BLOOMFIELD FIRE DEPARTMENT

Serving Bloomfield Since 1883

Community Risk and Emergency Services Analysis

Standard of Cover

FIRE BLOOMFIELD N.J. DEPT.

Mission, Vision and Values Statement of the Bloomfield Fire Department

Mission Statement

The Bloomfield Fire Department exists to provide the highest level of public safety services to the great community that we serve. We are dedicated to saving lives and property through fire suppression, emergency medical response, disaster management, hazardous material response, fire prevention and education. Our members are committed to excellence, providing the highest level of service to those that we serve, treating everyone with respect regardless of race, color, creed, sex, age, lifestyle, national origin or economic status.

Vision Statement

The vision of the Bloomfield Fire Department is to become a leader in the fire service. We will attain this vision by continuing to provide the community we serve with the tools, programs and services necessary to create and ensure the highest standards of safety. We will provide continuing educational opportunities to our members, seek accreditation from the industry and nation's most respected accrediting agency, increase efficiency of services we provide as well as enhancing those services to include emergency medical response. We will also continue creating a high reliability organization by establishing an internal risk management program and maintain fiscal responsibility while upholding standards of excellence through a creative and carefully planned equipment replacement program.

Values Statement

The core values of the Bloomfield Fire Department establish a foundation of expectations for its members. Members of the Bloomfield Fire Department react instantly, unselfishly, compassionately and professionally in mitigating a wide array of emergency calls.

Integrity- Maintain the highest level of ethical standards. Instill community trust by demonstrating honesty and fairness in all our actions and decisions.

Citizenship- We advocate collaborative relationships with other governmental agencies. We maintain community through professional behaviors and open communication.

Respect- We honor the rights, beliefs, and differences of all our members and those within the community we serve. We value diversity in our department and within the township.

Teamwork- We are a team of dedicated and hard-working individuals that believe in professional development, continual improvement and working together towards common goals.

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I. Executive Summary

This document identifies the Bloomfield Fire Departments Critical Risk Assessment (CRA) and Standard of Cover (SOC) for the Township of Bloomfield, New Jersey. The purpose is to report and document the fire department's ability to respond to calls for emergency services. Detailed analysis of data for alarms from the past three years (2020-2022) was collected and considered. This analysis of data considered total alarms, concentration of alarms by day of week and time of day, total number of personnel responding to alarms, and geographical distribution of alarms by fire protection zones in the community.

Planning zones were created using the four existing first due response areas for the apparatus stationed at the fire stations located in the township. The number of moderate and high hazard properties in each of these four zones was considered. An informal concentration and distribution of fire department resources policy has been in effect for years. One of the purposes of this report was to formally establish a policy that is based on an analysis of factual data. The number of low, moderate, and high hazard occupancies in each of the four planning zones was considered, along with historical fire losses incurred in those zones.

The majority of the township's fire losses have historically occurred in detached wood frame dwellings, housing one to four families. These are generally rated in the moderate hazard class. A study of the necessary operational assignments to both initiate and to sustain an interior, offensive mode fire attack has been included in this report.

A cycle of emergency events sequence has been included. This illustrates the life cycle of an emergency, from a state of normalcy, through the event returning and back to a state of normalcy.

The total reflex time (response time) has been considered and charted. Reflex time is a measure of the total amount of time that elapses from the time a call for service is received at the dispatch center until the time emergency apparatus arrives at the scene of the emergency. Benchmark goals for response times to the various types of emergency incidents that this organization responds to have been established and adopted. These response time goals are based on the recommendations of the National Fire Protection Association (NFPA).

The reflex times have been tracked for three years (2019-2022) and will continue to be analyzed on an annual basis. This will serve two purposes; first it will help the department to measure its effectiveness in achieving service level goals. The second purpose is to serve the department as a method of judging if and when the distribution of resources needs to be adjusted to meet changing demands for service. The community served is changing due to recent redevelopment of previously industrial areas into multi- family housing complexes.

II. Acknowledgements

Acknowledgements

Fire Chief Louis Venezia, CPM

CRA/SOC Authors

Captain Carl Mercado, FO

CRA/SOC Contributors

Captain Timothy McCulloch
Captain David Duda
Captain Anthony Minervino
Deputy Chief Wojciech Masiak
Captain Richard Rannou
Captain Darren McCoy
Captain Joseph Callaros
FF Claudio Carchia
FF Steve Todaro
Captain David Parsons
FF William Todaro
FO Vincent Colavitti
Deputy Chief Joseph Colletta
Captain Steven Zurlo
Captain Jeffery Roberts
Captain Robert Griffin
Captain Joseph Critchley
FF Alexander Nieves
FF Oscar Morales
Captain Kevin Villegas
Fire Official Ronald Fusaro
Captain Patrick Fazzini
Deputy Chief Kevin Nelson
Captain Martin Kaczmarczyk
Deputy Chief Brian McDade
FF Mark Rosetti
Cotter Strategies, LLC
Bloomfield Dispatchers
Fire Sub-Code Official Vincent Colavitti
Donna Queli
Kim Beese
Cheryl Epple
Tracy Jones

III. Introduction

The following report serves as the Bloomfield Fire Department Standard of Cover document. The department was tasked with developing a Critical Risk Assessment and Standard of Cover in 2022. This document is another step in completing the department's goal of being fully accredited by the Commission of Fire Service Accreditation International. This document is a living document and is subject to be review and revision as needed.

One of the issues historically faced by emergency services is that of defining levels of service for the community it serves. The Center for Fire Accreditation International (CFAI) identifies this process as "deployment analysis," a written procedure which determines the distribution and concentration of fixed and mobile resources of an organization. The result of this process is documented as Standard of Cover. The purpose of completing such an analysis and document is to assist Bloomfield Fire Department in the deployment of a safe and effective response force for fire suppression, emergency medical response, disaster management, and hazardous materials response. In summary, the Standard of Cover consists of a rational, systematic way to describe deployment decisions regarding resources and the demand placed on them by the type of risk and historical needs of the community.

The creation of a Standard of Cover document requires that several areas be researched, studied, and evaluated. This report will begin with an overview of both the community of Bloomfield and the fire department. Following this overview, the document will discuss areas such as risk assessment, critical task analysis, department service level objectives, distribution, and concentration measures. Documentation of reliability studies and historical performance will be included. The department's desired performance objectives will conclude the report.

IV. History of Bloomfield Township

1666 - The Township of Bloomfield was first settled by British colonists from Connecticut and Dutch migrants from the Hudson Valley region of New York in May of 1666. At this time most of what is now Essex County, including the entire township, was part of Newark.

1679 - English landowners started to clear the land and began settling between the Second and Third Rivers but only for pastureland for grazing and creating paths to and from their plantations. They were fearful of being attacked by Indians and still lived in Newark for protection. Around 1695 Dutch settlers purchased a large tract of land in the township from the Leni Lenape Indians. Originally called Stone House Plains, the area was renamed Brookdale in 1873.

1702 - The Morris Plantation sawmill was established at Bay Avenue and Morris Place, Samuel Ward's and George Harris's wool mill also began operations. Around 1712, settlers started to build their houses in what is now Bloomfield Township before the American Revolution.

1812 - The township separated from Newark and was incorporated as the Township of Bloomfield. The name chosen was that of a local revolutionary war hero, General Joseph Bloomfield. The area of the original township was 20.5 square miles. However, through the following decades amid squabbles with several other communities, separate municipalities were split off. Today the township has an area of 5.4 square miles.

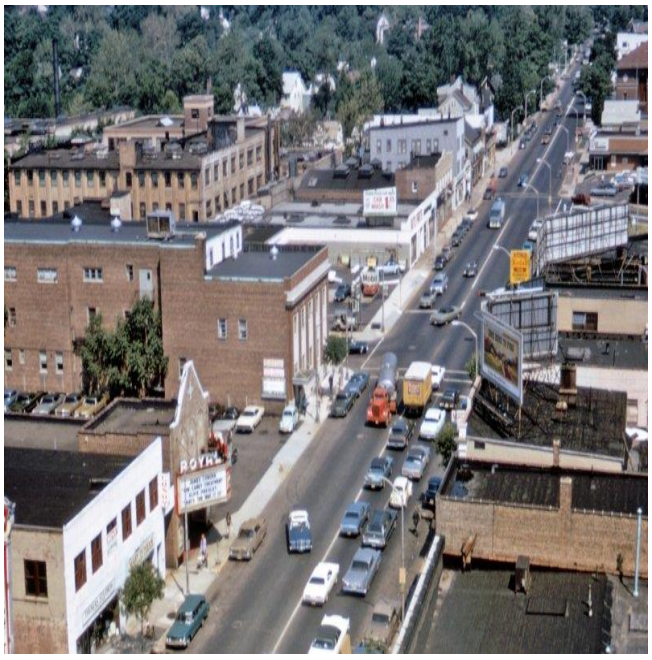
1824 - The opening of the Morris Canal gave a huge boost in industrial growth for Bloomfield as the area had become a commercial center. The town consisted of 4,309 residents and contained numerous textile mills and factories along the canal. In the late 1800's, to provide better transportation services, two different railroads built rail lines that connected the township's industries with the then expanding national rail network. The first newspaper was founded in 1872. In this era many new immigrants from Italy, Poland, and Germany arrived to work in the expanding industries located in the township.

1912 - The town celebrated its centennial, Bloomfield had 45 industries with a population of 15,070. In 1920 the town's population reached 22,019 residents with 85 industries producing goods such as organs, light bulbs, safety pins and silk stockings. In 1940 the township continued growing as the population of the township reached 41,600. During World War II, Bloomfield's numerous factories were converted from civilian manufacturing to produce vital war materials.

1962 - At its sesquicentennial celebration, the population was over 50,000 residents, mainly due to residential development, such as replacing farmland and constructing single family housing and new

apartment complexes. This growth was simulated by the construction of highways and good access to mass transportation. The town benefited from the enterprising efforts of heavy industry, light industry, retail establishments, and professional and commercial services.

2020 - Today the population of the township is 53,105. Located in Essex County in the northeast section of New Jersey in a densely populated section of the country located approximately 10 miles from Midtown Manhattan, New York. All the heavy industries that once operated in the township are now gone and these former land uses have been redeveloped into commercial, retail, multi-family housing developments and other residential uses. These redevelopments have been partially driven by the presence of several commuter services with direct access into both downtown Newark and Midtown Manhattan via NJ Transit train service as well as the several direct commuter bus lines. Redevelopment is also being spurred by a major limited access highway, the Garden State Parkway that bisects the township and runs the length of the state (north to south) providing convenient highway access for township commuters.
The township is also home to Bloomfield College. Founded in 1868, the campus of this small 1500-student liberal arts college occupies approximately 11 acres in the downtown area. Most students are commuters; however, there are several dorms for students that wish to live on campus.



(Left) Frederick, B., Jean, K., Mark, S. (2001). *Images of America Bloomfield*. Arcadia Publishing.
(Right) Rosetti, M, (2023). BFD

V. Legally Established

March 23, 1812, the township separated from Newark and was incorporated as the Township of Bloomfield. The area of the township is 5.3 square miles.

The Fire Department of Bloomfield, New Jersey operates under the authority granted to it by the mayor and township council, the Township Code Chapter 5, Article 13, Section 5-74 and 5-75, and Article 22, Section 22-106 and 22-107. During the annual budget preparation and review process the Mayor and Council approved the fire department's programs, priorities, and structure.

The Township of Bloomfield is governed by a Mayor and Council form of government. The Township Council consists of the Mayor and three Council Members at large and three Council Members elected by wards, one from each of the three wards. All elected members serve three-year terms.

A Township Administrator is appointed by the Mayor and Council. The Administrator is responsible for the preparation of the township budget and supervises the administration of all departments, offices, and agencies of the township.

Mayor

1st Ward

2nd Ward

3rd Ward

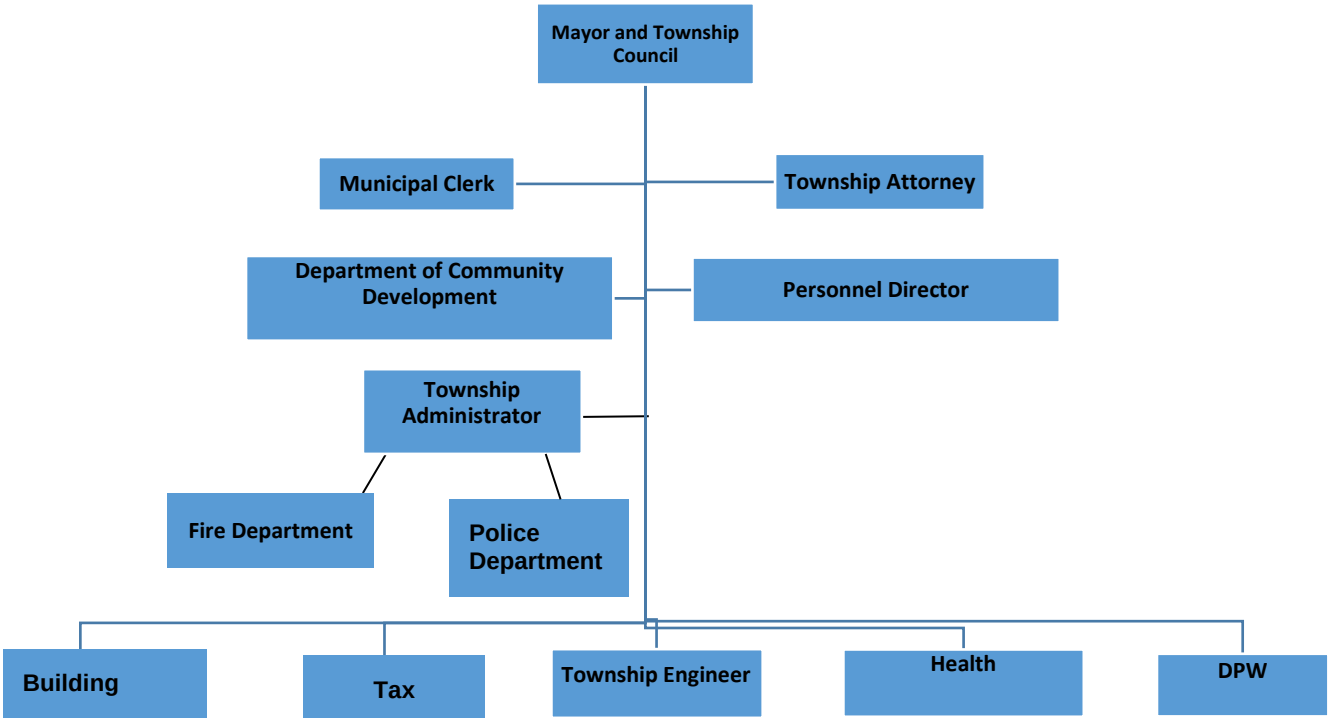
Council At Large

Council At Large

Council At Large

Township Administrator

VI. Organization Chart

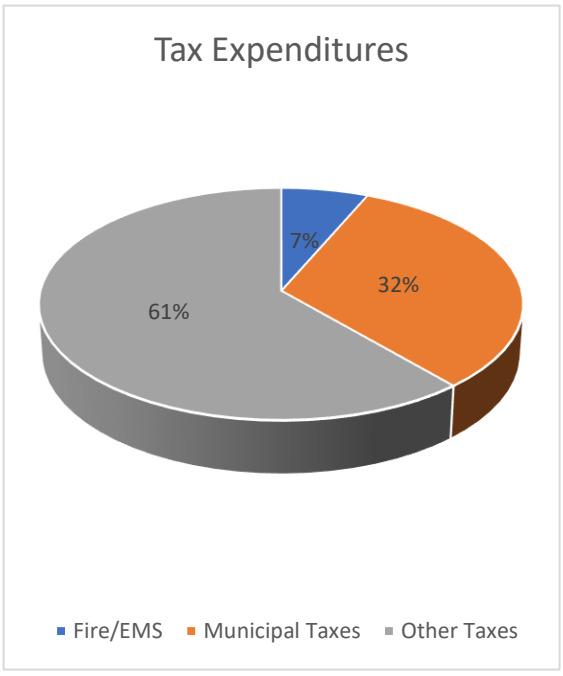


VII. Funding

The Mayor and Town Council (AHJ) have given the Fire Chief the authority to conduct the planning, management, and operation of the Fire Department through the Code of the Township. The Fire Chief is directed, by ordinance, to be responsible for creating an annual budget and presenting that document to the AHJ for review and approval.

New Jersey budgetary regulations require conformance with OCBOA (Other Comprehensive Basis of Accounting). The New Jersey Department of Community Affairs, Division of Local Government Services publishes "Best Practices" including a standard budget format that municipalities must follow regarding local budgets. All local budgets must be posted to the local government's website. The operating fire department budget comes from the general fund. Larger purchases are requested by the Fire Chief in the annual capital budget requests. i.e., 2019- $900,000 for a new ladder truck.

The average property tax per household is $9,800. The total amount of tax paid per household for our local career Fire and EMS professionals is: $639.02 ($1.75 per day). The chart below page displays how little of the average total taxes paid go to support Fire and EMS professionals who are there for safety and protection 24 hours per day, 7 days per week, 365 days of the year. While staffing cuts were implemented in 1998, the deployment levels have increased since 2019 to have Engine 1 in service more often.



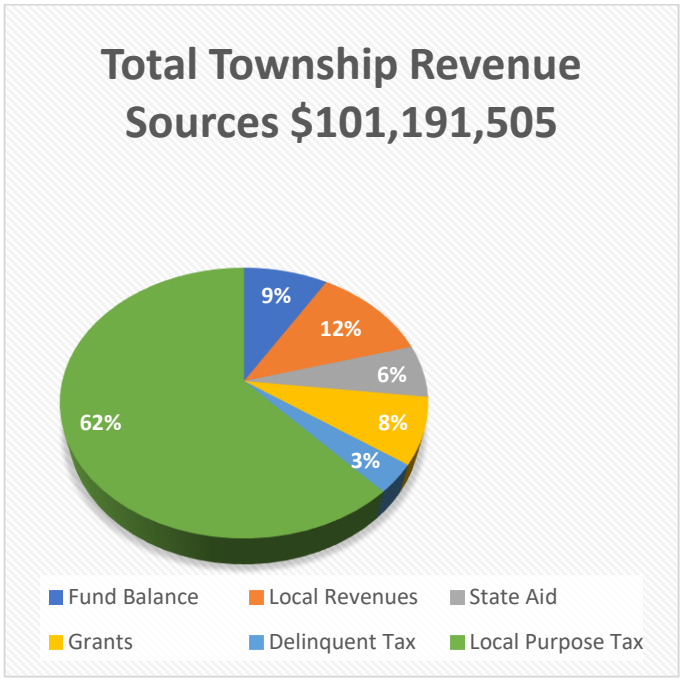


Fig. 2

VIII. Bloomfield Fire Department History

On June 27, 1883, several concerned citizens of Bloomfield took steps to protect their lives and property by organizing the Bloomfield Fire Association. This was done after a series of memorable fires during the winter of 1882-1883 that destroyed many homes, causing insurance rates in the township to increase sharply. The final blow was a disastrous fire which destroyed the old John Archdeacon's Hotel which stood at the northeast corner of Bloomfield Avenue and Washington Street and threatened to burn down the entire business district. Men and equipment were summoned from Newark, but their late arrival made it obvious that Bloomfield needed its own fire department. Citizens and businessmen raised $1600 for a horse drawn fire wagon and contracts were drawn up for the purchase of a hook & ladder truck and a bell tower to alert the volunteer members. They also contracted with the Orange Water Company to construct 10 miles of water mains with 96 fire hydrants. Essex Hook and Ladder Company No. 1 was organized on June 27, 1883, with 25 members of the Bloomfield Fire Association, and met in Wilde's Hall to form an active truck company. About 6 weeks later, Bloomfield's first fire truck, a horse drawn Hook & Ladder arrived. November 2, 1883, another group of citizens organized Bloomfield Hose Company No. 1 and the township provided a "jumper," a horse drawn hose reel and some hose.

In May 1885, the Bloomfield Fire Association disbanded, and the township took over responsibility for the Essex Hook and Ladder Company and the new Phoenix Hose Company. As the township fire companies expanded, a chain of command was created with the appointment of the first Fire Chief Engineer Andrew Marsh.

Active Hose Company No. 2 was organized in May 1885, Excelsior Hose Company No. 3 was organized in November 1886. Montgomery Hose Company No. 4 was organized in November 1904 and was converted to the first motorized apparatus in 1924. Finally in December 1911 Brookdale Hose Company 5 was established which absorbed Montgomery Hose Company No. 4. In 1938, the Bloomfield Fire Department converted to all career staff.

At the turn of the century, members appealed to the town for a Gamewell electric fire alarm system that stayed in service until 2012.

Initiatives completed since the last accreditation review in 2010 include:

2015: Pierce Enforcer Pumper placed in service.

2016: Chevy Tahoe (Car 30) placed in service.

2017: Implemented the Emergency Reporting fire incident reporting and records management system.

2018: Upgraded the departments radio system to be compatible with the NJICS Trunking System.

2018: Implemented the Child Car Seat Safety Installation Program.

2019: E-One Typhoon Rescue Pumper placed in service.

2019: Implemented the 1st Responder Emergency Medical response program.

2020: Implemented mobile data terminal capabilities in all response apparatus.

2021: Developed and implemented an Automatic Aid agreement between fire departments of Belleville, Nutley, and Bloomfield

2022: E-One Metro 100-foot aerial ladder apparatus placed in service

IX. Service Area Boundaries

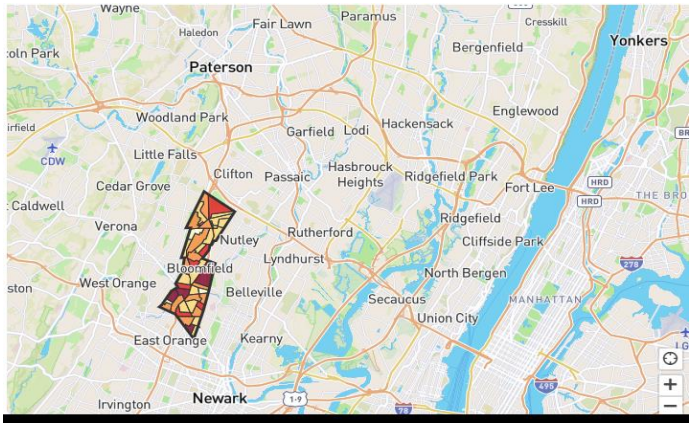


Fig. 3

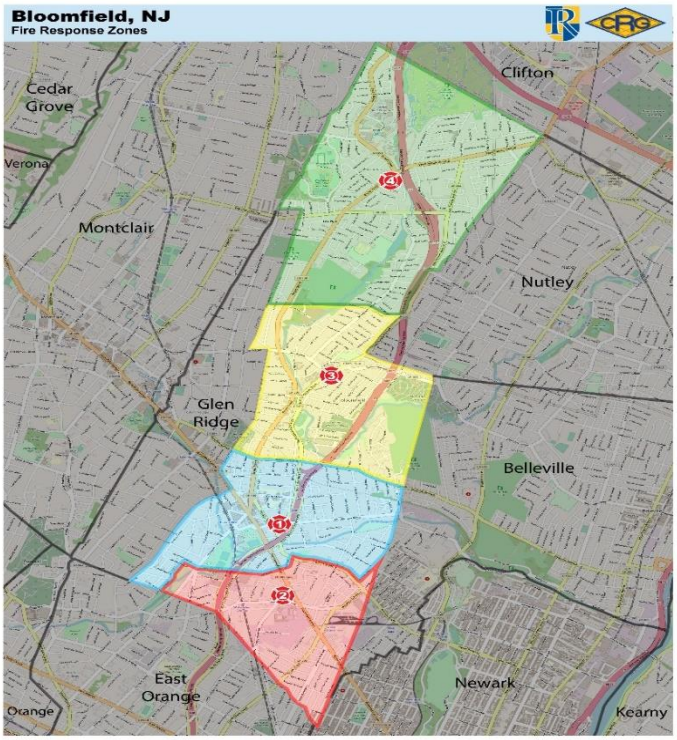


Fig. 4

The Township of Bloomfield is an urban community situated in the northeastern region of the State of New Jersey, 11miles from Midtown Manhattan, New York. The Township is mostly surrounded by other urban municipalities that share services with Bloomfield.

Fire Management Zones

For the purposes of analysis and planning, the township is divided into four fire management zones (FMZ) and automatic aid zones to two surrounding urban towns, Nutley and Belleville. These FMZ are defined by the boundaries of the existing first due response areas for the four engine companies deployed from four fire stations distributed throughout the township. The department also provides mutual aid resources to any Essex County town, or other areas as defined by the state mutual aid plan.

Garden State Parkway (GSP)

The GSP multi lane highway, known as the Garden State Parkway, which runs the length of the state (north to south), provides convenient highway access for commuters. BFD provides fire suppression, EMS, HAZMAT, extrication, and general cleanup for incidents on the 5.3 linear miles of highway located in the township.

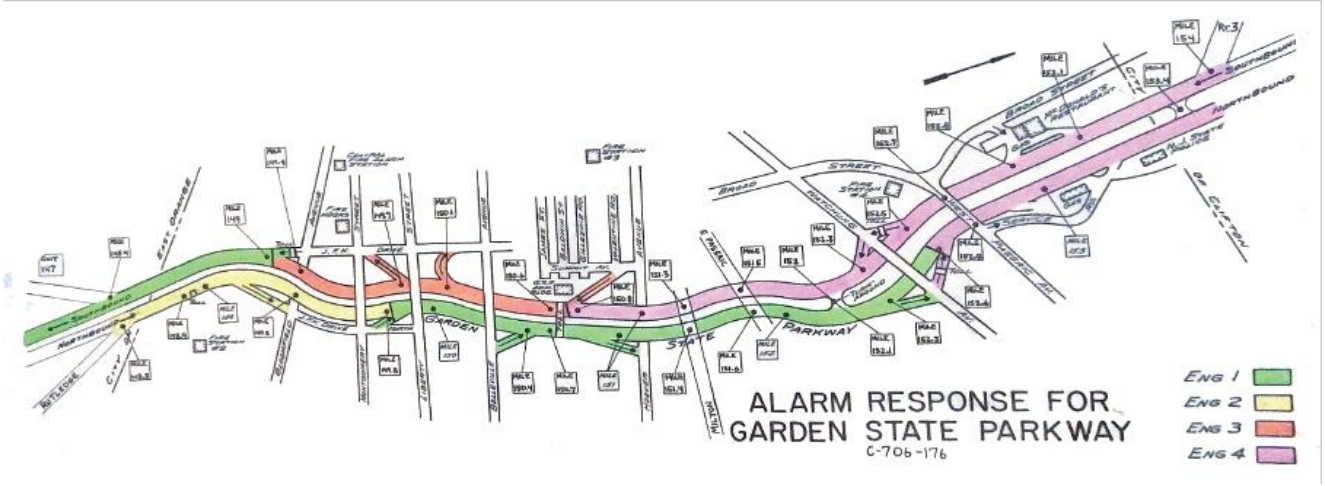


Fig. 5

Automatic/Mutual Aid

Government organizations are continually seeking best practices for effectiveness and efficiency in the delivery of services. The sharing of regional fire assets between municipalities is a good example of such shared services agreements. The Bloomfield Fire Department has a history of providing fire equipment and resources to neighboring communities in times of need. During civil disturbances in the 1960s, Bloomfield fire units were sent into the City of Newark. The department also provided service to NYC during the aftermath of 9/11. Today, the department participates in the Essex County Fire Mutual Aid System which is governed by formalized agreements between all county municipalities that are regulated through the state and federal governments and N.J.A.C. Title 52 Chapter 75A that is specific to fire mutual aid requests.

Automatic Aid- In 2021, the Bloomfield Fire Department initiated an Automatic Aid agreement that provides for the response of apparatus and personnel to certain first alarm response assignments within the Townships of Belleville, Bloomfield, and Nutley. These additional personnel are in addition to each fire department's current staffing and are not meant to be used for the reduction or replacement of any participating department's total operational staffing. The intent of the agreement is to provide for enhanced protection of civilian life and property while enhancing firefighter safety and effectiveness.

Mutual Aid- The Essex County Fire Resource and Mutual Aid Guide outlines the recommended mutual aid response assignments for this agency up to a 9th alarm or equivalent incident. The county mutual aid plan provides written and established guidelines for County Fire Coordinators and municipal Fire Dispatchers to follow. Unit availability may be affected by the needs of a specific incident or concurrent incidents and assignments may be modified as needed. This guide is reviewed and updated annually per state requirements.

X. Documentation of Area Characteristics

Natural Area Features

Geography

The Township of Bloomfield is located at 40.809128°N latitude & 74.187155°W longitude in the northeastern portion of the State of New Jersey. The township is in the northeastern portion of Essex County and is considered part of the New York metropolitan area. The 5.32 square mile community is bordered by the municipalities of Belleville, East Orange, Glen Ridge, Montclair, Newark and Nutley in Essex County; and Clifton in Passaic County. There are several unincorporated communities within the township including Brookdale in the north, and Watsessing and Ampere North in the southern portion of the township.

Topography

Bloomfield Township is located on gradually sloped terrain starting from the base of the eastern side of Eagle Rock Mountain in West Orange two miles to the west. Two waterways, the Second and Third Rivers, pass through the township.

The Second River, also known as the Watsessing River, flows east from its source in West Orange and passes through Orange and East Orange before entering the community at the southern border with East Orange. The stream then flows northeasterly across the southern portion of the township passing through Watsessing Park and exiting east into Belleville before emptying into the Passaic River.

The Third River, also known as the Yantecaw River, originates at the Great Notch Reservoir in Woodland Park, and runs south through the towns of Little Falls, Clifton, and Montclair. The waterway then loops north back into Clifton before entering Bloomfield at the northern border with Clifton in the Upper Montclair Country Club. The stream is joined by several small tributaries as it flows south through the Brookdale area while paralleling the Garden State Parkway. It flows into Clarks Pond near the athletic field behind Bloomfield Middle School and continues south as it flows through Foley Field before turning north flowing under the Garden State Parkway. Continuing in a northerly direction, the stream then turns east across the northern portion of the township before entering Nutley. The stream passes through multiple parks in Nutley before it empties into the Passaic River in Clifton just north of the border with Nutley.

When there is a heavy rain fall certain areas of Bloomfield historically experience flooding however, in 2021 a new 4.2-acre wetland/water retention area was developed and connected hydrologically to the Third River, Spring Brook and a former floodplain that will store and slowly release up to ten-million gallons of floodwater.

Bloomfield Township is well developed with some roads that are still the width of when they were first paved. This results in tighter streets, longer travel time and difficulty with access on weekends and after working hours.

