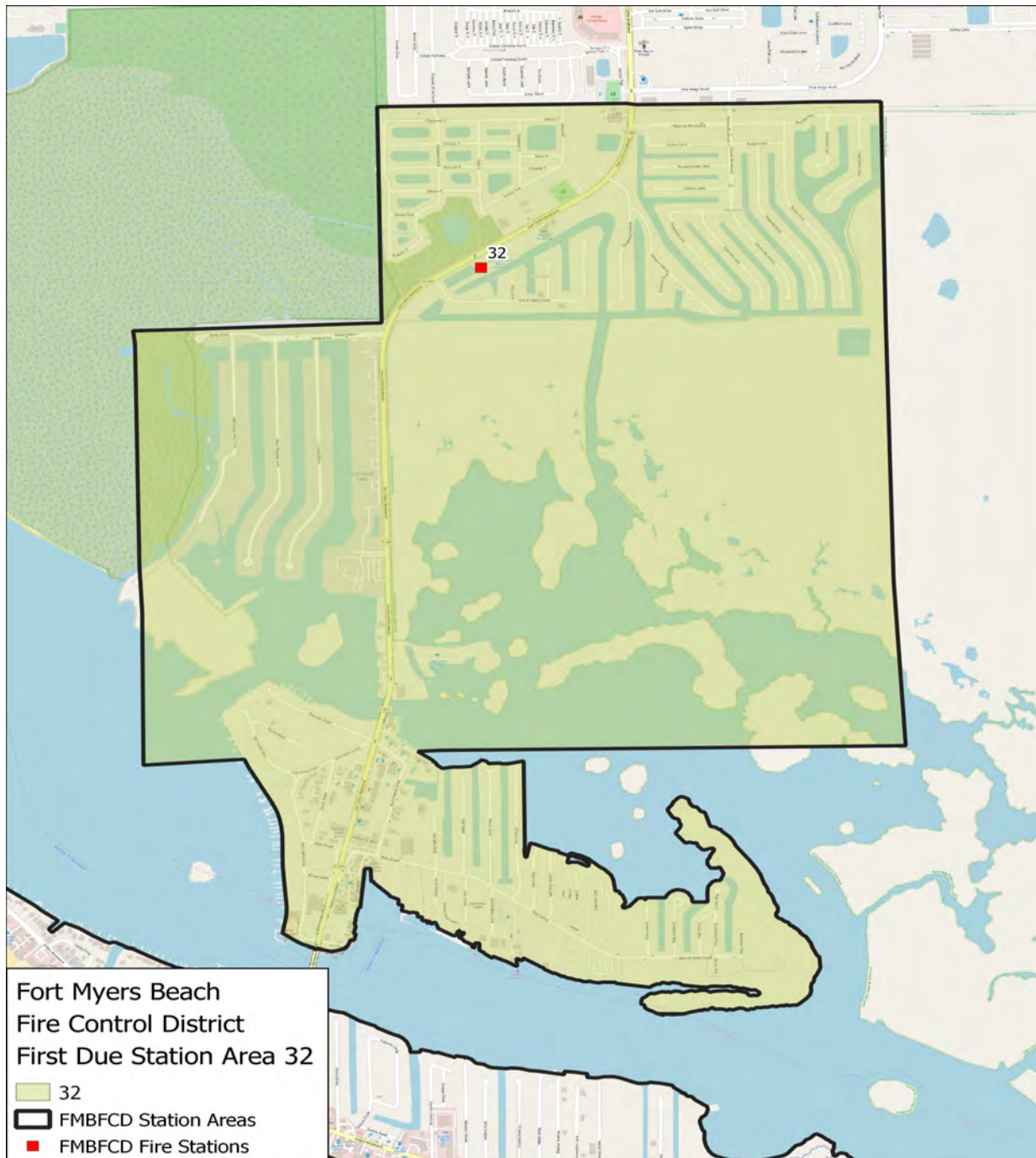




Station	Unit Identifier	Unit Type
32	E32	Engine
	R32	ALS Rescue

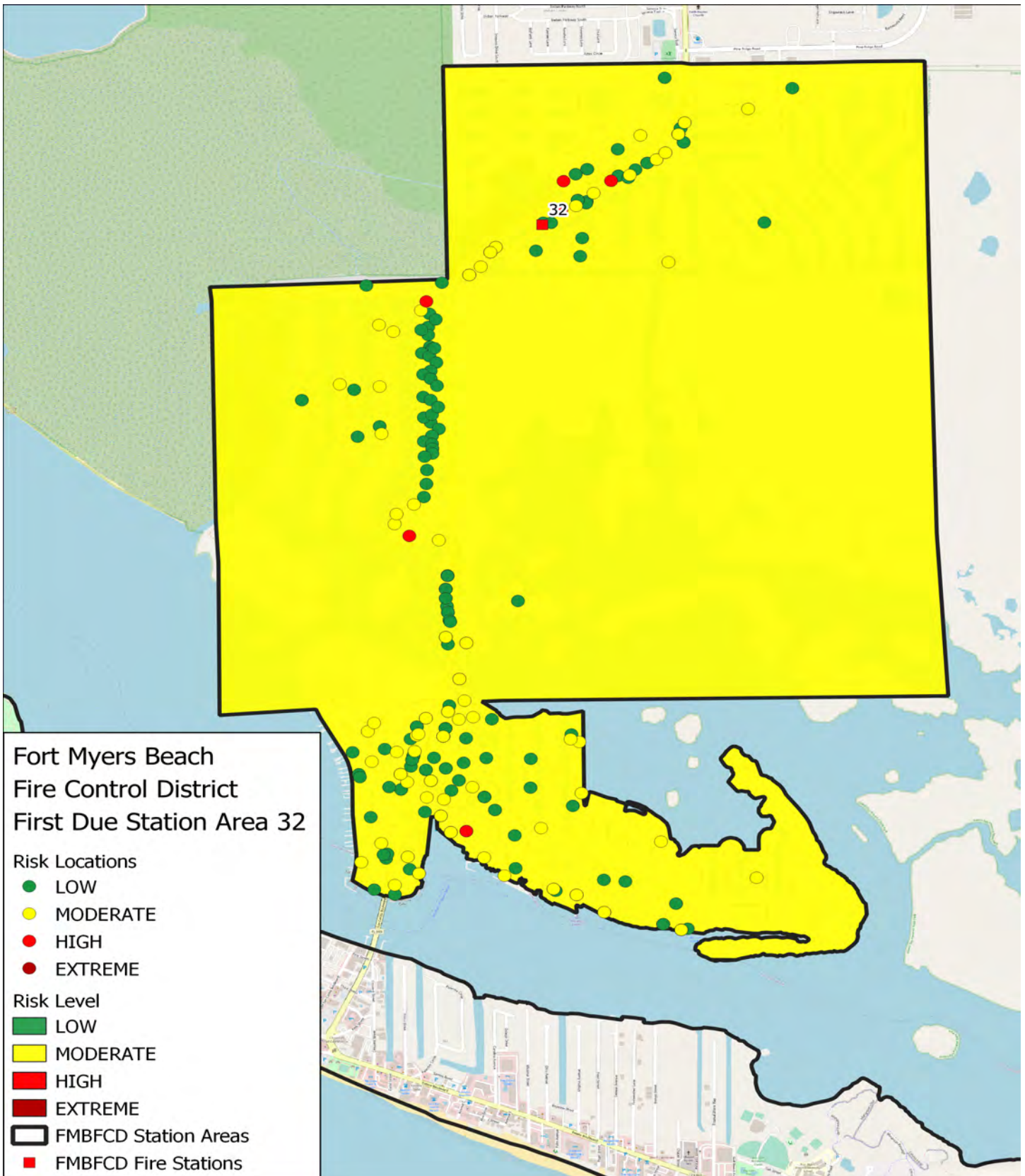


Station 32 staffs two primary units; Engine and ALS Rescue. The first due station area has a moderate overall jurisdictional risk level and is adjacent to Station 31 lying in the north end of the District.

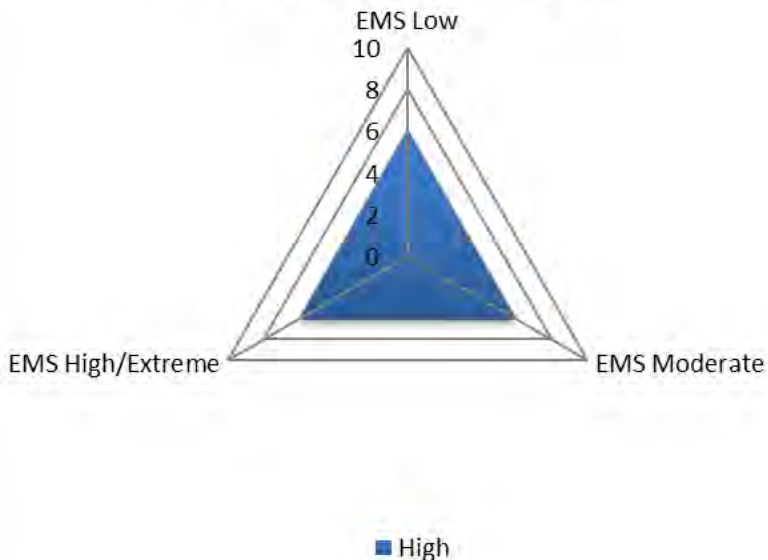


### Risk Analysis

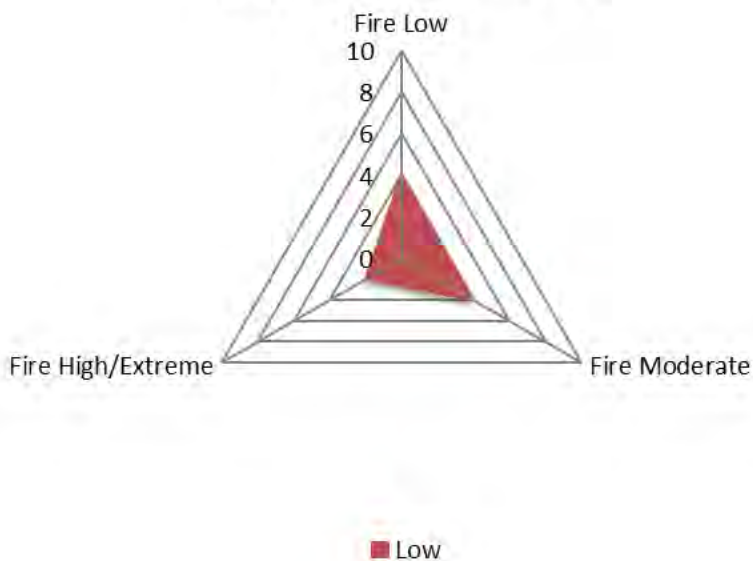
Risk of individual building locations is represented by the small circles and shaded to indicate risk level. Building risks are located throughout the first due station area. The overall first due station area is a moderate risk area.



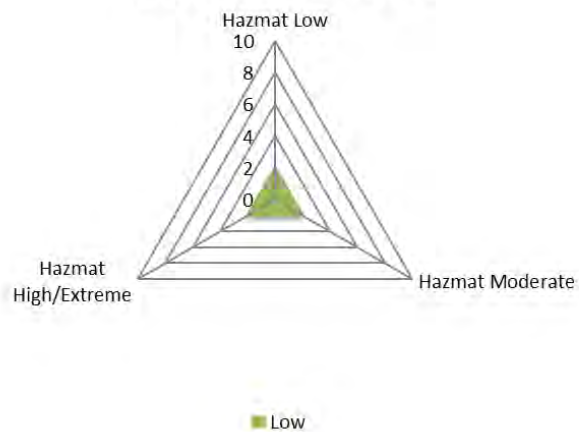
### First Due Station 32



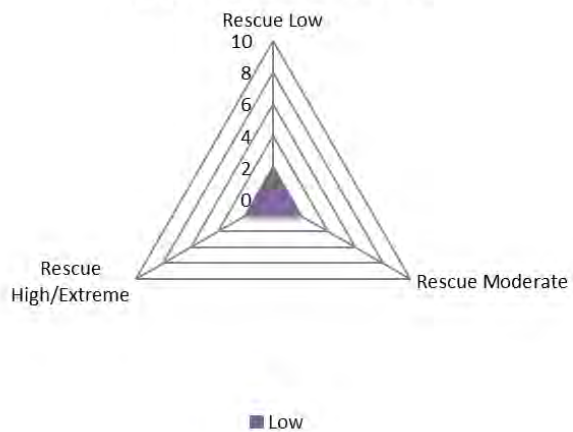
### First Due Station 32



### First Due Station 32



### First Due Station 32





### Station 32 First Due Area Historical Data Analysis

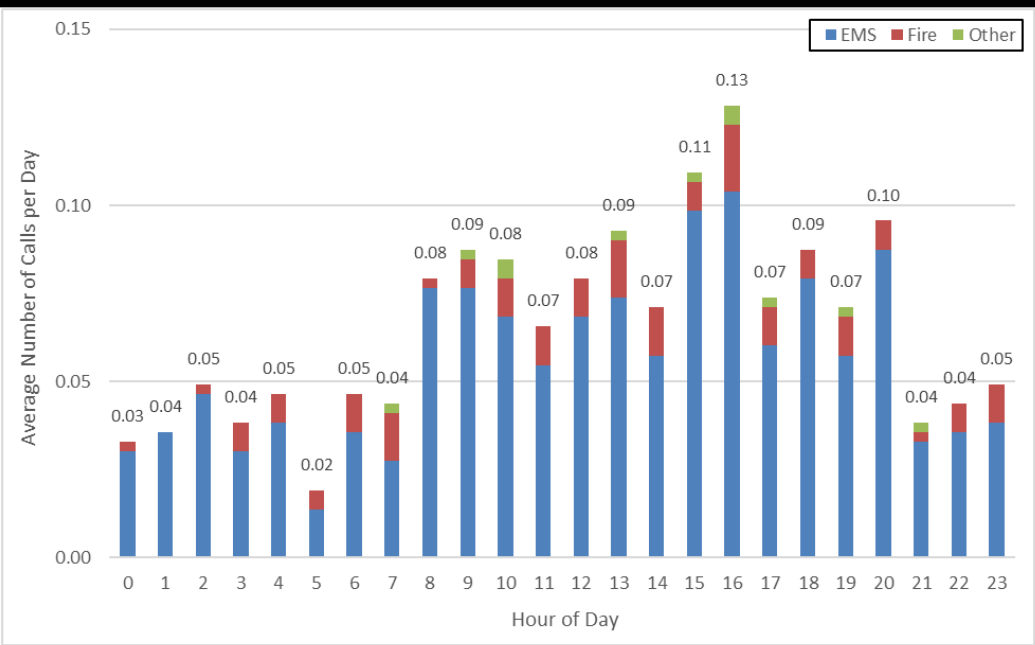
Station 32 First Due Area Incidents by Call Category	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
EMS Total	487	443	448	475	1,853
Fire Total	48	38	62	79	227
Hazmat Total	2	3	1	7	13
Mutual Aid Total	1	1	1	1	4
Rescue Total	4	2	4	3	13
<b>Total</b>	<b>542</b>	<b>487</b>	<b>516</b>	<b>565</b>	<b>2,110</b>

Unit ID	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
FBA32	1,382	1,080	844	0	3,306
FBE32	768	620	591	1,094	3,073
FBR32	0	0	336	1,405	1,741
FBSU32	2	0	0	0	2
<b>Total</b>	<b>2,152</b>	<b>1,700</b>	<b>1,771</b>	<b>2,499</b>	<b>8,122</b>
<b>Average Responses per Day</b>	<b>5.9</b>	<b>4.7</b>	<b>4.9</b>	<b>6.8</b>	<b>5.6</b>

First Due Station 32:		2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20	2016-17 to 2019-20 Benchmark	2016-17 to 2019-20 Compliance
1 <sup>st</sup> Arriving	Baseline							
<b>Alarm Handling</b>		1:04	1:11	1:06	0:57	1:02	1:04	89.9
<b>Turnout Time</b>		2:18	2:25	2:31	2:04	2:10	2:02	83.9
<b>Travel Time</b>	Urban	5:24	5:07	5:14	5:20	5:59	5:28	90.5
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Re-response Time</b>	Urban	7:40	7:32	7:34	7:29	8:13	7:30	88.5
		<i>n</i> = 1,711	<i>n</i> = 474	<i>n</i> = 411	<i>n</i> = 437	<i>n</i> = 389		
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A		

Color coding legend: green fill ≥ 90%; yellow fill ≥ 70% to < 90%; red fill < 70%



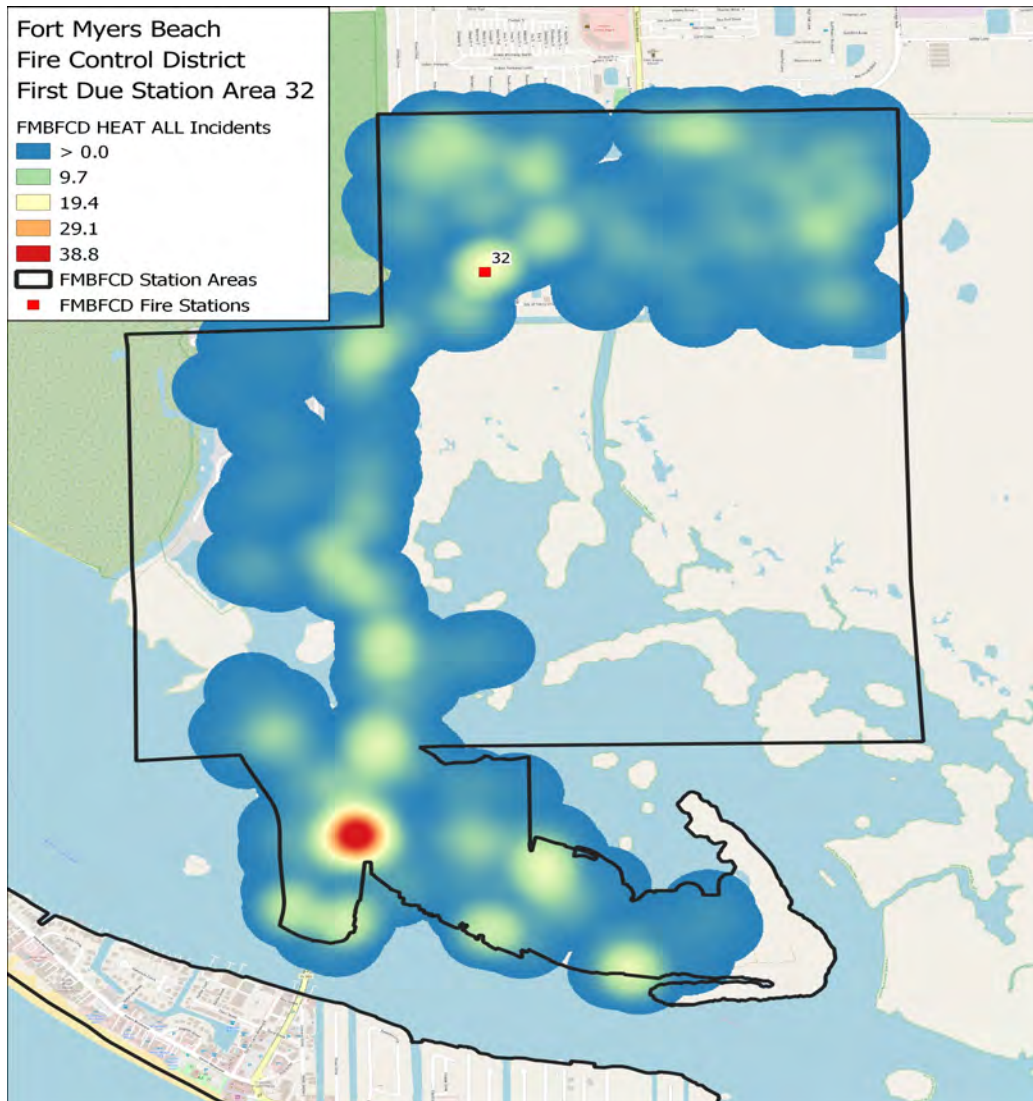


### Temporal Analysis

Incident volume by time of day by type of call shows Station 32’s busy period to be between the hours of 3 and 4 pm.

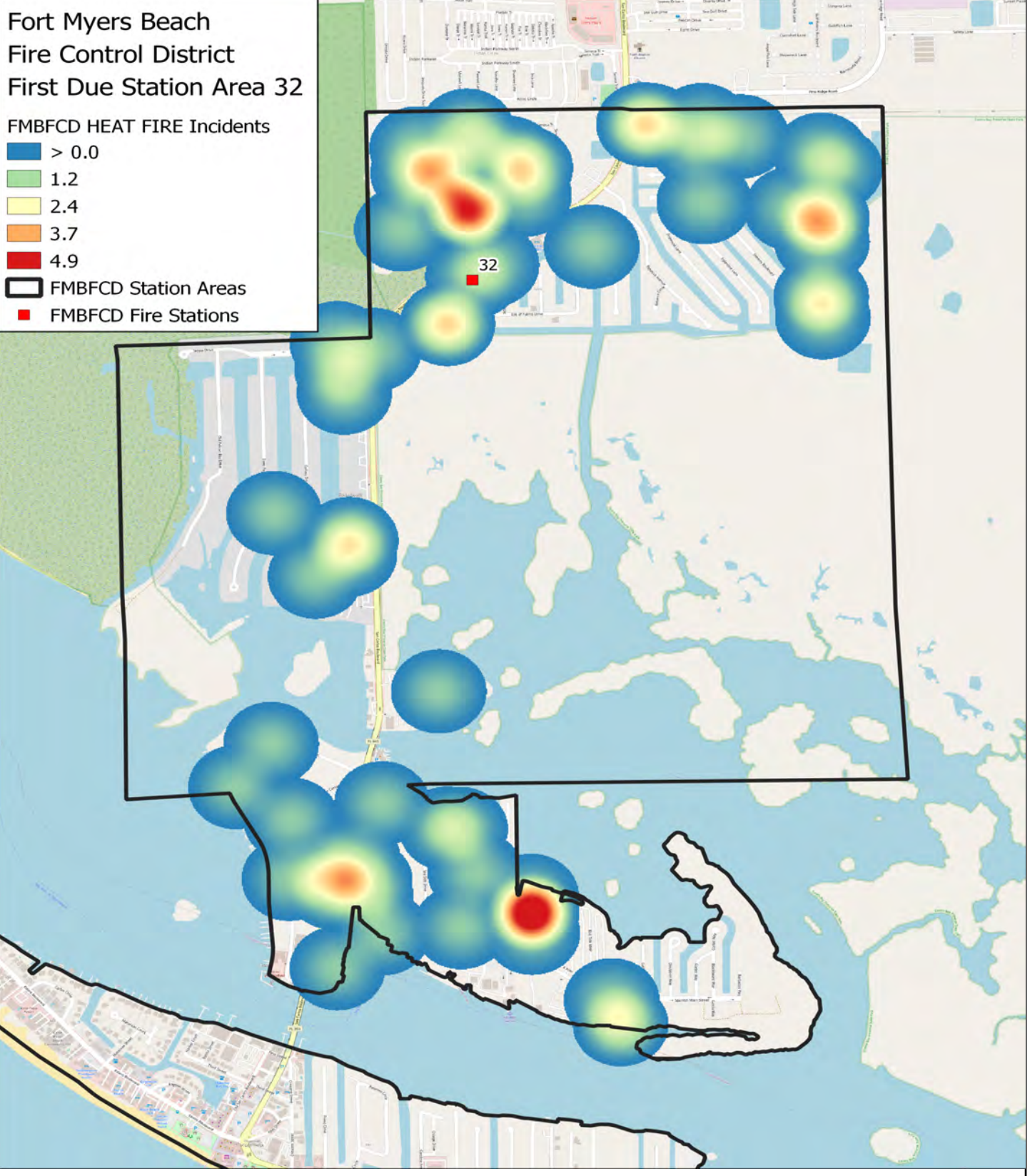
### Overall Hot Spot Map

Trends indicate the majority of call volume is located southwest of the station. Otherwise, the remaining concentration of calls are relatively evenly distributed across the entirety of the first due station area.



### Fire Hot Spot Map

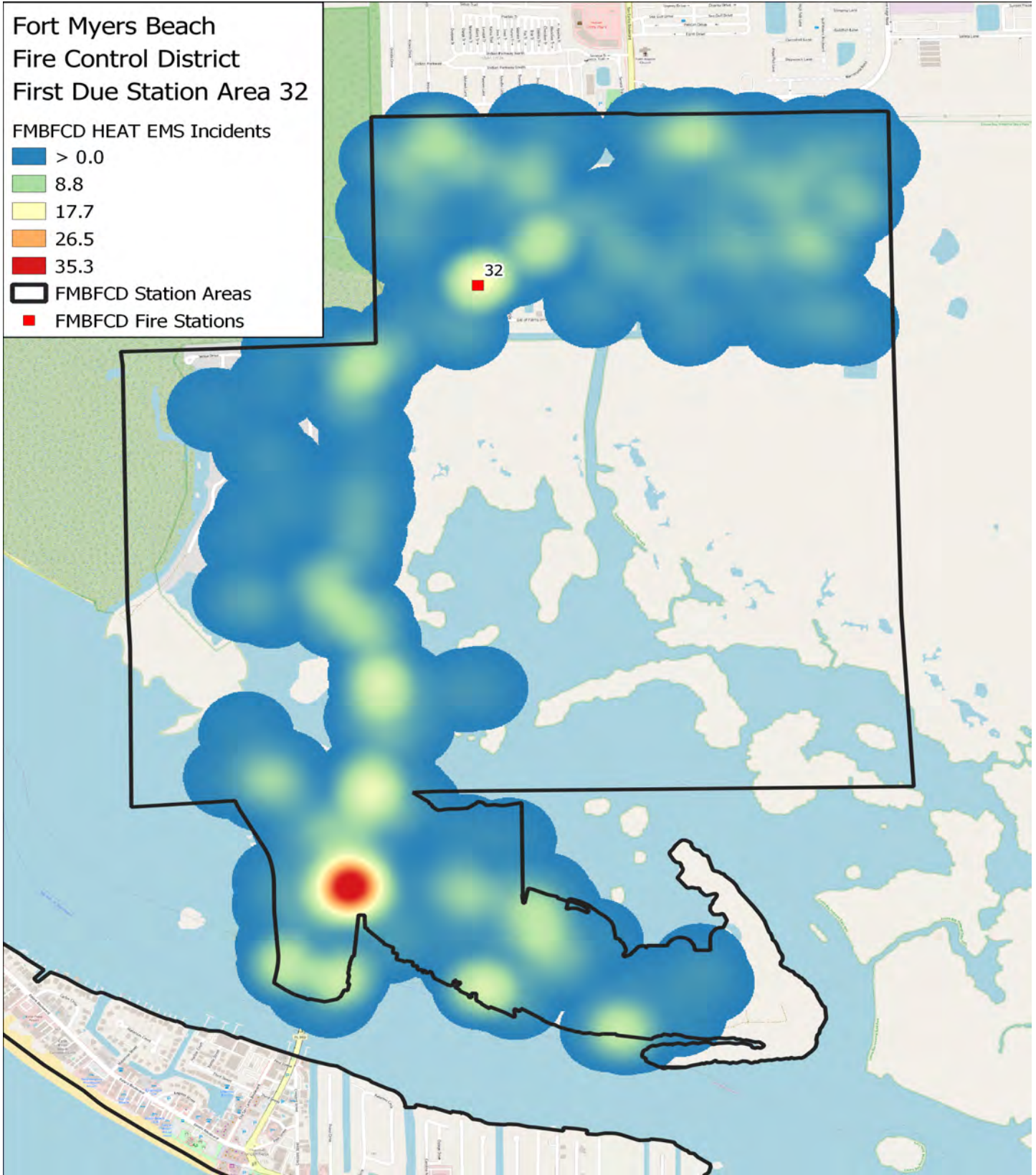
This map indicates a fairly even distribution of fire calls across the first due area.





### EMS Hot Spot Map

The majority of call volume is located south of the station. The remaining demand is relatively evenly distributed across the entirety of the first due station area.



### Haz Mat Hot Spot Map

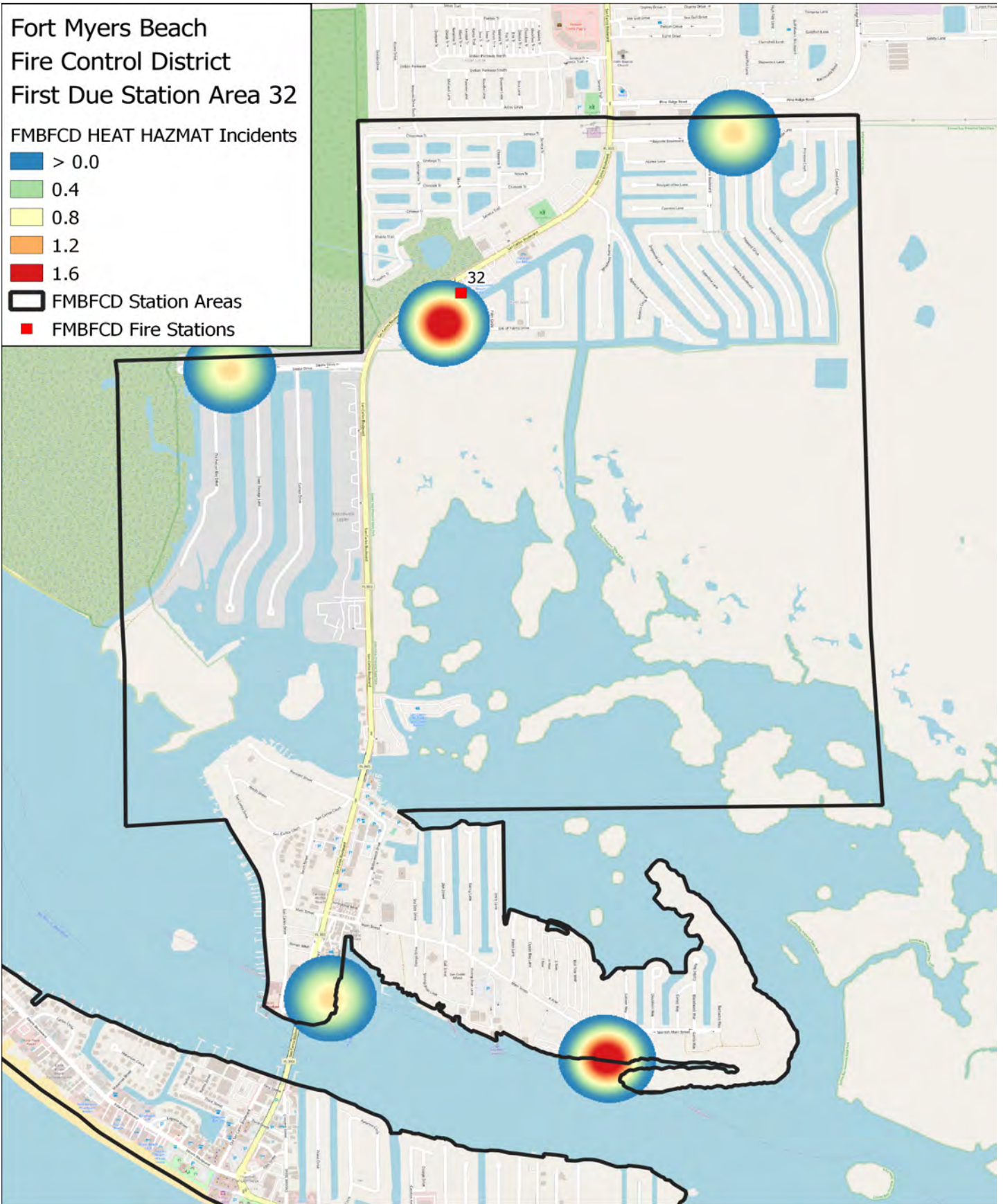
Haz Mat calls are concentrated in five distinct areas.