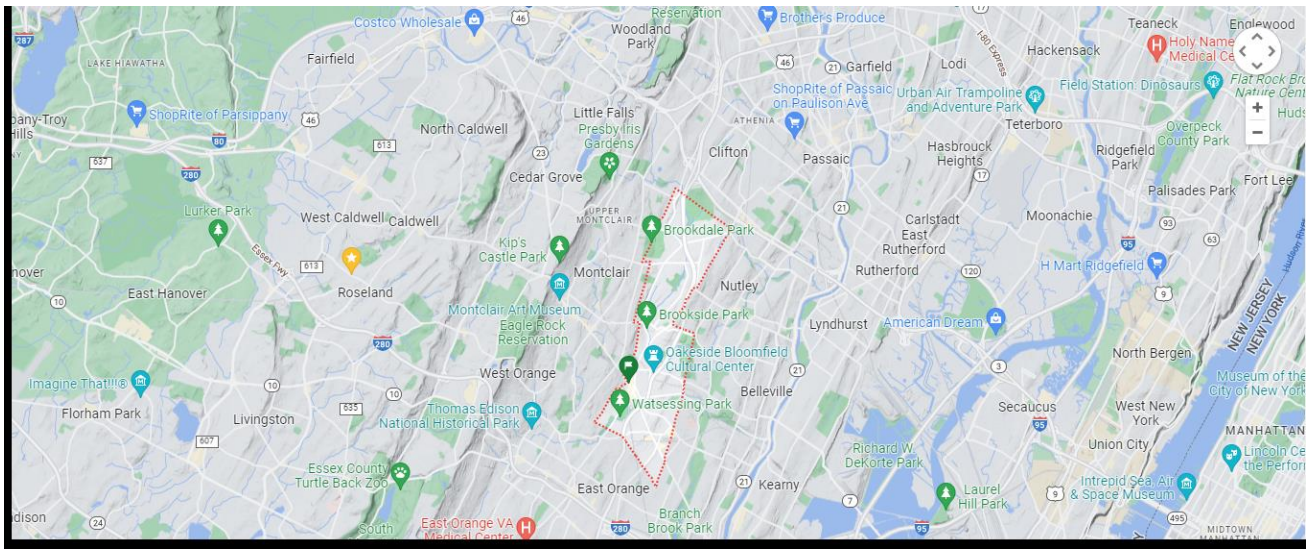
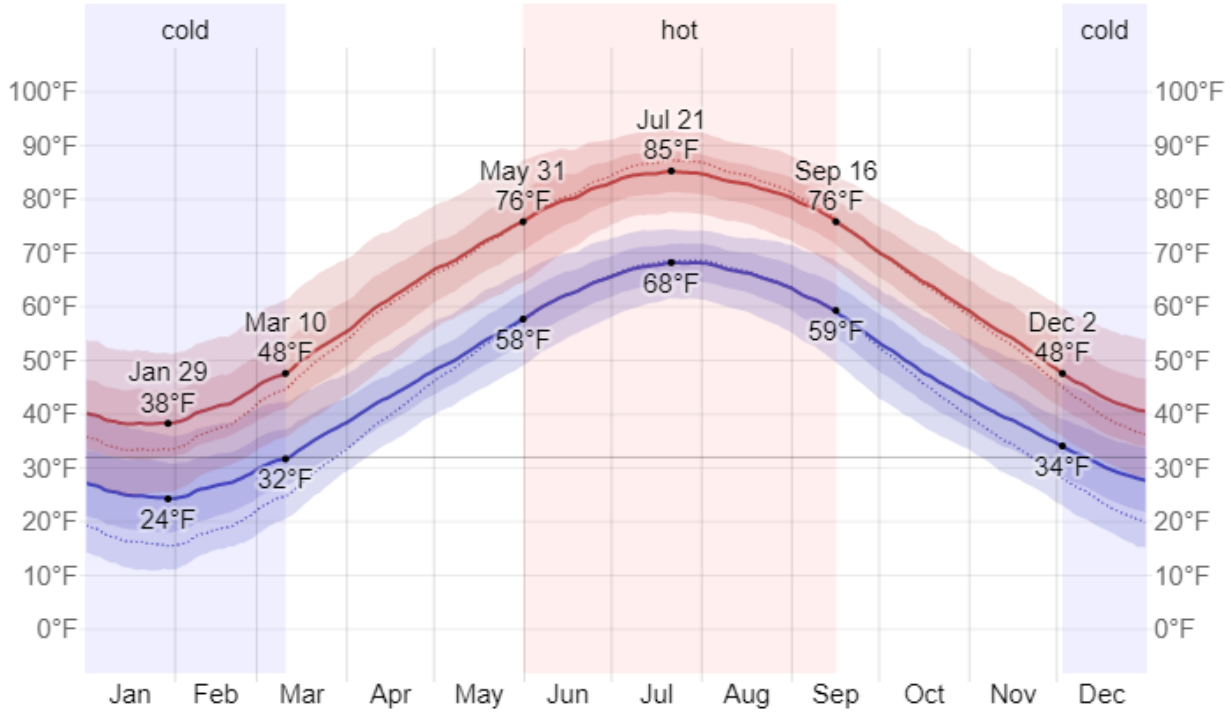


Fig. 6

Climate

Bloomfield Township has four climates with summers experiencing very high temperatures and high humidity during the season that usually lasts about 3.5 months with an average temperature above 75°F. Winters experience low temperatures and low humidity during the season that lasts about 3 months with an average low temperature of 25°F. The average yearly rain fall is about 24.35 inches. Rainfall yearly totals can be substantially higher as the area often experiences tropical storms, hurricane remnants and northeastern storms that pass along the Mid-Atlantic coast. Potential for swift water rescue operations increased during these events. Even though the area does not frequently

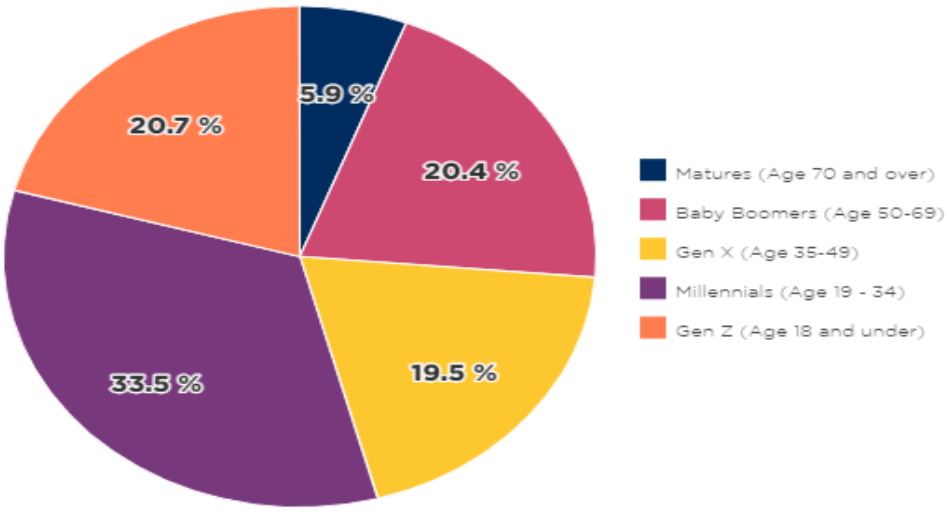
receive direct impact hurricanes, the area has the potential for impact from high volume of precipitation that may be received during these events. The average snowfall is 31.5 inches.



Human Related Characteristics

The Township of Bloomfield consists of 12,589 properties, with a total of 15,845 buildings located in a 5.32 square mile area. The building density per square mile is 2,990. The township is in the northeast section of New Jersey, approximately 10 miles from Midtown Manhattan, New York.
The population of the township according to the 2020 U.S. Census was 53,105. The population density of the township is 10,020 people per square mile. Since the 2010 census this was a 12% increase in population growth. If this current trend in population growth continues, the 2030 estimated population will be 59,477 making a population density of 11,222 people per square mile.
Bloomfield has a very diverse population; the 2020 U.S. Census shows the township's racial makeup was 39.2% white, 29% Hispanic, 8.6% Asian, and 18.8% black. The percentage of residents that are foreign born is 23.9%.

Generations

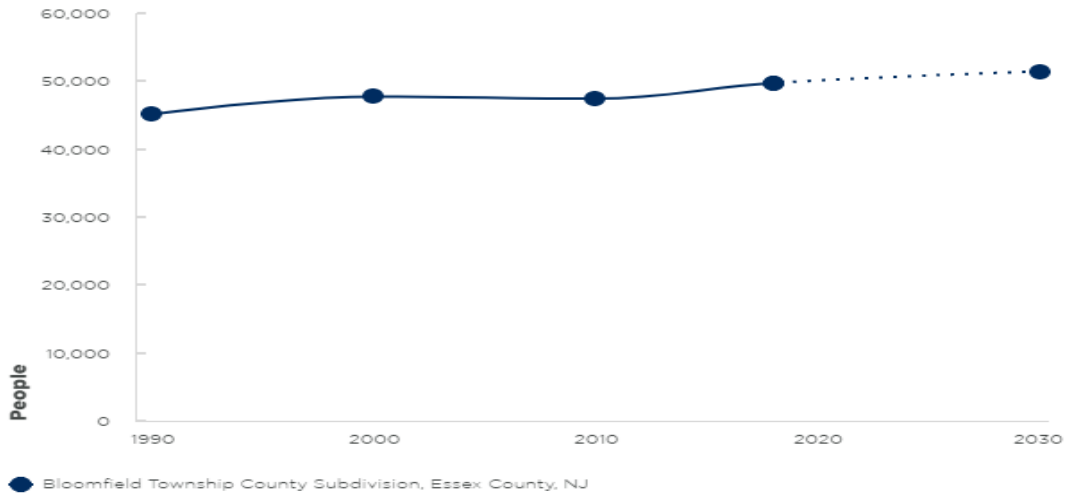


Bloomfield Township County Subdivision, Essex County, NJ

Sources: US Census Bureau ACS 5-year 2016-2020

Fig. 7

Population Change Over Time



Sources: US Census Bureau; US Census Bureau ACS 5-year

Fig. 8

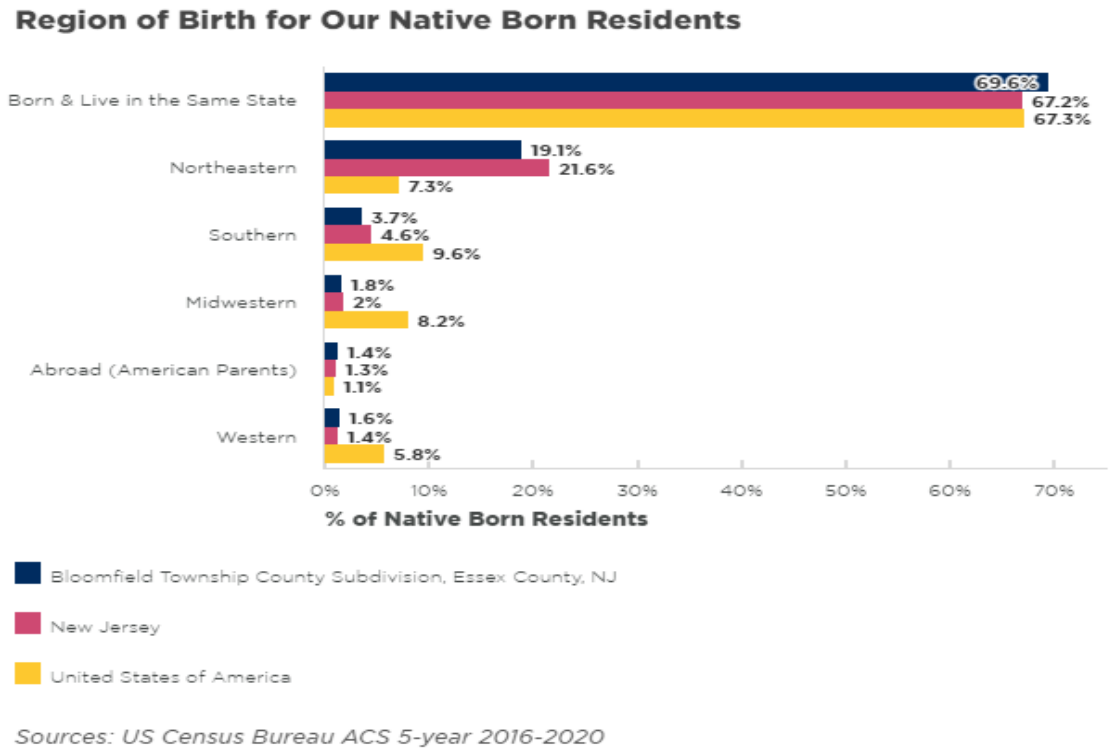


Fig. 9

Economics and Housing

The average medium household income in Bloomfield is $81,978 and the average household size is 2.75 persons. This compares to the state average medium household income of $89,926 and state average household size of 2.66 persons. The average unemployment rate in the township is 6.8%. 40.6% of residents are in white collar professions, 53% have at least an undergraduate degree. There are 3,780 commercial properties in the township. There are 13,150 residential properties, with a total of 19,912 housing units located in the 5.32 square mile community. The building/housing density per square mile is 3,742 units. Occupied housing consists of 52% owned by the residents and 48% leased or rented. Due to the development of large blocks of residential housing during the pre-World War II era, many structures in Bloomfield are of older balloon and braced wood frame construction. Some structures have been renovated or have had additions built using newer lightweight wood truss components. In 1992, state building codes made it mandatory that any building using any type occupancy, except one-

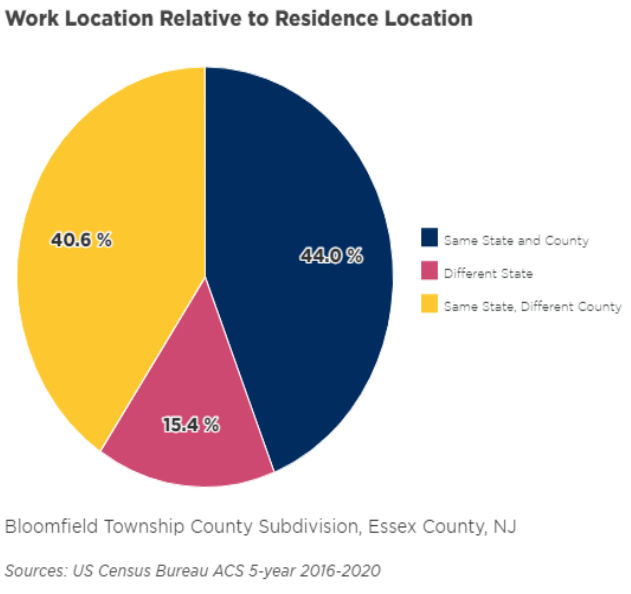


Fig. 10

and two-family dwellings, using truss components in the structural frame are required to display a truss recognition placard on the exterior of the building. The intent of the regulation is to alert fire department personnel of the presence of truss construction in the structure. Truss building components fail more quickly than conventional building components when exposed to fire.

Human-Made Characteristics

Infrastructure

Development

In 1812, Bloomfield separated from the City of Newark and established itself as a sperate Township. Most of the developed land was located at the south end of town, while land in the north end was mainly used for grazing and farmland. Throughout the late 19th century and first half of the 20th century the township contained a significant amount of heavy industry. In the 20th century, General Electric, Westinghouse and Schering built major manufacturing plants in the southern end of the township. After World War I, farms in the Brookdale section at the northern end of town were developed into residential neighborhoods and supporting services with large tracts of wood frame dwellings and garden-style apartments. Substantial population growth continued into the 1950s. During World War II, while many Bloomfield men served in the Armed Forces, Bloomfield's farms and factories, largely staffed by women, supported the war effort. In the decades after the war, the township's industrial base steadily shut down with stricter environmental regulations, rising labor costs, and growing foreign competition. These influences, as well as construction of the Garden State Parkway, further drove urban decay and related population turnover and stagnation through the latter part of the 20th century.

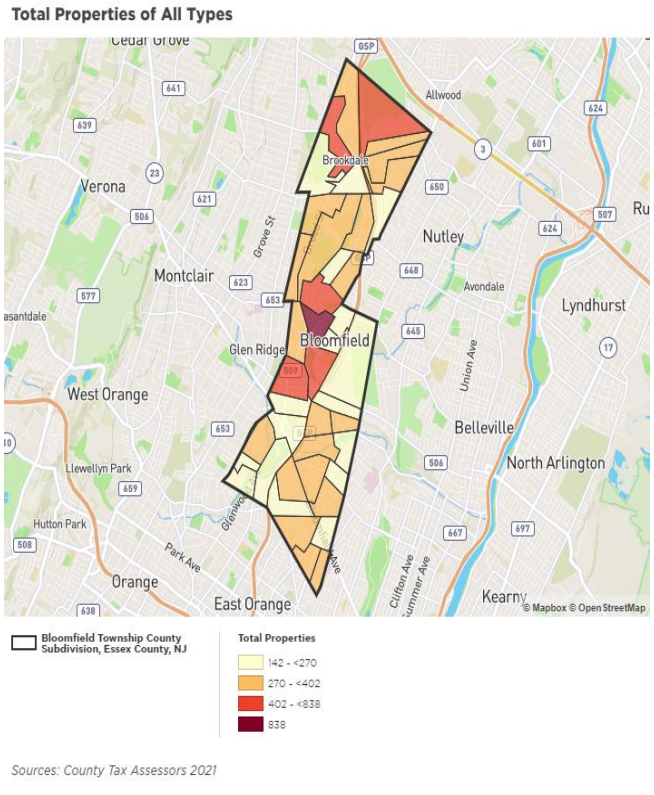


Fig. 11

In the early 21st century, redevelopment of blighted and underutilized properties has further shifted Bloomfield towards becoming a primarily residential municipality. The sites of former industrial properties have been redeveloped into commercial, retail, or residential uses. Several of these sites have been repurposed into large mixed use high density multi-family complexes with restaurants and shops on the ground floors. Modeling the transit village concept, these redevelopments have been driven by the availability of direct commuter rail service into both downtown Newark and Midtown Manhattan via NJ Transit train service and the Newark Light Rail system from several stations located in the township. Redevelopment has been further encouraged by the accessibility to commuter highways. The Garden State Parkway, a multi-lane limited access highway that runs the length of the state from

north to south, provides convenient highway access for local commuters. The roadway runs the length of the township with access points located in the northern, central, and southern portions of the community. The township is also home to Bloomfield College, a small 1,500-student liberal arts college founded in 1868. The college campus occupies approximately 11 acres in the downtown area. Most students are commuters; however, there are three dorms for students that wish to live on campus.

(Top) Factory Westinghouse- BFD

(Below) The Grove Transit Village- BFD

Transit Village Districts

Located directly across from or within easy walking distance to three commuter rail stations located in the southern end of the township, several transit village concept districts have been developed on land formerly occupied by industries and vacant properties.

Significant Business Districts

There are three major business districts in the township:

A concentration of shops and businesses located in the Brookdale area at the northern end of the township near the intersection Watchung Avenue and Broad Street features a two-block area of low-rise commercial occupancies surrounded by large tracts of residential dwellings. Little new development or redevelopment has occurred in the Brookdale area.

The downtown area near Bloomfield Avenue and Broad Street in the southcentral portion of township contains several blocks of low and mid-rise commercial, mercantile and residential developments. Several very large transit village concept complexes have been recently constructed in this area due to the proximity of the Bloomfield NJ Transit rail station.

In the Watsessing area in the southern end of the township, several high-density residential housing complexes have been recently completed of former industrial properties. This area features a recently constructed supermarket and shops along Broad Street and Watsessing Avenue and an older mercantile section of shops at the intersection of Dodd Street and Watsessing Avenue. This area has access to tow transit stops, one on the west side at the Watsessing NJ Transit rail station and a second located on the east end at the Grove Street station of the Newark light Rail system.

Major Projects

A number of redevelopment projects have recently been completed or are in the construction or planning stages:

- Avalon Bloomfield Station (transit village)- 300 Glenwood Avenue- 4 -story residential/commercial lightweight wood frame pedestal construction - 672 units, 1,320,000 sq. ft. of living space with businesses on the ground floor. Completed in 2015.
- Oakes Pond (transit village) 440 Memorial Parkway- 4-story residential lightweight wood frame pedestal construction - 390 units, 588,240 sq. ft. of living space with parking garages on the ground floor. Completed in 2016.
- The Grove Crossing (transit village) - 192 Bloomfield Avenue – 4-story residential lightweight wood frame construction - 552 units, 569,088 sq. ft. of living space. Completed in 2019.
- The Grove at Watsessing (transit village) - Arlington Avenue – 4-story residential lightweight wood frame construction - 360 units, 430,920 sq. ft. of living space. Completed in 2022.
- Six Points at Bloomfield Station (transit village)- 30 Farrand Street- 6-story lightweight wood frame pedestal construction - 176 units, 301,000 sq. ft. of living space. Completed in 2021.
- The Green at Bloomfield (transit village)- 56 Broad Street- 5-story residential/commercial lightweight wood frame construction - 142 units, 180,504 sq. ft. of living space with businesses on the ground floor. Completed in 2021.
- Heritage Village - 390 Franklin Street- 5-story residential fire resistive construction senior citizen affordable housing - 82 units, 46,080 sq. ft. Of living space. Completed in 2018.
- 44 Park Street- 5-story residential/commercial lightweight wood frame pedestal construction - 52 units, 48,576 sq. ft. of living space with businesses and parking on the ground floor. Completed in 2017.
- 110 Washington Street (transit village) - 4-story residential lightweight wood frame pedestal construction - 170 units, 209,554 sq. ft. of living space with parking on the ground floor. Completion is expected in 2023.
- 616 Bloomfield Avenue (transit village) (former site of Royal Theater) - 5-story residential/commercial lightweight wood frame pedestal construction - 224 units, 385,604 sq. ft. of living space with businesses on ground floor. Expected to begin construction in 2023.
- 660 Bloomfield Avenue – 5-story residential/commercial lightweight non-combustible construction - 21 units, 33,066 sq. ft. of living space with businesses on ground floor. Completion expected in 2023.
- 11-35 Broad Street (transit village) – Construction type unknown - 124 units 40,000 sq ft. of living space with businesses on ground floor. In planning stage, completion projected in 2025.

Community Resources

Public Schools

Schools	Address	Grades	Approximate Enrollment (2021)
Berkeley Elementary	351 Bloomfield Ave	K-6	470
Brookdale Elementary	1230 Broad St	K-6	380
Carteret Elementary	158 Grove St	K-6	380
Demarest Elementary	485 Broughton Ave	K-6	480
Fairview Elementary	376 Berkeley Ave	K-6	560
Forest Glen School	287 Davey St	Special education	250
Franklin Elementary	85 Curtis St	k-6	350
Bloomfield Middle School	60 Huck Rd	7-8	940
Oak View Elementary	150 Garrabrant Ave	K-6	380
Bloomfield High School	160 Broad St	9-12	1,979
Watsessing Elementary	71 Prospect St	K-6	330

Private Schools

Schools	Address	Grades	Approximate Enrollment
Bloomfield College	Liberty St Campus	Undergraduate Studies	1,300
St. Thomas Catholic School	60 Byrd St	K-8	220
Essex County Newark Technical School	209 Franklin St	9-12	720

City Buildings

Building Name	Address

Municipal Building, Police Department & Civil Defense Building	1 Municipal Plaza
Civic Center	84 Broad Street
Public Library	90 Broad Street
Department of Public Works Maintenance Building	230 Grove Street
Animal Shelter	61 Bukowski Place
Board of Education Administration Building	155 Broad Street
Board of Education Maintenance Garage	60 Pilch Street
Bloomfield Parking Authority	23 Lackawanna Place

Government Buildings

Building Name	**Address**
New Jersey Soil Remediation	80 Orchard Street
Women's Home	57 Hazelwood Avenue
Fellowship house	34 Monroe Place

Dependent Care Facilities

Facility Name	**Address**
Job Haines Home	160 Bloomfield Avenue
The ARC of Essex County	5 Linden Avenue
The ARC of Essex County	24 Clarendon Place
Easter Seals Group Home	34 John Street
Easter Seals Group Home	2 Montgomery Street

Historical Sites

Building Name	Address

Collins House	Behind 400 Hoover Avenue

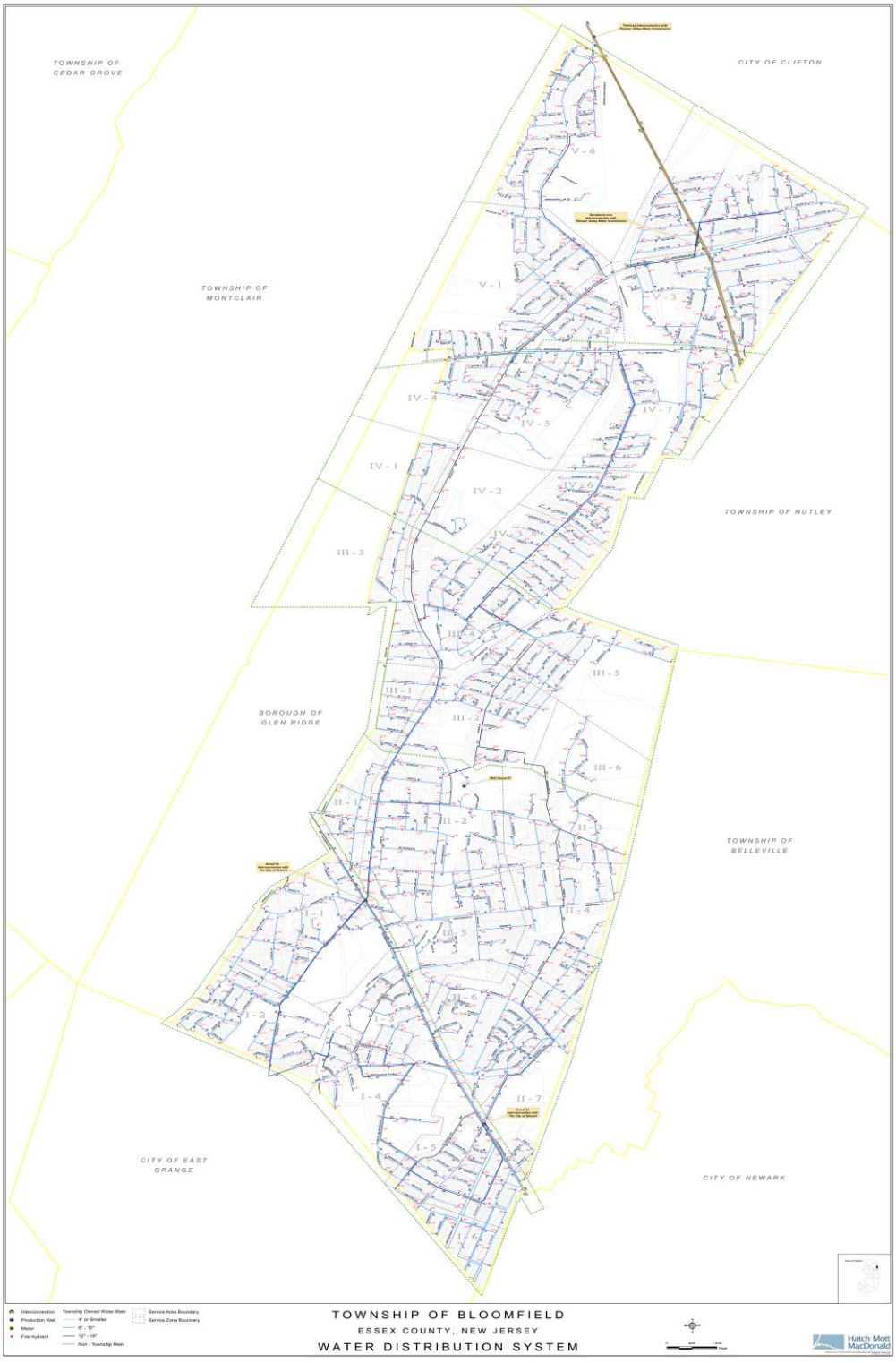


Fig. 12

Services

Water Supply Systems

Public water service for the township of Bloomfield is supplied by the City of Newark Department of Water and Sewer Utilities. During times of need or when a water emergency occurs, the township can alternatively be supplied by Passaic Valley Water Commission through cross connection valves in the system. There are currently 1,208 well-spaced hydrants in the township of Bloomfield. The Fire Department performs the majority of maintenance of the fire hydrants and the Bloomfield Water Department manages the replacements of fire hydrants.

Electrical Systems

Electrical service to the township is provided by Public Service Electric & Gas Company (PSE&G) The company has recently upgraded its underground power lines on Bloomfield Avenue and Broad Street in the central business district. In 2021, upgraded service poles were installed on the north end of Broad Street. A high voltage power line right-of-way traverses a corner of the township near the northern border with Nutley and Clifton. (Shown as the red line in the graphic to the right). The township also has a large PSE&G electric substation on Washington Street near Lackawanna Street along the NJ Transit rail line.

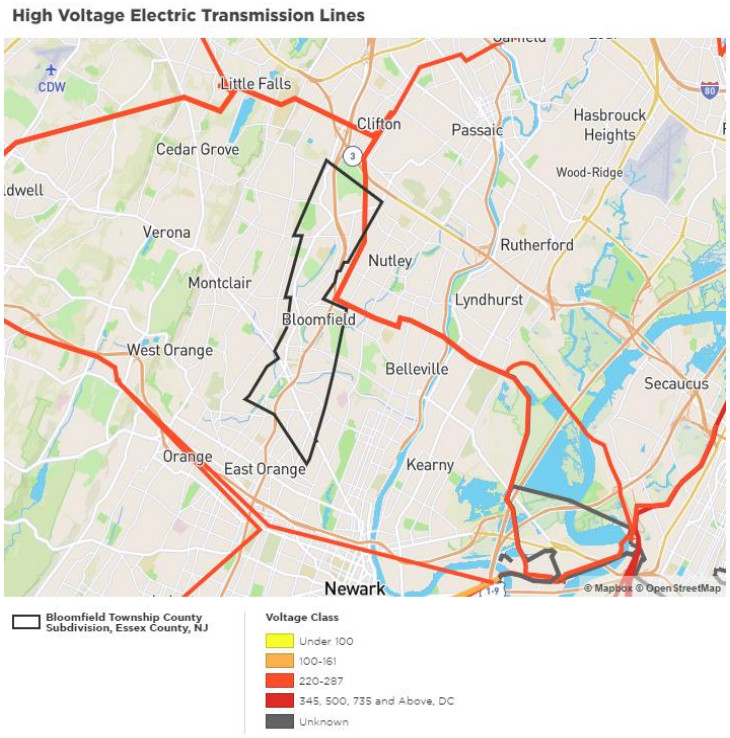


Fig. 13

Sanitary Sewer and Storm Drainage Systems.

The Department of Public Works and the Water Department manages the sanitary sewer and storm water drainage system in the township. Sewage is pumped to the treatment facilities of the Passaic Valley Sewerage Commission on Wilson Avenue in Newark. The storm water connection system is managed by the Engineering Department as per the township stormwater management plan. Much of the excess storm water is discharged into the Second and Third River, each of which flows into the Passaic River.

Natural Gas Pipelines

A 16-inch diameter natural gas pipeline owned by Transco and maintained by PSE&G traverses a corner of the township near the northern border with Nutley and Clifton following much of the same right-of-right as the high voltage power line mentioned above. The pipeline is owned by Transco and is maintained by PSE&G.

Communications System

The Township of Bloomfield "Central" Communications Center is located in the municipal complex at Municipal Plaza and Franklin Street across from Fire Headquarters. Here, the radio transmission equipment is located near the geographic center of the township with an additional repeater site located at Fire Station 3 at 144 East Passaic Avenue that broadens radio coverage for the northern portion of the community. Municipal Police, Fire and EMS units use the State Police Emergency Network (SPEN) for region wide interdepartmental communications. All Essex County fire departments are equipped with and have the ability to communicate with each other by using the county fire channel. Additionally in 2018 for a total of $2.8 million "Central" adopted the P25 700 MHz Mandate for FCC Narrowbanding. It is a shared system that is purchased by individual cities and is linked together through a network to provide regional coverage.

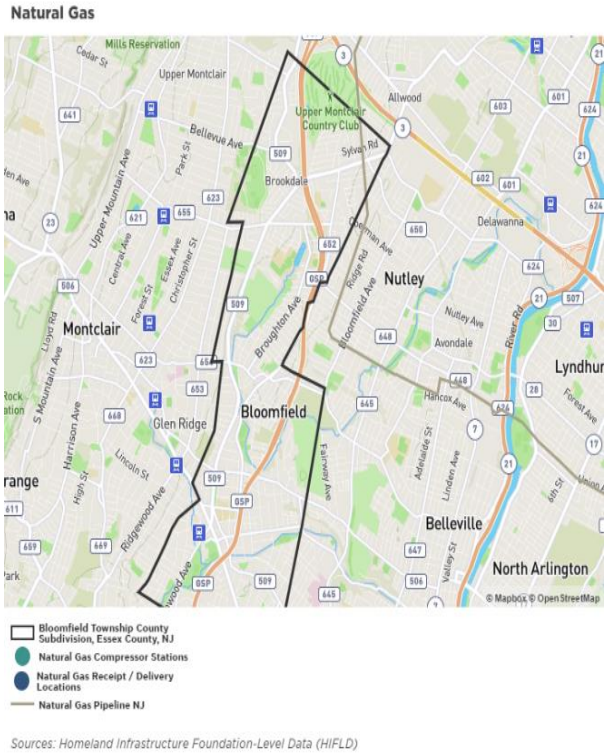


Fig. 14

Recreational - Parks, Trails and Open Spaces

The Department of Public Works oversees the maintenance and operation of 11 township parks comprised of 58 acres of land and several buildings located on these properties. Pending a federal program, nine miles of old unused commuter rail line will be converted into a walking and bicycle path that will connect several other cities ending at Jersey City. $65 million has been spent to date on this project.

Park	**Address**
Brookside Park	90 Bay Avenue
Clarks Pond	111 Dewey Street
Felton Field	145 Floyd Avenue
Halcyon Pond	84 Parkway West
Memorial Park	231 Belleville Avenue
Milbank Playground	264 North 17th Street
Morris Canal Park	Oaktree Lane
Lions gate park	Lions Gate Drive

Pulaski Park	24 Mt. Vernon Avenue
Vassar Field	606 E. Passaic Avenue
Wrights Field	303 Berkeley Avenue

Transportation

Bloomfield is considered a commuter town with over 60% of residents that reside in the township driving to work. Just under 20% of residents who commute to their workplaces rely on mass transit.

Highways and Streets

As of May 2010, the township had a total of 95.39 miles of roadways, of which 77.39 miles were maintained by the municipality, 13.77 miles by Essex County and 4.23 miles by the New Jersey Turnpike Authority. The local streets, especially near "transit villages" in the central and southern portions of the community, see abnormally high traffic volumes during daily rush hour times. Response times in these areas may be delayed due to high traffic volume.

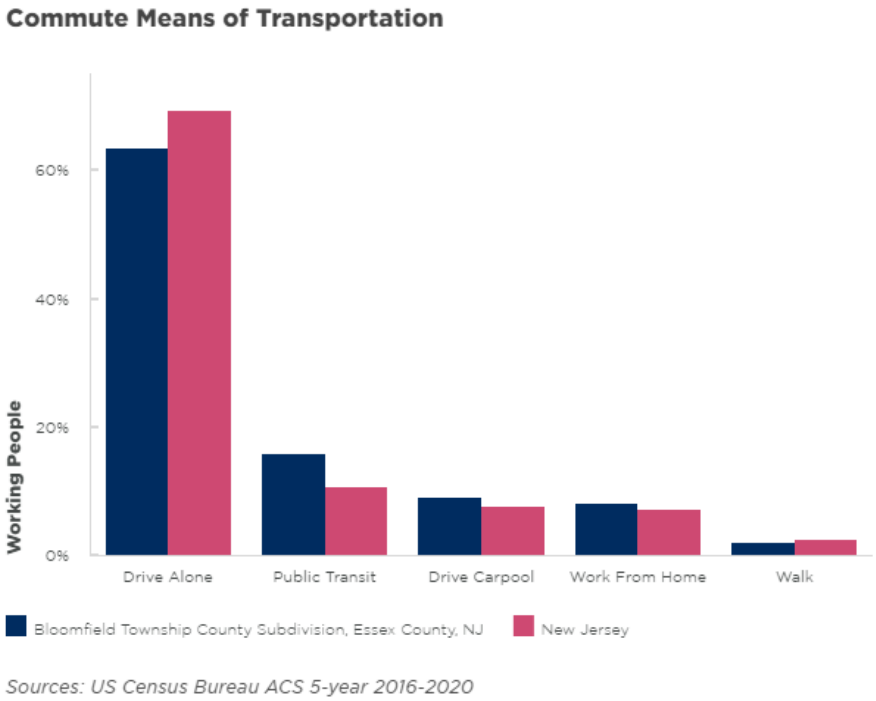
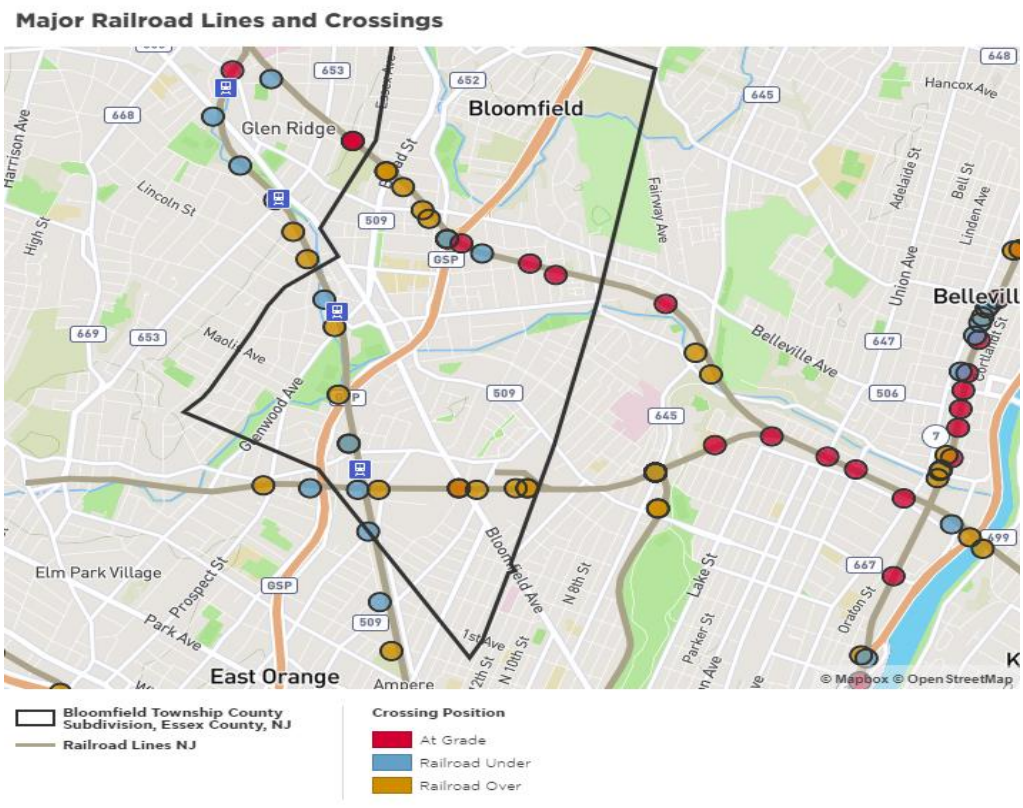


Fig. 15

A major multi-lane limited access highway traverses the length of the township from north to south. The Garden State Parkway, a passenger vehicle only toll roadway, has four access points in the township in the northern, central and southern portions of the community. The roadway is a heavily traveled major artery in the state that traverses the entire length of New Jersey from north to south. The roadway experiences high traffic volumes during weekday rush hours and holidays.

Rail

The township is served by two commuter rail lines. A portion of the NJ Transit Montclair-Boonton commuter rail line passes through the southern portion of the township with two stations that provide direct access to Newark and Midtown Manhattan. Bloomfield Station is located in the south-central area in the downtown business district. Watsessing Station is located below grade in the southern section of the community near the intersection of Dodd Street and Watsessing Avenue. The Grove Street Station, part of the NJ Transit Newark Light Rail System is the terminus of this commuter light rail line that provides access to downtown Newark. Combined, these stations serve approximately



Sources: US DOT BTS National Highway-Rail Crossings Inventory Program; US Census. Crossing position 1 is At Grade, 2 is Railroad Under, and 3 is Railroad Over

2,300 daily riders, however, these numbers are from a 2017 survey and it is assumed the ridership may have risen since the development of several "transit villages" in the township that are located directly in front or within easy walking distance of one of the stations.

Bus

The Township of Bloomfield has its own commuter bus service. However, Bloomfield is serviced by two commuter bus services, NJ Transit and DeCamp bus lines, that provide direct service to the Port Authority bus terminal in Midtown Manhattan where connections can be made to other destinations. The daily ridership for these bus lines is hard to calculate but an estimated 3,000 daily riders use these services.

Fig. 16

Air (Overflights)

Newark Liberty International Airport is located approximately 14 miles from Bloomfield. The community is within the flight path of many incoming and outgoing flights from the airport which is the second busiest of the three international airports in the New York/New Jersey metropolitan area.

XI. Description of Agency Programs and Services

Community Risk Reduction

The Bloomfield Fire Department Fire Prevention Bureau (FPB) is committed to providing the township with comprehensive and professional community risk reduction services. The FPB helps keep the community safe by providing both prevention and mitigation strategies to its residents and businesses. These programs are implemented through the adoption, interpretation, past experience, and enforcement of regulations and best practices recommended by the National Fire Protection Association (NFPA) and the State of New Jersey Division of Fire Safety (NJDFS). NJDFS models these standards from criteria under the Uniform Construction Code and the International Fire Code. FPB programs include: documentation of businesses that handle reportable quantities of hazardous materials; plan check and inspection of the installation and maintenance of fire sprinkler systems, fire

alarm systems, above and below ground tank installations, spray booths, commercial kitchen hood systems, special agent extinguishing systems, building fire flow requirements, public and private fire hydrant locations, and classified electrical installations; and the inspection of building exit plans and other building safety components in structures and occupancies within the township.

Fire Investigation Services

The FPB manages the department's fire investigation program. Two FPB fire inspectors are trained and qualified fire investigators who are responsible for conducting fire origin and cause investigations. Several other department fire inspectors have received training and are qualified to conduct fire investigations in the absence of the primary investigators.

Public Education Services

The department offers several public education and life safety education services. Fire department members visit local schools and daycare centers, conduct fire station tours, and offer emergency and fire safety education during multiple public events throughout the year. The department has partnered with Bloomfield College to develop a program that offers one-day internships that give college students a better understanding of the fire service. The department also manages several fire safety educational campaigns throughout the year, which include the dissemination of information in person at the local farmers' market and via the township's website, social media channels and email. Examples of these campaigns include Fire Service Day, Read Across America, Block Parties, the Bloomfield Festival, Firefighter Fridays at the library and Fire Prevention Week.

Car Seat Installations

Since 2018, the department has conducted a Child Passenger Car Seat Installation program that provides and/or assists with child car seat installations according to the manufacturer's guidelines. Every group of probationary firefighters have been certified in car seat installations ensuring that every shift has one or two members designated as child safety seat technicians to be able to provide car seat installation services. The national certification program is provided by a program sponsored by Safe Kids Worldwide working closely with the National Highway Traffic Safety Administration (NHTSA). Between 2019 and 2022, 58 child car seat installations have been completed.

Fire Hydrant Maintenance

The Bloomfield Fire Department has a proactive fire hydrant maintenance program. Each spring and fall, line personnel from each suppression company are assigned a section of the township to perform an inspection and maintenance of each fire hydrant located in their assigned FMZ. Maintenance includes operating the hydrant to flow water to flush the hydrant and clean the mains while checking for proper operation of all components such drains, outlets caps, operating valve, etc. After flushing the hydrant, personnel clean and lubricate all outlet caps. If any defects are noted a Hydrant Repair Record report is filed and forwarded to the Water Department for corrective action. The maintenance program is organized by fire response zones, so that each suppression company is assigned hydrants that are located in that company's "first due zone". This helps personnel to maintain familiarity with the location of hydrants in their local response area.

Emergency Stormwater Dewatering

Each fire station has an assigned small engine dewatering pump that is used to remove excess water from residential and commercial properties in the event of a large water leak or flooding from a storm or other weather-related event. Department personal use the pumps to help remove water from stakeholders' buildings to the outside of the structure or to a drain. The department does not remove sewage water found in buildings; such requests are forwarded to the Department of Public Works for correction.

Non-Emergency Vehicle/House Lockouts

Each fire apparatus has an automotive lockout kit to successfully enter accidentally locked vehicles. Each member has been trained to utilize the lockout kits without causing damage to a vehicle. Department members also conduct non-emergency entries of locked residential and commercial structures. A signed disclaimer form completed by either the owner or the renter of the vehicle, home or business is required before entry is attempted.

Emergency Preparedness

The Department has assigned emergency management responsibilities within its jurisdiction that are managed through the Essex County Emergency Management Coordinator and the township Fire Chief and the Office of Emergency Management. An all-hazards emergency operations plan (EOP), has been adopted that is compliant with the National Incident Management System (NIMS), and utilizes the NIMS Incident Command System (ICS) on all emergency responses. The Department has interoperable communications with surrounding agencies and participates in various drills with neighboring agencies to ensure operational readiness. The Department conducts annual community-wide disaster drills and active shooter drills and works closely with community readiness groups like the Police Department, Health Department and Building Department.

Fire Suppression

Fire suppression personnel provide emergency response to a wide range of fire suppression-related incidents including fires involving residential and commercial structures, residential high-rise buildings, high-density mixed use “transit villages”, all types of vehicle fires, outside fires involving dumpsters/trash/rubbish, and brush fires involving grass, brush and wooded area fires. The Department staffs four engine companies, one truck company, and a Deputy Chief/shift supervisor command vehicle to protect the township. A four-platoon/shift configuration with 16-18 personnel assigned to each shift is utilized to provide the community with around-the-clock service. Supplementing the fire suppression program, the Department maintains a small group of volunteer rescue firefighters that are utilized for major incidents. This program has the added benefit of preparing potential Career Division candidates for a future successful career in the fire service while allowing citizens to volunteer their services to the community. Volunteer firefighters are not factored into the Department’s Effective Response Force or first-due response calculations. Recruitment levels for the Volunteer Division have been falling since 2017.

Emergency Medical Services

The Fire Department provides secondary basic life support (BLS) services only and does not presently provide patient transportation services. Patient transport services are presently provided by Bloomfield Emergency Medical Service that is the primary BLS emergency medical provider in the township utilizing a combination of career and volunteer members staffing three ambulances. In January 2019, the Fire Department launched the first responder emergency medical response program to supplement the response of local EMS providers. The department's services are requested when there are no available ambulances in the township to respond to an EMS call for service. While a mutual aid ambulance is dispatched and enroute, Fire Department members are dispatched to stabilize the patient for transport. 98% of all uniformed career staff members of the Fire Department are nationally certified emergency medical technicians (EMTs). Bloomfield EMS and surrounding ambulance operators provide patient transport services. Since the start of the program the fire department members have saved countless lives and completed over 5,248 emergency medical calls for service.

Hazardous Materials

The Department responds to a variety of hazardous materials issues. Common hazardous materials calls for service include reports of hazardous materials dumping, carbon monoxide incidents, fuel leaks resulting from vehicle collisions, and natural gas leaks. Township fire personnel are trained and equipped to Hazardous Materials Awareness and Operations levels. Incidents that are found to be beyond the operational capabilities of the fire department members are supplemented with the dispatch of the Hazardous Materials Unit of the Nutley Fire Department. Bloomfield members are trained to stabilize an incident and conduct incident reconnaissance pending the arrival of the Hazardous Materials Unit. The department conducts periodic joint training sessions with Nutley personnel.

Technical Rescue

The Department responds to a variety of calls for service that require technical rescue. Typical technical rescue responses include motor vehicle collisions requiring patient extrication, swift water rescue, ice/water rescue, low and high angle rescue, natural disaster response, and structural collapse rescue. Fire Department members are trained to various levels of expertise in each of these disciplines. All Department members are trained to the Awareness level for swift water rescues, 13 members are certified at the Technician level for swift water rescue. Any technical rescue call for service that exceeds the operational capabilities of Department members is supplemented by the dispatch of local and regional technical rescue teams trained to the Technician level for each individual discipline. Fire Department personnel conduct periodic joint training event with local and regional technical rescue response teams.

XII. Current Delivery System

The township has been divided into four fire, rescue and emergency medical services (EMS) districts. There are three fire stations, a training facility, a telecommunication facility (dispatch), police headquarters, city hall, and the Fire headquarters building which houses Fire Prevention and Fire Administration.

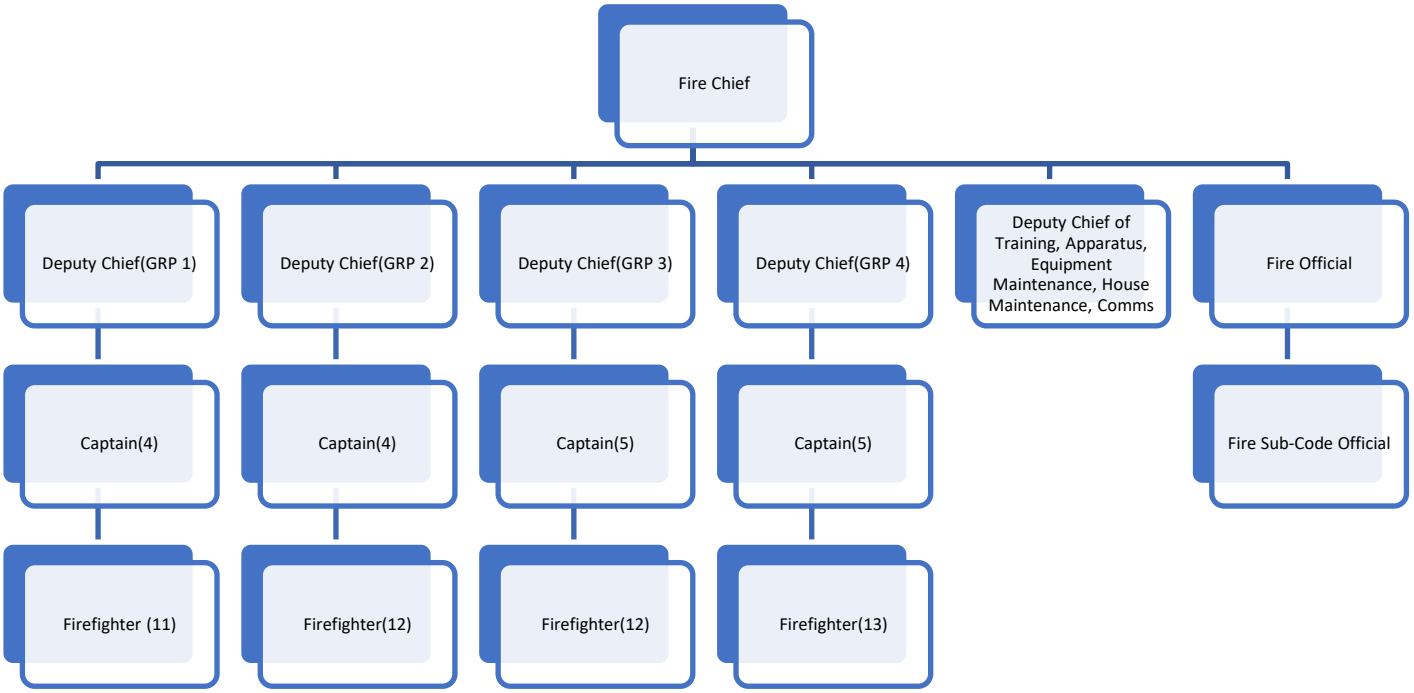


Fig. 17

The Department utilizes a four-shift schedule, staffing each shift for a 24-hour period, 7 days a week, 365 days a year. Minimum on-duty staffing level of 13 personnel has been established for around the clock delivery of emergency services. Personnel recall procedures are in place to facilitate additional staffing when needed. The department utilizes a still alarm for the response of one apparatus for a minor call for service. The department utilizes a bell alarm for a call for service that requires a multi-unit response of three engines, the ladder company, and a deputy chief/shift commander. The fifth apparatus remains in service in their first-due response area. Note: During time periods when Engine 1, which is quartered at Fire Headquarter/Fire Station 1, is out of service due to staffing or other circumstances, bell alarm responses will include all three in-service engine companies, the ladder company, and the deputy chief/shift commander.

Automatic Aid

In 2021, the Fire Department initiated an Automatic Aid response interlocal agreement with the fire departments in neighboring Belleville and Nutley that provides for the response of additional apparatus and personnel to certain first alarm response assignments within the Townships of Belleville, Bloomfield and Nutley. Criteria for automatic aid response is the report of smoke or fire in a structure. Each participating department has agreed to send an engine company to the location of the emergency in the respective township. These supplemental personnel are in addition to each fire department's current staffing level and are not meant to be used for the reduction or replacement of any department's total operational staffing. The intent of the agreement is to provide for enhanced protection of civilian life and property while enhancing firefighter safety and effectiveness. In the two years that the program has been in operation, Bloomfield fire units have received 41 number of automatic aid responses to incidents within Bloomfield while providing 44 responses to Belleville and Nutley.

Points of Service Delivery

The township is divided into four fire management zones. Each district has full first due coverage, with an engine quartered at each station. In the event that Engine 1, which is quartered at Fire Headquarters/Fire Station 1, is out of service due to staffing or other circumstances, FMZ 1 is divided between the adjacent FMZ 2 and FMZ 3. (See the response district map attached).

Fig. 18

Daily Minimum Staffing Level

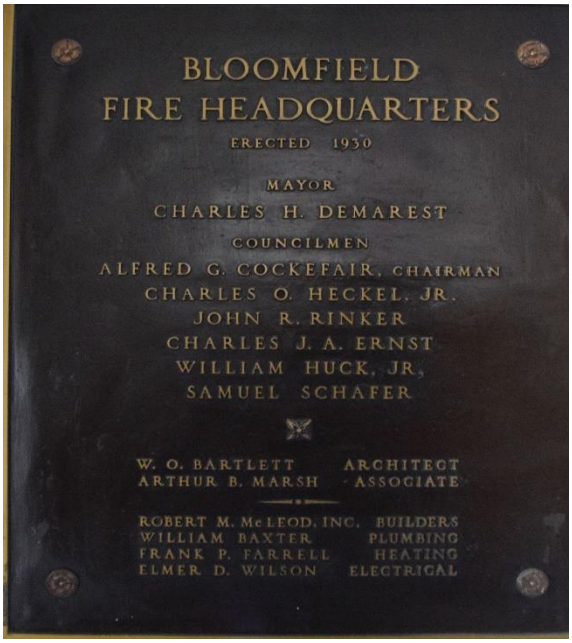
Type	# of Apparatus	# of Staff per apparatus	Total Staff
Engine Company	3	3	9
Truck Company	1	3	3
Command Unit	1	1	1
			13

Additional staffing for major emergencies or community disasters is available through the response of executive and staff officers. The department also has the ability to request automatic aid/mutual aid and/or recall off-duty personnel. Note: If the shift staffing level drops to thirteen personnel, Engine 1 is placed out of service and the Engine 1 FMZ is divided equally between Engines 2 and 3.

Stations

Fire Station 1/Headquarters

Headquarters is the quarters of Car 30, Truck 1, Engine 1, Car 6, Car 34 and 36, as well as the department's administrative offices. This station covers the southcentral portion of the township including the downtown business district. The Fire Prevention Bureau, which maintains responsibility over New Jersey Fire Code enforcement and Fire Safety Education, is located on the second floor. Located at 375 Franklin Street across the stareet from the municipal complex, the station was built in 1930.



Type	Year	Make	Staffing Level
Engine 1	2008	Pierce 1,500 GPM pumper	3
Truck 1	2021	E-One Typhoon 100-foot aerial ladder	4
Car 30	2016	Chevy Tahoe Deputy Chief Command	1
Car 6	2020	Ford Escape	1
Car 34	2006	Ford Expedition	0
Car 36	2008	Ford Expedition	0
Car 5	2007	Ford Explorer	0

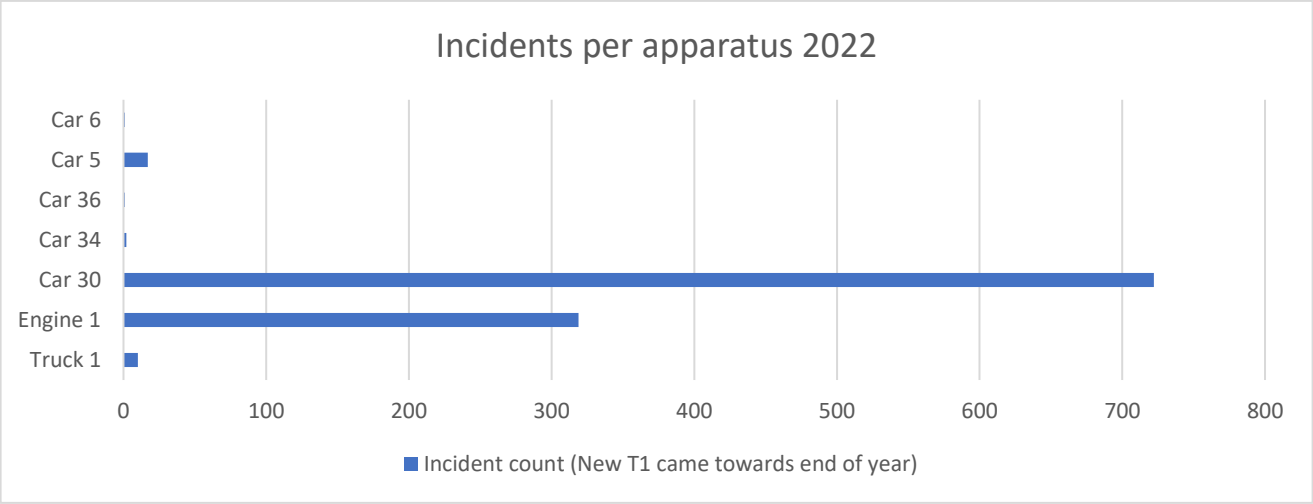
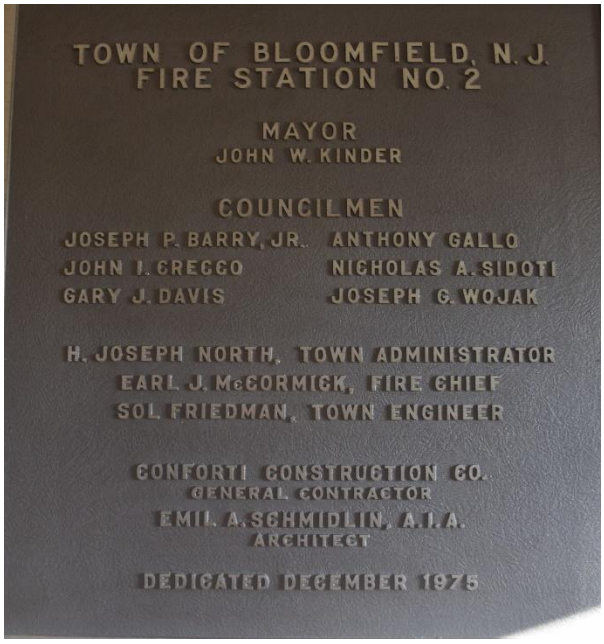


Fig. 19

Fire Station 2

Station 2 is the quarters of Engine 2, Reserve Truck 2, Reserve Truck 3 and utility pick-up Truck 7. This station covers the southern section of Bloomfield, this area previously had numerous industrial structures but in recent years those spaces have transitioned into large area high-density residential transit villages. This station is typically the department's most active station. Engine 2's FMZ expands northward when Engine 1 is out of service. This is the departments newest station and was built 1975.