Fort Myers Beach  
Fire Control District  
First Due Station Area 32

FMBFCD HEAT HAZMAT Incidents

- > 0.0
- 0.4
- 0.8
- 1.2
- 1.6

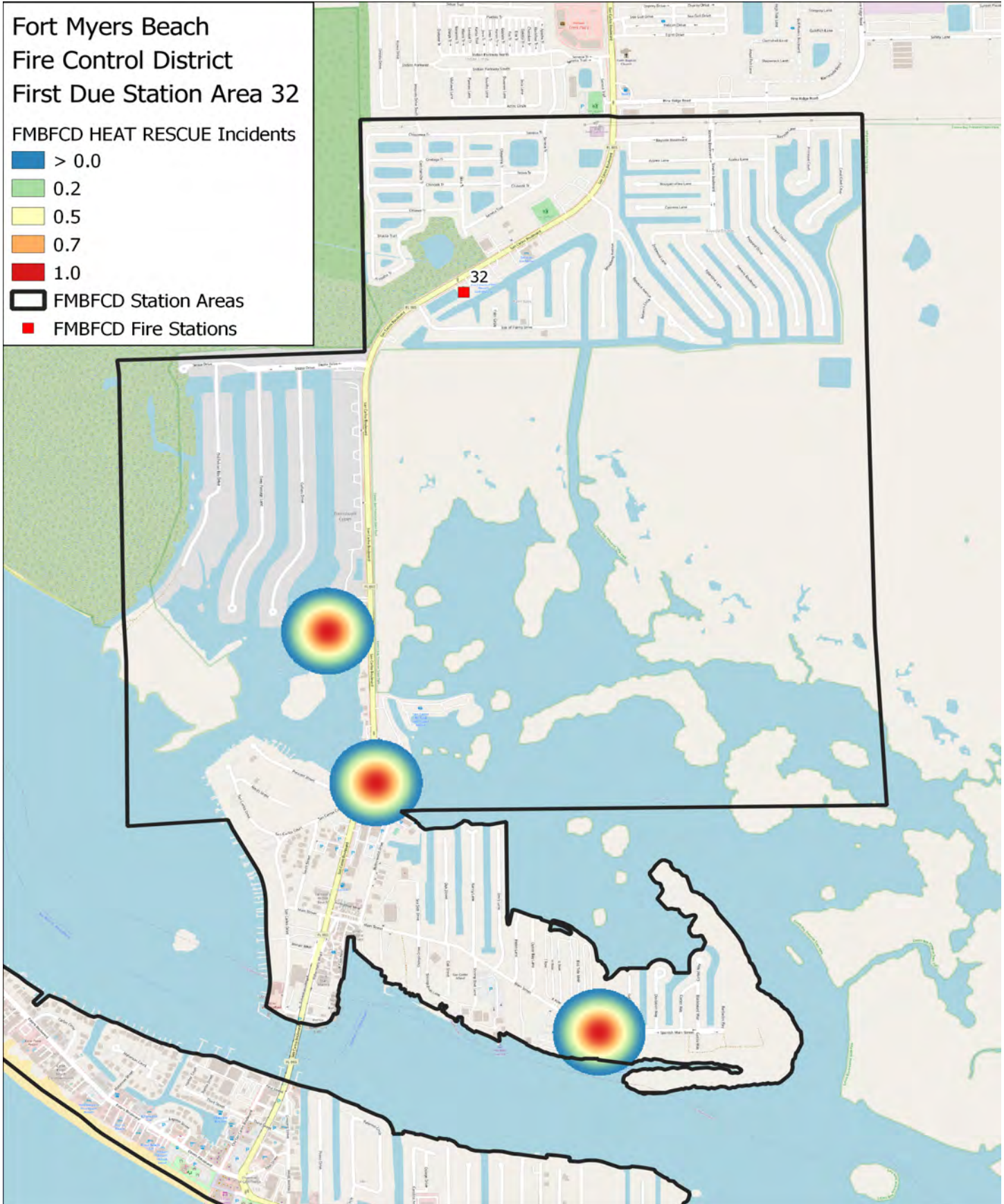
- FMBFCD Station Areas
- FMBFCD Fire Stations





### Rescue Hot Spot Map

Rescue incidents are concentrated in three distinct shoreline areas south of the station.





### Mutual Aid Hot Spot Map

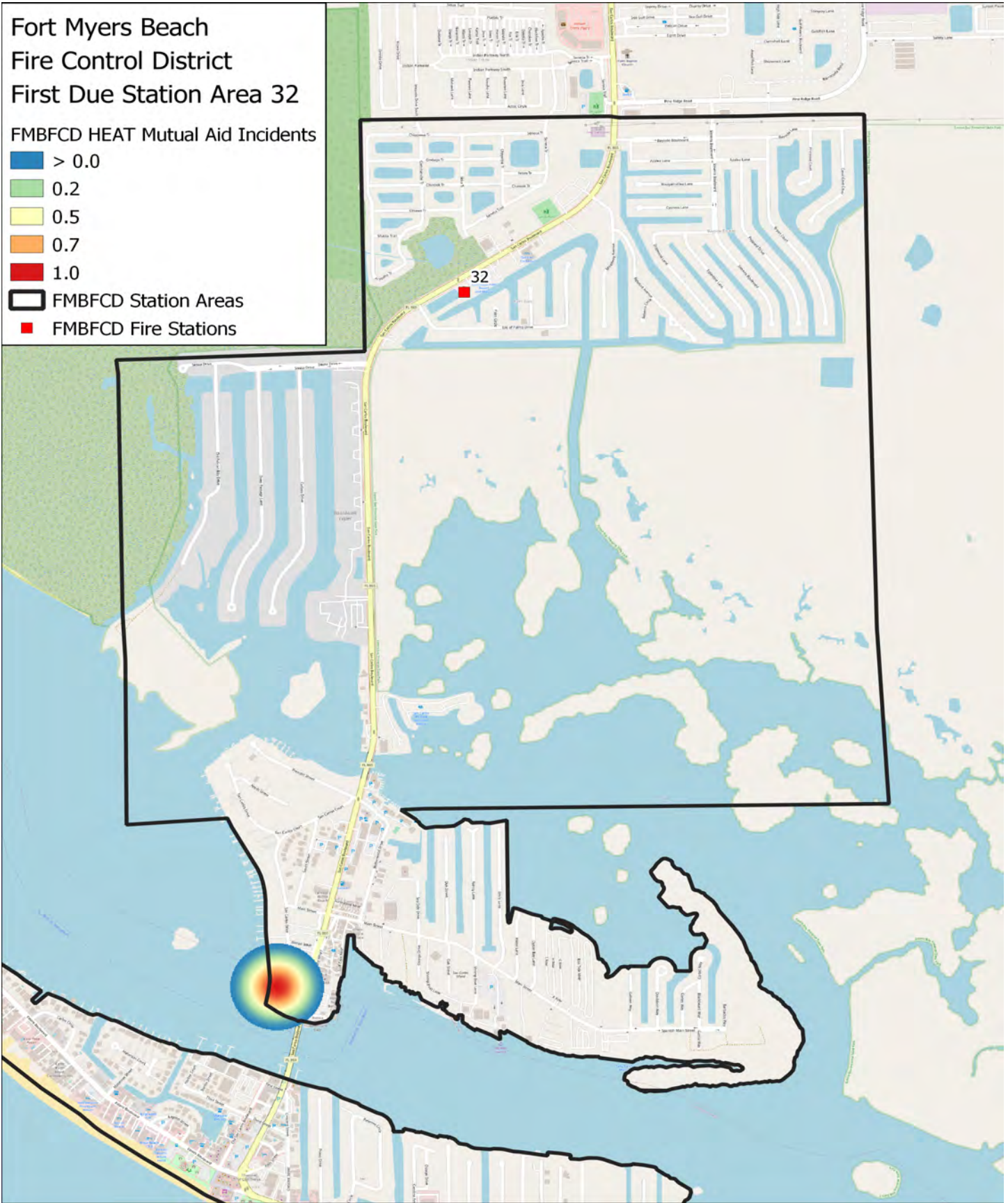
Mutual aid incidents are concentrated at the far southern end of the first due area.

Fort Myers Beach  
Fire Control District  
First Due Station Area 32

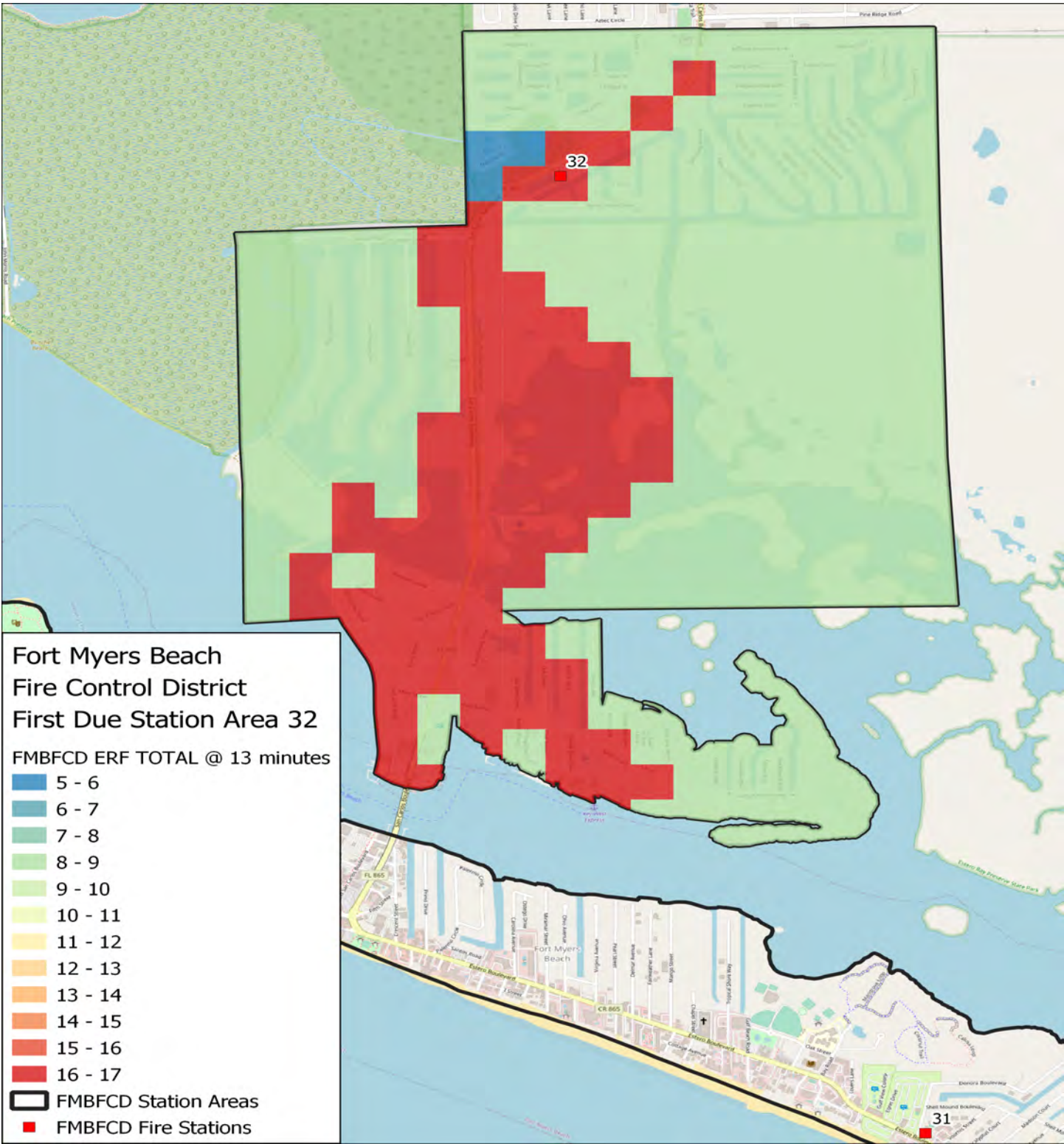
FMBFCD HEAT Mutual Aid Incidents

- > 0.0
- 0.2
- 0.5
- 0.7
- 1.0

- FMBFCD Station Areas
- FMBFCD Fire Stations



ERF Travel Time	ERF 3	ERF 5	ERF 7	ERF 13
8-Minute	98.24%	98.24%	37.89%	0.00%
10-Minutes	100.00%	100.00%	74.84%	0.00%
13-Minutes	100.00%	100.00%	99.05%	27.54%

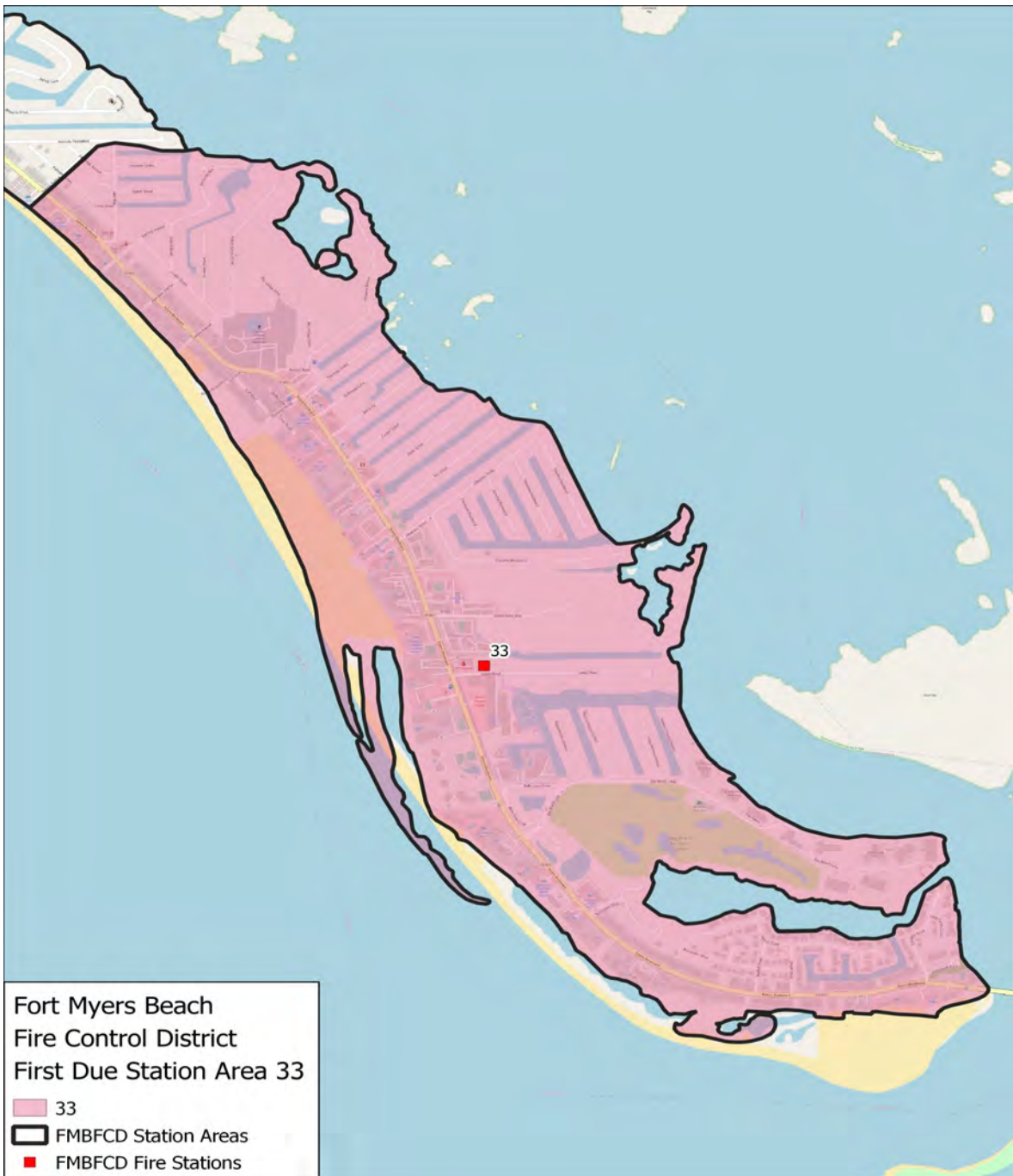




Station	Unit Identifier	Unit Type
33	E33	Engine
	R33	ALS Rescue
	T33	Truck

**First Due Station 33**

Station 33 staffs three primary units; Engine, ALS Rescue, and Truck. The first due station area has moderate overall jurisdictional risk level and is adjacent to Stations 31 lying a the south end of the District.