Type	Year	Make	Staffing Level
Engine 2	2016	Pierce 1,500 GPM pumper	3
Truck 2	1996	E-One 110-foot aerial ladder	Reserve
Truck 3	2007	American LaFrance 110-foot aerial ladder	Reserve
Truck 7	2008	Ford F-250	0

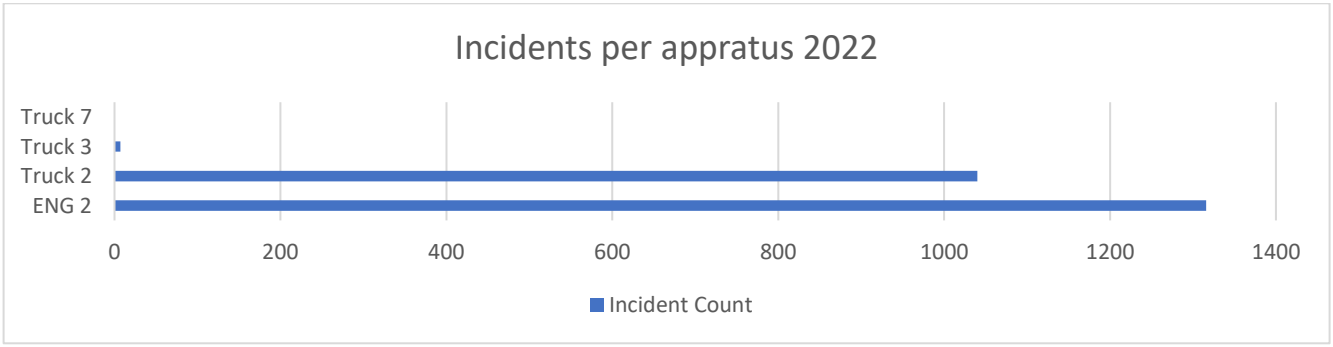
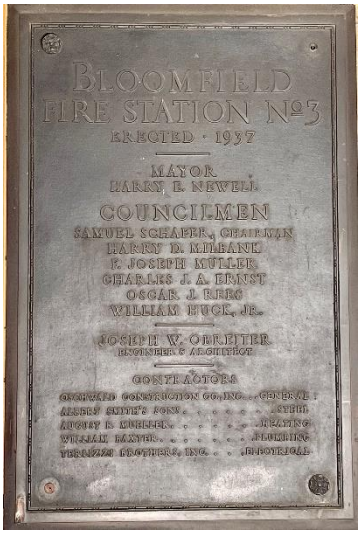


Fig. 20

Fire Station 3

Station 3 is the quarters of Engine 3 and Rescue 1. There is a classroom on the second floor that is used for department training classes. In the rear of the property is a fire and technical rescue training area that features a flat and peaked roof simulator prop, vehicle stabilizer prop and a firefighter survival maze. It is located at 144 East Passaic Avenue and was built in 1937. The Station 3's FMZ expands southward when Engine 1 is out of service.



Type	Year	Make	Staffing Level
Engine 3	2019	E-One 1,500 GPM pumper	3
Rescue 1	2010	Freightliner	

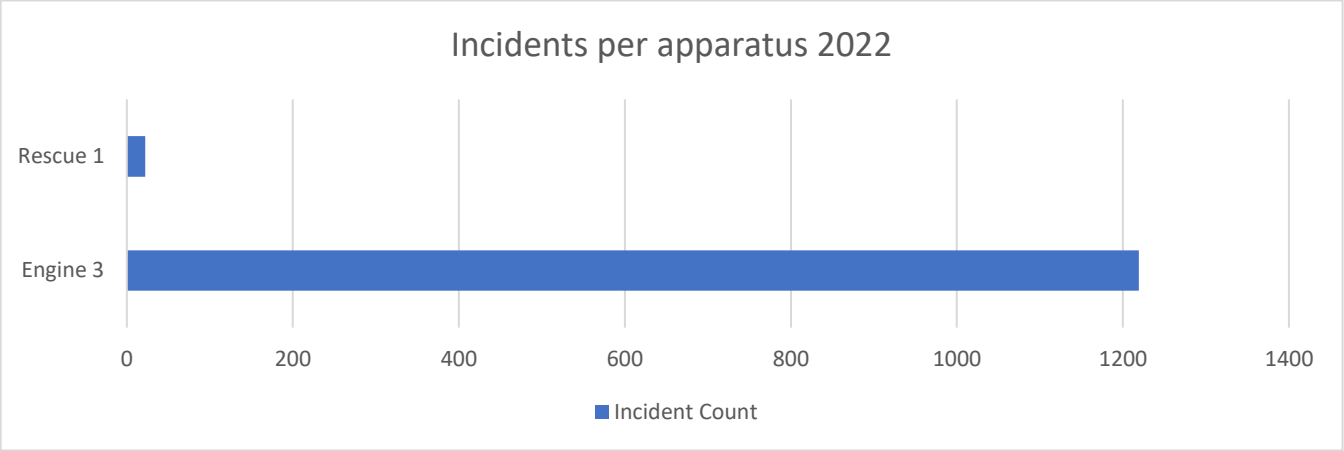


Fig. 21

Fire Station 4

Station 4 is the quarters of Engine 4, Reserve Engine 5, Reserve Engine 6 and Car 35. This station covers the Brookdale area in the northern portion of the township and is the largest response area for the department. It is located at 1233 Broad Street and was built in 1931.

Type	Year	Make	Staffing Level
Engine 4	2005	Pierce	3
Engine 5	1994	E-0ne 1,500 GPM pumper	Reserve
Engine 6	1992	E-One 1,500 GPM pumper	Reserve
Car 35	2001	Chevy Tahoe	

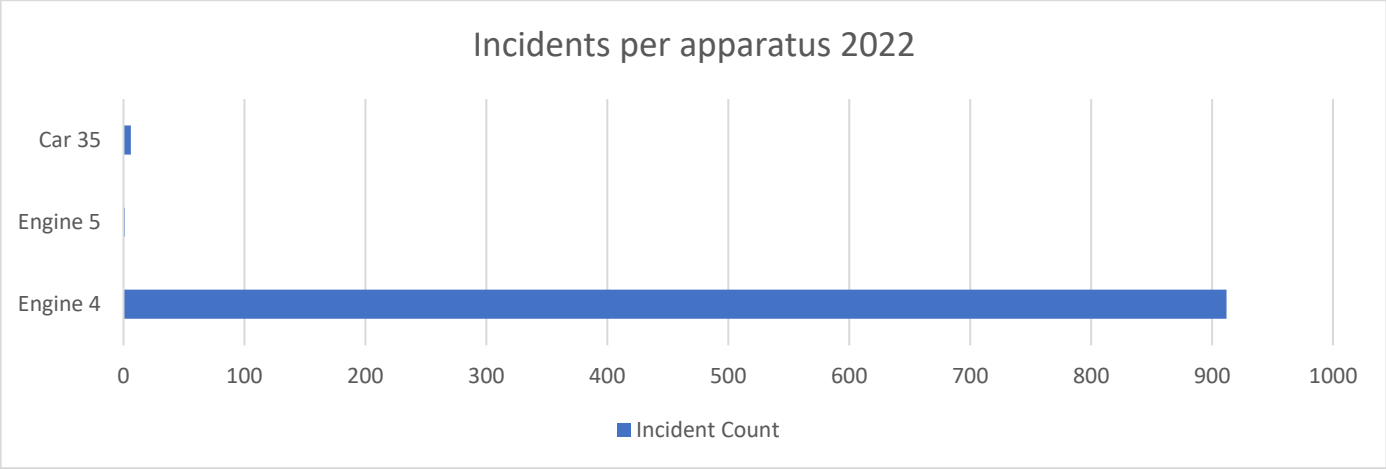

Incidents per apparatus 2022
Car 35
Engine 5
Engine 4
0
100
200
300
400
500
600
700
800
900
1000
Incident Count

Fig. 22

Apparatus

Engine Companies

The primary emergency response unit for the Bloomfield Fire Department is the engine company. There is one engine company quartered at each of the four stations. Engine companies are staffed with a minimum of three personnel: a supervising captain, an engineer, and a firefighter. All fire personnel are required to be certified at the emergency medical technician (EMT) basic level. Each engine is a triple-combination pumper, equipped with a 1,500 gallon per minute (gpm) pump, with a 700- or 750-gallon water tank. Engines are also equipped with 15 gallons of Class A firefighting foam, pre-connected medium and large diameter hose lines, a deck gun, 700 feet of five-inch supply hose, 500 feet of three-inch supply hose, and two and half-inch 200 feet of pre-connected portable standpipe. The primary purpose of an engine company is to provide personnel with equipment and water to sustain an initial attack on a structure fire, but each engine company is also equipped with a variety of emergency equipment such as: basic and advanced life support medical equipment, emergency scene lighting and basic tools for defensive hazardous materials mitigation. Each engine company is also equipped with 48 feet of ground ladders, forcible entry tools, auto extrication equipment, mobile data computer, dash cameras, and a thermal imaging camera.

Truck Company

The Bloomfield Fire Department has one truck company in service located at Fire Headquarters. The truck company is supervised by a captain and is staffed with an engineer and two firefighters. The vehicle is called an aerial ladder truck. The truck has a 100-foot truck mounted extension ladder, that is able to reach the equivalent of up to eight stories in height. This allows firefighters to access a building from a significant height and also to attack a fire from above. The aerial ladder is capable of allowing firefighters to direct an elevated master water stream of up to 600 gpm from the tip of the ladder. Because the truck does not have a pump or water tank, a pumper/engine must supply the water to fight the fire. In addition to the aerial ladder device, the truck is also equipped with over 149 feet of ground ladders, heavy rescue and auto extrication equipment and many other types of rescue equipment to handle various calls for service throughout the Township.

Deputy Chief/Shift Commander Vehicle

A Deputy Chief/Shift Commander is responsible for overall field operations utilizing a command vehicle. The command vehicle, quartered at Fire Headquarters, is equipped with advanced communication equipment, a mobile data computer, rapid intervention crew (RIC) pack, and a combustible gas detector. From this command vehicle, a Deputy Chief is able to direct emergency scene operations and command all firefighting, lifesaving, and fire prevention operations. Additional equipment carried in the command vehicle includes self-contained breathing apparatus (SCBA), suppression equipment, command worksheets and reference materials.

Heavy Rescue 1

The Bloomfield Fire Department has one volunteer rescue company quartered at Fire Station 3. The rescue company is supervised by a volunteer captain and is staffed by 12 on-call volunteer firefighters. The volunteer members of Rescue 1 are alerted via pagers for incidents that require a second and greater alarm. Rescue 1 has a cascade system, air bags, cribbing, scene lighting, generator, winch, saws, ropes, forcible entry tools, chains, pike poles and an apartment high-rise pack. Rescue 1 is mainly a volunteer-based apparatus, but the vehicle has been placed in service by career members during times of state of emergencies and other emergency incidents where time for delivery of critical resources is of the essence for response to emergencies throughout the Township.

Reserve and Specialty Apparatus

The Fire Department maintains a fleet of reserve apparatus that are utilized to accommodate periodic maintenance and repair of front-line apparatus and to staff additional units during large-scale emergencies. Fire Department specialty apparatus includes a flatbed utility truck.


E5


BLOOMFIELD
E6


BLOOMFIELD
T2
EMERGENCY
911


BLOOMFIELD
T3

XIII. All-Hazard Risk Community Assessment

A systematic and comprehensive risk assessment must look at all of the community's unique pieces and parts. This process must be all-inclusive in order to better manage risk by reducing risk and matching the right resources to the right risks. The Bloomfield Fire Department performed an in-depth community risk and emergency services analysis. This thorough process involved an extensive discussion and consideration of:

- Community hazards (risk or danger)
- Threats (probability/potential/likelihood)
- Consequences (economic, human, historical, etc.)
- Impacts (influence upon resources, response, and reality)
- Risks (classification (type) and categorization (severity)
- Conclusions (opinions formed after thought and research)
- Critical tasks (minimal number of functions needed to effectively mitigate a situation).

This community risk assessment process was both proactive and progressive and included all department programs (e.g., risk reduction, fire suppression, occupancy type). The foundation of this thorough analysis was based upon four key components:

1. Identify - Identification of risks (local hazards, threats, etc.)

2. Assess - Assessment of risks

3. Classify - Classification of risks (e.g., fire, rescue, hazmat)

4. Categorize - Categorization or severity of those risks

The Department has developed and implemented a methodology for identifying, assessing, categorizing and classifying risks within each fire management zone by utilizing an analysis tool in the Emergency Reporting (ER) software package that fire personnel use to collect critical fire protection, available fire flow, building construction and occupancy information. The software then utilizes the VISION Risk Assessment algorithm to calculate an Occupancy Vulnerability Assessment Profile (OVAP) score for each occupancy surveyed. The occupancies are then categorized into four levels of risk: Low Risk (0-14.99 OVAP score), Moderate Risk (15-39.99 OVAP score), Significant Risk (40-59.99 OVAP score), and Maximum/Special Risk (60 & up OVAP score). The Department, in cooperation with Fire Prevention Bureau personnel and inputs from superior officers, categorized each risk against the 2-Axis Risk tool.

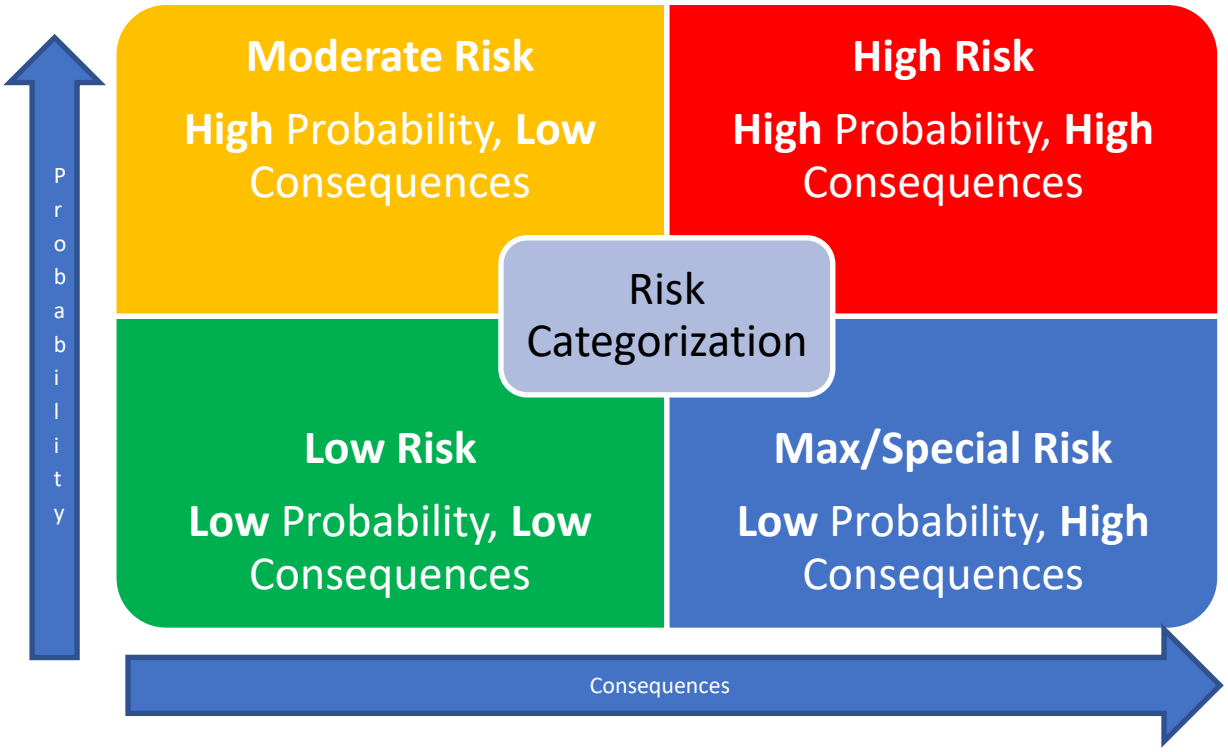


Fig. 23

Risk Identification and Classification

Risk Identification and Classification						
Fire	**EMS**	**Rescue**	**HAZMAT**	**EOD**	**Disaster Potentials**	**Non-Fire**
Vehicle Fire	Life Safety	Vehicle Extrication	Life Safety	Threat Protection	Flooding	Pump-out
Commercial	Prepare for Transport	Swift Water/ Flood water Rescue	Business and Industry	Render Safe Operations	Pump-outs	Collapse
1 – 2 Family Structures		Ice Rescue	DECON			General road accident cleanup
Transit Villages		Technical Rescue out of BFD scope				Car/house lockouts

Risk Assessment Methodology and Categorization

After the OVAP score is identified, the next step in the process was to have all superior officers review the 2-axis risk diagram for probability, building occupancy, building construction and impact on the community. Having a systematic process allowed the Bloomfield Fire Department to maintain a standard approach to managing community risk using department resources. The community risk assessment approach must be dynamic and employ the right resources for the emergencies they are dispatched to. For example, the risk and resources needed to mitigate a house fire are respectively higher and larger than those necessary to manage an outside brush fire. The department's use of the two-axis risk categorization method in conjunction with the OVAP scoring in the VISION risk assessment tool identifies the level of expected risk for each type of emergency. The methodology's foundation is based on probability and consequence and how the occupancies are then categorized into four levels of risk: Low Risk (0-14.99), Moderate Risk (15-39.99), Significant Risk (40-59.99), and Maximum/Special Risk (60 & up). These are factual representations of what hazards currently exist in the Township and how the Department can make best use of Township resources and mutual/automatic aid partners capabilities.

Fire Risks - One-Two Family Structures

Across the country, fire continues to be a genuine concern as every:

- 23 seconds a fire department responds to a fire.
- 64 seconds a fire occurs in a structure.

- 89 seconds a home fire occurs.

In the U.S., fires and fire-related civilian deaths and civilian injuries have nearly been cut in half since 1980, according to the National Fire Protection Association (NFPA). However, the direct financial impact of fire has remained unchanged.

All Fires in the United States - 1980-2020				
Year	**Fires**	**Civilian Deaths**	**Civilian Injuries**	**Direct Property Damage (2020 Dollars**
1980	2,988,000	6,505	30,200	$19.8 Billion
1990	2,019,000	5,195	28,600	$15.5 Billion
2000	1,708,000	4,045	23,350	$16.9 Billion
2010	1,331,500	3,120	17,720	$13.8 Billion
2020	1,388,500	3,500	15,200	$21.9 Billion
Source: NFPA				

Although this downward trend is significant to the preservation of life, the hazard and threat of fire is still real. Annually, U.S. fire departments respond to almost 1.4 million fire calls (https://www.nfpa.org/News-and-Research/Data-research-and-tools/EmergencyResponders/Fire-department-calls). The U.S. no longer ranks at the top of the list of industrialized nations when it comes to fires, but there is still a significant loss of lives each year. Thousands of Americans die and tens of thousands are injured with billions of dollars of property loss. Besides the obvious impacts of fire, there are many other significant consequences as well, like emotional/psychological consequences in the form of loss of family and friends, economic consequences in the loss of homes, property, jobs, and revenue. Additionally, fires have impacts on people individually as well as communities as a whole. Every year fires kill more people than all natural disasters, like tornadoes, floods, hurricanes, and earthquakes, combined.

The Township of Bloomfield's fire risk assessment was sub-classified into four groupings based upon FMZ's:

- FMZ 1- Truck 1 and Engine 1
- FMZ 2- Engine 2 (When Engine 1 is out of service, Engine 2 absorbs a portion of FMZ 1)
- FMZ 3- Engine 3 (When Engine 1 is out of service, Engine 3 absorbs a portion of FMZ 1)
- FMZ 4- Engine 4

From 2019 to 2022, the department responded to 530 actual fire calls with an average of 132 per year. Although the number of fire calls responded to was merely 2.8% of the total call volume, the inherent hazard of fire responses remains significant.

Bloomfield Fire Department - Fire Run Incidents - 2019-2022						
Category	**2019**	**2020**	**2021**	**2022**	**Total**	**Annual Average**
Structure fires	47	28	33	33	141	35.25
Fire contained within the structure	55	45	38	32	170	42.5
Outside rubbish, dumpster, trash fire	17	21	25	21	84	21
Passenger vehicle fires	20	18	19	20	77	19.25
Natural vegetation, mulch, grass, brush, forest fire	10	15	11	22	58	14.5
Total	149	127	126	128	530	132.5
Source: *ER Database 2019 – 2022.*						

Many factors positively or negatively affect a fire's outcome. Fire protection measures (e.g., construction, suppression systems), early occupant notification (e.g., smoke alarms) and public awareness/education (e.g., behavior/habits, have a plan, test and replace smoke alarms) - along with reliable resource distribution and concentration and system resiliency – directly impact and contribute to confining a fire to the room of origin.

A high-level overview of the impact of fire in Bloomfield can be illustrated using four measures:

1. Fires confined to room of origin
2. Property loss per capita
3. Save calculation {WHAT IS AT RISK - WHAT IS LOST = WHAT IS SAVED}
4. Performance calculation {WHAT IS SAVED / WHAT IS AT RISK}

Fire in Bloomfield – Loss and Preservation Outcomes - 2019-2022					
Performance Measurement	**2019**	**2020**	**2021**	**2022**	**Annual Average**
Fires confined to room of origin	54%	62%	46%	49%	53%
Pre-incident Value	$1,150	$3,049,059	$21,907,478	$116,358,196	$35,328,970
Losses	$1,150	$2,368,859	$401,302	$1,811,180	$1,145,622
Saved		$680,200	$21,506,176	$114,547,016	$34,183,348
Source: *ER Database 2019 – 2022.*					

General conclusions about fire loss in Bloomfield for the years of 2019 to 2022:

• Fires confined to room of origin: The four-year average of 53% was well above the national average of 9% (2015-2019, NFPA).

• Save calculation: The adjusted save calculation annual average for a typical year is unknown due to inaccuracies in previous reporting of property valuations and damage estimates. Department personnel received enhanced report writing training in early 2022 to more accurately document property losses.

• 2022 is the most accurate and up-to-date year showing losses, pre-incident value and saved. The fire confined to room of origin data is correct for all the years.

Fire Injuries and Deaths for Civilians and Firefighters

Bloomfield fire deaths and injuries (2019-2022) all occurred in residences. The average age of the deceased was 83 and the average age of the injured was 44. The three civilian fatalities for the four-year period studied were the result of two structure fires and one motor vehicle fire. Structure fires also accounted for 100% of nine civilian fire injuries in Bloomfield. Civilian fire injuries ranged in severity from minor (57%), moderate (14%) and severe (29%). During the same time period, the department recorded no firefighter deaths and 51 firefighter fire-related injuries. The average age of an injured firefighter was 34.

Bloomfield Fire Deaths and Injuries							
Type	**2019**	**2020**	**2021**	**2022**	**4 YR Total**	**Annual AVG**	**AVG Age**
Fire Deaths (Civilian)	1	1	1	0	3	.75	65
Fire Injuries (Civilian)	3	1	1	4	9	2.25	44
Fire Deaths (FF's)	0	0	0	0	0	0	0
Fire Injuries (FF's)	9	16	25	98	148	37	34
Source: *ER Database 2019 – 2022.*							

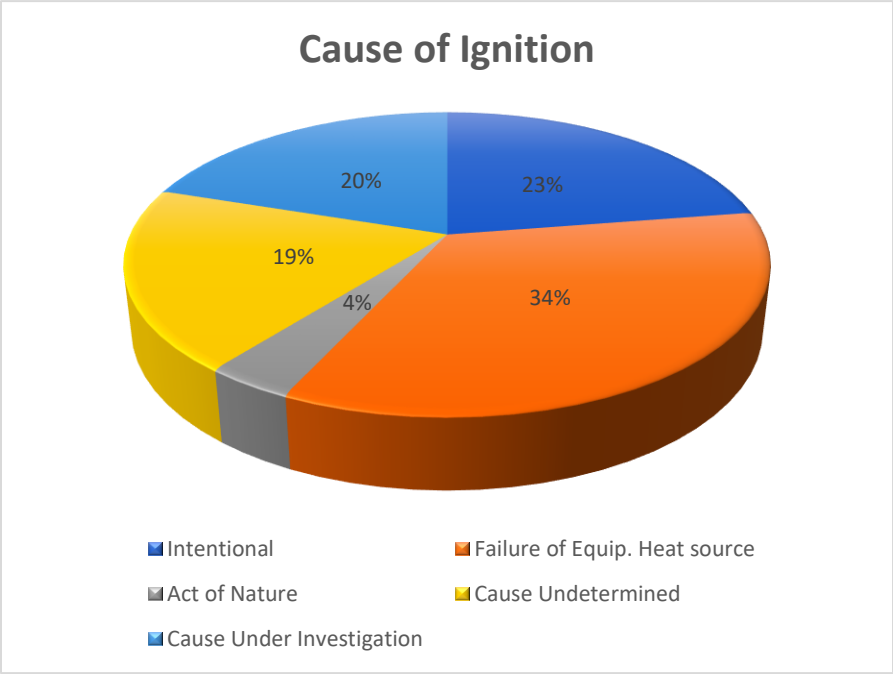
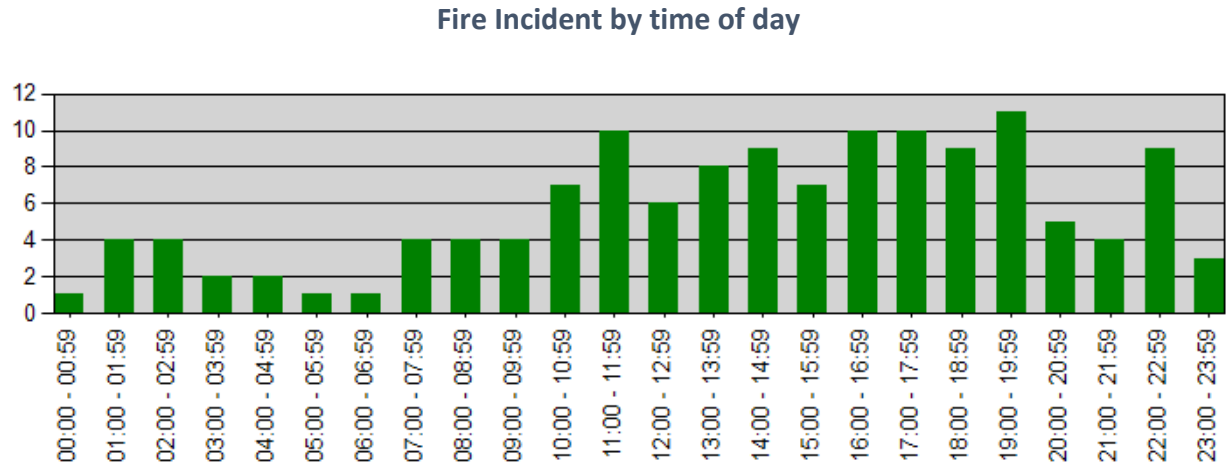


Fig. 24

A

The period between 4 p.m. and 8p.m. continues to be the busiest time for fire calls. Since 2018, 30% of the home fires in Bloomfield occurred during this period. The most common cause of home fires in Bloomfield are unintentional causes (i.e., candles, incense etc.). The most common source of ignition (65.3%) is unintentional, followed by failure of equipment or heat source. Additionally, 13% of residential fires are either undetermined or under investigation.



The risk assessment also considered age as an integral factor relating to both residential and commercial fire risk. (The department used occupancy type to segregate the elderly specific rent-controlled structures.) In the U.S., adults ages 55 and older had a greater relative risk of fire death than the general population; and, adults ages 85 or older had the highest relative risk of fire death. When physical and cognitive abilities are limited, as is often the case for the elderly, the risk of death from fire rises, according to United States Fire Administration (USFA). For these reasons, it is important to have an informed awareness about Bloomfield's older adult population (e.g., who they are, where they live).

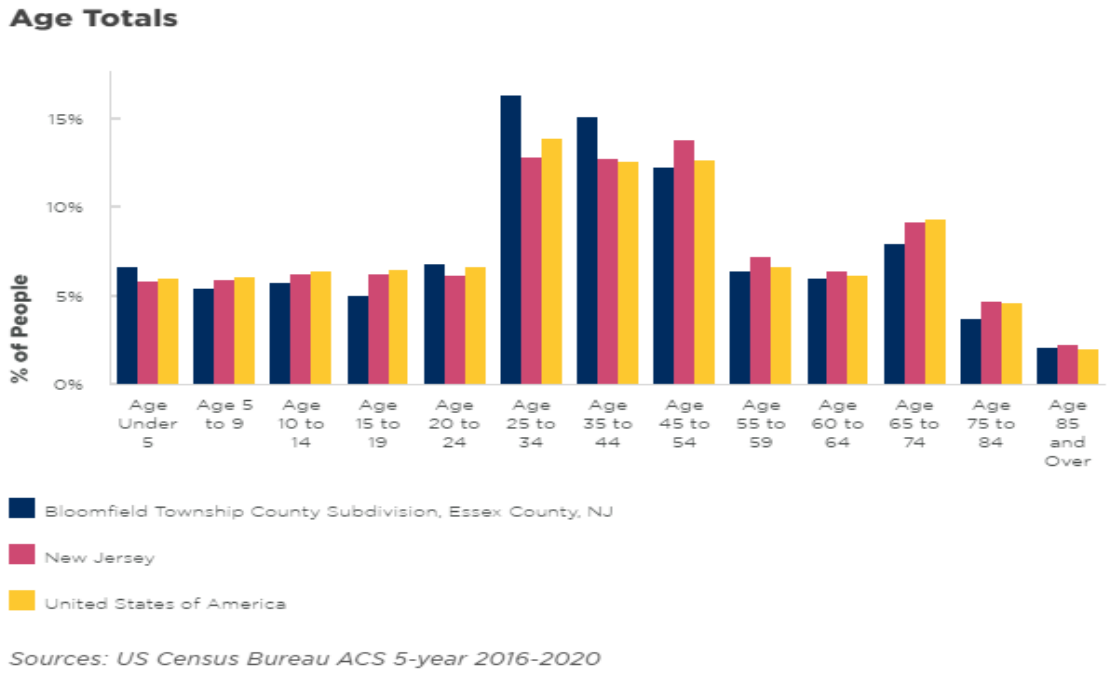


Fig. 25

Residents ages 65 and older comprise 13% of Bloomfield's populace. Statistically, the age breakdown of those ages 65 and over in Bloomfield is a little lower than New Jersey's and the U.S. average (due to the recent COVID mitigation.) Based on these similarities in age breakdown, it is reasonable to conclude that the local fire risk for older adults is a little lower to that of the national numbers and

most of that population is targeted to three fire resistive structures in the township. *(Names of the occupancies)*

Housing conditions were used in consideration within the risk assessment. However, older homes may possess specific hazards such as inadequate or unreliable electrical wiring, wiring put through old, unprotected dumbwaiter shafts, balloon or braced house framing, and unprotected cocklofts. Given that the Township of Bloomfield was established in 1812, community building stock data showed that 76.9% of all local housing units were built before 1970. However, housing units built before 1970 in New Jersey account for 52% of state's homes. Housing units constructed for the same time period in the U.S. account for 37% of homes in the country. Clearly this shows that many housing units in Bloomfield are significantly older than those overall, in the state and the country. It is crucial that Department members have an awareness of the age of an occupancy when responding to a reported structure fire as this will factor into the strategy and tactics that will be employed to conduct possible rescues and mitigate the emergency.