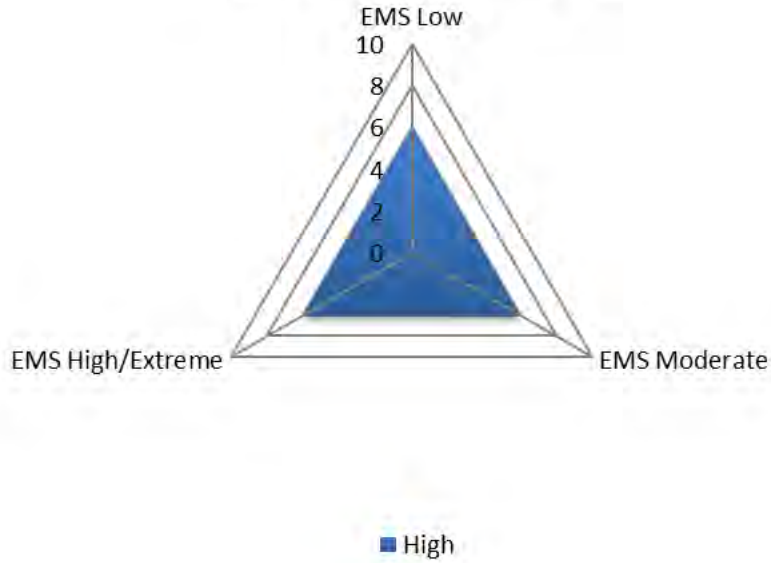


### Risk Analysis

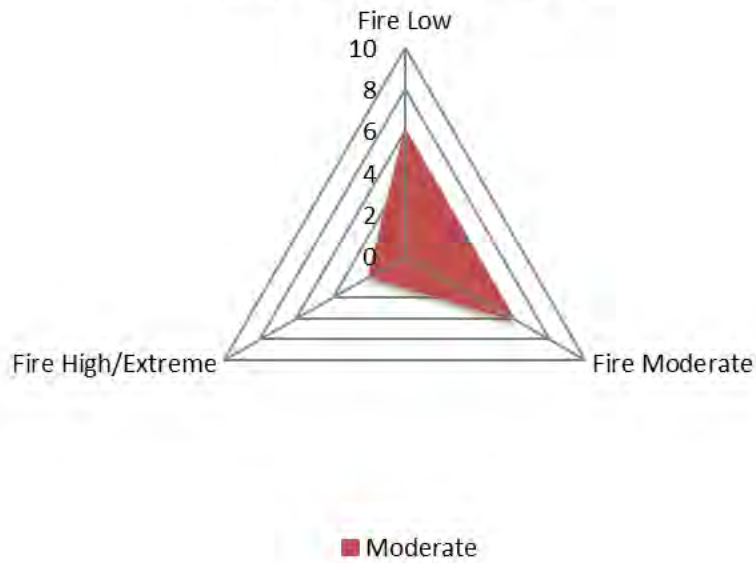
Risk of individual building locations is represented by the small circles and shaded to indicate risk level. Risk is also evaluated by the first due station area using the same shading criteria. Station 33 is measured as a moderate risk station area.



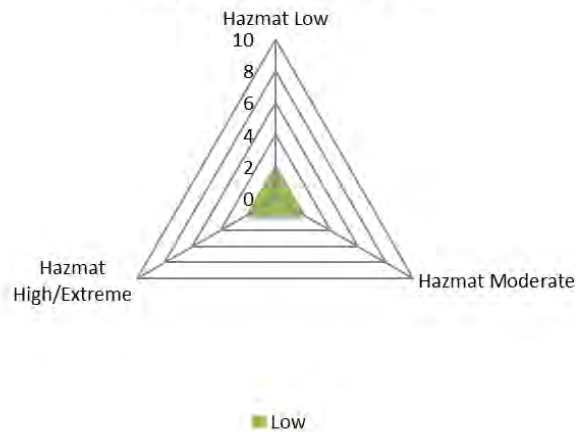
### First Due Station 33



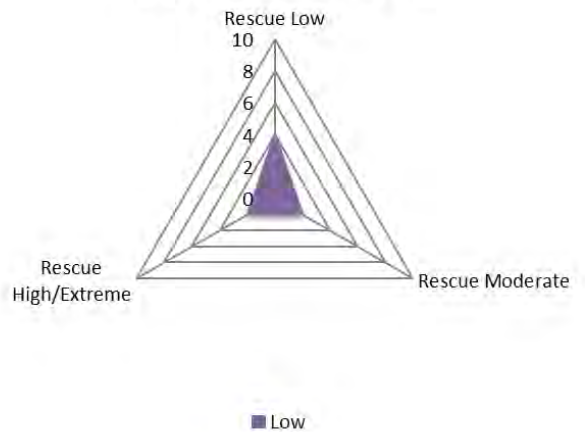
### First Due Station 33



### First Due Station 33



### First Due Station 33



### Station 33 First Due Area Historical Data Analysis

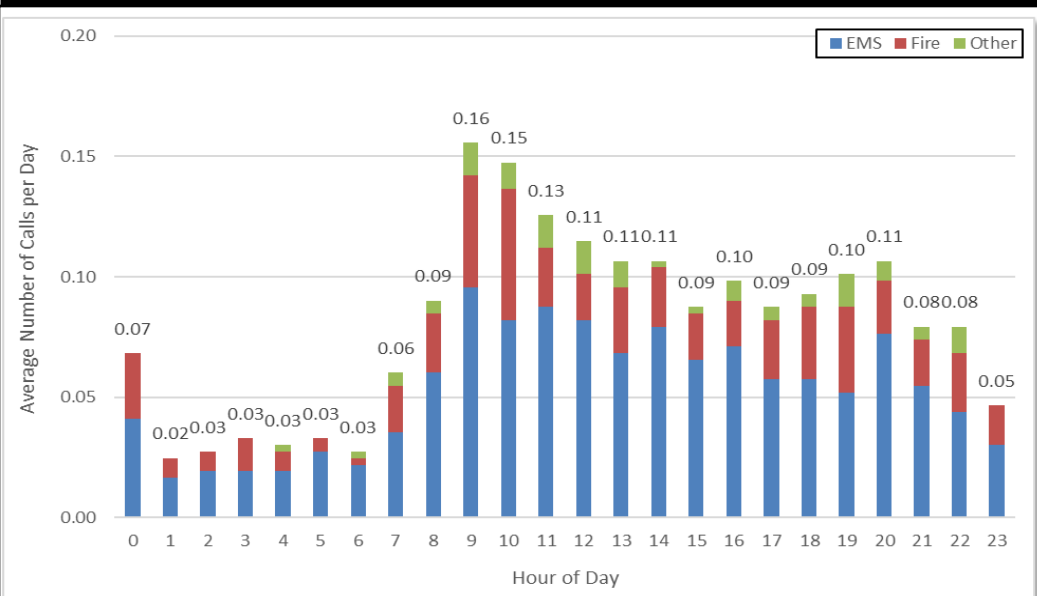
Station 33 First Due Area Incidents by Call Category	Reporting Period <sup>1</sup>				
	2016-17	2017-18	2018-19	2019-20	All
<b>EMS Total</b>	616	493	520	461	2,090
<b>Fire Total</b>	255	201	198	192	846
<b>Hazmat Total</b>	2	3	5	4	14
<b>Mutual Aid Total</b>	1	1	1	0	3
<b>Rescue Total</b>	51	41	31	48	171
<b>Total</b>	925	739	755	705	3,124

Unit ID	Reporting Period				
	2016-17	2017-18	2018-19	2019-20	All
FBA33	611	554	655	0	1,820
FBE30	274	165	0	0	439
FBE33	0	0	1	263	264
FBE39	0	0	0	1	1
FBR33	0	0	214	784	998
FBSU33	6	4	5	5	20
FBTK33	846	749	667	501	2,763
<b>Total</b>	<b>1,737</b>	<b>1,472</b>	<b>1,542</b>	<b>1,554</b>	<b>6,305</b>
<b>Average Responses per Day</b>	<b>4.8</b>	<b>4</b>	<b>4.2</b>	<b>4.2</b>	<b>4.3</b>

First Due Station 33: 1 <sup>st</sup> Arriving Baseline		2016-17 to 2019-20	2016-17	2017-18	2018-19	2019-20	2016-17 to 2019-20 Benchmark	2016-17 to 2019-20 Compliance
<b>Alarm Handling</b>		1:09	1:25	1:18	1:00	1:05	1:04	88.3
<b>Turnout Time</b>		2:16	2:23	2:25	2:08	1:59	2:02	84.8
<b>Travel Time</b>	Urban	6:05	5:22	6:17	5:57	7:39	5:28	87.1
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total Re- sponse Time</b>	Urban	8:15	8:03	8:30	7:47	9:35	7:30	86.2
		<i>n</i> = 2,539	<i>n</i> = 779	<i>n</i> = 637	<i>n</i> = 659	<i>n</i> = 464		
	Rural	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A		

Color coding legend:   fill ≥ 90%;   fill ≥ 70% to < 90%;   fill < 70%



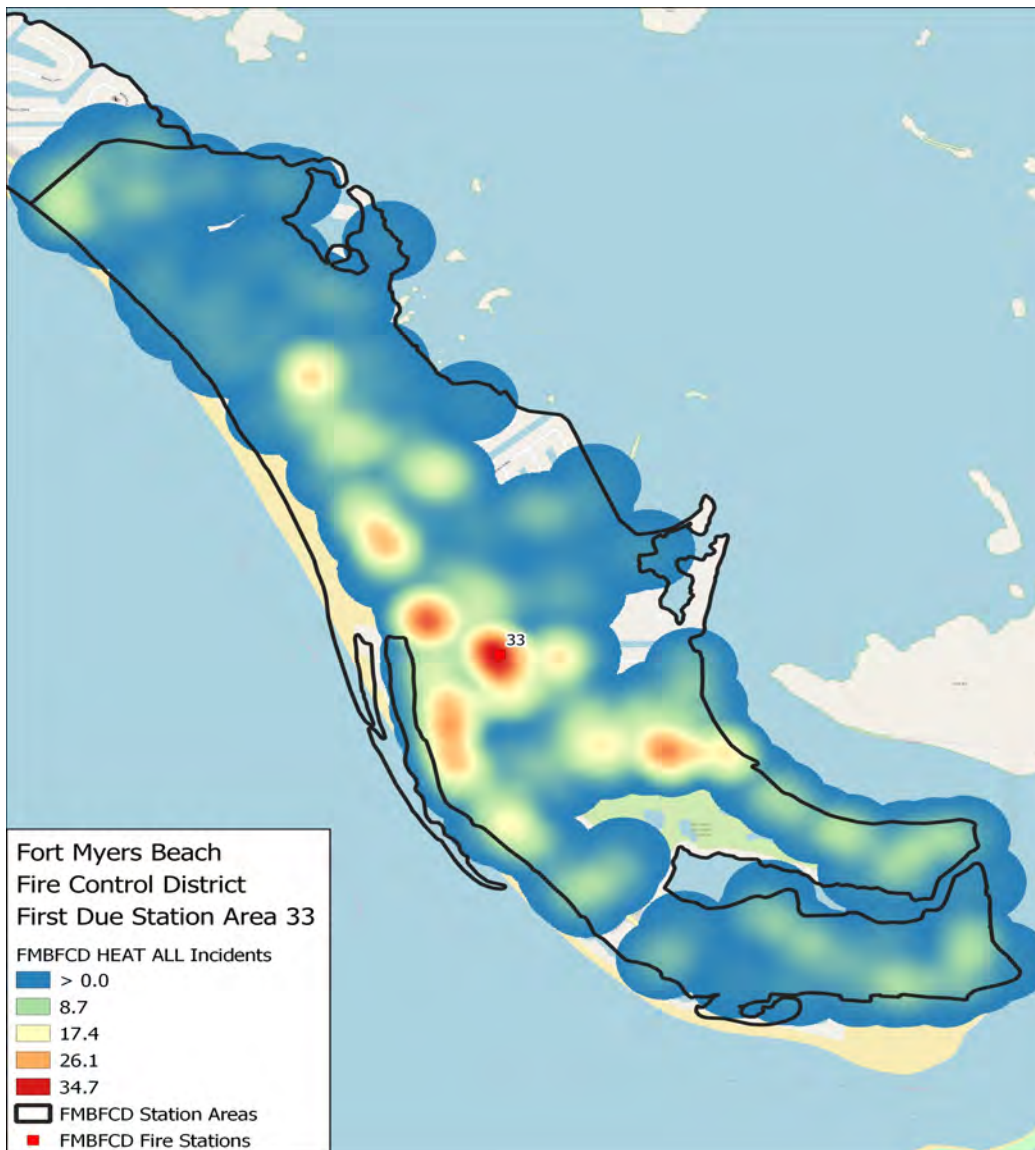


### Temporal Analysis

Incident volume by time of day and by type of call shows Station 33’s busiest times are from 9 am to 8 pm.

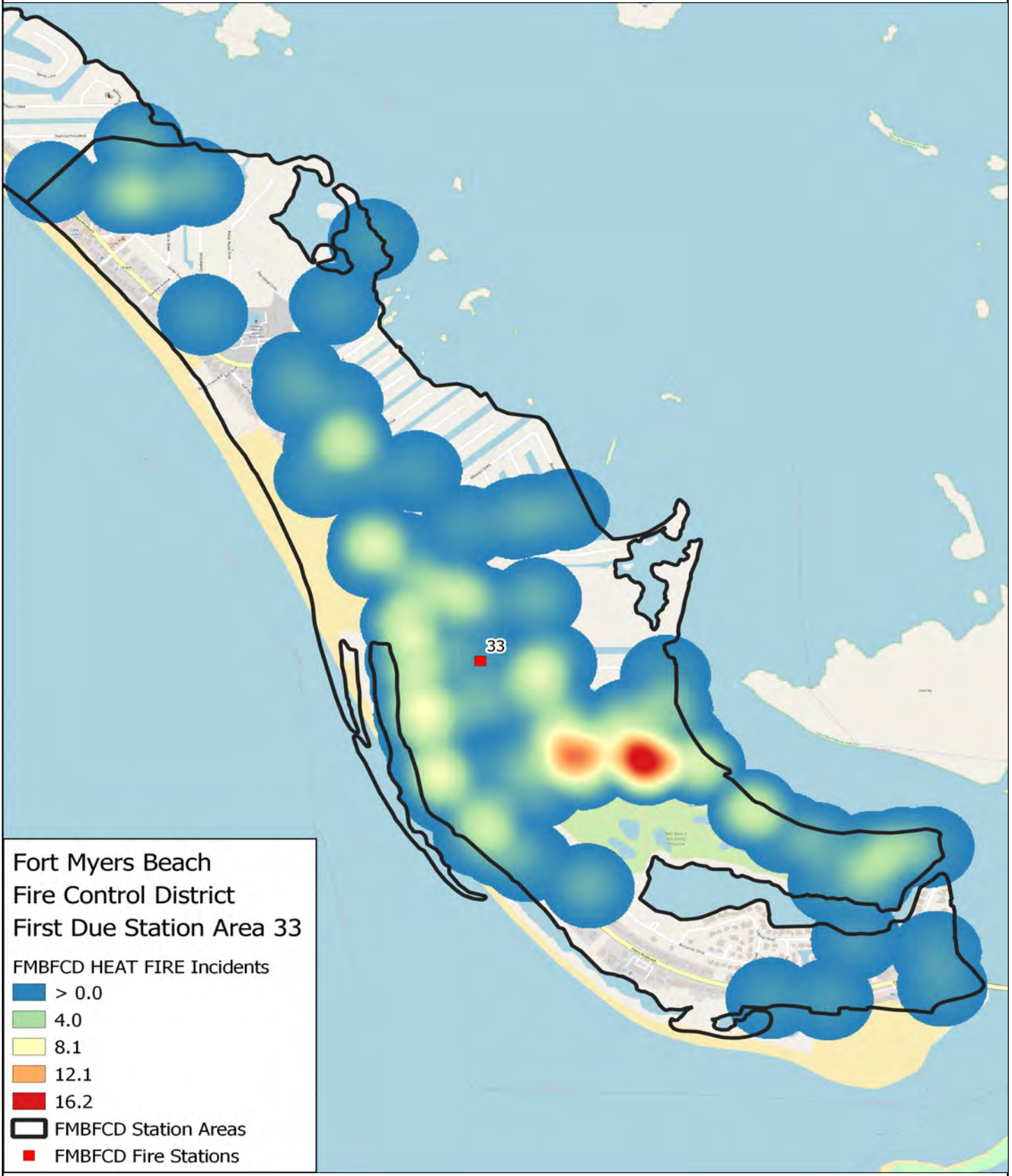
### Overall Hot Spot Map

Incidents are distributed fairly evenly across the first due station area with the highest concentration at the station itself.



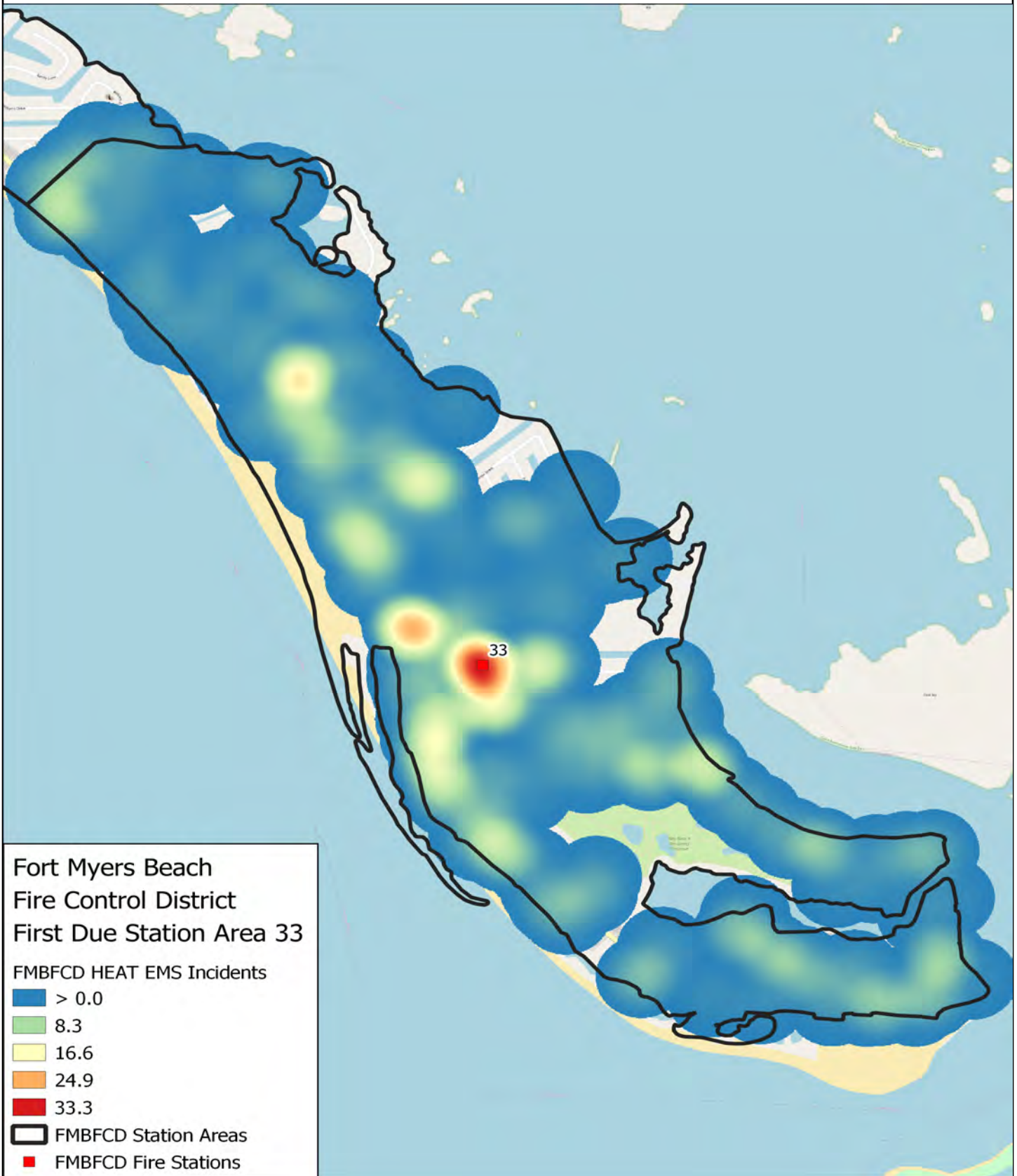
### Fire Hot Spot Map

This map indicates a the largest concentration of fire related incidents being just south of the station.



### EMS Hot Spot Map

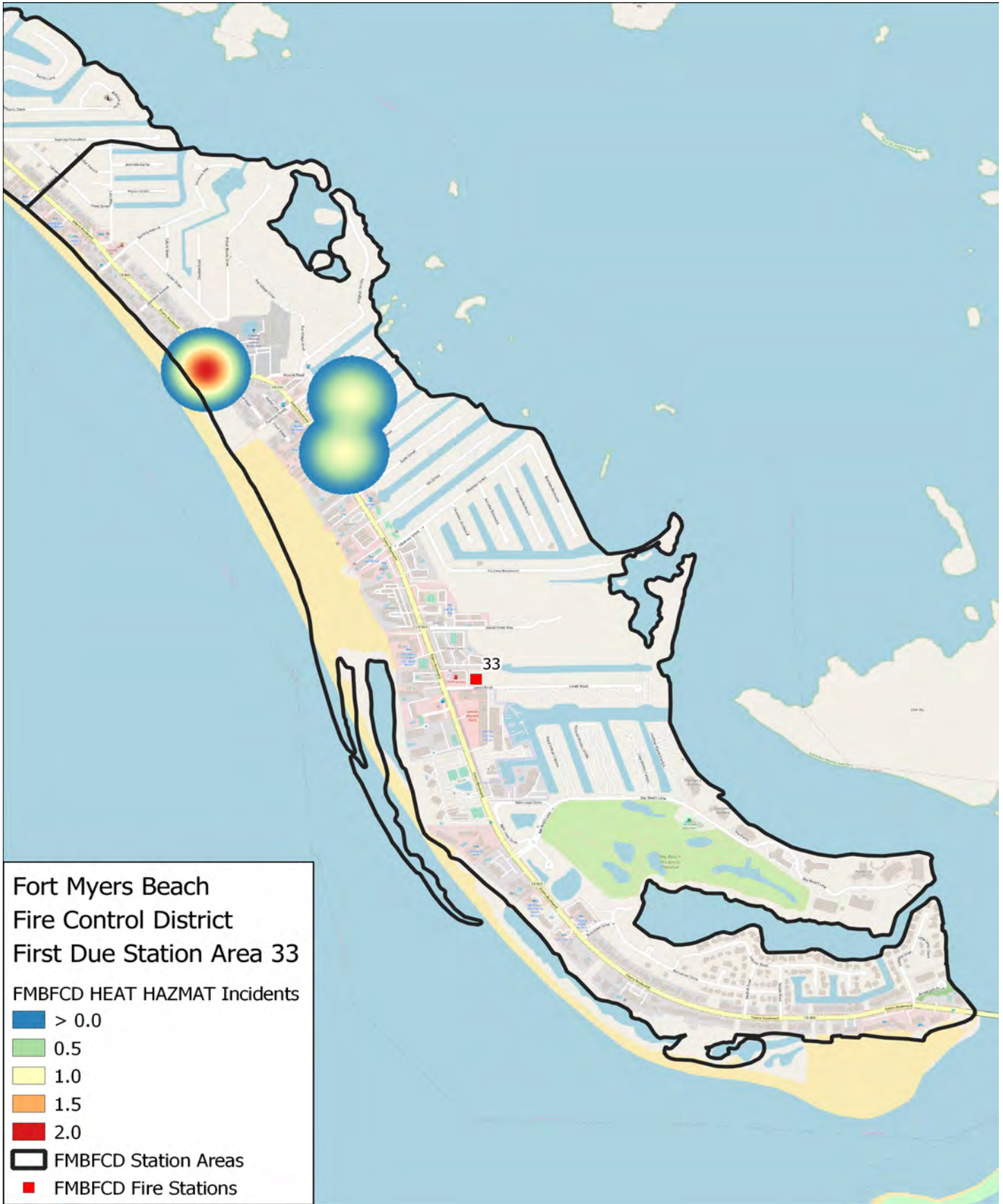
This map indicates a the largest concentration of EMS related incidents being at the station location itself.





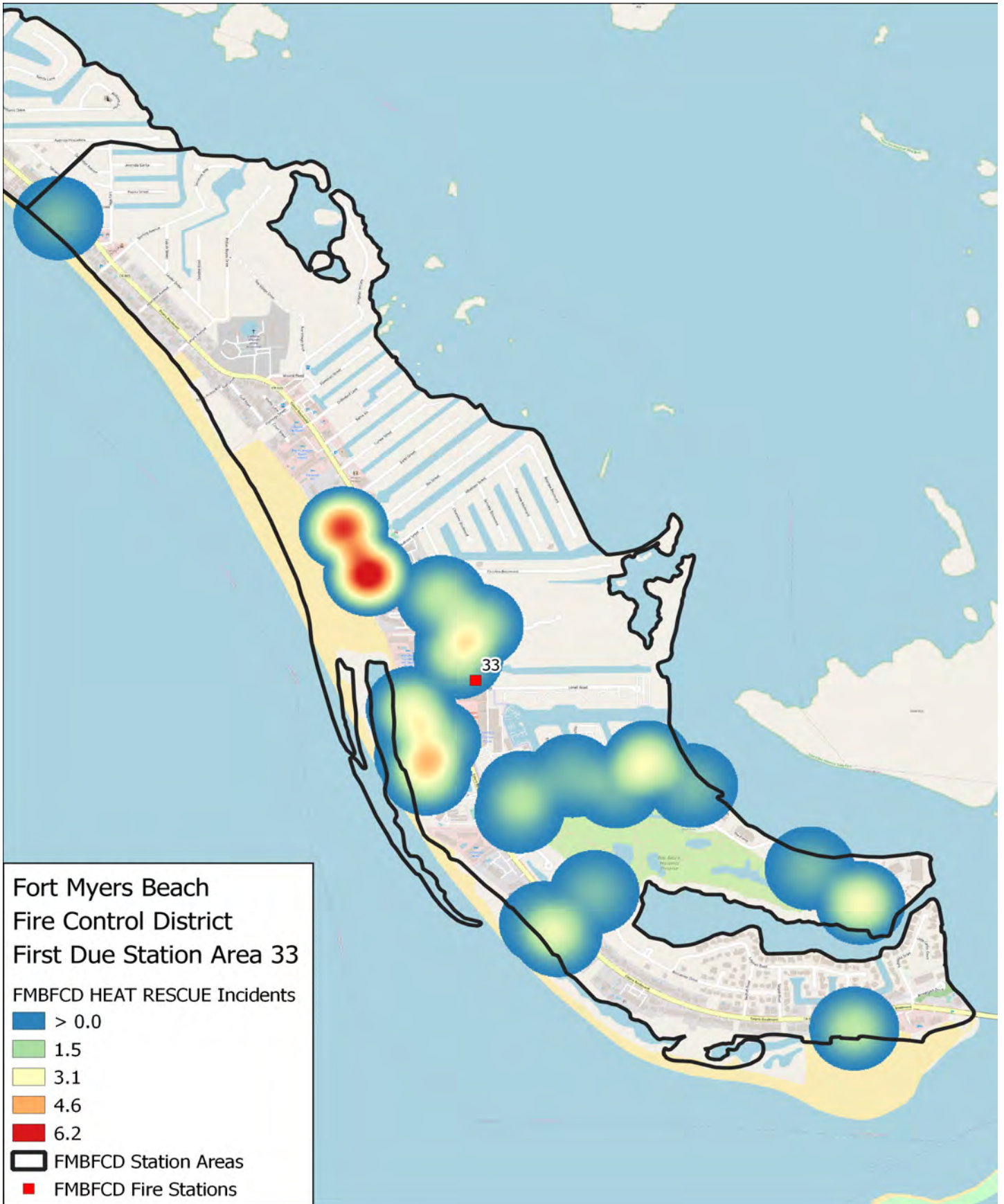
### Haz Mat Hot Spot Map

This maps shows Hazmat incidents to be concentrated north of the station, near the shoreline.



### Rescue Hot Spot Map

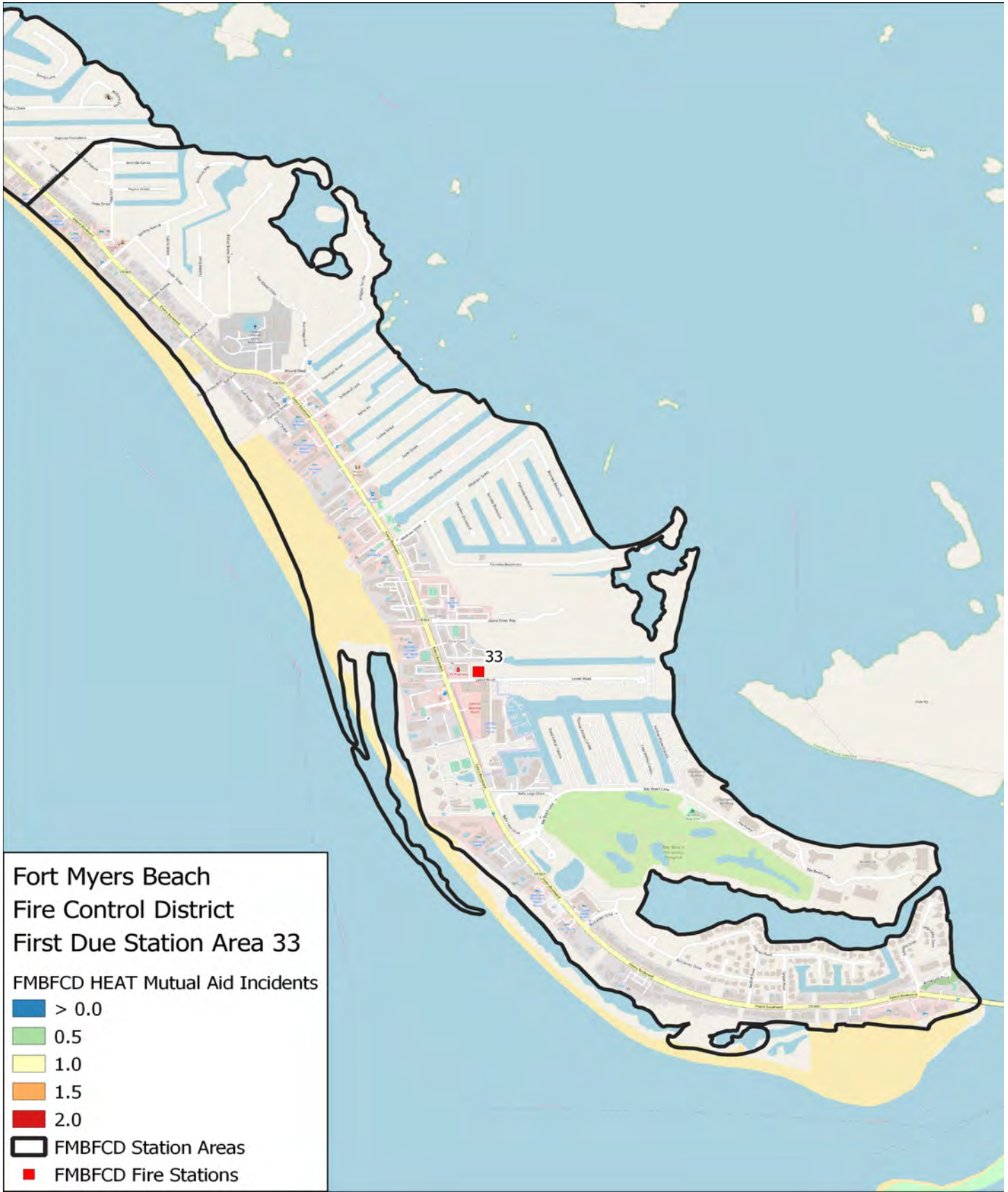
This maps shows Rescue incidents to be concentrated just north of the station around public access areas.





### Mutual Aid Hot Spot Map

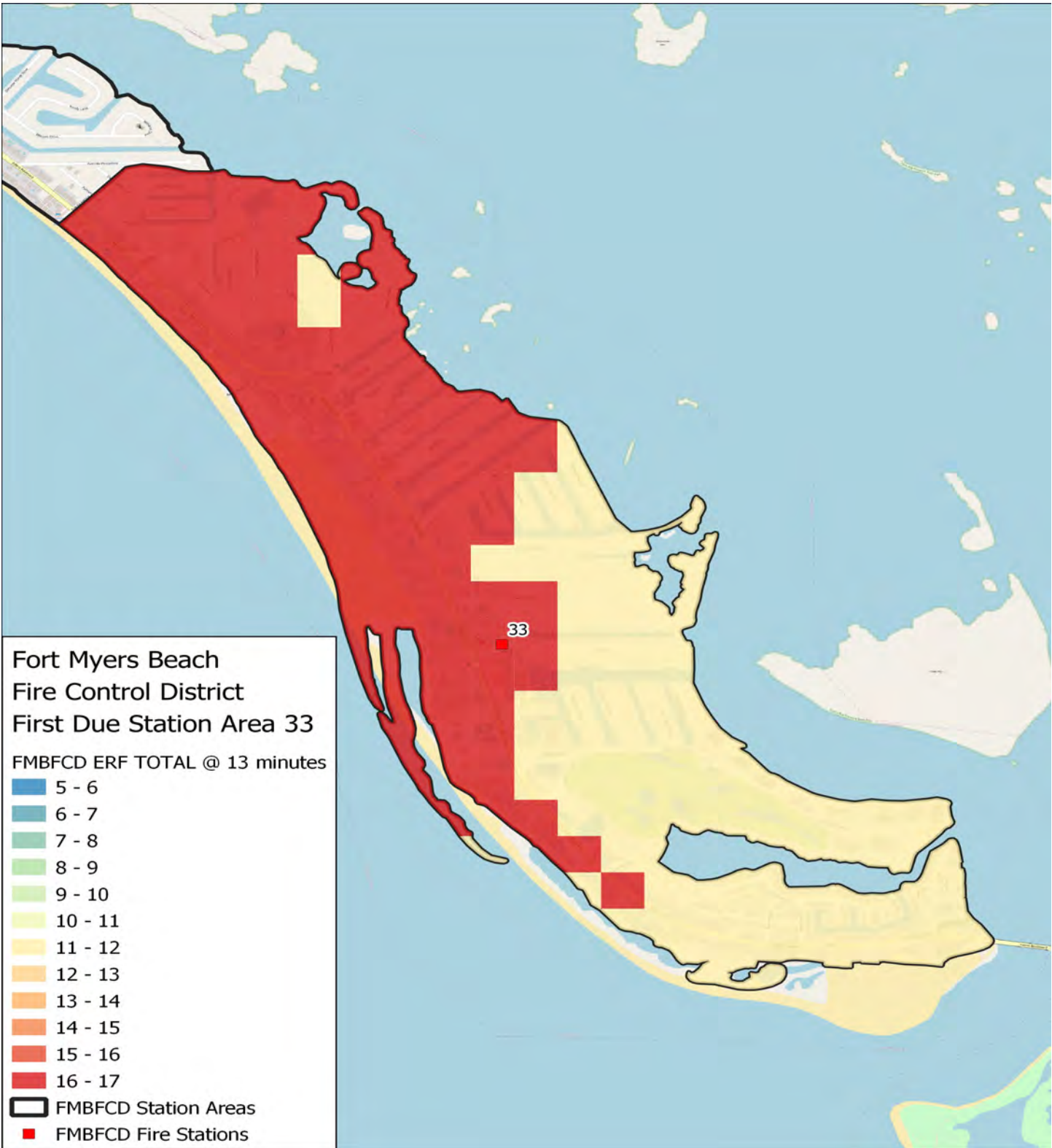
The Station 33 first due area has not recorded any incidents receiving mutual-aid.