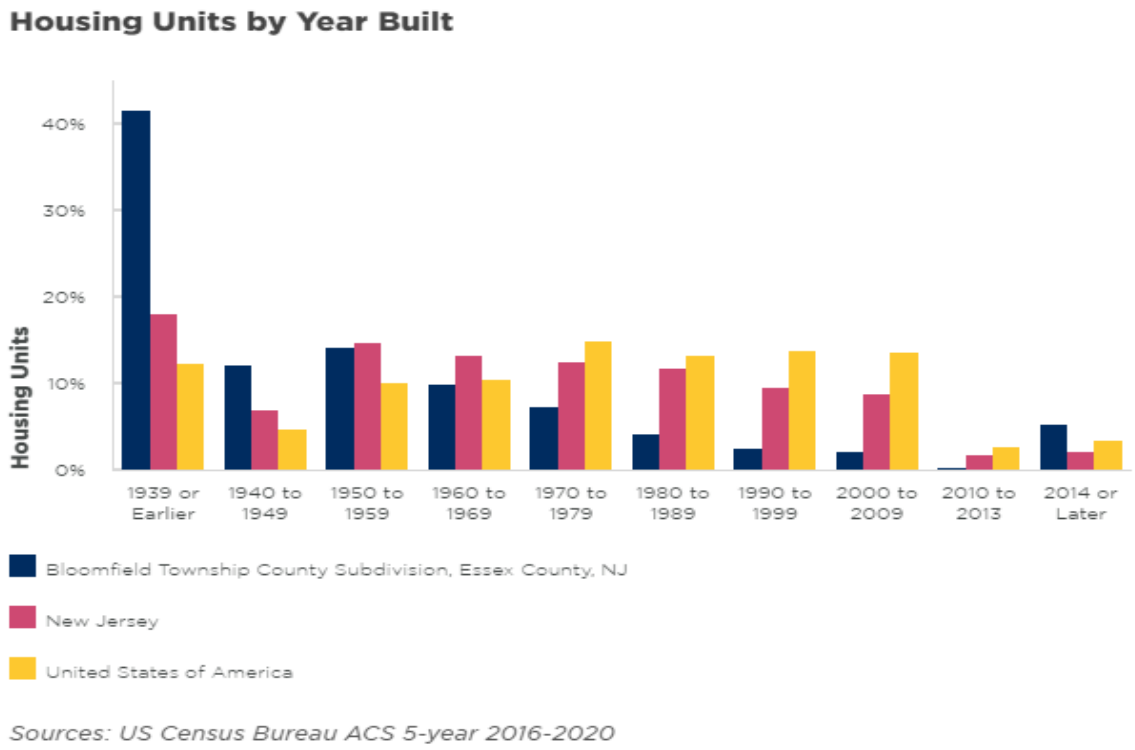


Fig. 26

As part of the all-inclusive approach risk assessment, Bloomfield's residential property values were taken into consideration. The following data contains the average appraised value along with the average sale price of homes in the township. Since 2017, the average appraised value of residential property has increased by 25% and the average sale price has increased by 23%. These figures are important to help better understand the community's overall quality of life.

Other risk factors from USFA information were also assessed. USFA data shows a relationship between fire risk and income. In summary, the poorer population groups have the highest risk of fire injury or death, while the wealthiest have the lowest. The data also states that many older adults often live

alone in substandard housing stock on meager incomes. A conclusion is that poorer populations, especially the aged, are more likely (probability) to be injured or die (consequence) as the result of fire.

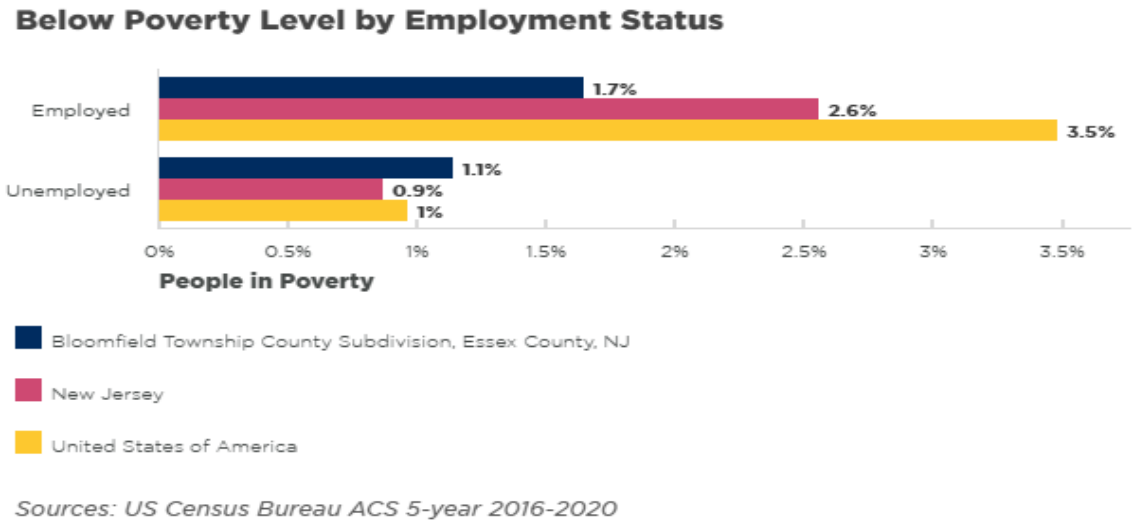


Fig. 27

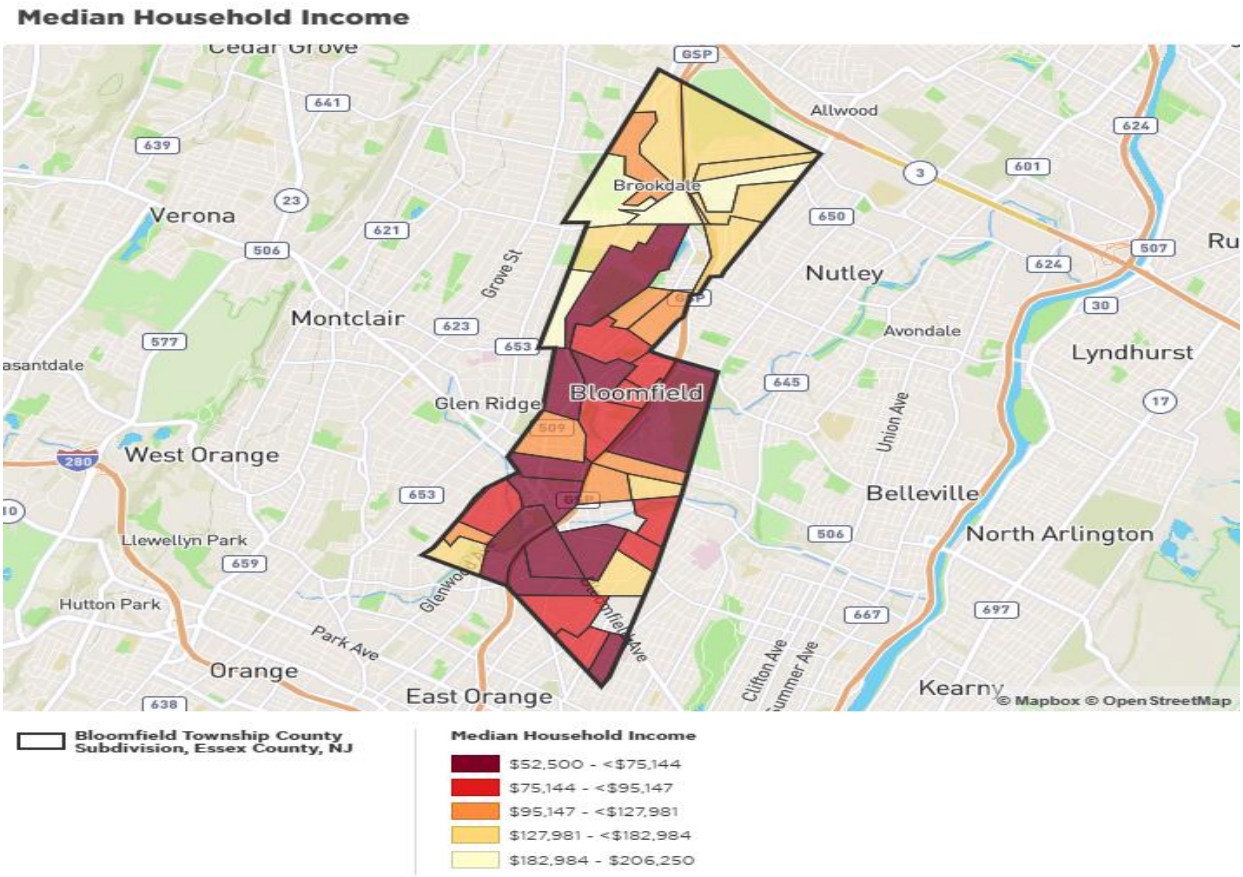


Fig. 28

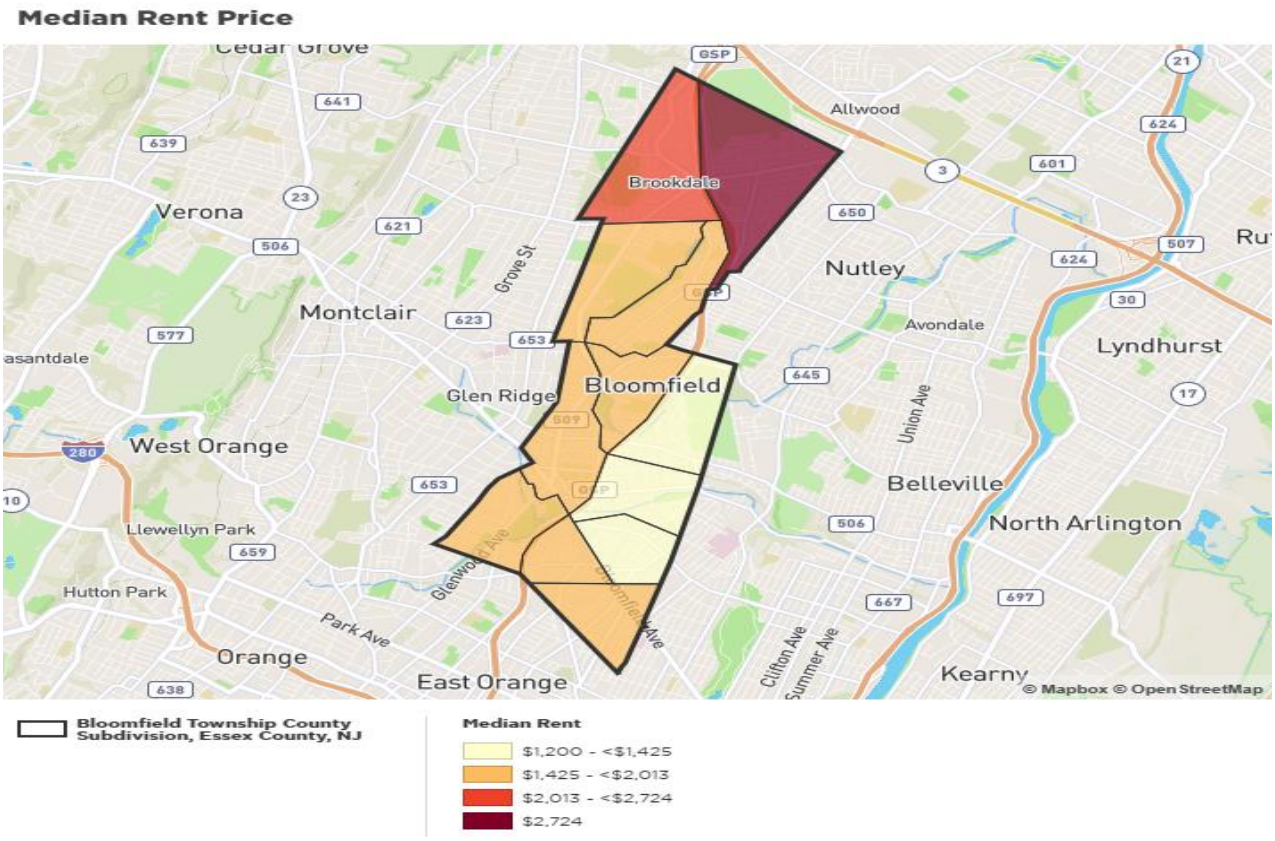


Fig. 29

The Grove (Transit Village) 558 Apartments- Old Westinghouse Property

Time IS A FACTOR

Time is crucial for the fire service because the process of identifying and activating the 9-1-1 or emergency service chain is a quick process but does take a couple of minutes before emergency services begin enroute. There are 3 main considerations for risk with time:

- Cascade of Events
- Fire Behavior
- Chain of Survival

Cascade of Events

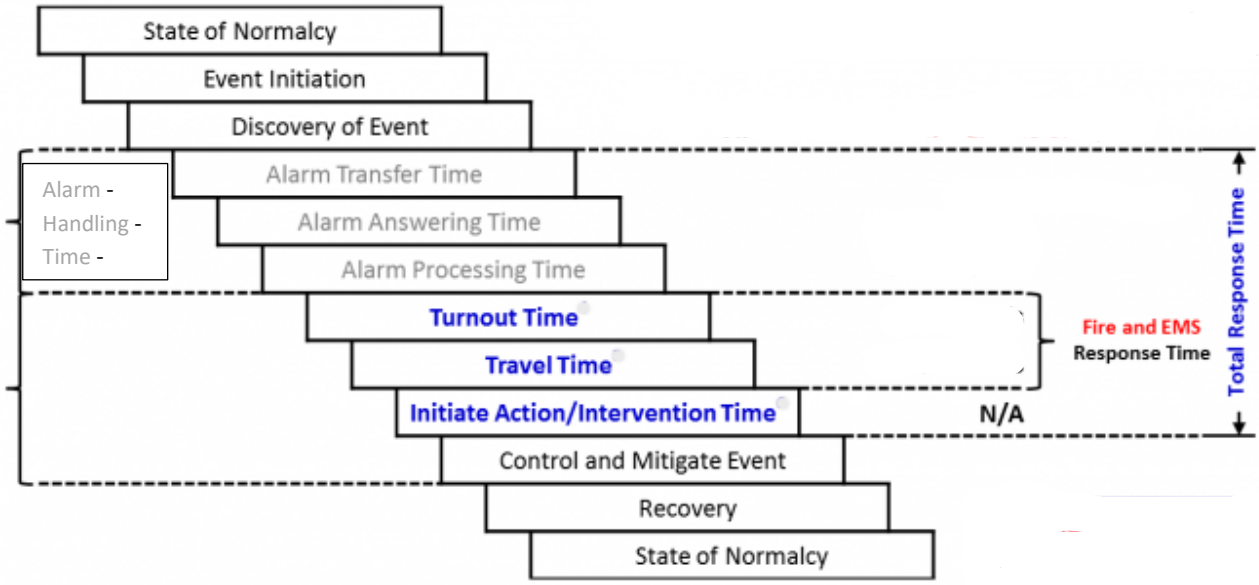


Fig. 30 Source NFPA

The cascade of events is a sequence that is related to an incident. It's a constant cycle of recurrence that the emergency system goes from and returns to a state of normalcy. The cascade has 12, orderly parts. After the "cause" is the "effect." The effect results in a need for service or intervention by emergency responders. This point in time is considered the event initiation of the emergency. The point may occur in seconds/ minutes or over hours /days. For example, a person had recurring issues with an electric outlet. The issues occurred throughout the week. However, a critical point of awareness was not reached until the person eventually noticed an odor of smoke inside the home and then called 911. An emergency event is when the critical point of awareness results in action. The point of awareness may be human or mechanical (e.g., smoke alarm, fire sprinkler). The alarm element is the actual transmission or signaling, from a person or device, which indicates the presence or an emergency situation. For example, a person makes a 9-1-1 call. Immediately following the Alarm is the Notification. Notification is when a 9-1-1 center receives and acknowledges the Alarm element. The element of alarm/call processing is the time interval from when an alarm is acknowledged at a 9-1-1 center to the time emergency responders are notified of a need for service. Turnout begins once responders, such as firefighters, are notified of the need for service. It ends when the unit goes "in route." The interval between a unit going "in route" and the unit arriving "on scene" is considered travel time. The on-scene element is when firefighters arrive at the location of the emergency. The

element that indicates the complete mitigation of an incident is when the 1st due apparatus is available – the end of the incident. At this point, emergency response units are available for service and the system returns to a state of normalcy.

Fire Behavior

Changing residential fire dynamics was a consideration of the risk assessment. All line fire personnel have been trained in this evolving subject area while completing Fire Fighter Level 2 course requirements. This consideration is important as the phenomenon of fire has not changed, but the single-family home, over time, has evolved in both construction and contents. Underwriters Laboratories (UL) conducted six fire experiments in simulated single-family homes and produced a technical report outlining their findings. The report stated that the physics of fire development has not changed over time, but the fire environment or more specifically the single-family home has evolved. And, the evolution was due to numerous factors:

- Larger homes (increase in two-story homes)
- Open home geometries (taller ceilings, open floor plans, two-story foyers, great rooms)
- Home contents/increased synthetic fuel loads (plastics and synthetic textiles)
- New construction materials (engineered products, green/sustainable items)

UL's six experiments - influenced by the previous four factors - created these modern-day home fire conclusions:

- Faster time to flashover
- Faster fire propagation
- Shorter times to collapse
- Shorter resident escape times

A significant inference from the UL experiments was that the findings are applicable locally and directly impact the well-being of both Bloomfield residents and firefighters.

UL Analysis of Changing Residential Fire Dynamics

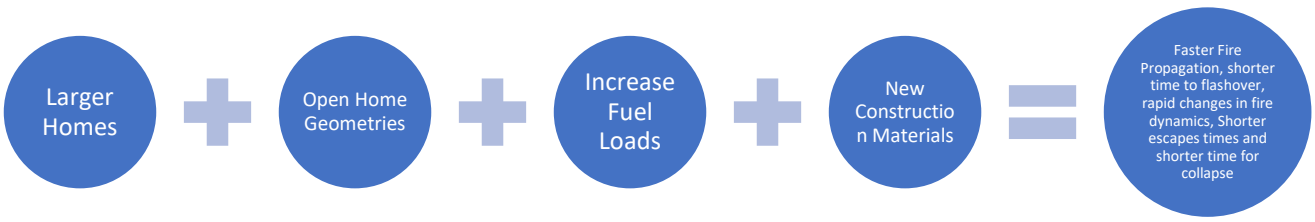


Fig. 31

The Home Fire Sprinkler Coalition (HFSC) developed a home fire timeline to show the growth of a fire both with and without fire sprinklers. During the first 90 seconds after the fire starts, the smoke alarm activates and heat from the fire activates the sprinkler. Without sprinklers, the odds of escaping decrease quickly as flashover can occur in three to five minutes, according to the HFSC. Designed to be a teaching tool, the timeline includes report of fire, dispatch, response to fire, set up, and fighting the fire. The consideration of time and fire behavior is critical to ensuring more positive outcomes.

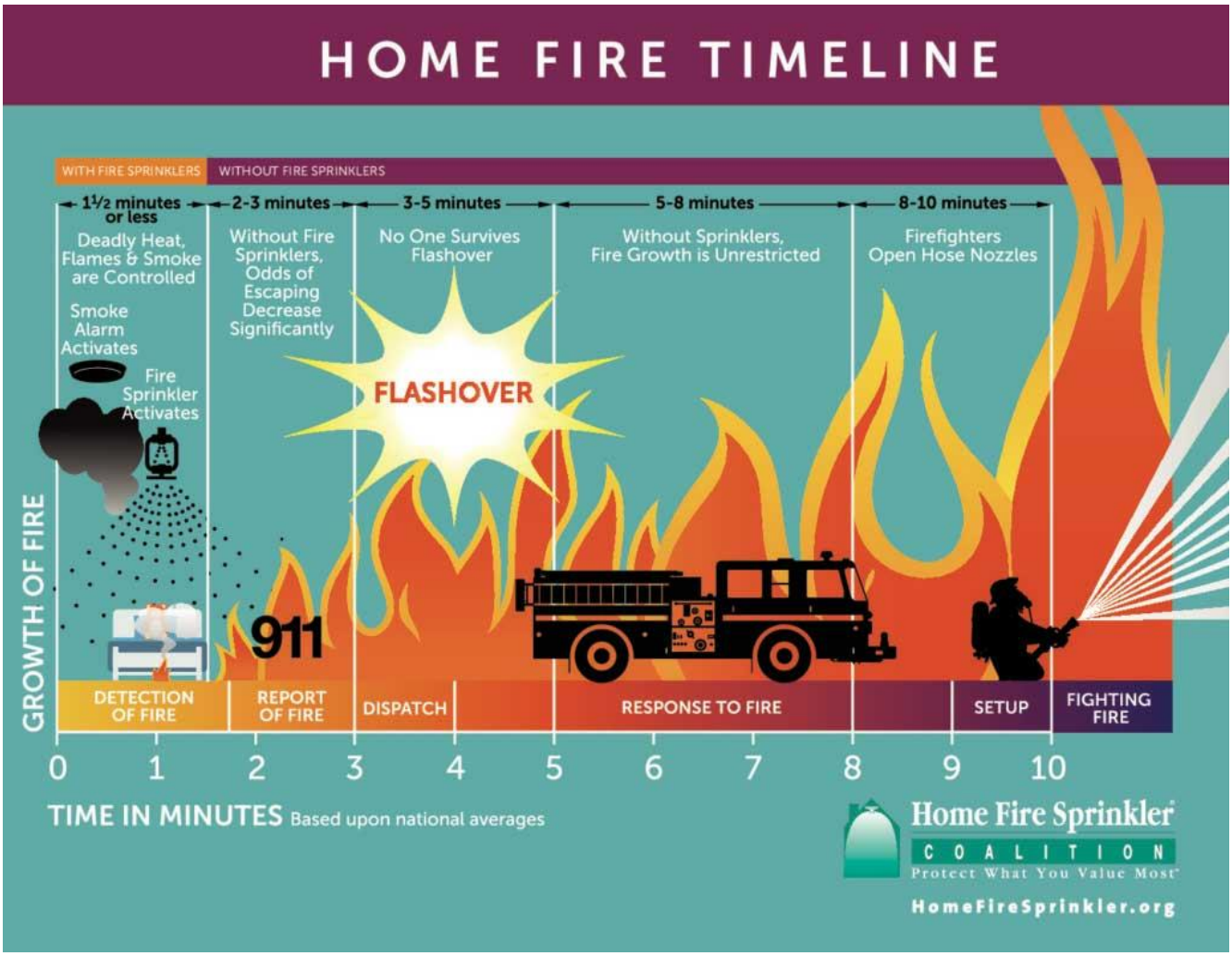


Fig. 32 Source Home Fire Sprinkler Coalition

Stages of Fire Growth

Although fires vary in terms of the speed at which they grow, the host structure, the material burning, and the intensity level, all fires follow the same stages of growth. Industry-wide, the flashover point is the moment during fire growth that significantly compounds the danger of the fire. New Jersey recognizes four stages of growth: ignition, growth, fully developed and decay.

Ignition Phase - This phase begins, for example, when a fallen candle ignites the contents in the plastic wastebasket sitting next to a vanity. The flame begins small, with a localized flame. As more contents in the wastebasket are ignited, a plume of hot gases rises from the wastebasket. Combustible

materials in the path of the flame begin to ignite, which increases the extent and intensity of the flame. The convection of hot gases is the primary means of fire growth.

Growth Phase - During this phase, additional fuel (combustible materials, paper, curtains, etc.) is drawn into the fire. As more fuel is ignited, the size of the fire increases. The plume of hot gases and flames creates a convection current that carries hot gases to the ceiling of the room. Next, flammable materials in the path of this plume ignite. Flames begin to spread upward and outward. Hot gases and smoke rise because they are lighter; they hit the ceiling and spread out to form a layer at the ceiling. These products of combustion are trapped in the room and continue to affect the growth of the fire, unlike in a free-burning fire that occurs outdoors. Radiation starts to play a greater role in the growth of the room-and-contents fire. The temperature of the room continues to increase as the fire grows. The room temperature is highest at the ceiling and lowest at the floor level. As the fire intensifies, the visibility will be greatest at the floor level and poorest at the ceiling. The growth of the fire is limited by the fuel available or by the oxygen available. If the room in which the fire is burning is noncombustible, the only fuel available will be the contents of the room. Likewise, if the doors and windows of the room are closed, a limited amount of oxygen will be present. Either reach the ceiling, however, they are likely to trigger involvement of the whole room.

Fully Developed - As the fire develops, temperatures increase to the point where the flammable materials in the room are undergoing pyrolysis. Large amounts of volatile gases are being released. If the temperature becomes high enough to ignite the materials in the room a condition called flashover can occur.

Flashover is when the temperature in the room reaches a point where the combustible contents of the room ignite all at once. This temperature varies depending on the ignition temperature of the room contents. Flashover is the final stage in the process of fire growth. Once the room flashes over, the fire is fully developed. All combustible materials are involved in the fire, and the burning fuels release the maximum amount of heat.

Decay - This is the last phase of fire, open-flame burning decreases to the point where there is just smoldering fuel. A large amount of heat buildup means that the room will remain very hot, even though the amount of heat being produced decreases. Although a large amount of heat is available, the amount of fuel available to be pyrolyzed decreases, so a smaller amount of combustible vapor is available.

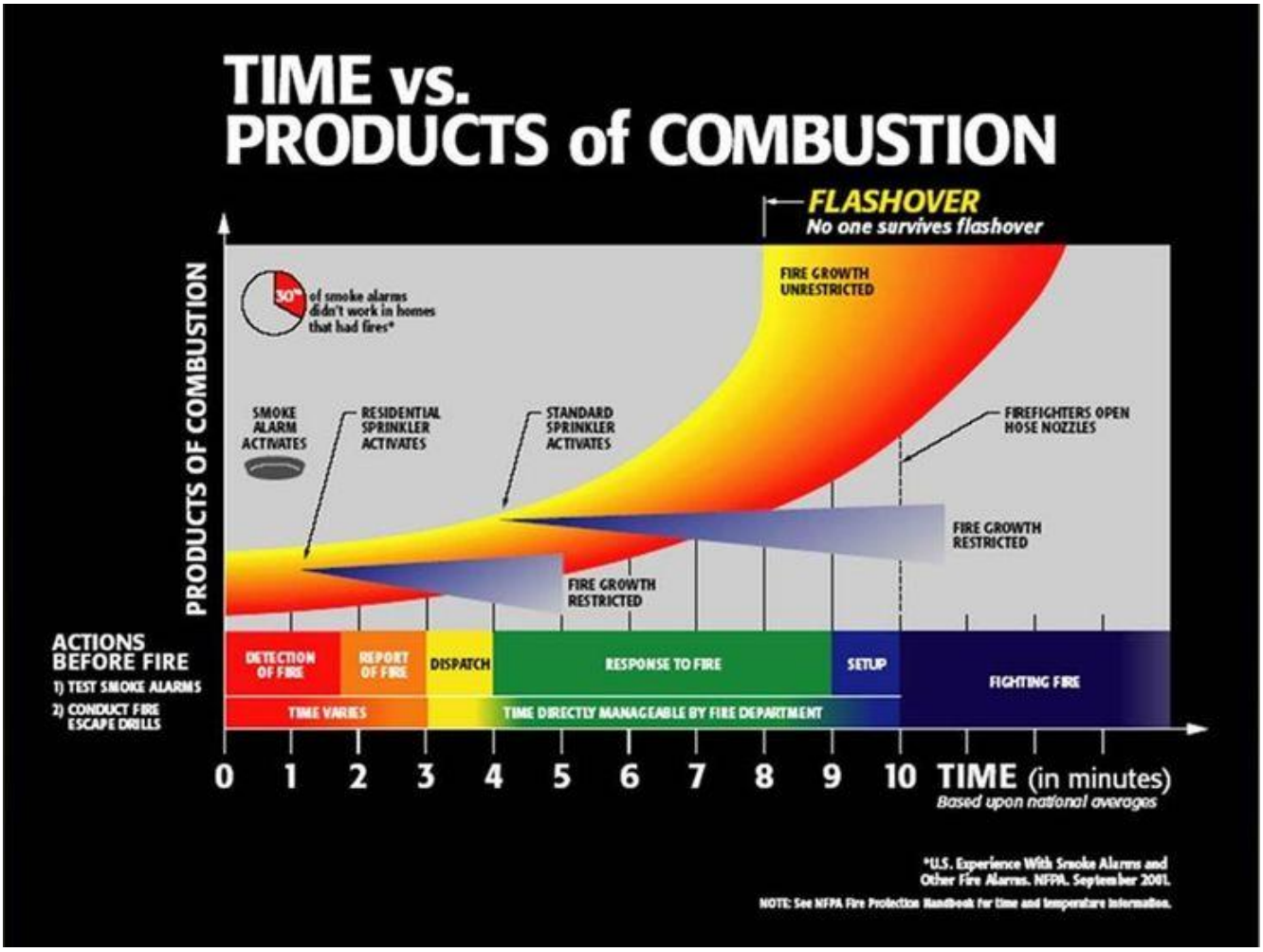


Fig. 33 Source NFPA

Chain of Survival

For EMS purposes the American Heart Association is a great resource to learn more about the Chain of Survival. For the Bloomfield Fire Department, it is a crucial part of the risk assessment. The time-sensitive emergency medical events are not the same. A heart attack occurs when blood flow to the heart is blocked. A heart attack is a “circulation” problem where the longer the patient goes without treatment, the greater the damage. Cardiac arrest occurs when the heart malfunctions and stops beating unexpectedly. Cardiac arrest is a problem where death occurs within minutes if the patient does not receive treatment from an automatic external defibrillator (AED) device. However, cardiac arrest is reversible in most victims if treated within minutes. A victim’s chance of survival can be as high as 64% if the victim receives “immediate CPR” until the arrival of emergency medical professionals (EMS). According to the American Heart Association (AHA), the term Chain of Survival provides a useful metaphor for the elements of the emergency cardiovascular care concept. The AHA’s Chain of Survival (six-link chain) for “adult out-of-hospital” cardiac arrest includes:

1. Recognition of cardiac arrest and activation of the emergency response system.

2. Early cardiopulmonary resuscitation (CPR) with an emphasis on chest compressions.

3. Rapid defibrillation.

4. Advanced resuscitation by EMS and other healthcare providers.

5. Post-cardiac arrest care.

6. Recovery (including additional treatment, observation, rehabilitation, and psychological support).

A strong Chain of Survival can improve chances of survival and recovery for victims of cardiac arrest.