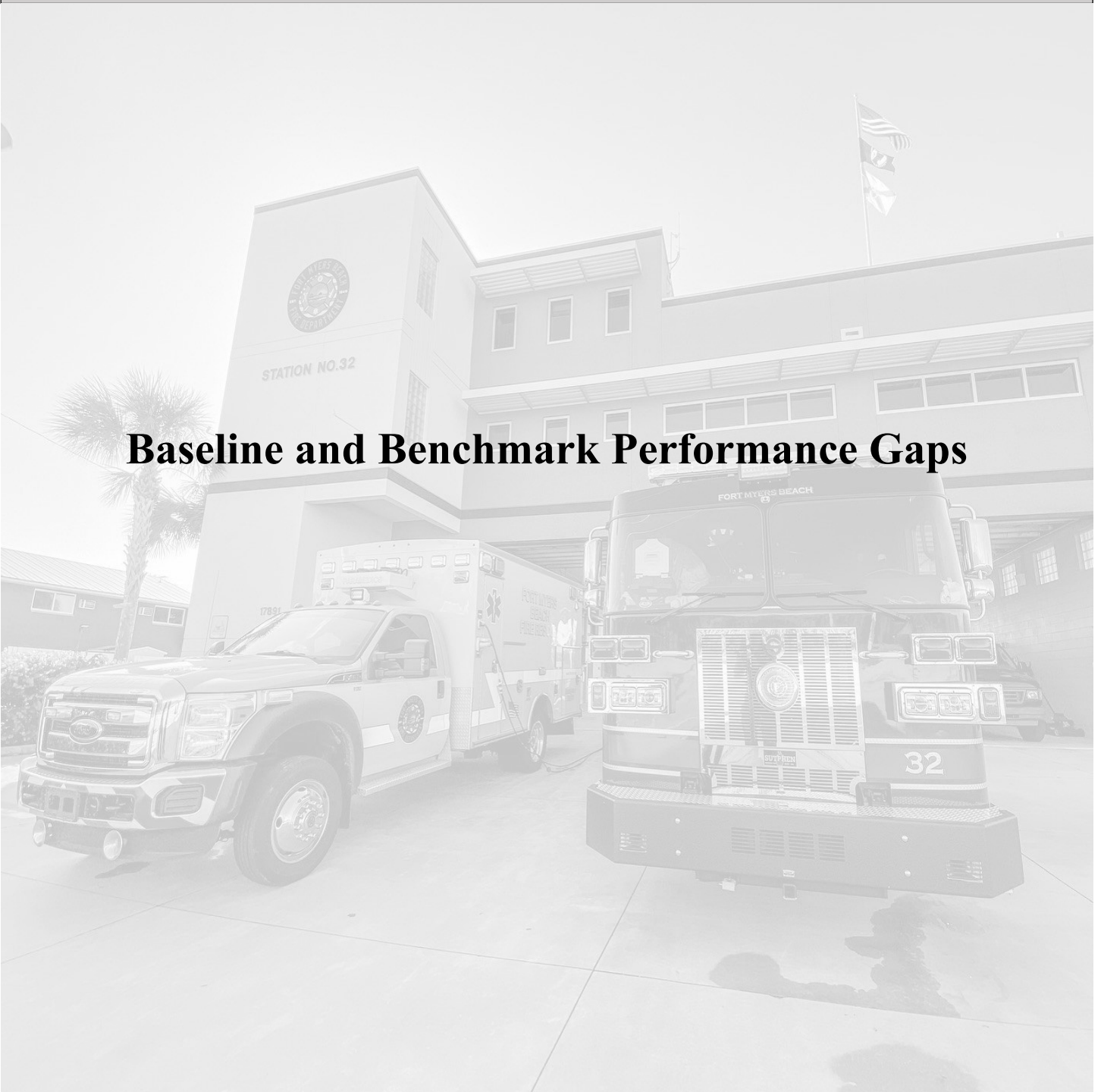
Section F- Current Deployment and Performance—First Due Station Area

ERF Travel Time	ERF 3	ERF 5	ERF 7	ERF 13
8-Minute	100.00%	100.00%	100.00%	0.00%
10-Minutes	100.00%	100.00%	100.00%	1.40%
13-Minutes	100.00%	100.00%	100.00%	54.37%



# **Section G - Evaluation of Current Deployment and Performance**

## **Baseline and Benchmark Performance Gaps**



## Baseline and Benchmark Performance Gaps

### Performance Gap Analysis

It is imperative that agency’s continuously evaluate their actual performance (baseline performance) versus their established goals (benchmark performance). This section takes a detailed look at the gaps where performance could be improved (noted in red) or is currently exceeding established goals (in green). Important trends can be discerned based upon the risk level (low, moderate, high or where the incidents or occurring (urban or rural).

### Evaluation of Current Deployment and Performance as it relates to Criterion 2D:

The agency has assessed and provided evidence that its current deployment methods for emergency services appropriately address the risk in its service area. Its response strategy has evolved to ensure that its deployment practices have maintained and/or made continuous improvements in the effectiveness, efficiency, and safety of its operations, notwithstanding any external influences beyond its control. The agency has identified the impacts of these external influences and communicates them to the authority having jurisdiction.

#### Criterion 5E Fire Suppression

**Summary**– Just over 1,300 fire incidents in the urban setting (FMBFD does not service rural demand). Low risk saw the smallest performance gap at 59-seconds over the established goal. Moderate and high risk are 1-minute and 10-seconds over the benchmark.

2016-17 to 2019-20 Fire Suppression Response Times Gap Analysis						
Risk Level	1st Due/ERF	Urban/Rural	n=	Baseline	Benchmark	Gap
Low	1st Due	Urban	586	09:51	08:52	-0:59
		Rural	N/A	N/A	N/A	
Moderate	1st Due	Urban	642	11:42	10:32	-01:10
		Rural	N/A	N/A	N/A	
	ERF	Urban	36	18:30	16:39	-01:51
		Rural	N/A	N/A	N/A	
High	1st Due	Urban	78	11:37	10:27	-01:10
		Rural	N/A	N/A	N/A	
	ERF	Urban	3	N/A	16:39	
		Rural	N/A	N/A	N/A	

#### Criterion 5F Emergency Medical Services

**Summary**– EMS response times were overall closer to their goals than fire suppression times. Moderate and High risk events occurred with greater frequency than those that fell into the Low risk category.

2016-17 to 2019-20 EMS Response Times Gap Analysis						
Risk Level	1st Due/ERF	Urban/Rural	n=	Baseline	Benchmark	Gap
Low	1st Due	Urban	1,126	07:51	07:04	-0:47
		Rural	N/A	N/A	N/A	
Moderate	1st Due	Urban	3,853	07:49	07:02	-0:47
		Rural	N/A	N/A	N/A	
	ERF	Urban	2,756	11:58	10:46	-01:12
		Rural	N/A	N/A	N/A	
High	1st Due	Urban	2,863	07:58	07:10	-0:48
		Rural	N/A	N/A	N/A	
	ERF	Urban	2,143	11:21	10:13	-01:08
		Rural	N/A	N/A	N/A	



**Criterion 5G  
Technical Rescue**

**Summary**– Technical rescue incidents are generally a low frequency event, but when they do occur, it is imperative to get the effective response force on scene quickly. 2016-20 saw no ERF assembled at the moderate or high risk level providing insufficient data for a gap analysis.

2016-17 to 2019-20 Technical Rescue Response Times Gap Analysis						
Risk Level	1st Due/ERF	Urban/Rural	n=	Baseline	Benchmark	Gap
Low	1st Due	Urban	143	11:46	10:35	-01:11
		Rural	N/A	N/A	N/A	
Moderate	1st Due	Urban	24	11:50	10:39	-01:11
		Rural	N/A	N/A	N/A	
	ERF	Urban	0	N/A	16:39	
		Rural	N/A	N/A	N/A	
High	1st Due	Urban	32	11:26	10:17	-01:09
		Rural	N/A	N/A	N/A	
	ERF	Urban	0	N/A	16:39	
		Rural	N/A	N/A	N/A	

**Criterion 5H  
Hazardous Materials**

**Summary**– Only a few incidents occurred in this category across the entire distribution of risk (<50) . The small data set show a small gap for 1st Due. 2016-20 saw no ERF assembled at the moderate or high risk level providing insufficient data for a gap analysis.

2016-17 to 2019-20 Hazmat Response Times Gap Analysis						
Risk Level	1st Due/ERF	Urban/Rural	n=	Baseline	Benchmark	Gap
Low	1st Due	Urban	2	N/A	08:52	
		Rural	N/A	N/A	N/A	
Moderate	1st Due	Urban	29	09:31	08:34	-0:57
		Rural	N/A	N/A	N/A	
	ERF	Urban	0	N/A	16:39	
		Rural	N/A	N/A	N/A	
High	1st Due	Urban	16	10:29	09:26	-01:03
		Rural	N/A	N/A	N/A	
	ERF	Urban	0	N/A	16:39	
		Rural	N/A	N/A	N/A	

**Section H - Plan for Maintaining and Improving  
Response Capabilities**

**Performance Evaluation and Compliance Strategy**

**Planning Process**

**Continuous Improvement Plan**

**Goals-Centered Perspectives**



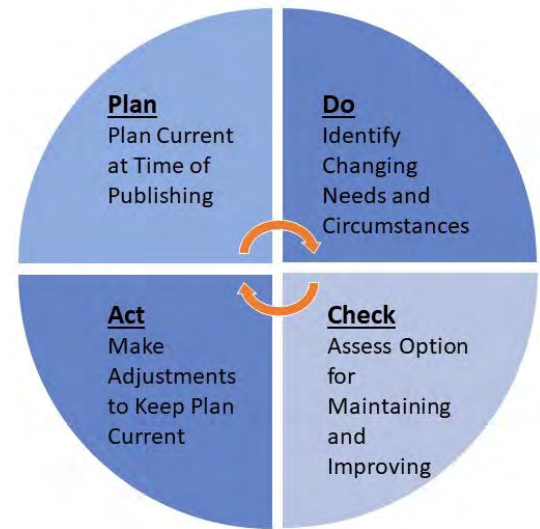
## Performance Evaluation and Compliance Strategy

A strategic plan, on paper, is a commitment to action. The Fort Myers Beach Fire Control District’s (FMBFCD) 2022-2025 strategic plan features a perspective of current conditions, stakeholder feedback and expectations. The primary focus and strategy of FMBFCD is centered on delivering excellent service to the community, fiscal responsibility, and employee engagement. Through the strategic planning process, a base guideline is established for transparent, department-wide decision making. The strategic plan is revisited at regular intervals to ensure that “documented plans” are morphing and evolving with environmental



needs and changes; both interdepartmental and those that are occurring within the community. By doing this the organization learns what works and what does not, then adapts and changes to provide excellence service to the community.

The goals are grouped into five categories or perspectives including the: Stakeholder Perspective, Financial Perspective, Internal Operations Perspective, Employee Development & Organizational Perspective, and Governance.



## Planning Process

The Strategic Planning process was adapted to meet the specific needs of FMBFCD. Significant stakeholders where included in this process including: FMBFCD Commission, leadership, community members, and employees. An important feature of this strategic plan is the emphasis placed on developing an annual review and work plan based on identified goals. Focus groups were held with respective stakeholders as identified in the chart below.

Data Collection and Report Development Task	Date
Presentation to Fire Commission with Feedback	August 2021
Fire Commission Individual Interviews	August – September 2021
Focus Group: Senior Leadership Team (various)	August- December 2021
Shift Personnel One-on-One Interviews	September 2021
Focus Group: Public Agency Partners	November 2, 2021
Focus Group: Administrative Staff	November 9, 2021
Focus Group: General Community	November 30, 2021
Focus Group: Business Groups	December 1, 2021
Online Community Survey	November – December 2021
Results Analysis	December 2021
Plan Draft and Approval	December 2021 – January 2022

**Core Competency 2D.1**

The agency has a documented and adopted methodology for assessing performance adequacy, consistency, reliability, resiliency and opportunities for improvement for the total response area.

**Performance Indicator 2D.2**

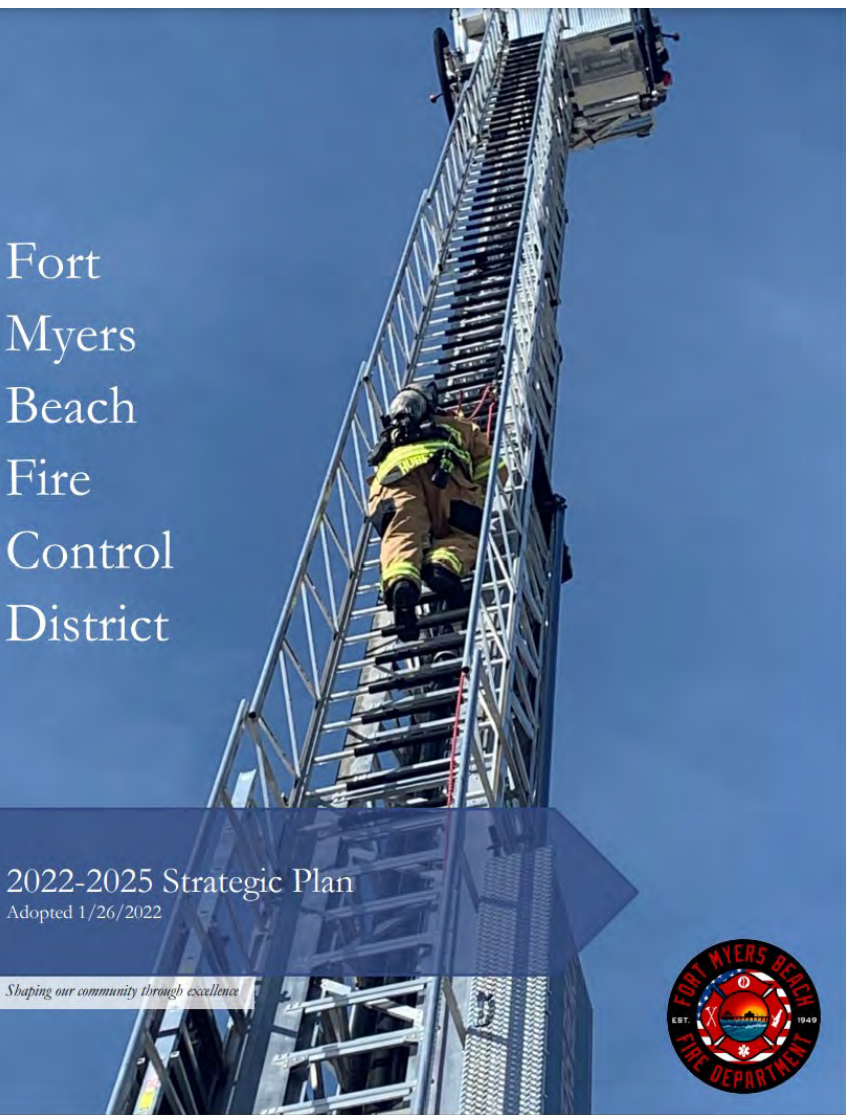
The agency continuously monitors, assesses, and internally reports at least quarterly, on the ability of the existing delivery system to meet expected outcomes and identifies and prioritizes remedial actions.

**Core Competency 2D.3**

The performance monitoring methodology identifies, at least annually, future external influences, altering conditions, growth and development trends, and new or evolving risks, for purposes of analyzing the balance of service capabilities with new conditions or demands.



# Continuous Improvement Plan



**Core Competency 2D.7**

The agency has systematically developed a continuous improvement plan that details actions to be taken within an identified timeframe to address existing gaps and variations.

The strategic plan was developed to provide an inclusive continuous improvement framework to measure standing performance, assess and address existing critical issues & service gaps, lay out specific goals, and outline an achievable plan and timeframe to accomplish goals for each identifiable “perspective” area of the organization.

**Performance Indicator 2D.8**

The agency has systematically developed a continuous improvement plan that details actions to be taken within an identified timeframe to address existing gaps and variations.

Sustaining the work is a critical step in the implementation of a strategic plan. The plan is a living document that supports continuous improvement. The strategic plan is also instrumental in giving policy makers a back-drop against which future decisions can be made, goals evaluated, and trade-offs can be weighed and measured.

To accomplish this, emphasis and attention were placed on developing an annual review and work plan based on identified goals. This allows the department to focus not only on long term strategic goals but to also address short term ones as well. This approach also assist with keeping team members accountable to the objectives and goals that they have been assigned.

Strategic Priority	Objective	Critical Tasks	Timeframe					Lead Branch / Division*
			0-6 mon	6-12 mon	12-24 mon	24-36 mon	Long Term	
1. Achieve excellence in stakeholder's perception of safety	1.a. Measure effectiveness of existing education program to increase stakeholder's actual and perceived sense of safety (car seat program, AED, & CPS)	Identify opportunities for innovative program delivery to meet community needs			✓	✓	✓	Life Safety
		Conduct evaluation of existing public education programming			✓	✓	✓	
2. Increase opportunity stakeholder engagement	3.a. Implement long term system of contributions and withdraws to maintain capital infrastructure and organizational health 3.b. Monitor funds and plan for facility replacement	Continue to monitor revenue to fund capital and operational needs based on existing 5-year plan Assess options for enhanced service delivery, including fee-based system			✓	✓	✓	Finance & Administrative Services
		Monitor station funding plan and adjust as needed			✓			
3. Implement financial and revenue strategy to sustain current and meet future needs	5.a. Develop, refine, and update emergency response plans 5.b. Respond to operational changes as suggested by the	Work with Lee County Division of Public Safety, Town of Fort Myers Beach, and Lee County Sheriff and other stakeholders to refine emergency response plans, including active shooter (all hazard plan update) Evaluate opportunities to incorporate emergency plans into District operations			✓	✓	✓	Operations Life Safety
		Review, finalize, and adopt SOC and CRR plan(s)			✓			
4. Achieve operational efficiency	7. Achieve excellent communication throughout the District	7.a. Provide forums for enhanced organizational communication			✓	✓	✓	Office of the Fire Chief Senior Leadership Team
		8. Achieve excellence as a high-performing organization	8.a. Develop consistency in personnel management policy and practice 8.b. Address employee culture	Standardize, update, and revise, and create consistency among organizational policies, procedures, and documents Develop an internal work group to collaborate and implement opportunities for meaningful workplace engagement Engage labor partners in implementing measures to enhance employee morale and solving organizational culture challenges Develop opportunities for labor – management communication and collaboration			✓	
6. Efficiently and effectively respond to emergencies	8.c. Complete organizational performance review as mandated by the Florida Statute, Section 191.003	Identify and implement methods to ensure consistent and continuity in communication practices			✓	✓	✓	Fire Chief Senior Leadership Team
		Complete performance review as outlined and mandated by FL Statutes Implement improvement measures as suggested by performance review			✓	✓	✓	

## Stakeholder Perspective

FMBFCD's mission as an all hazards emergency services agency is to honorably serve the community by providing caring, compassionate service through devoted professionals. The Stakeholder Perspective considers how the department is seen and how its worth is measured and valued by its stakeholders. This drives the department to constantly evaluate which services it delivers to its customers.

## Financial Perspective

The Financial Perspective considers the financial resources of the District that are needed to achieve its mission and goals. The focus is to operate sustainably and responsibly while maintaining transparency by strengthening established business practices. This helps ensure that the District can maintain current service levels without placing an undue financial burden on its taxpayers.

## Internal Operations Perspective

The Internal Operations Perspective is inward-facing introspective analysis. What the department must do to accomplish its goals is considered here. Exemplifying FMBFCD's mission of providing compassionate service to people physically, mentally, and emotionally. Also, essential to this is measuring the department's performance. This is done by using performance measures. An example of some of these are highlighted below:

- ◆ Rate of re-inspections
- ◆ Response times by activity
- ◆ Rate of compliance with training hour requirements based on Department goals

## Employee Development & Organizational Learning Perspective

This perspective is also inward facing and considers how the District will work with its employees to change and improve the achievement of its mission. FMBFCD takes serious stock in the value of human capital. Understanding that it is through people (our employees) that our goals are accomplished or just remain visionary in nature.

## Governance

This considers the way the Fire Commission carries out its duties in governing the department. This includes policy making, monitoring and approving the budget and exercising oversight of the Fire Chief.

### Core Competency 2C.8

The agency has identified efforts to maintain and improve its performance in the delivery of its emergency services for the past three (initial accreditation agencies) to five (currently accredited agencies) immediately previous years.

### Performance Indicator 2C.9

The agency's resiliency has been assessed through its deployment policies, procedures, and practices.

### Performance Indicator 2D.4

The performance monitoring methodology supports the assessment of the efficiency and effectiveness of each service program at least annually in relation to industry research.

### Performance Indicator 2D.5

Impacts of incident mitigation program efforts, such as community risk reduction, public education, and community service programs are considered and assessed in the monitoring process.

### Core Competency 2D.6

Performance gaps for the total response area, such as inadequacies, inconsistencies, and negative trends, are determined at least annually.

### Core Competency 2D.9

On at least an annual basis, the agency formally notifies the AHJ of any gaps in current capabilities, capacity, and the level of service provided within its delivery system to mitigate the identified risks within its service area, as identified in its community risk assessment/standards of cover.

### Performance Indicator 2D.10

The agency interacts with external stakeholders and the AHJ at least once every three years to determine the stakeholders' and AHJ's expectations for types and levels of services provided by the agency.

# **Section I - Conclusion and Recommendations**

**Conclusions**

**Observations**

**Recommendations**





## **Overall Evaluation**

The overall evaluation is the final component of the Standards of Cover (SOC) process. As a risk-based process that incorporates risk, mitigation, and outcomes measures, both the Department and the District leadership can more easily discuss service levels, outcomes, and the associated cost allocations based on community risk.

Overall, the department is performing well within the current system. The community enjoys high quality services from a professional and well-trained department. The District per unit workload is both reasonable (<13%) and well below the upper recommended threshold (<30%). In other words, the department has a robust deployment strategy, and the existing resources can absorb more work prior to reinvestment due to workload. This provides considerable cost avoidance and long-term expenditure sustainability within the current resource allocation.

The District's distribution and concentration delivery models are appropriately aligned with the District's unique risks. The quantity and locations of the fire stations are well-planned and performing well. However, there are areas that have been identified where the District could make incremental system adjustments to improve.

## **General Observations**

### ***Total Response Time***

The department has established baseline and benchmark performance objectives during the development of this SOC. The individual station demand zone performance provides understanding of the compartmentalized performance. While it is up to the department to establish policy related to meeting or exceeding community expectations, there are opportunities to better align goals and baseline objectives.

Observations and remedies:

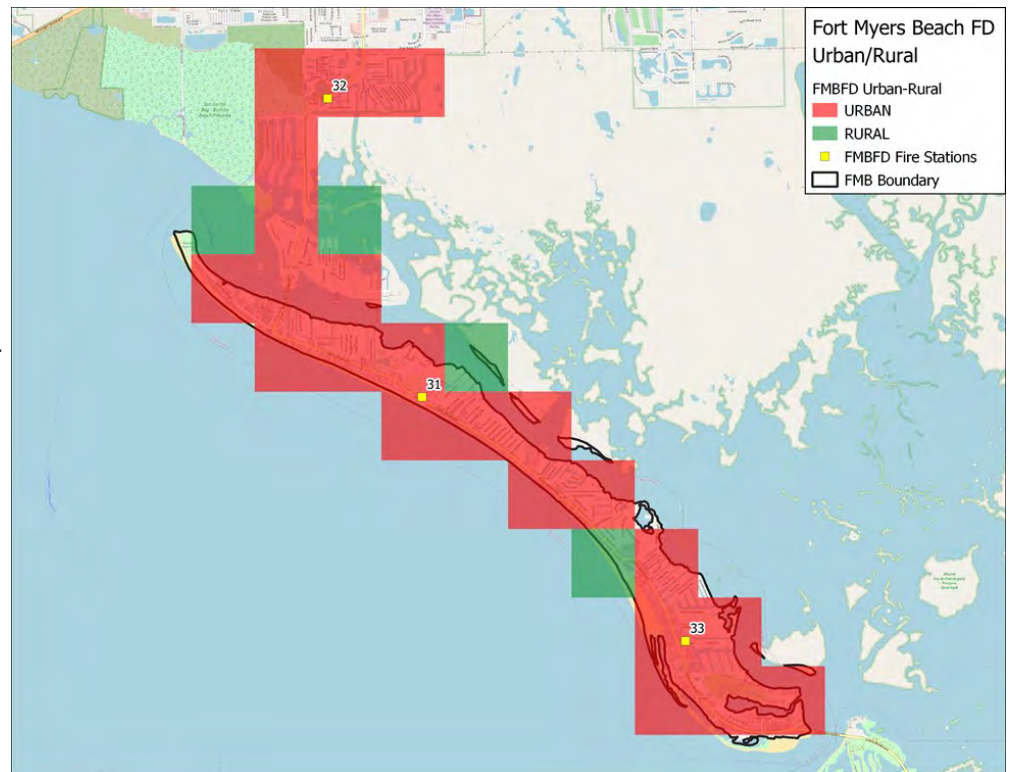
- The department could impact the total response time in most instances with incremental improvement of crew turnout time that is more closely aligned with best practices.
- Department could improve by approximately 1 minute on EMS incidents.
- Department could improve by approximately 1 minute on Fire incidents.
- Turnout time performance is typically within personnel and management control.
- Improvement of turnout times at no cost would receive the same system benefit as substantive monetary investments in the response distribution model.

### Station Locations and Current Performance

The District's current total response time of 9.2 minutes at the 90th percentile is well aligned with the national experience. A District gap analyses between baseline and benchmark performance is fully evaluated in Section G of the SOC. All three stations have a relatively commensurate level of performance as the performance varies by 1.5 minutes or less across the three stations. This confirms a well-designed station placement.

Demand Zone (First Due Station)	Dispatch Time (Minutes)	Turnout Time (Minutes)	Travel Time	Response Time (Minutes)
31	1.1	2.1	6.3	8.2
32	1.0	2.2	6.0	8.0
33	1.1	2.0	7.5	9.5
Outside of FMBFD	1.5	2.1	8.9	11.3
<b>Total</b>	<b>1.2</b>	<b>2.1</b>	<b>7.0</b>	<b>9.2</b>

The current performance is both expected and reasonable from a system design perspective when considering the differences in demand and geographic areas across the district. Urban/Rural call density is calculated based on the relative concentration of incidents based on approximately 0.5-mile geographic areas as well as the adjacent 0.5-mile areas. The results demonstrate an urban and rural designation based on call density for services and not based on population. The red areas are designated as urban service areas and the green areas are designated as rural service areas. Any area that is not colored has less than one call every six months in the 0.5-mile area and the adjacent areas.



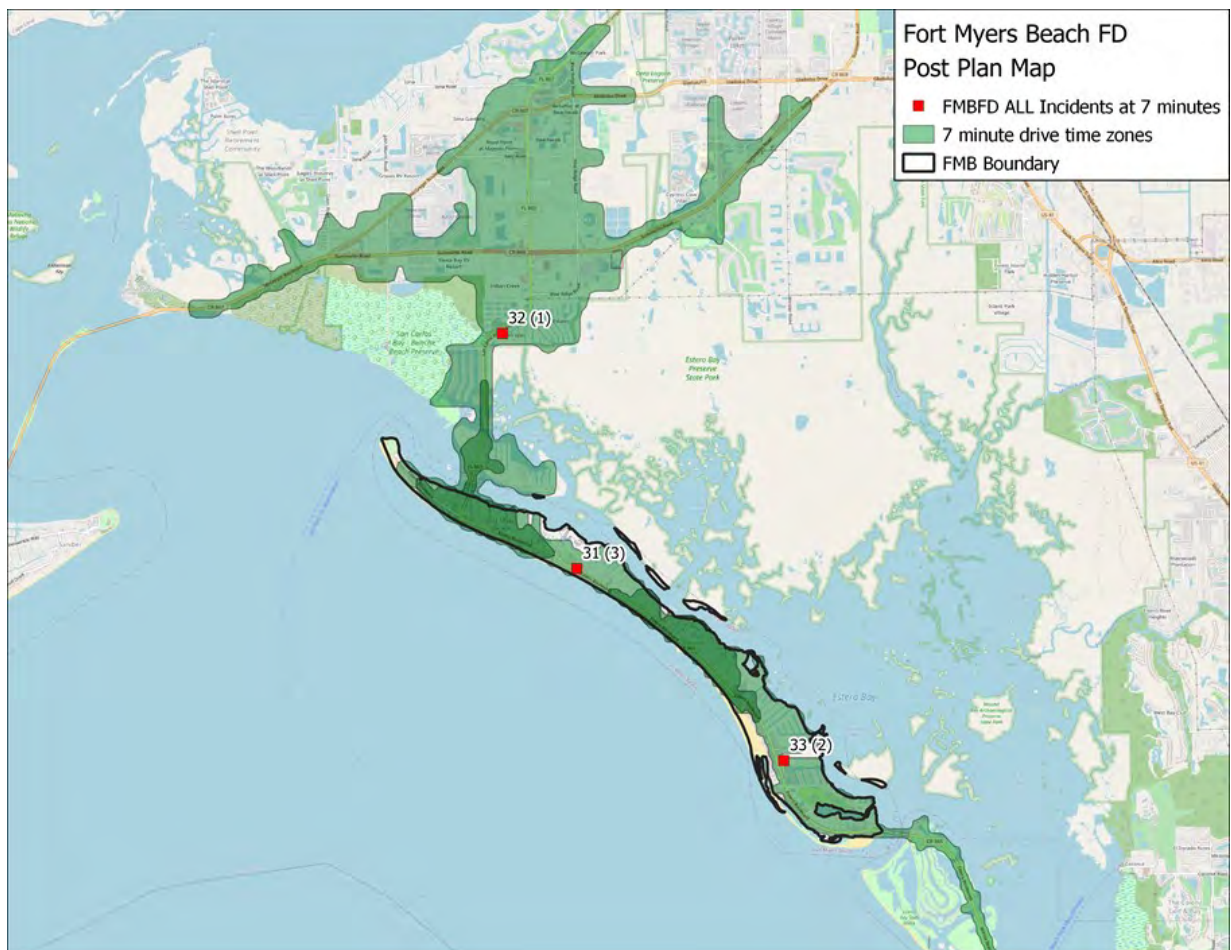
When referring to the Figure, this confirms that each of the station locations are strategically located within the community demand. This strategy is well aligned, and more responsive, as a commensurate risk model than the current census definition of urban and rural.

**Consideration for a Formal Move-Up Policy**

In addition to the quantitative analyses provided, Geographic Information System (GIS) analyzed the station locations and associated travel time capabilities. The current capabilities were evaluated to establish a recommended move-up policy for District resources when resources begin to be drawn down. Currently, the on-duty BC must recognize system draw down and then manually initiate a move-up strategy. While this may perform well during most instances, a more formalized process will ensure consistency across the three shifts and battalion chiefs as well as reduce the opportunity for delayed recognition with an automated process.

The table below can be interpreted as follows: The number one ranked station is station 32 and would be able to respond to 52.27% of the District’s incidents within 7-minutes. Each station provides additional coverage, but a diminishing return, until Station 31 brings the total system capability to 95.1%. All three stations are required to achieve a 7-minute travel time for all incidents. Since 7-minutes is the current overall performance, it is utilized in this assessment. Data is presented in the Table and Figure below.