Fig. 34 Source AHA

Trauma Center Destination

The State of New Jersey recognizes five Trauma Levels for facilities:

- **Level V:** This is the most basic type of trauma center. Services here typically include standard trauma diagnoses and stabilization procedures. Standard emergency care is also available.
- **Level IV:** In this tier, patients can receive advanced life support functions and stabilization as they await transfer to a higher tier trauma center.
- **Level III:** Level III trauma centers offer 24-hour emergency care services, including resuscitation, intensive care, and other advanced trauma care procedures.
- **Level II:** This tier is capable of handling most traumatic medical conditions, including surgery, emergency diagnostics, and critical care services.
- **Level I:** The most comprehensive level of trauma care. At this level, patients receive dedicated care through every stage of their recovery, from initial diagnosis to the final steps of rehabilitation.

The Department in 2021 adopted the RWJ Barnabas medical directive for EMS services. The RWJ Barnabas medical directive is the same directive for the surrounding mutual aid EMS transport services that serve the Township (Bloomfield EMS, Nutley, Belleville and Glen Ridge).

Since 98% of its members are trained to the same level of care and determination of specialty care or facility destination, when a member of the Department instructs the EMS company on his/her recommendations, that member is following the same medical directive that the transport ambulance service provider also follows.

In New Jersey, trauma center hospitals are certified by the American College of Surgeons Committee on Trauma (ACS). The Township of Bloomfield is conveniently located near one Level 1 hospital

(University Hospital in Newark, ACS certified), two Level 2 hospitals (St. Joseph's Regional Medical Center in Paterson, and Morristown Memorial Hospital in Morristown, both ACS certified), a burn trauma center at St. Barnabas Medical Center in Livingston, and two Level 3 hospitals where less critical patients are transported (Clara Maass Medical Center in Belleville, and Hackensack Meridian Health Mountainside Medical Center in Glen Ridge). Proximity to these facilities results in an increase in the percentage of survival rates for patients once the 2nd or 3rd step of the Chain of Survival is started.

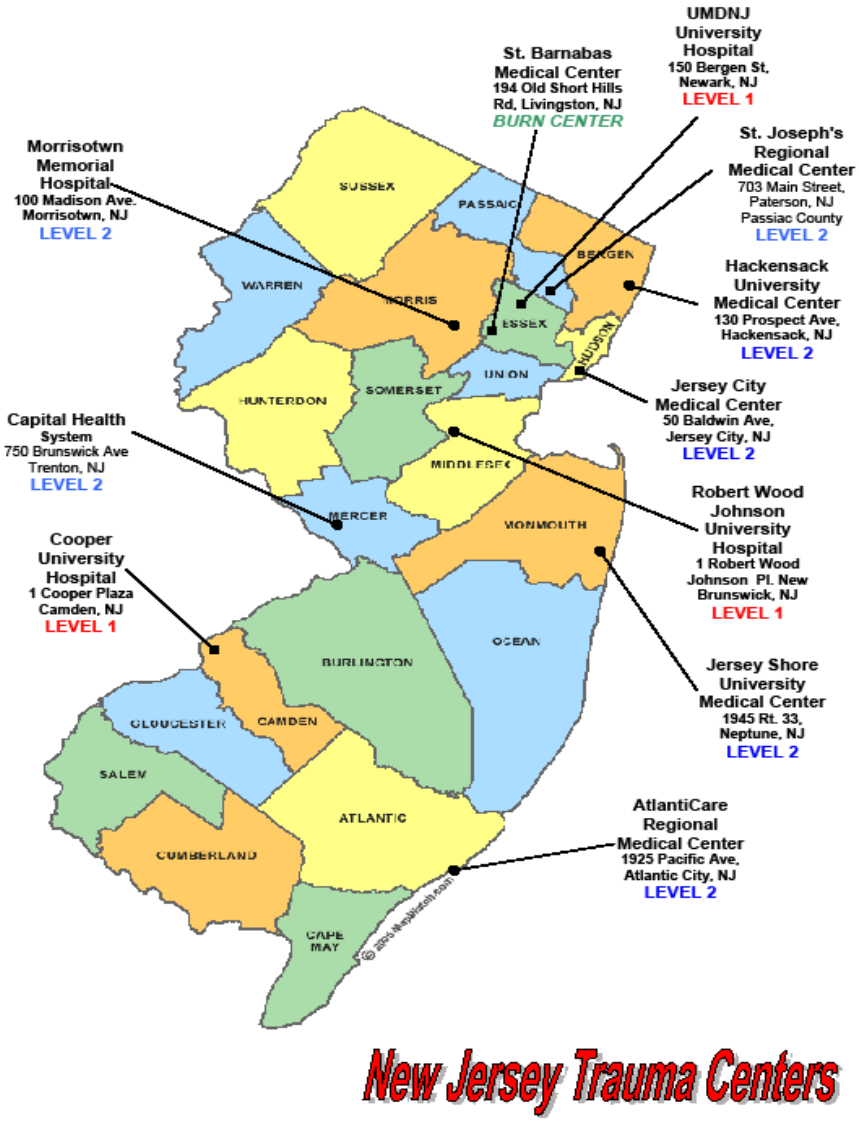


Fig. 35

Fire Risk- Commercial Structures

The Township of Bloomfield does not have many large commercial or industrial structures since the decline of manufacturing in the Northeastern U.S. during the latter part of the 20th century. Some of the remaining large commercial structures have been either repurposed into apartments or were razed and the sites redeveloped into high-density residential apartments. An example of a repurposed former manufacturing building is the Parkway Lofts complex located at 5 Lawrence Drive in the southern portion of the Township at the border with East Orange. The six-story former General Electric manufacturing and warehouse building has been converted into a residential apartment complex with 361 living units. The majority of the commercial structures located in Bloomfield are mixed use two- to six-story buildings, high-density mixed-use buildings with businesses on the ground floor, and one- and two - story large commercial structures. A number of large educational and municipal use buildings are also located in the township.


Westing House Electric Corporation- 1920-2004, The Grove & The Grove at Watsessing (Transit Village 912 Apartments)

Fire Protection Bureau

The Fire Department uses a software program called Spatial Data Logic (SDL) that is designed to help the Fire Prevention Bureau (FPB) manage inspections, address safety concerns, reference building standards and fire and life safety codes, and pre-plan for emergencies to ensure code compliance is being met throughout the Township. The FPB collects this information from a couple of sources including the municipal Building and Tax Departments, and during the property inspection process. The information is then input into the SDL Fire Prevention module where the software collects, organizes and categorizes the FPB inspection reports. The system tracks and monitors compliance on all buildings in Bloomfield. This tool helps improve time management of inspection activities by reducing staff hours. Currently Non-Life Hazard inspections are completed by line fire suppression personnel and the company inspections do not interact with SDL system.

The FPB is comprised of one Fire Official, one Fire Sub-Code Official, two Fire Inspectors and three administrative assistants that coordinate daily inspection appointments and perform data management responsibilities. Several line fire suppression personnel are certified fire inspectors who perform fire inspections to assist the FPB inspections staff with scheduled inspections.

Fire Inspection Activities			
Type of Inspection	**2020**	**2021**	**2022**
Bureau of Housing Inspection	325	214	175
Life Hazard Use Inspections	206	165	206
Non-Life Hazard Inspections	51	58	124
Company Inspections Non-LHU	743	1168	1713
TOP Inspections	460	413	594
RPR Inspections	2737	1980	2785
Total Revenue from all inspections	$359,453	$109,781*	$368,313
Source: SDL database 2020 – 2022.			

*The drastic change in fees collected in 2021 was due to COVID 2020-2021 inspections not being completed due to uncontrolled circumstances.

The Department uses the VISION™ Risk Assessment software to help create an occupancy vulnerability assessment profile (OVAP) for all structures. The software is a dynamic tool that analyzes and

categorizes risks and generates an Occupancy Vulnerability Assessment Profile (OVAP) score for all structures within Bloomfield. The information collected and inputted for OVAP score calculation is collected through the Non-Life Hazard company inspections that on fire suppression line firefighters complete on an annual schedule. The OVAP score methodology used 18-specific factors to best categorize risk:

- Number of employees
- Number of floors
- Square footage
- Property value
- Occupancy load
- Occupancy access
- Occupant mobility
- Warning Alarm System
- Exits
- Construction Type
- Regulatory Oversight
- Human Activity
- Experience (incident frequency)
- Capacity to Control
- Hazard Index
- Fire Load
- Available Water Flow
- Fire Load Sprinklers

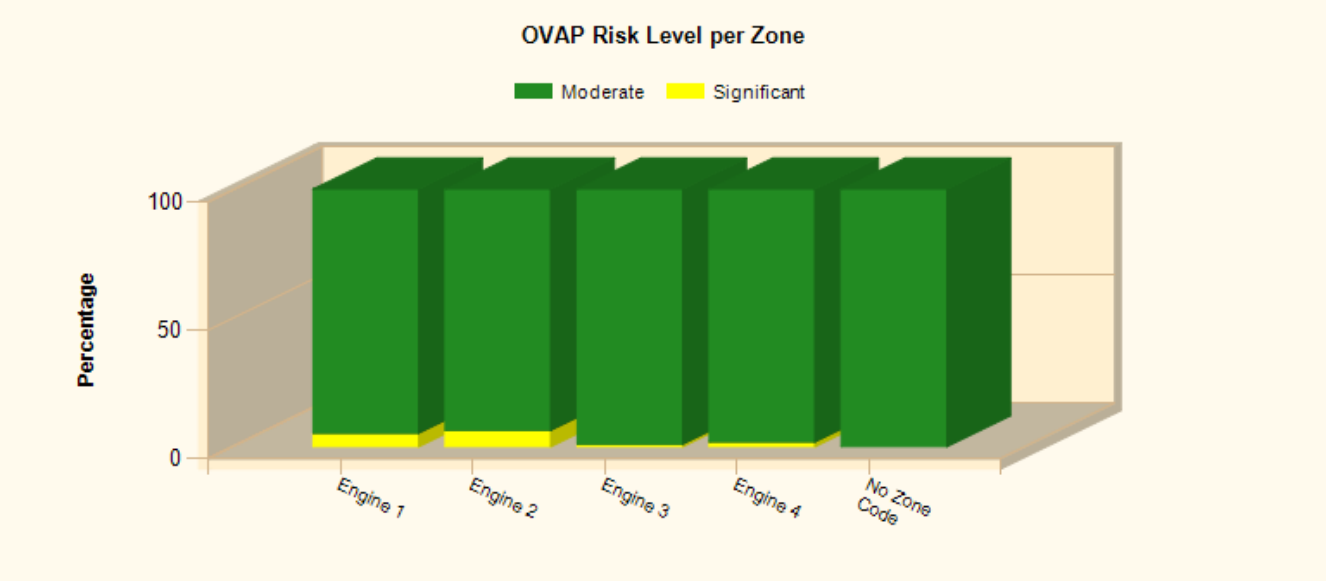
VISION™ creates a risk categorization using an OVAP score for each commercial and three-family and above residential property. The software generates an OVAP score using an algorithm that analyzes the 18 risk-factors and intuitive methodology. OVAP scores are categorized as:

- Maximum/Special (OVAP score of 60 or more)
- High (OVAP score of 40-59.99)
- Moderate (OVAP score of 14-39.99)
- Low (OVAP score of 13.99 or less)

The BFD's Community Risk Reduction Program performed a thorough evaluation of Bloomfield's building stock that evaluated over 70% of structures in the township. The evaluation includes a detailed three-part process:

1. Detailed review of every structure in the department records management system (ER).
2. Methodical entry of each structure's 18 risk factors in VISION™.

3. Generation of OVAP scores.



Risk Level	OVAP Score	Number Occupancies	Percent
ZONE : Engine 1 - Engine 1			
Significant	59.99 - 40.00	24	1.51%
Moderate	39.99 - 15.00	429	26.98%
ZONE : Engine 2 - Engine 2			
Significant	59.99 - 40.00	29	1.82%
Moderate	39.99 - 15.00	422	26.54%
ZONE : Engine 3 - Engine 3			
Significant	59.99 - 40.00	5	0.31%
Moderate	39.99 - 15.00	469	29.50%
Incomplete	00.00	1	0.06%
ZONE : Engine 4 - Engine 4			
Significant	59.99 - 40.00	4	0.25%
Moderate	39.99 - 15.00	204	12.83%
ZONE : No Zone Assigned			
Moderate	39.99 - 15.00	3	0.19%
# Occupancies with Complete OVAP scores		1589	99.94%
# Occupancies with Incomplete OVAP scores		1	0.06%

- This is 71% of all occupancies.

The OVAP risk categorization efforts yielded some conclusions about the evaluation and the 2022 process:

- within two years, fire department personnel were able to inspect over 70% of commercial and three-family and above residential structures and produce an OVAP score for each inspected occupancy.
- improved upon how commercial structures were identified and evaluated.
- concluded that the OVAP score gave a lower risk factor on the high-density mixed-use residential complexes than what was initially assumed.

- found that the department had not categorized an occupancy with “maximum” risk after the comprehensive OVAP processes. - This finding could be due to the lack of training on how to categorize the newer high-density mixed-use residential complexes, the recently completed high-density occupancies were not yet inspected, or the program needs to be adjusted to the department specific risk categories. Using the Two-Axis Risk Categorization Method, these buildings would be categorized as HIGH Risk (see below).

The context of probability (frequency/experience factor) and consequence (magnitude) illustrates the aggregate significance of OVAP values for risk categorization. The inherent nature of the OVAP scoring yields the likelihood (probability) of service demands yet to come. Furthermore, the scoring’s all-inclusiveness also produces a reliable gauge to help understand the potential impact (consequence) to the community.

Besides the use and application of the VISION™ Risk Assessment to evaluate most structures/occupancies, the Department also considered other community features such as:

- Zoning data and maps.
- Commercial building permit data and maps.
- Top real estate property values.
- Residential board and care occupancies, retirement communities and apartments.
- Critical facilities/infrastructure/target hazards.

High-rise buildings (defined under the Uniform Construction Code as a building with of more than 75 feet from the most accessible level for fire apparatus), office buildings and large apartment complexes have been in Bloomfield for years. However, the rate of development and scale of current, under construction, and proposed large area buildings has created a unique challenge for the Fire Department. Developers have been building these large area buildings just short of 75 feet in height so that lightweight wood construction materials can be used instead of reinforced concrete and protected steel high-rise construction materials. As well as staying under 75-foot height limit, many developers have adopted pedestal style construction. Pedestal construction, sometimes also known as podium style construction, allows for the construction of up to four stories of lightweight wood frame residential construction over a fire resistive base featuring one or two stories of reinforced concrete or protected steel. The code requires that these structures be equipped with automatic fire sprinklers. However, the residential wood frame upper floors may be covered by an NFPA 13R (residential) sprinkler system. Such lower water flow systems are designed to control an interior rooms and content fire while allowing for the safe egress of the occupants. The problem presented by these light-duty fire sprinkler systems is that the code allows for less coverage of the occupied spaces in a building. Areas such as attics, small bathrooms, small closets, concealed spaces and voids, and porches are not required to have fire sprinklers under the provisions of the relaxed sprinkler code. These systems are not designed to protect the building itself causing concern for firefighters who must enter the structure to extinguish a fire. If a fire is able to breach the drywall covering of the wood frame structural elements or starts within a combustible wall, floor, or attic space that are not required to be covered by the residential sprinkler system, early collapse of the structure or a portion of the structure can be

anticipated. Laboratory testing and actual fire ground experience have shown that if the lightweight wood frame structural elements are exposed to significant fire, collapse of the structural elements can be expected in as little as 5 to 7 minutes. The number and sheer size of these structures that have been built in the Township in the last few years pose a significant challenge to firefighters.

Fig. 36 Avalon Building- During construction on left, after construction on right.

Since 2015, Bloomfield had an additional 4,152,632 square feet of residential building stock added (mostly located in high-density residential complexes) with a total of 12 large projects. This additional square footage of building stock, along with new business spaces often occupying the ground floor, are a major fire protection concern. The large population increase resulting from an additional 2,965 studio, single, 2- & 3-bedroom apartments that have been added to an already densely populated township presents significant challenges for the Department. There are several additional high-density projects projected to be built within the next couple of years.

With the former expansive commercial warehouses and manufacturing complexes in the Township having been razed to make way for large high-density residential complexes, the Township fire risk has shifted from a manufacturing protection means to a life safety protection means. The previous manufacturing plants were mostly low-rise fire resistive and non-combustible warehouses and factory buildings with the typical fire protection concerns of manufacturing facilities. They have now been replaced by mid-rise lightweight wood frame high-density housing of up to six-stories in height with high content fire loads, more intricate interior designs, and great occupancy life safety concerns.

Community Wide Risk

Natural Hazards

The Township of Bloomfield is susceptible to various natural hazards including extreme heat/humidity, flooding, geological hazards, snowstorms, windstorms, and climate change.

Flood

The topography of Bloomfield includes a couple of waterways that traverse the township. Most notably, the Second and Third Rivers pass through the community on their way to drain into the nearby Passaic River. Bloomfield has historically experienced flooding in the drainage areas adjacent to these waterways and has experienced street flooding during heavy summer rainstorms and while northeastern storms and the remnants of Atlantic hurricanes and tropical storms pass through the area. Some work has been completed on storm water mitigation projects in several flood plagued sections of the community, however many of these areas continue to experience flooding during periods of heavy rainfall.

Windstorms

High winds are defined as those that last longer than one hour at greater than 39 miles per hour (mph) or for any length of time at greater than 57 mph. Windstorms that affect Bloomfield are not location specific but rather impact most of the area. Usually, these winds are associated with hurricanes and tropical storms entering the area from the south during the Atlantic hurricane season (June to November) or from northeastern storms that can impact the area at any time of the year. These events can bring heavy rains or snowfalls coupled with periods of high winds.

Severe windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause damage to homes and businesses. The winds are not considered major widespread threats to population and property but do involve responses from emergency service personnel. Destructive impacts to trees, power lines, and utility services are also associated with high winds. Falling trees can occasionally cause fatalities and serious structural damage while fallen power lines could cause widespread power outages and fire. These incidents are rare as well as localized.

Climate Change

Climate change is not a distinct hazard, but rather a phenomenon that could exacerbate weather related hazards. Climatologists are unsure what exact risks may be imposed on the community by climate change, however, existing exposures to storms and other extreme events must be considered.

Technological/Human Hazards

Fig. 37

Pipelines A 16-inch natural gas transmission pipeline runs on the northeast side of town that is owned by Transco and maintained by PSE&G. The pipeline is buried underground in rights-of-way at varying depths that traverse the township at the northeast corner. 22% of all pipeline accidents are caused by careless excavators who fail to notify pipeline and underground utility operators, as required. Contractors are required to call 811 before beginning excavations. In the event of a leak or pipeline accident, Bloomfield fire units would respond. Additional specialized resources are available through the Essex County Master Mutual Aid Plan and PSE&G emergency services.

Hazardous Material Incidents Hazardous Material incidents accounted for 7.9% of all calls to the Fire Department from 2018-2022. There are different types of hazardous materials incident responses ranging from a single engine response (e.g., an abandoned container of motor oil), to a response requiring the Department's entire staff for a major spill or release of hazardous materials. Bloomfield fire units would respond to a reported Hazardous Materials incident and perform containment and hazard mitigation to the level of their training. All fire department members are certified to Hazardous Materials Awareness and Operations training levels. If the incident may exceed the capabilities of the local fire forces, Nutley Fire Department would be requested to respond to the scene of the emergency with their Hazardous Materials Unit. Policies, procedures, joint training and mutual aid agreements are in place to handle such events.

Utility Failure

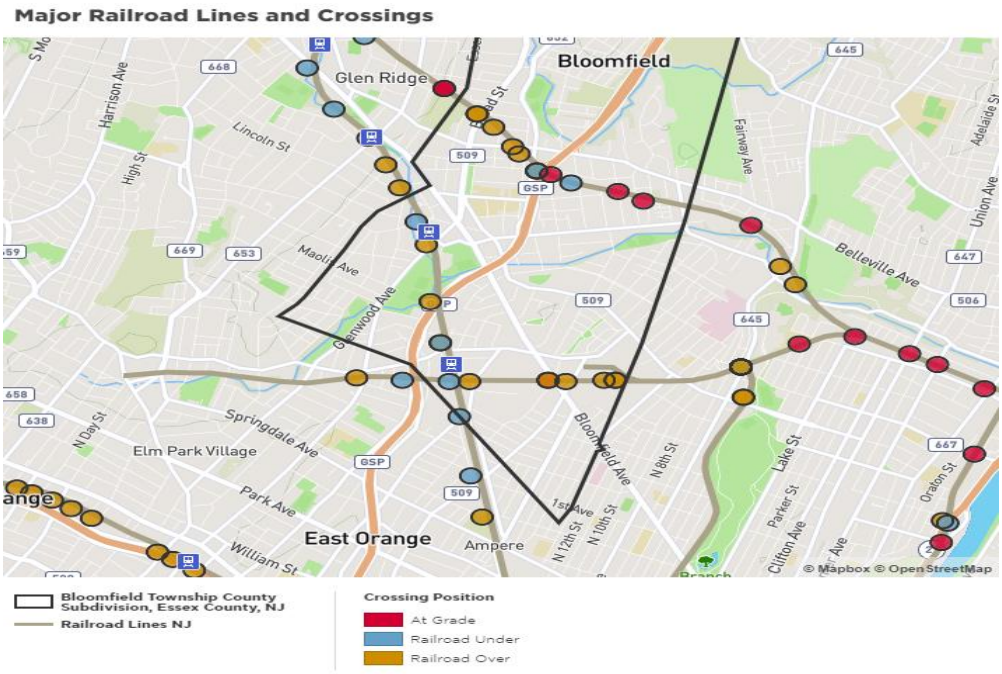
Utility failure is not about introducing a hazard into the community; rather, the risk relates to the absence of major utilities such as power. A lack of power for an extended amount of time could have a catastrophic impact on critical infrastructure and the economy of an area. Without power, communications, Wi-Fi, and transportation services may come to a halt. Businesses, grocery stores, gas stations, ATMs, banks, and other essential services may cease operations. Refrigeration and medical devices are unable to function. Critical township infrastructure including City Hall, the Police Department, DPW, the Civic Center, and each fire station have emergency power capability with procedures in place to maintain essential emergency services. Long-term power outages could significantly impact the residents and businesses of the Township.

Transportation Systems

Air

The Township of Bloomfield does not have an airport within its boundaries but the community is located approximately 14 miles away from Newark Liberty International Airport (EWR). The airport is the second busiest airport in the New York metropolitan area, and the 12th busiest airport in the United States, based on numbers of passengers served.

Light Rail



Sources: US DOT BTS National Highway-Rail Crossings Inventory Program; US Census. Crossing position 1 is At Grade, 2 is Railroad Under, and 3 is Railroad Over

Fig. 38

The Township of Bloomfield has access to the NJ Transit Newark Light Rail system via a station at Grove Street in the southern portion of the community. The presence of the light rail system adds to the potential for mass casualty and/or other rescue incidents. The department annually holds a training class for its personnel with NJ Light Rail representatives as a refresher on how the system operates and how to handle system emergencies that may require rescue and fire suppression operations. Policies, procedures, training, and mutual aid agreements are in place to handle the potential of an incident involving the light rail system.

NJ Transit Train

In 2020, the NFPA reported that fire departments in the U.S. annually responded to 760 rail vehicle fires. On average, these fires are responsible for one civilian death, 76 civilian injuries and $23 million in direct property damage. Engines or locomotives were involved with 38% of these fires. 24% of rail vehicle fires involved box, freight, or hopper cars. Railroad-related fires and other incidents in the Bloomfield metropolitan area can have a significant impact on the community. Bloomfield is considered a commuter town, evidenced by the large transit villages that have been built near the two commuter rail stations at the Bloomfield-Watsessing Station and the Bloomfield Station. (A potential third rail in the Township may be realized with the proposed re-opening of a former station near Bloomfield-Newark boarder). An incident during the morning and afternoon rush hours can have a significant impact on the community due to service disruptions. Rail fires are a serious consideration of fire risk. The Fire Department has not responded to a rail car fire from 2019 to 2022. Two miles of

electrified tracks runs through the township via the right-of-way of the Montclair Boonton commuter line of NJ Transit. This line is managed by AMTRAK but NJ Transit commuter trains use these rails every day. A daily average of 59 trains travel through Bloomfield via this rail line. Rail vehicle fires are rare, but the occurrence can have a significant impact on the Department, community, and region. Rail vehicle fires are considered a special risk. A former railway right of way that traverses the central portion of the Township is no longer in use and is projected to become a biking and walking path by 2034.

Streets and Highways

As of May 2010, the township had a total of 95.39 miles of roadways, of which 77.39 miles were maintained by the municipality, 13.77 miles by Essex County and 4.23 miles by the New Jersey Turnpike Authority. The local streets, especially near the transit villages in the central and southern portions of the community see abnormally high traffic volumes during daily rush hour times. Response times in these areas may be delayed due to high traffic volume.

A major multi-lane limited access highway traverses the length of the township from north to south. The Garden State Parkway, a passenger only toll roadway, has four access points in the township in the northern, central, and southern portions of the community. The roadway is a heavily traveled major artery in the state that traverses the entire length of New Jersey from north to south. The roadway experiences high traffic volumes during weekday rush hours and holidays.

Vehicle accidents, especially on the high-speed Garden State Parkway, pose a risk to the community. Fire Department personnel regularly respond to motor vehicle accidents and are well experienced in mitigating the hazards found in such instances. Department personnel regularly train on vehicle extrication techniques and emergency medical patient care for victims of vehicle collisions.

Security Hazards

Civil Disorder

Located near the large urban center of the City of Newark, Bloomfield is at risk of being affected by civil unrest that may impact the adjacent city. For example, historical events such as the violent armed conflict that occurred on the streets of Newark in July of 1967 serves to illustrate the potential of the community being affected by civil disturbances. As the probability of these events occurring in the township is low, the associated risk falls into the low probability with high consequence category. While generally a police department issue, fire departments may be called upon to extinguish fires and treat the injured, when safe, during these events. In the past, Bloomfield has teamed up with Newark Fire Department and operated using the policies, tactics and procedures developed for suppression situations but not civil unrest situations.

Terrorism

Located within the New York metropolitan area, and situated next to some of the most densely populated cities in the United States (East Orange, West New York, Jersey City, etc.), Bloomfield is at risk of being involved in a terrorist attack involving potential targets in the metropolitan area. All members are trained to an Awareness level for terrorism incidents, and many have had extensive additional training. Depending on the nature of the event—chemical, biological, radiological, nuclear,

or explosive— policies, procedures, and mutual aid agreements are in place to handle this potential risk.

Active Shooter

Located in the United States, Bloomfield is a soft target and at risk of being involved in an active shooter incident. Specific locations, such as schools and houses of worship have been identified and training has been conducted in partnership with the Bloomfield Police Department.

Fire Classified by Response Type

FIRE

Fire Risk Assessment

In general, fire hazards are related to the characteristic type and layout of a city's development. The majority of Bloomfield is devoted to residential or low-rise commercial development that is composed predominantly of wood-frame construction. 2018 structure fire data for the township indicates that of fires involving structures, over 70 percent occurred in residential and small commercial buildings.

Fire (Urban) Risk Assessment Methodology

Fire risk in this category include structure fires, vehicle fires, rubbish fires, and vegetation fires. The analysis considers fire potential (probability) and impact (consequences). There are five steps in the assessment process. The department primarily uses the OVAP scores and the 2-Axis Risk Categorization Process in categorizing the risks and considers the other factors in the department's 5 step risk assessment process.

Step 1: Review community demographics and development- Review of the general features of the Township to include demographics, population density, building density, road and highway miles, and total assessed property valuation. OVAP and 2-Axis Risk Categorization.

Step 2: Identify hazards- Identify the hazard types (structure, vehicle, rubbish, brush) and estimate probability based on historical data. OVAP and 2-Axis Risk Categorization.

Step 3: Evaluate the risks- Evaluate the consequences. Consider life safety (risk of death or injury), economic or cultural loss (loss of property, income, historic, or irreplaceable assets), and environmental harm (irreparable or long-term damage to the environment). The evaluation includes an assessment of occupancy use, occupant type, density, construction types, construction features, fire flow requirements, historical significance, and environmentally sensitive areas. 2-Axis Risk Categorization.

Step 4: Consider mitigating factors- Consider factors such as access, fire detection systems, fire sprinklers, extinguishing systems, standpipes, other fire protection features (elevator recall, HVAC shutoffs, sprinklered/protected stairwells) and onsite 24-hour security personnel. OVAP.

Step 5: Define and establish hazard levels- Define and establish hazard levels of low, moderate, high, and special. Though the assessment is based on firefighter company inspections, it provides a solid framework to measure risk and formulate plans to reduce these risks. 2-Axis Risk Categorization.

Fire (Urban) Risk Levels

Based upon this analysis of existing and potential community risk, in addition to the probability and consequences of these events, the following hazard levels have been established:

- Low Risk: Small structures that are remote from other buildings are considered low hazard occupancies. Examples include detached garages and sheds. Also included in this category are vehicle fires, rubbish fires, and small vegetation fires. OVAP Score 0-14.99.

- Moderate Risk: Moderate hazard areas are also known as typical hazards. Most of the structures in Bloomfield fall into this category that includes single family dwellings, multifamily dwellings, and small or medium apartments/condominiums (≤ 39 units), all public schools, daycare centers and small commercial occupancies (≤ 10,000 square feet) are examples of moderate risk structures. OVAP Score 15-39.99.
- High Risk: These properties are typically substantial structures that in an emergency may bear the risk of large loss of life, loss of economic value to the community, or large property loss. Large apartment or high-density mixed-use complexes (40+ units) and large commercial buildings (>10,000 square feet) are examples of high-risk occupancies. OVAP Score 40-59.99.

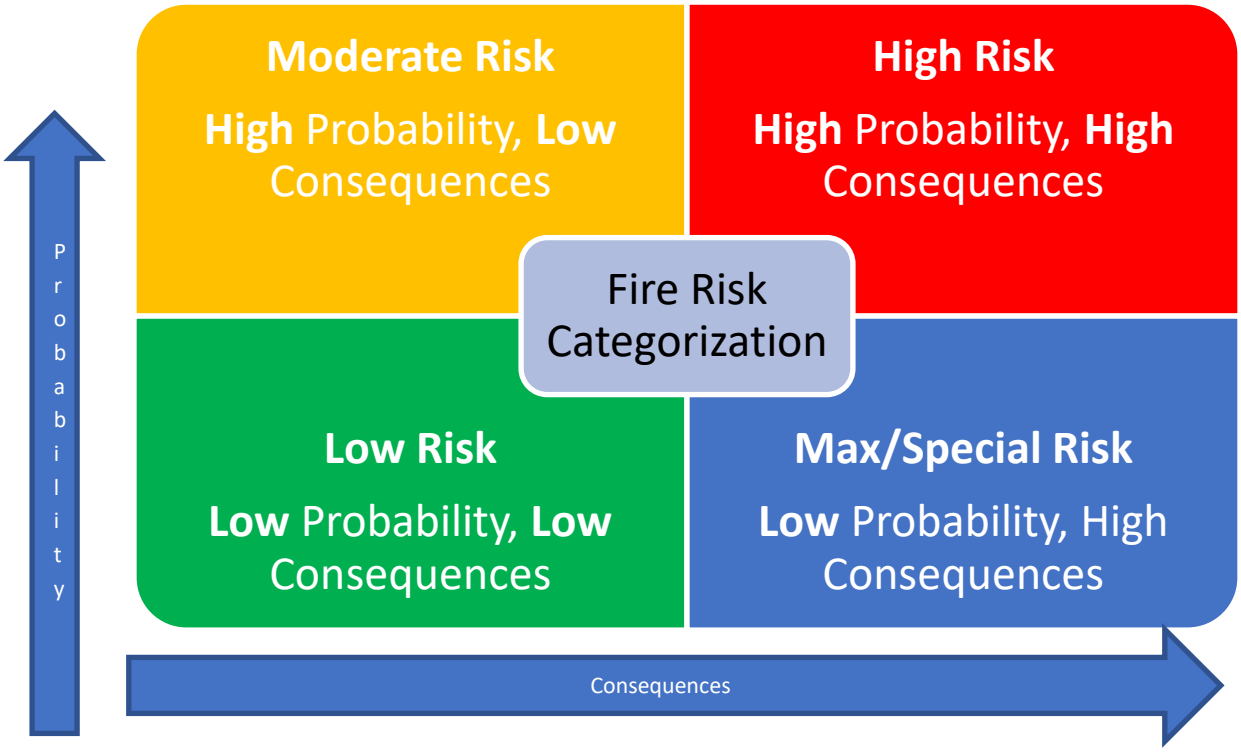


Fig. 39

- Special Risk: High-rise buildings, Natural Disaster situations, senior citizen housing, and skilled nursing facilities Special Risk is an exceptional classification that addresses critical tasking for a unique incident type. OVAP Score 60 & up.

Fire Flow

The evaluation of water supply needed once a structure has become fully involved in fire is known as the required fire flow. Fire flow is a vital component to the assessment of fire risk. Fire flow requirements for the Township of Bloomfield have been determined by the Insurance Service Organization (ISO). The last ISO review examined required fire flow data and measured actual available water for 13 areas of the Township. The needed flows ranged from a low of 2,250 gallons per minute (GPM) to a high of 4,000 GPM depending on the hazard in each area. The average fire flow needed for the township is 3,058 GPM. Tests conducted during the last ISO survey showed that the township water supply can deliver an average flow of 3,638 GPM. The location of fire hydrants is collected during the pre-fire planning program and are considered in the risk evaluation.

Fire Benchmarks

For 90 percent of all (Risk Level) fires, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 8 minutes in all areas. The first-due unit for all risk levels shall be capable of: providing 500 gallons of water and 1,500 gallons per minute (gpm) pumping capacity; initiating command; requesting additional resources; establishing a back-up line and advancing an attack line, each flowing a minimum of 150 gpm; establishing an uninterrupted water supply; containing the fire; rescuing at-risk victims; and performing salvage operations. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.
For 90 percent of Low and Moderate (Risk Level) fires, the total response time for the arrival of the effective response force (ERF), staffed with 18 firefighters and officers, shall be: 8 minutes in all areas.
For 90 percent of High and Significant (Risk Level) fires, the total response time for the arrival of the effective response force (ERF), staffed with 29 firefighters and officers, shall be: 10 minutes and 10 seconds in all areas. The ERF shall be capable of: establishing command; appointing a site safety officer; providing an uninterrupted water supply; advancing an attack line and a backup line for fire control; complying with the Occupational Safety and Health Administration (OSHA) requirements of two-in and two-out; completing forcible entry; searching and rescuing at-risk victims; ventilating the structure; controlling utilities; and performing salvage and overhaul. These operations shall be done in accordance with departmental standard operating procedures while providing for the safety of responders and the public.
In order for the department to reach the proper deployment levels in accordance with the department's critical task ERF deployment levels, the department needs to have the full shift of on-line personnel, automatic aid and mutual aid companies to respond to the scene. The department is currently taking proactive steps to document when automatic/mutual aid companies arrive on scene in order analyze the ability to reach ERF staffing levels for responses to all types of structure fires.

Non-Fire Risk Assessment

There are three general categories of non-fire hazards: Emergency Medical Services (EMS), hazardous materials response (HazMat), and technical rescue. Risk assessment for non-fire hazards incorporate many of the same components evaluated during the fire risk assessment (historical data, community characteristics, and demographics). However, there are factors unique to each risk.

Non-Fire Risk Assessment Methodology

Non-fire risk analysis considers potential incident (probability) and impact (consequences). There are five steps in the assessment process.

Step 1: Review community demographics and development. Review general features of the Township to include demographics, population density, building density, environment, type of rescue or injury, road and highway miles, and type of emergency. The type of emergency is the largest deciding factor, for example, an elevator entrapment with no injuries will be considered Low Risk compared to an emergency response involving a vehicle collision with occupant injury/entrapment.

Step 2: Identify non-fire hazards. Identify hazard types (EMS, hazardous material release, technical rescue) and estimate probability based on historical data.

Step 3: Evaluate the risks. Evaluate the consequences. Consider life safety (risk of death or injury), economic or cultural loss (loss of property, income, historic, or irreplaceable assets), and environmental harm (irreparable or long-term damage to the environment). Can the victim rescue/removal be delayed until the arrival of specialty teams such as Nutley HAZMAT, Metro Area UASI Strike Team, NJDFS, or New Jersey Task Force 1.

Step 4: Consider mitigating factors. Consider factors such as access and built-in safety features (HAZMAT and Technical Rescue).

Step 5: Define and establish hazard levels.

Emergency Medical Incidents

Requests for Emergency Medical Services (EMS) are the second most frequent type of service provided by the Bloomfield Fire Department. EMS incidents account for 30% percent (2019-2022) of emergency activities and correspondingly have the greatest impact on Department resources. Normal EMS teams are two individuals, when BFD is dispatched, the apparatus has three members and can be dispatched out of their FMZ. Residential and population density is a significant factor in assessing the probability of EMS incidents. The Fire Department is only dispatched to EMS incidents if the primary EMS provider, Bloomfield EMS, is on a previous assignment, and EMS mutual aid has been requested. The Fire Department does not provide patient transport services. As the population density of the Bloomfield increases due to expected additional development, the demand for EMS will likely increase proportionately. There is a range of EMS incident types. The following hazard levels have been established for EMS risk:

- Low Risk: Injured and ill persons, without airway, breathing, or circulatory problems.
- Moderate Risk: Cardiac arrest, severe respiratory distress, patients meeting trauma center criteria or other specialty center criteria.
- High Risk: Multi-victim incidents with five or more patients.

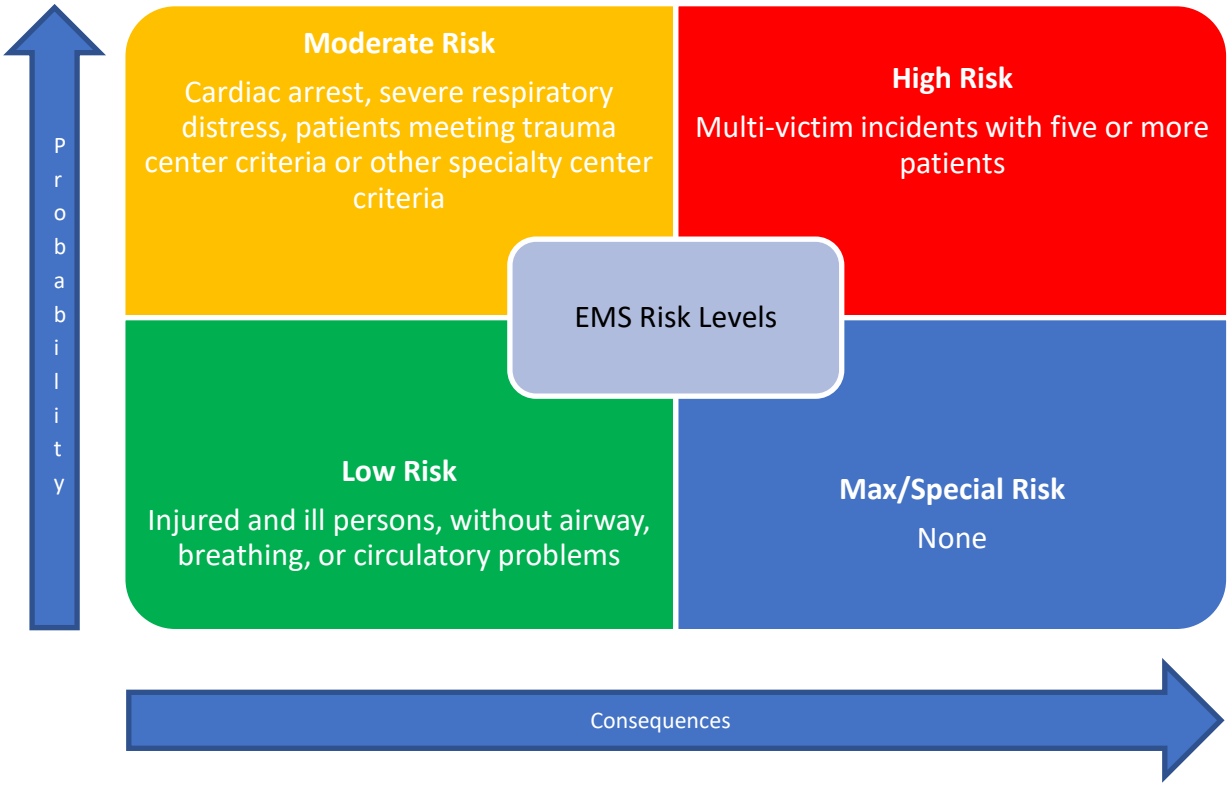


Fig. 40

EMS Benchmarks

For 90 percent of all (Risk Level) EMS responses, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 8 minutes in all areas. The first-due unit shall be capable of: assessing scene safety and establishing command; sizing-up the situation; conducting an initial patient assessment; obtaining vitals and patient's medical history; initiating mitigation efforts within one minute of arrival; providing first responder medical aid including automatic external defibrillation (AED); and assisting transport personnel with packaging the patient.
For 90 percent of all (Risk Level) EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with two firefighters and one officer, shall be 8 minutes in all areas. The ERF shall be capable of: providing incident command and producing related documentation; appointing a site safety officer; completing patient assessment; providing appropriate treatment; performing AED; initiating cardio-pulmonary resuscitation (CPR).
The department relies upon Bloomfield EMS and mutual aid EMS providers to complete the effective response force (ERF) component of its EMS program. The initial arriving apparatus shall have the capabilities of providing basic emergency medical technician (EMT) level medical aid including AED, until the third-party EMS provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire apparatus shall upon arrival provide support as needed.

Hazardous Materials Incidents

Hazardous material incidents account for 7% of Department responses from 2019-2022. Hazardous materials are routinely transported on the streets of Bloomfield and there are many businesses that

use or store reportable quantities of hazardous materials. There is also a 16-inch transmission pipeline in the Northeastern portion of town carrying natural gas under high pressure. Illicit drug labs and illegal dumping are other sources of hazardous material incidents. For hazardous materials scenarios that exceed the training or equipment capabilities of the Department and its members, additional resources will be dispatched from the county hazardous materials unit operated by the Nutley Fire Department. We also request that PSE&G respond to incidents that our standard operating procedures have established for life safety. The following hazard levels have been established for hazardous materials risk:

- Low Risk: Residential carbon monoxide detector activation, hazardous material investigation, natural gas leaks outside of a structure.
- Moderate Risk: Static hazardous material release – no immediate threat to life, environment, natural gas leak inside a structure or property.
- High Risk: Dynamic hazardous material release – immediate threat to life, environment, or property.

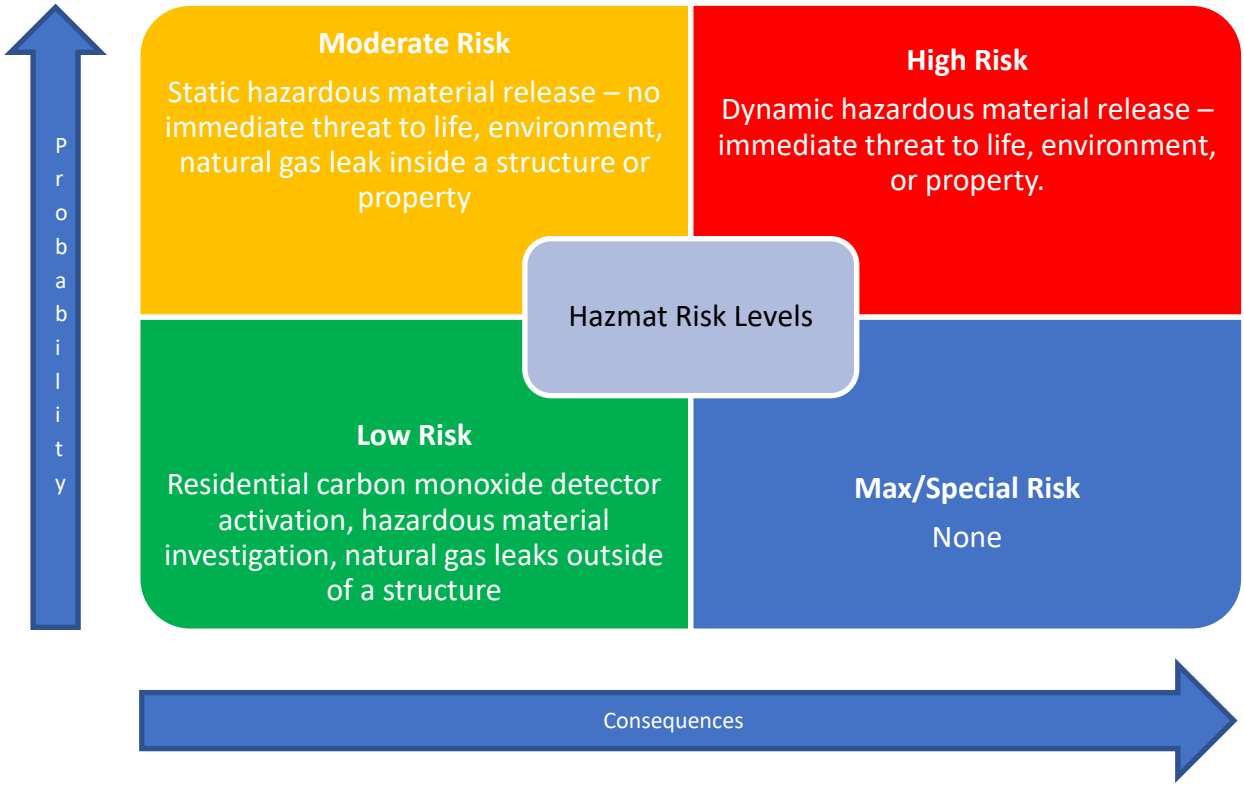


Fig. 41

HAZMAT Benchmarks

For 90 percent of all Low and Moderate (Risk Level) hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 8 minutes in all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.

For 90 percent of all High (Risk Level) hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 25 firefighters and officers, shall be 10 minutes and 10 seconds in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.
The department relies upon mutual aid from Nutley HazMat to complete the effective response force (ERF) component of its HazMat program. The initial arriving apparatus shall have the capabilities of providing establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm and cold zone. The Department will request an emergency response from PSE&G for any incidents involving high carbon monoxide levels, combustible gas readings above lower explosive limits (LEL), and natural gas odors inside/outside a structure for life safety purposes.

Technical Rescue Incidents

Technical rescue covers a wide range of incidents, which include elevator rescue, vehicle extrication, confined space rescue, trench collapse, low/high angle rescue, swift water rescue, and building collapse. Technical rescue accounted for one percent of Department emergency responses from 2019-2022. Contributing factors include population density, vehicle traffic, mass transit (light rail, train, bus), construction activity, and manufacturing. The agency currently responds to elevator rescue and small vehicle extrication as the most common rescue incidents. Rescues that go beyond the Technical Rescue Awareness training level are dispatched as mutual aid requests through the Essex County Mutual Aid Coordinator who dispatches the Metro Area UASI Strike team, NJDFS and New Jersey Task Force 1, as needed, to perform higher risk rescues. The Metro Area UASI Strike Team is comprised of the closest companies depending on the location of the incident. Participating agencies include fire department personnel from Jersey City, Newark, Paterson, Elizabeth, Newark, North Hudson Regional, Hoboken, Bayonne, Morristown, Hackensack, Middlesex, and the Port Authority of New York and New Jersey.
The following hazard levels have been established for technical rescue risk:

- Low Risk – Elevator entrapment (non-injury).
- Moderate Risk – Traffic collision with occupant injury/entrapment, vehicle collision into a structure.
- High Risk – Swift water rescue, flood water rescue, ice water rescue.
- Special Risk – Confined space rescue, cave-in or collapse with person trapped, rescue from elevated position.

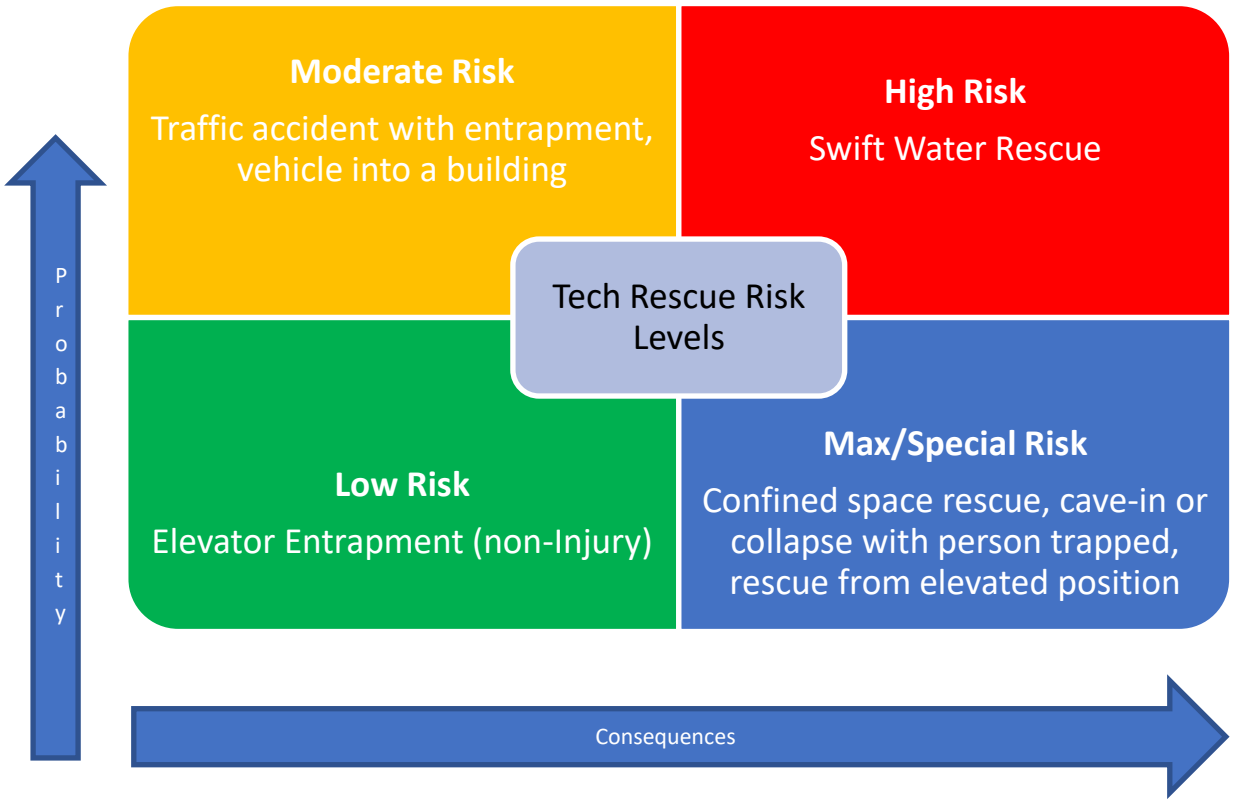


Fig. 42

Technical Rescue Benchmarks

For 90 percent of Low and Moderate (Risk Level) technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 4 minutes in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.
For 90 percent of High and Max (Risk Level) technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 17 (High) and 22 (Max) firefighters and officers including the technical response team, shall be 10 minutes and 10 seconds all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

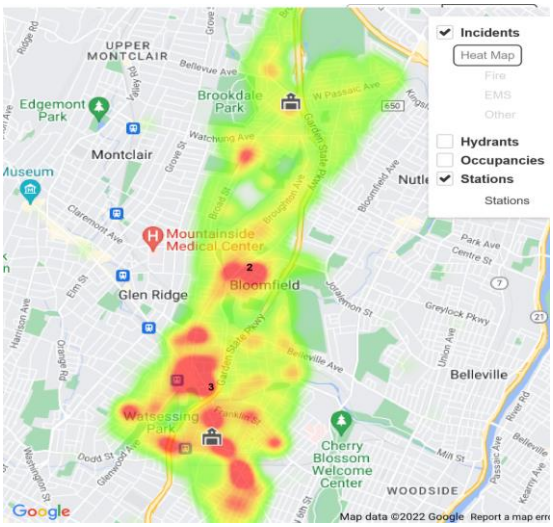
The department requests mutual aid through the Essex County Mutual Aid Coordinator who dispatches the Metro Area UASI Strike team, NJDFS and New Jersey Task Force 1 to perform higher risk rescues. The Metro Area UASI Strike Team is comprised of the closest companies depending on the location of the incident. Participating agencies include fire department personnel from Jersey City, Newark, Paterson, Elizabeth, Newark, North Hudson Regional, Hoboken, Bayonne, Morristown, Hackensack, Middlesex, and the Port Authority of New York and New Jersey. The initial arriving apparatus shall have the capabilities of establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm, and cold zone.

The Department currently responds to elevator rescues and small vehicle extrications as the most common rescue incidents.

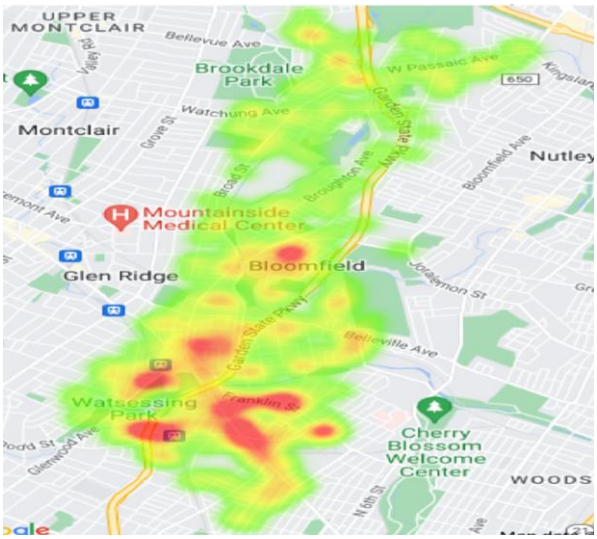
Probability/Historical Frequency

Historical Emergency Demand

The Department reviews historical call volume data in order to determine future probability of service demand. This process is divided into call volume per Fire Management Zone. The following intensity gradient map charts show where the Township has experienced the most service demand by call volume during the time period of 2019-2022 segregated into call volume for each risk category. Red indicates high call volume, yellow indicates moderate call volume, and green represents lower call volume.

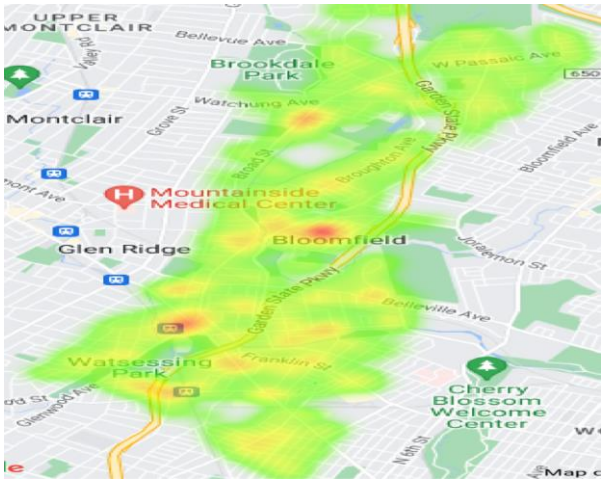


All

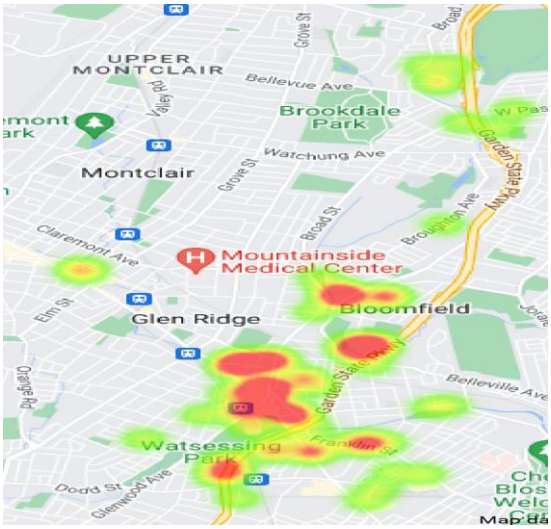


Fire

EMS

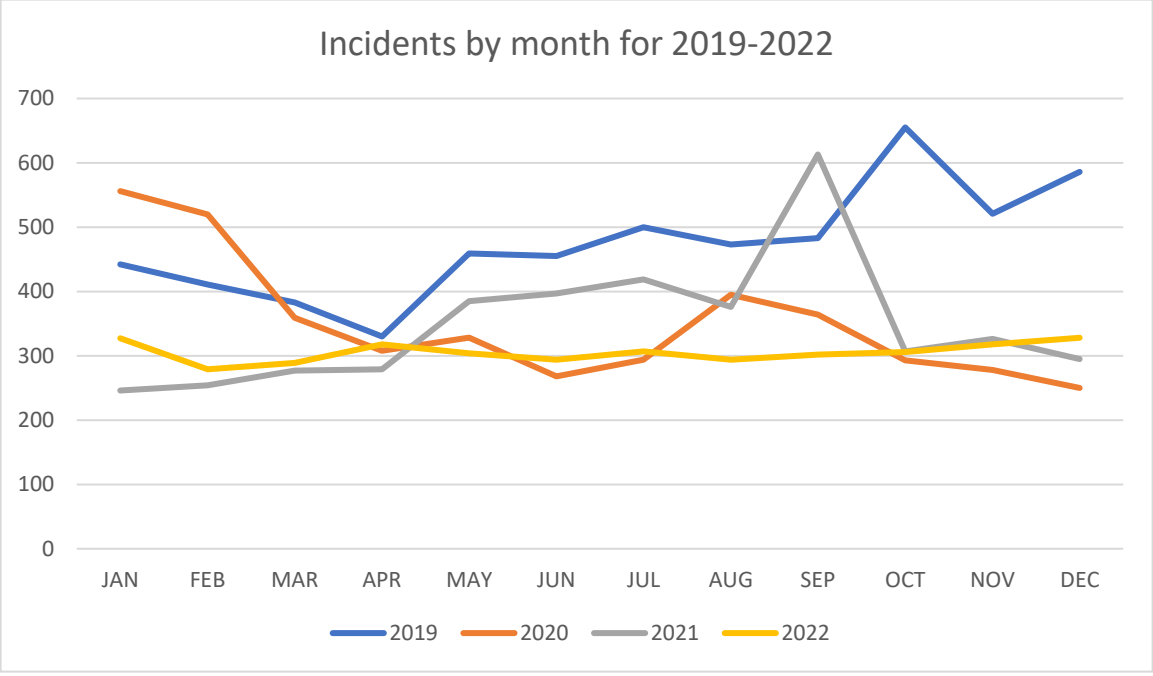


HAZMAT

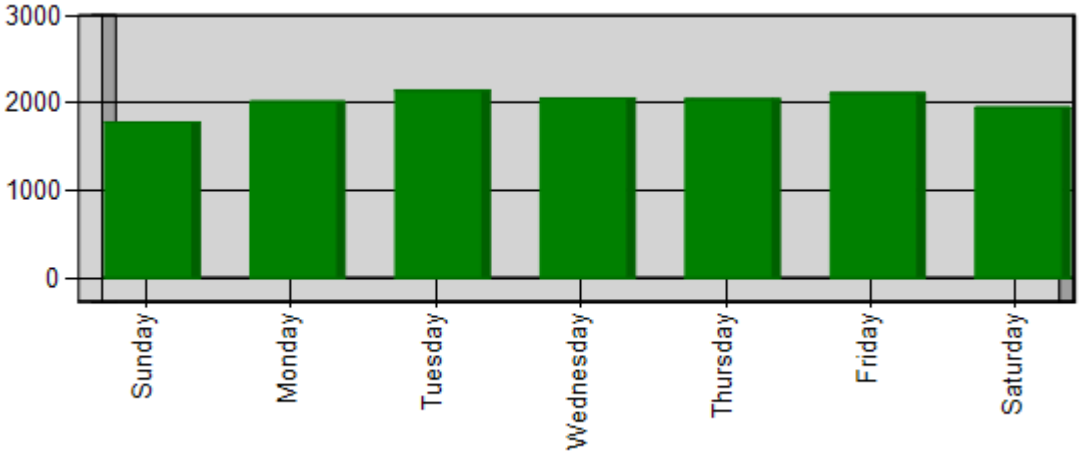


TECH RESCUE *Fig. 43*

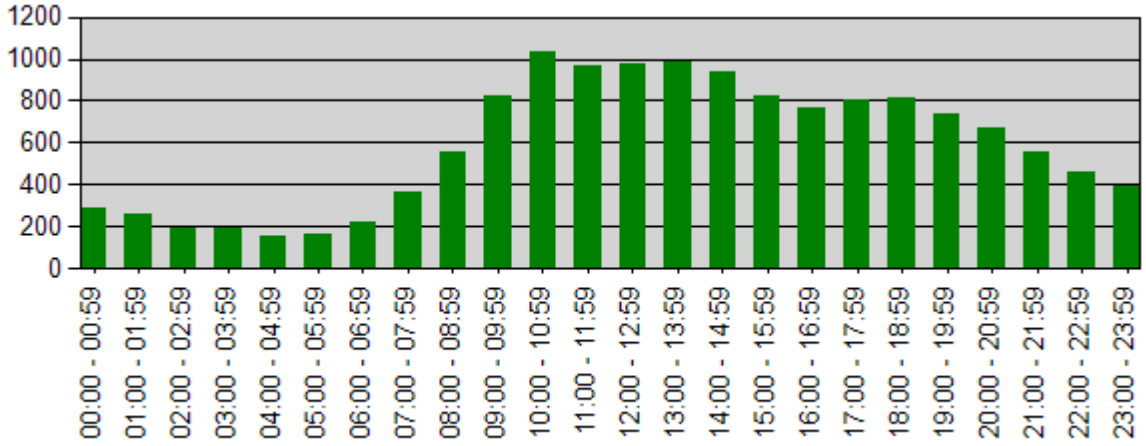
Emergency Activity	2019	2020	2021	2022
Total Incidents	5700	4213	4174	3670
Fire- Overall	149	127	126	128
Structure Fire- Only	47	28	33	33
Rescue/EMS- Overall	2327	1345	908	1046
EMS- Only	2226	1213	828	981
Technical Rescue	101	66	80	65
Hazmat	692	530	453	366



Incidents by day of week 2019-2022



Incidents by hour 2019-2022



In referencing the above charts of incidents by month and by hour. The reason incidents spike during the September and October months are many of those incidents are from Bloomfield College dorms. However, many of those incidents are also from the onset of cold weather and citizens boilers and

furnaces are first used. The incidents by hours spike during the waking hours is due to more citizens working from home. Most of this data is collected during and post COVID pandemic.