Rank	Station	Station Capture	Total Capture	Percent Capture
1	32	1,426	1,426	57.27%
2	33	742	2,168	87.07%
3	31	200	2,368	95.10%



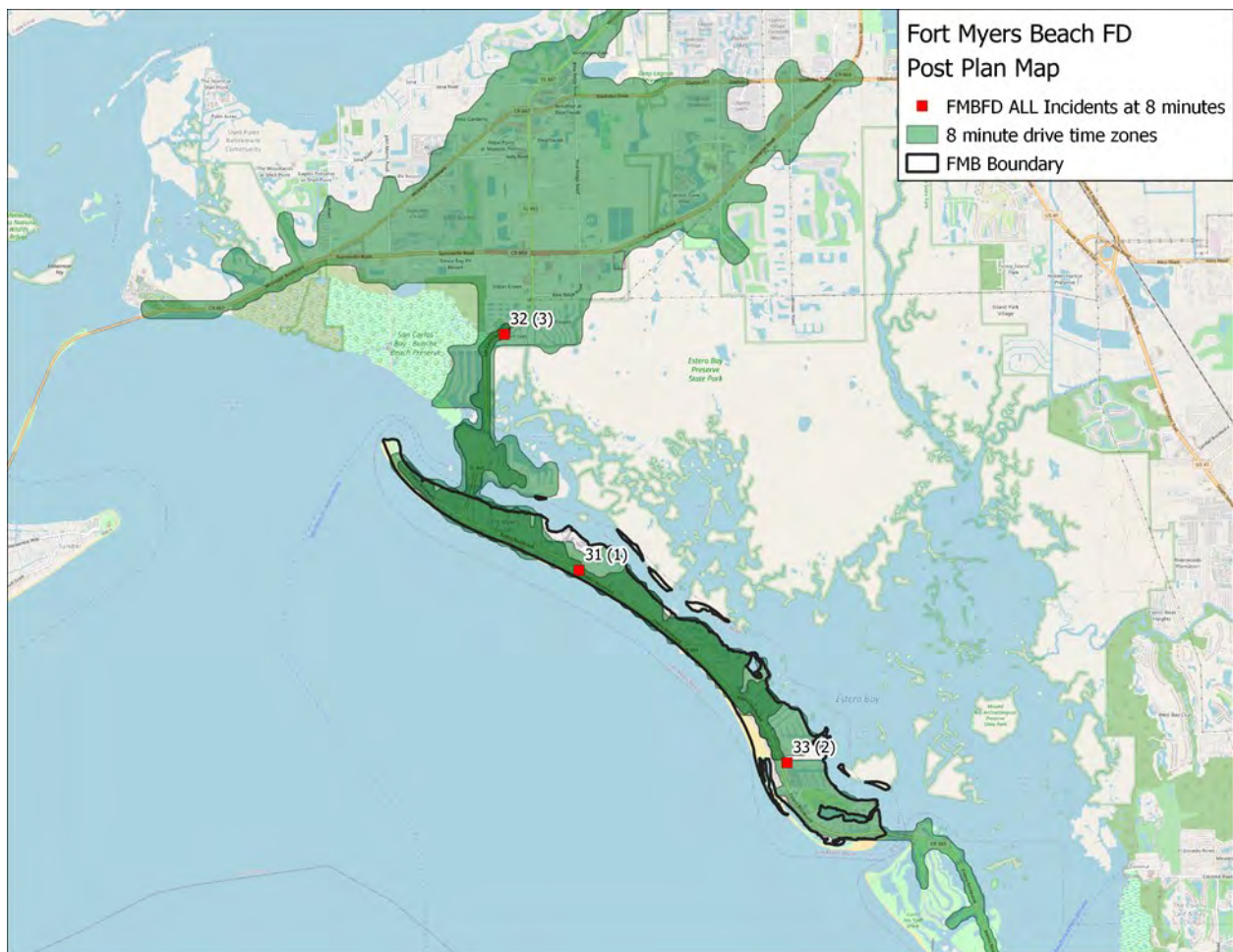


Specifically evaluating a move-up policy, the marginal utility analysis provides a quantifiable framework for deciding which stations to allocate resources to when units are being drawn down. For example, following the previous table, if only two units were left available in the District, the best advantage would be two staff Station 32 and Station 33 and still capture 87% of the incidents within the desired timeframe.

Alternatively, when only one resource is left, such as the final rescue, then Station 31 would be best situated to provide coverage for the entirety of the jurisdiction within 8-minutes travel time for nearly 67% of the incidents from this single location. Results are presented below.

Results suggest that with all three stations, 95.94% of calls could be responded to within 8 minutes or less travel time.

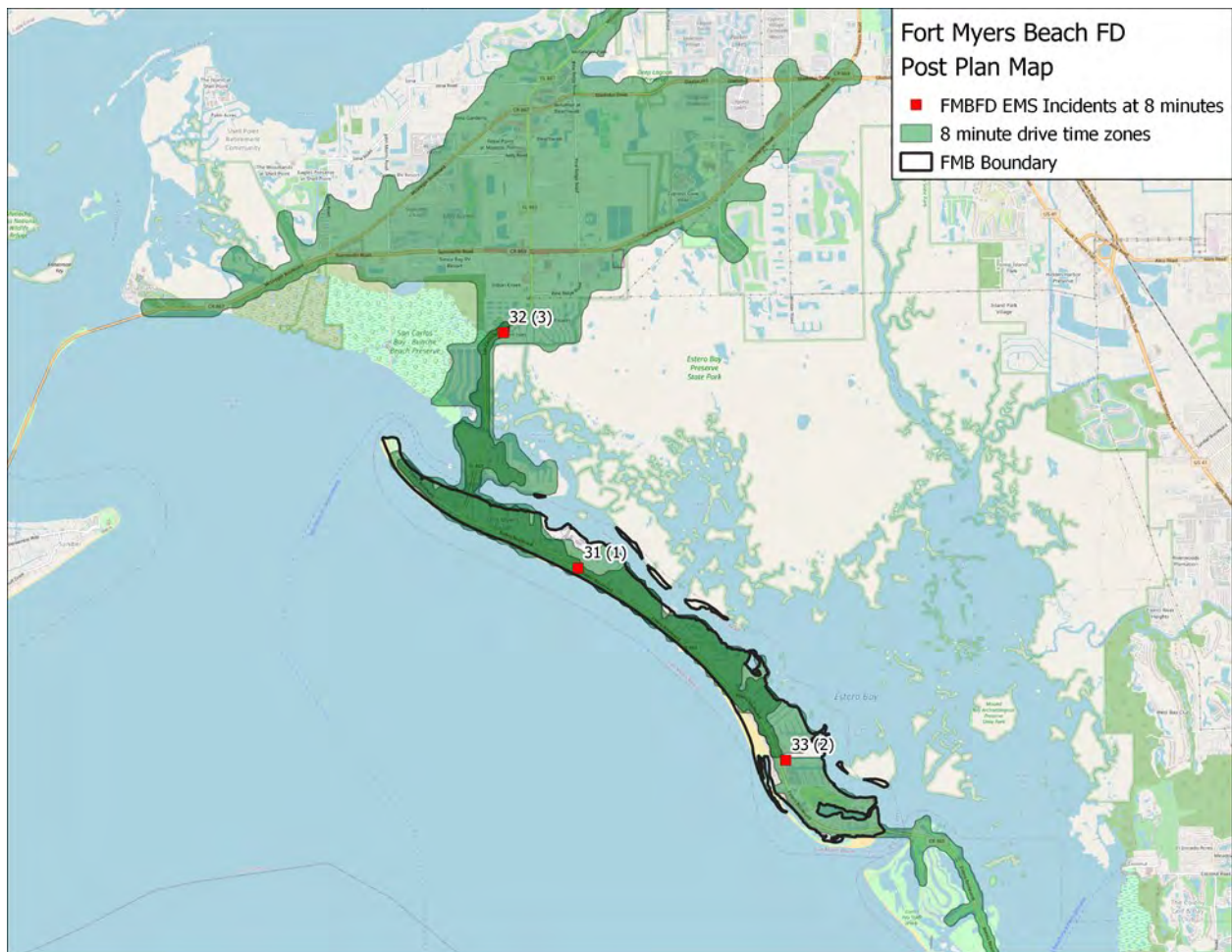
Rank	Station	Station Capture	Total Capture	Percent Capture
1	31	1,662	1,662	66.75%
2	33	437	2,099	84.30%
3	32	290	2,389	95.94%



**Rescue Unit Deployment**

Currently, the District deploys two Rescue (ambulances) that deploy from Stations 32 and 33. This is well aligned with the analysis for EMS incidents as well. Therefore, the department has provided the optimal deployment for a two-rescue configuration. However, like the move-up strategy, if only one rescue resource was left available, Station 31 would be best positioned to cover the greatest (71%) of the incidents within 8-minutes travel time. Results are presented below.

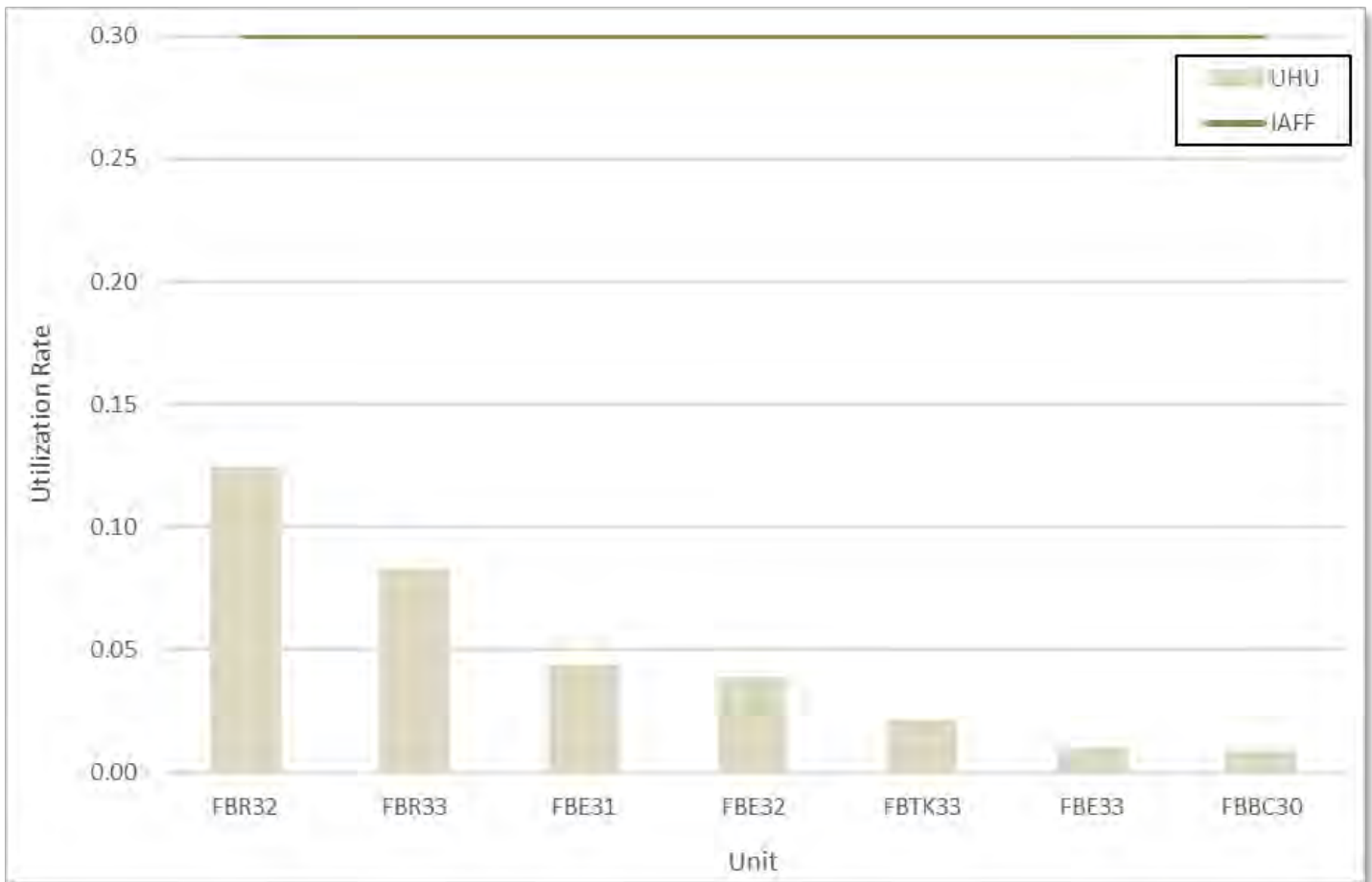
Rank	Station	Station Capture	Total Capture	Percent Capture
1	31	1,381	1,381	71.15%
2	33	277	1,658	85.42%
3	32	227	1,885	97.11%



Overall, for both the move-up policy and the rescue unit placement should follow a formal automated process through CAD/Dispatch as opposed to a manual process performed by the battalion chiefs.

### ***Workload Capacity—Reinvesting or Reallocating Resources***

The department is currently operating within the boundaries of nationally recommended best practices with respect to workload. Overall, the department is performing at less than or equal to 12% (0.12). The most utilized unit is the Rescue 32 at Station 32, at 0.12. Rescue 33 is the second most utilized unit at 8% (0.08). All other resources are less than 5% (0.05). At the current workload utilization rates, the department should have a limited impact on their level of readiness or system performance. *FITCH*'s recommendation is that workloads greater than 0.25 are not optimal on a 24-hour shift and should not exceed 0.30.





### ***Brown-Out Considerations***

Understanding the overall deployment capacity, the previous unit hour utilization analysis, and the GIS analyses, it is clear that some excess capacity exists within the system. However, under the current deployment, any reductions from the number of staffed stations would result in an incrementally slower response. If the District had to make fiscal adjustments at some point in the future, such as offsetting overtime utilization, the overall daily staffing could remain consistent, but adjust the minimum staffing threshold in one of two alternatives in no priority order.

First, the minimum staffing threshold (the threshold for which overtime is utilized to maintain the minimum staffing) is reduced by three FTEs to a minimum staffing of 11. In this manner, E31 could be taken out of service, or browned out, when staffing doesn't support it. Under this scenario, the system should be expected to perform at an 8-minute travel time as previously presented.

Alternatively, the minimum staffing threshold could be reduced by two FTEs to a minimum daily staffing of 12. In this manner, T33 and R33 could be cross-staffed with a minimum of three personnel. Truck 33 has a total UHU value of approximately 0.03 (3%) combined with E33. Therefore, Truck 33 is on calls approximately 43 minutes per day. The overall consideration of call concurrency and the ability for E31 to move up to Station 33 when needed, this is a reasonable method to entertain resource constraints when needed.

Again, all analyses suggest that the current resource allocations are appropriate and well-aligned with the risk and desired performance. This assessment for brown-out considerations are only offered in context of the necessity to accommodate fiscal considerations and it is acknowledged that they may reasonably impact performance.

### ***Effective Response Force Capabilities***

The effective response force capabilities were evaluated through two distinct lenses: restricted to District resources and the inclusion of the automatic aid resources identified by the District. The current station locations and staffing were utilized to assess the ability to achieve a 13-person ERF within the jurisdiction.

With the District's current staffing and the geographic barriers of the island, it is difficult to assemble a large ERF. Therefore, even at 18-minutes it is difficult to assemble 13 personnel to 90% of the jurisdiction. However, there is considerable benefit to the District by including the automatic aid capabilities as nearly 80% of the District can be covered with 13 people in 13 minutes travel time as compared to the only 22% of the jurisdiction with resources restricted to the District.

<b>Travel Time Objective</b>	<b>District Only</b>	<b>District and Automatic Aid</b>
8-Minute	0.26%	0.26%
10-Minute	10.49%	31.62%
13-Minute	21.95%	79.77%
15-Minute	37.42%	84.02%
18-Minute	71.19%	84.55%

Overall, the first due response time performance may be the primary policy focus when considering the relatively infrequent occurrence of working fires or other large event requiring an ERF of 13. Unlike municipal centers where the geography can afford multiple concentric stations responding to the same area, the linearity of the island geography creates significant impedance to assembling a typical ERF. Understanding that there is not a need for additional stations or resources at this time, the solution would be associated with a much

### ***Value of Automatic-Aid Agreements***

The fiscal reality of this solution demonstrates the excellent value and return on investment of the countywide automatic aid agreements that provide the District considerable depth for those high-risk but low frequency events that are very labor intensive. This is easily estimated as a multi-million equivalency in recurring personnel costs.

Therefore, it is recommended that the District continue to make every effort to remain a valued partner within the automatic aid and closest unit response environment with high fidelity.

## **Observations and Recommendations**

1. The District could improve the total response time in most instances with an incremental improvement in crew turnout time that is more closely aligned with best practices.
2. All three stations are required to meet desired response time performance.
3. The fire stations are strategically located and well-aligned with community demands for service.
4. The District is encouraged to consider a formalized move-up policy strategy that is integrated with CAD/911.
5. The current workload provides considerable capacity to absorb more work as the call volume and development increases prior to the need to add resources specifically due to workload.
6. If fiscal constraints require operational adjustments, the District is encouraged to consider the brown-out strategy developed to minimize the impact of operational reductions.
7. It is recommended that the District continue to make every effort to remain a valued partner within the automatic aid and closest unit response environment with high fidelity.