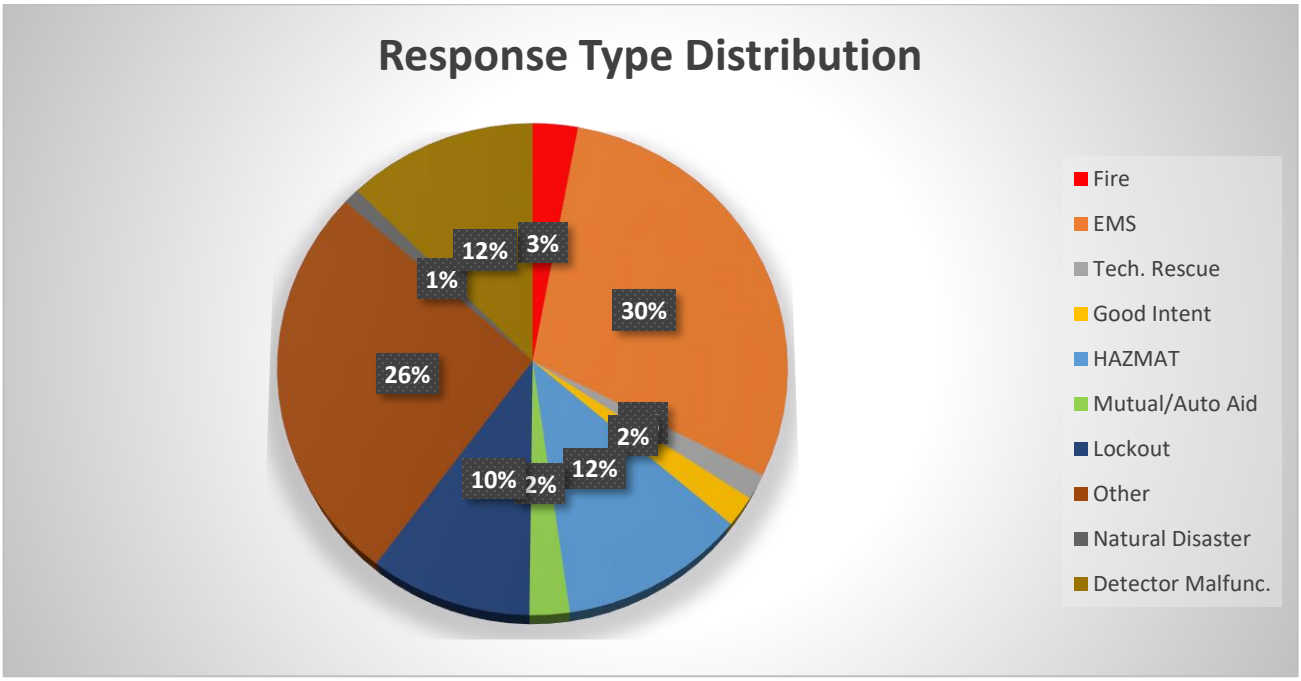


Fig. 44

EMS Historical Activity

Since 2019 the agency has been responding to EMS calls for service in the Township when the primary ambulance provider (Bloomfield EMS) is unavailable for immediate response. Responding firefighters will treat and stabilize a patient for transport by another agency. The agency does not have patient transport capabilities.

Automatic/Mutual Aid

The county wide mutual aid plan is designed to assist any community that has an emergency and has depleted its own resources. A system of predetermined response assignments of additional resources is in place and reviewed periodically by the department fire chiefs and mutual aid coordinators in the county. Based on the demands of a particular emergency, the county fire coordinators may order the response of additional resources as needed. If the level of the emergency exceeds the capabilities of the resources of Essex County, the State Office of Emergency Management will notify other county coordinators of unaffected counties to provide the additional resources required. This plan was developed because of the extreme level of mutual aid that was required to control the fires that resulted during the urban riots that occurred in New Jersey cities in the late 1960's. The county plans have been in effect since 1969; the plans are used quite often and have proven to be effective but are not meant to be used to supplement understaffed agencies. The state level plan was put into effect and worked effectively following the terrorist attacks on New York City on September 11, 2001. As a result of that event numerous New Jersey fire agencies were directed to respond to and cover vacant

FDNY firehouses and Emergency Medical Service (EMS) units were relocated to assist New York City EMS.

In recent years the county mutual aid plans have seen a dramatic increase in usage. This has resulted due to state regulatory requirements governing fire ground operations, such as the need for Rapid Intervention Teams as well as a general increase in the overall number of fire service personnel utilized at emergency incidents to reduce injuries and fatalities. These considerations have added to the number of personnel, apparatus and equipment that are required when controlling fire emergencies. The county plans are periodically revised and updated so they reflect changes in available equipment and so that the plan remains accurate and current. Due to budget cuts in many urban areas of the state that have resulted in reduced staffing of individual fire departments, reliance on mutual aid to provide an adequate number of personnel at an emergency has increased.

In 2021, the agency initiated an Automatic Aid response agreement that provides for the response of apparatus and personnel to certain first alarm response assignments within the Townships of Belleville, Bloomfield, and Nutley. These additional personnel are in addition to each fire department's current staffing on-duty level and are not meant to be used for the reduction or replacement of any department's total operational staffing. The intent of the agreement is to provide for enhanced protection of civilian life and property while enhance firefighter safety and effectiveness.

Bloomfield Fire Department has been involved in the Essex County Mutual Aid Agreement since 2009. In 2021, the agency implemented an automatic aid agreement with the neighboring fire departments in Belleville and Nutley. The agreement furnishes one engine company from each department to respond on the initial dispatch to reports of structure fires within the participating townships.

Aid type 2020-2022	Total	% Of total
Mutual Aid Received	1,374	11.4%
Automatic Aid Received	45	.4%
Mutual Aid Given	235	1.9%
Automatic Aid Given	44	.4%
Other Aid	13	.1%
No Outside Agency Aid Requested	10,344	85.5%
Source: ER Database - Report #549 – Mutual Aid/Automatic Aid Received & Given.		

According to the three-axis risk model, for the risk that is posed by automatic and mutual aid calls is rated as 39.6 moderate risk. The department's conclusion on consequence is rated as a 6 because Bloomfield firefighters are unfamiliar with the configuration of the buildings, they are unaware of the fire flow capacity of the hydrants and their maintenance status, and they are unaware of the continuity of inspections in the automatic/mutual aid townships. The unfamiliarity and the possibility of being 1st due in the automatic/mutual aid areas may increase the risks to firefighter safety. The other above risk assessments (Fire, HAZMAT, EMS and Technical) are made with the assumption that Bloomfield has a full shift of personnel with Engine 1 staffed and that the automatic aid township also has full apparatus availability. The above risk assessments would change if Engine 1 is not staffed, and another Bloomfield apparatus is assigned to an automatic/mutual aid call. If any of the automatic aid township is

unavailable this would only leave two engines and a ladder truck for fire and rescue protection coverage for the Township of Bloomfield.

Probability		
Score	**Probability**	**Actual number of occurrences w/in 2020-2022**
2	Occurs annually of less	0-5
4	Occurs every 6 months	6-21
6	Occurs Monthly	22-71
8	Occurs weekly	72-600
10	Occurs daily	601 +

Consequence			
Score	**Financial**	**Life**	**Emotional**
2	Inconsequential	No loss of life/minor injury	0-5
4	</= $70,000	Potential loss of life/injury	6-15
6	$70K-$500K	Loss of life/multiple injury	16-50
8	$500K-$1M	Multiple loss of life/multiple injuries	51-100
10	>$1M	Mass Casualty	>100

Impact	
Score	**Companies needed**
2	1
4	2
6	3
8	4
10	5+

Rating Matrix	
Low Risk	0-24.99
Moderate Risk	25-49.99
High Risk	50+

The department has recognized the inherent value of automatic/mutual aid in reducing risk for the public, property and firefighter health and safety for response to structure fires. Note: Automatic aid and mutual aid requests come with some risk for the firefighters. Risk may be increased if the requested responding company arrives first at the scene depending on the unit's current location and the location of the incident. Nutley and Belleville have it in their policies that any call with smoke or fire is an automatic aid call. To show the risk in automatic and mutual aid calls the department believes in using the 3 Axis Risk model to show the impact on the stakeholders when a company responds. The use of the 3 Axis Risk Model for automatic/mutual aid risk categorization instead of the 2 Axis Model, is due to the many contributing factors that affect incidents outcome. Please keep into account that

automatic aid and mutual aid requests are still fulfilled even when Engine 1 is OOS. The tables below are the data inputs created by CPSE and are based on the historical factual data from the past 2 years.

RISK	
Probability of occurrence	**8**
Consequence to community	**6**
Impact on Fire Department	**2**
SCORE	**36.76955262**

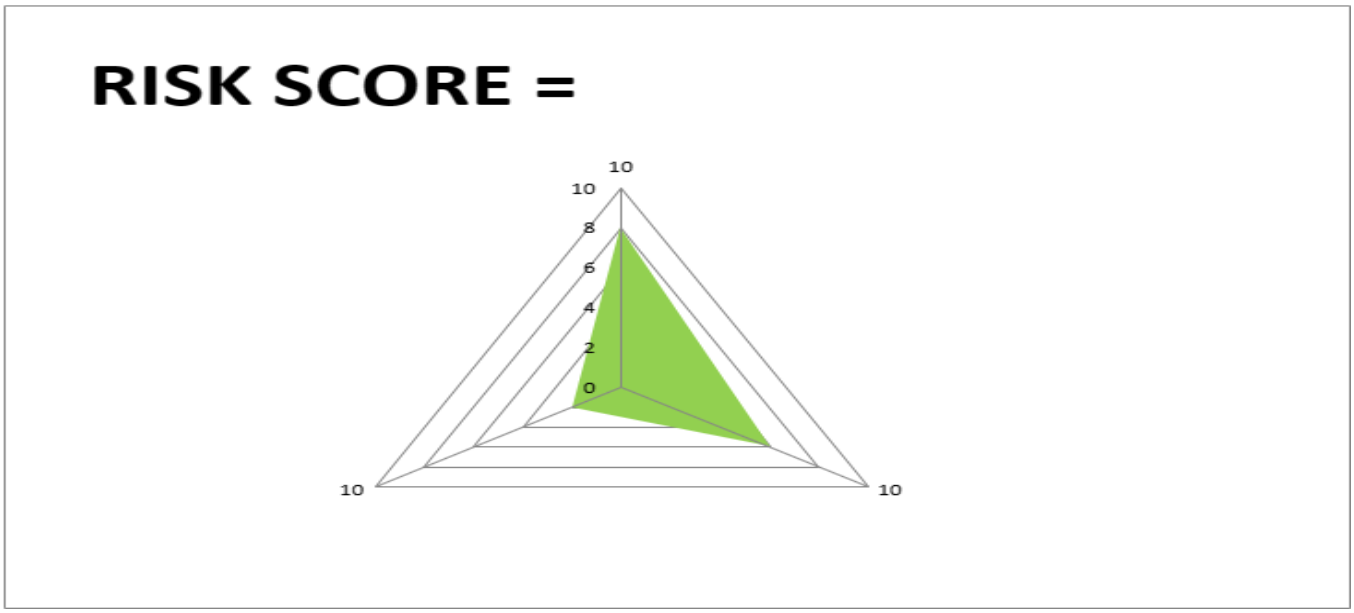


Fig. 45

Historical Overlapping of Zones

The overlapping of FMZ's is an ongoing issue due to deployment levels, increasing population growth, increase in traffic, increase in volume of calls for service and an increase in services provided to the stakeholders. Many incidents have a longer response time because a call for service in one FMZ may have to be answered by an apparatus from a more distant FMZ. The resulting delay and lengthened response time for the first arriving apparatus is a concern for the department while attempting to be in compliance with the recommended response times referenced in NFPA 1710. In conjunction with the overlapping FMZ's the implementation of automatic aid agreements has increased the volume of overlapping incidents. When Engine 1 is not in service and a request for automatic/mutual aid is requested, the township is left with only 2 engines and a truck available to respond to additional incidents. Mutual aid can be requested to supplement station coverage in uncovered FMZ, however, if another township is utilizing mutual aid resources then the delay in response is increased due to the additional distance the covering apparatus needs to travel. In addition to requesting additional resources, not all resources are staffed by career departments and many are volunteers, which means their response will be delayed because many of the volunteer departments to do not regularly staff

their stations. The table below shows factual historical data of how often an apparatus is responding to a FMZ out of their servicing FMZ.

# Overlapping 2019-2022	% Overlapping	Total
8249	46.47	17,753

Historical Non-emergency Demands

The non-emergency demands are also a contributing factor to the high overlapping numbers due to simultaneous calls for service. Some non-emergency demands are for community risk reduction events like public education seminars, hydrant flushing and public events.

Non-emergency calls 2019-2022	2019	2020	2021	2022
500- Service Calls	1365	1144	1594	1032
600- Good Intent Calls	153	169	230	333
700- False Alarm & False calls	522	523	633	662

Line Personnel Non-Emergency Activity Summary 2019-2022	2019	2020	2021	2022
Training (HRS)	25,729	24,349	21,348	20,805
Wellness (HRS)	57	24	414	390
Pre-fire Planning (HRS)	0	0	1165	2257
Hydrant maintenance (HRS)	402	402	402	402
Public Education (HRS)	238	128	152	119
Car Seat Installations (Individual installs)	11	4	19	24

Historical Non-emergency Demands Conclusions

The Bloomfield Fire Department has gone through many changes from report writing software to the training and documentation on how to properly categorize events, calendar items and incident types. The proof is in the table above showing some inconclusive data but also showing an increase in numbers. Our future goal is to have a steady rate in numbers that does not vary so much year after year.

Risk by Fire Management Zones

The agency has divided the township into four fire management zones in an effort to provide rapid and reliable response to calls for emergency service. This separation into zones also provides an efficient method of division of labor for the in-service company fire safety inspections program. The personnel assigned to the individual fire companies also develop a familiarity with the specific hazards that are

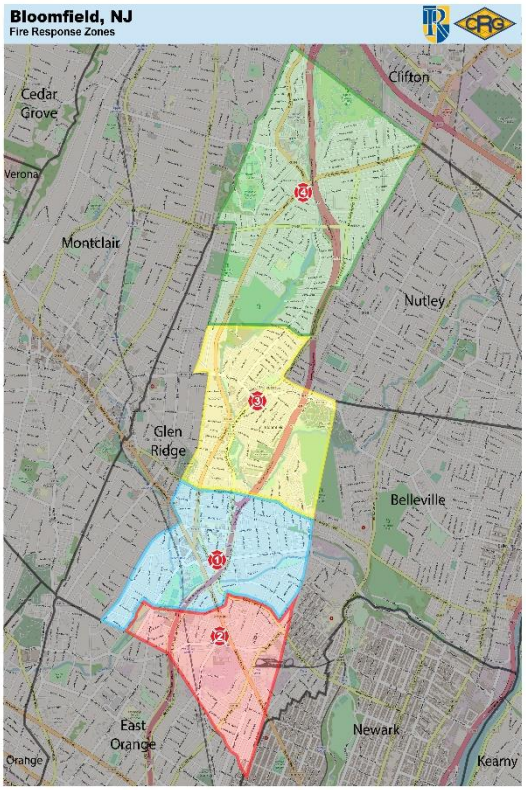


Fig. 46

found in their assigned zones while conducting company inspections. This provides the agency with a dual benefit. The inspections serve a fire prevention function while also providing an opportunity for personnel to conduct pre-fire planning of target hazards in their first due response zones. The first revision of this system took place when the second truck company disbanded in 1988. At that time the fire safety inspection zones were redrawn to reflect the change in the number of companies available to conduct inspections. This system has been in place for a long period of time and has proven to be adequate and appropriate for the agency's current needs. An adjustment to the system takes place when Engine 1 (FMZ1) is out of service and Engine 2 (FMZ2) and Engine 3 (FMZ3) must split responsibility of the covered zone.

A geographic information system (GIS) mapping program is used that integrates hardware, software, and data for captures, manages, analyzes and displays all forms of geographically reference information in a map format for each FMZ. The GIS Mapping program is a centralized infrastructure so that high quality GIS technology solutions are efficiently delivered to county departments, local governments, and the public. Its interactive mapping website allows users to locate property by owner name, address, or parcel-id, display layers and aerial photography, measure distances, print maps, identify features, and obtain ownership information.

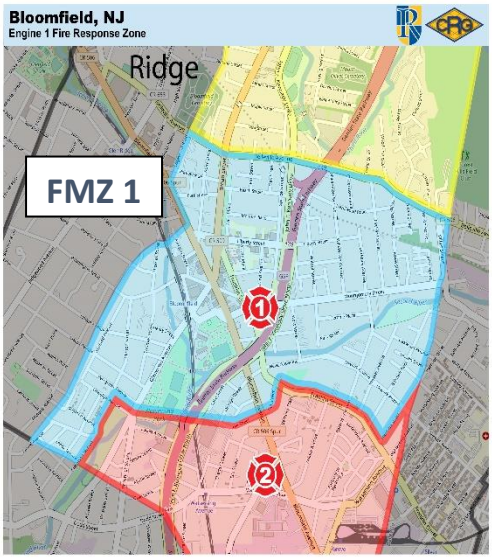


Fig. 47

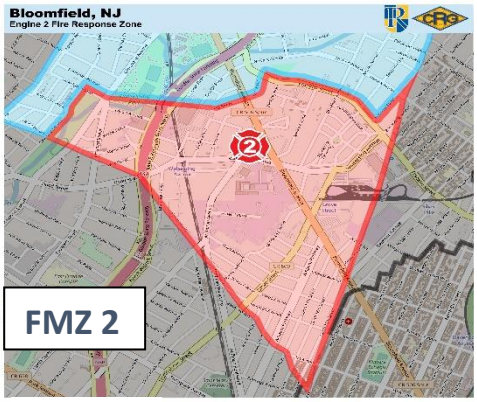


Fig. 48

As stated earlier, throughout the late 19th century and first half of the 20th century the township contained a significant number of heavy industries particularly in FMZ 1 and FMZ 2. During the last two decades, all of these industries either shut down or moved to other locations leaving large industrial properties vacant. Most of these large properties have been redeveloped into commercial, retail, or high density residential uses. Several of these redeveloped properties are now occupied by very large high-density mixed use residential over commercial complexes often known as "transit village" due to their proximity to mass transit. These redevelopments have been driven by easy access to direct commuter train service to both downtown Newark and Mid-town Manhattan via NJ Transit rail service.

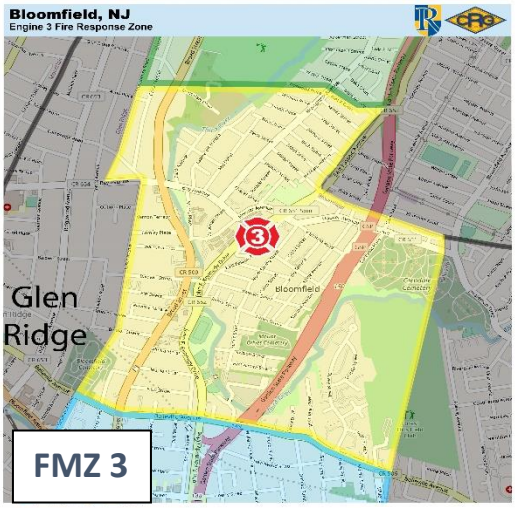


Fig. 49

FMZ 3 has not experienced as much change in the last two decades like FMZ 1 and FMZ 2. FMZ 3 is mostly comprised of two or three family homes that are closely spaced together in smaller lots. These structures however though are much older than compared to the average homes in the State of NJ and Nationally, building stock data showed that 76.9% of all local housing units were built before 1970 most of this stock can be accounted for in FMZ 3 (Reference FIG. 26). This is due to that the Morris Canal locks were in this area and the Oakes Factory (Now Oakes Pond Apartment Transit Village) was a major employer throughout the 19th century.

FMZ 4 has also not experienced much change in the last two decades and is mostly comprised of single family homes built 1970 or later. There are some homes in the area that might be balloon or braced frame but very few. FMZ 4 is the longest travel time for Truck 1 and Car 30 to arrive on scene. The reason of the delay in response is due to the growth of population. The growth of population has added more vehicles and lights to an already dense population of Bloomfield. Additional time travel time is expected during rush hour times, the local streets of Bloomfield have stayed the same width since its construction and some major roads have been reduced in width. For example, in 2016 the township widened the sidewalk on Broad Street to help the Central business district area attract more foot traffic. The widening of the sidewalk took away pull over space for traffic to move out of the way for emergency responders.

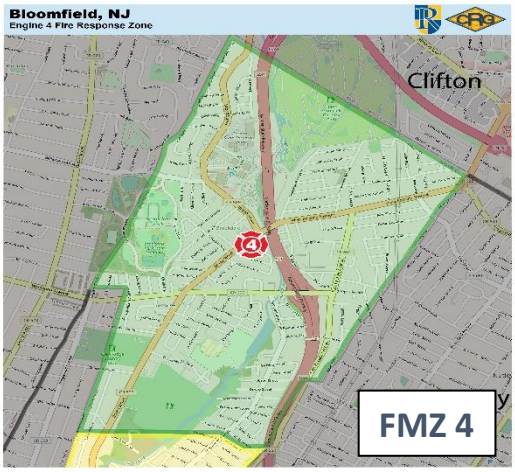


Fig. 50

Fig.51

Due to the nature of its limited access, the Garden State Parkway (GSP) has been established as a separate special hazard FMZ with specific service boundaries for response to calls for service on the highway by Bloomfield apparatus. The GSP has specific response zone boundaries because of access limitations imposed by only four access points within the Township along the limited access highway. Some of the interchanges are not full access interchanges that allow both entrance and exit of vehicles. Due to these conditions and lengthy response routes to reach access points, the assignment of apparatus is based on actual road miles to be travelled rather than by the closest station to the reported emergency location. In accordance with the CEVO III New Jersey emergency apparatus driving course and State of New Jersey Highway Incident Traffic Safety Guidelines for Emergency Responders, it is recommended that full size apparatus not be permitted to use the median or paved emergency access breaks in the center roadway divider to make a U-turn, except in cases of life-threatening emergencies and extenuating circumstances. Emergency apparatus must follow the direction of traffic no matter if the apparatus passes the emergency incident in the opposite lane. Travel against the normal flow of traffic will only be employed if specific approval by the New Jersey State Police has been obtained and the roadway has been shut down. Responding units must coordinate their movements on the highway in order to allow for the arrival of the assigned apparatus at the actual location of the emergency.

Fig. 52

XIV. Current Deployment and Performance

Critical Tasking Charts

Deployment describes what resources the agency sends to a particular type of call for service. The agency considers what risks must be managed (community risk assessment), what resources are necessary to mitigate those risks (risk assessment), how likely will the agency be able to mitigate those incidents with its current deployment model (historical incidents), and how likely will the agency be able to recover from those incidents (resiliency).

Significant socio-economic indicators and demographic characteristics for the FMZ's have been identified by the Department including overall population growth and the socio-economic change from manufacturing and industrial occupancies to high density transit-village concept apartment buildings in several focused areas in the Township. The dramatic increase in occupancy levels in these large apartment occupancies have added additional life safety challenges in meeting the staffing response needs of the Department.

The current shift staffing levels provide for a minimum of 13 firefighters and fire officers on duty daily. Department staffing levels have dropped from 88 in 2006 to the current level of 76 firefighting personnel resulting in the frequent closure of an engine company normally assigned to Fire Headquarters/Station No. 1/FMZ1 due to insufficient shift staffing. These closures have a direct impact on the number of on-duty firefighters that can be quickly delivered to the scene of a structural fire.

In an effort to answer the deployment issue, in 2021, the department adopted and implemented a policy to provide increased staffing levels for structural fire incidents for several high-density transit-

village apartment buildings that were recently constructed, are under construction, or are proposed for targeted redevelopment areas in the township. The department negotiated and implemented an interlocal cooperative agreement with the fire agencies of the neighboring communities of Belleville and Nutley. The policy provides from the automatic response of an engine company to the scene of a reported structure from each department to supplement staffing for the host community. The use of the automatic aid policy is intended to provide response strategies within the deployment level recommendations as outlined in NFPA 1710-12 5.2.4 for any 2nd alarm response and above.

Fire Risk Critical Task ERF			
Low Vehicle fire, outside rubbish, brush, vegetation fire. (OVAP 13.99 or less)		**Moderate** Structure fire in a typical 2000 square foot, two-story single-family dwelling without a basement and with no exposures. Automatic Aid will be dispatched to the scene bringing an additional truck with 3 Firefighters & an additional engine with 3 Firefighters. (OVAP 14-39.99)	
Tasks	Personnel	Tasks	Personnel
Incident Commander – establish Command, conduct 360-degree scene size-up, develop the Incident Action Plan (IAP), scene safety, accountability, resource allocation, incident communications.	1	Incident Commander – establish Command, conduct 360-degree scene size-up, develop the Incident Action Plan (IAP), scene safety, accountability, resource allocation, incident communications.	1
Water Pump Operator & Water Supply - responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd hose lines.	1	Water Pump Operator & Water Supply - responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd hose lines.	1
Initial Fire Attack - responsible for 1st hose line and primary search.	2	Initial Fire Attack - responsible for 1st hose line and primary search.	2
Vehicle stabilization, secure power, force entry	3	Back-up hose team - responsible for back-up hose to either the same floor/above/below)	2
Total/ERF	7	Hydrant Support/Utilities- (usually 2nd/3rd due engine) - responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place and attacking the fire.	2
		Aerial, ladders, ventilation, utility control -- responsible for establishing a secondary means of egress for interior teams, vertical ventilation as requested by the Incident Commander, horizontal ventilation in coordination with the interior hose teams and rescue operations. (NOTE: this is usually divided up by either a 3-person truck crew or between the truck and 3rd due Engine).	4

		Rapid Intervention Team (RIT) - team of firefighters in the standby position for quick rescue of any firefighters in distress.	3
		EMS- (either by Bloomfield private EMS or mutual aid) usually not Bloomfield members	2
		Rehabilitation- responsible for firefighter emergency medical concerns and rehabilitation	2
		Total Effective Response Force	19 (17 w/out EMS)
High Commercial buildings ranging from 13,000 to 196,000 square feet. Automatic Aid will be dispatched to the scene. Structure fire in a typical 1200 square foot apartment within a three-story, garden-style apartment building. Automatic Aid will be dispatched to the scene. Bringing an additional Truck-3 FF's & Engine-3 FF's. Mutual Aid will be requested for backfill. OVAP 40-59.99		**Max/Special** Structure fire in a building with the highest floor greater than 75 feet above the lowest level of fire department vehicle access. Automatic Aid will be dispatched to the scene. Bringing an additional Truck-3 FF's & Engine-3 FF's. Mutual Aid will be requested for backfill. Newark FD will be requested and bring Truck- 3FF's, Engine 3FF's and Supervisor 1Off directly to the scene. OVAP 60 & up.	
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1
Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd lines)	1	Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd, 3rd lines and FDC)	1
Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2	Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2
Back-up hose team (Responsible for back-up hose to either the same floor/above/below)	2	Back-up hose team (Responsible for back-up hose to either the same floor/above)	2
Hydrant Support/Utilities (Usually 2nd/3rd due engine and they are responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place and attacking the fire)	2	Hydrant Support/Utilities (Usually 2nd/3rd due engine and they are responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place, secured to standpipe and attacking the fire)	2
Aerial, Roof OPS (Responsible for establishing a secondary means of egress for interior teams, vertical ventilation if the IC requests, horizontal ventilation in coordination with the interior hose teams and rescue operations. NOTE: this is usually divided up by either a 3 person truck crew or between the truck and 3rd due Engine)	2	Search and Rescue	3
Ladders, Ventilation Team, Search and Rescue (Responsible for establishing a secondary means of egress for interior teams, vertical ventilation if the IC requests, horizontal ventilation in coordination with the interior hose teams and rescue operations)	2	Evacuation Management Teams (Responsible for assisting fire floor supervisor in safely evacuating civilians to either the floor above if injured or out of the building if capable)	2

RIT (Team of firefighters in the standby position for quick rescue of any firefighters in distress)	3	RIT (Team of firefighters in the standby position for quick rescue of any firefighters in distress)	3
3rd Hose Team(Ensure that 1st and 2nd hose line is in operation and is supplied by a reliable water source. Stretch 3rd line to either the floor above/below/basement IC discretion.)	3	Fire Floor Below Supervisor (Responsible for allocating actions to fight the fire, requesting needs to the interior staging supervisor and relaying conditions to the IC)	2
EMS (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2	Inside EMS/Rehab (either by Bloomfield private EMS or on-scene firefighters)	2
Rehabilitation	2	Safety Off and Acct. Off	1
Total/ERF (NFPA Recommends 27-28 EFR)	22 (20 w/out EMS)	Elevator Operations (Responsible for Elevator operations	1
		Fire Floor Above the Fire Supervisor (located 2 floors above fire): (Responsible for allocating EMS needs and supply needs to the fire floor supervisor)	2
		Interior Staging Area Supervisor (Responsible for establishing rehab station for firefighters and the staging floor for additional tools, air and any other needs that the fire floor supervisor and floor above may need): 1 officer (two floors below the fire floor) Firefighter Rehabilitation (Responsible to assess firefighter rehabilitation needs located 2 floors below)	2
		Lobby Control (Responsible for firefighter accountability, elevator operations, notification of resources to the floor supervisors, utility controls)	2
		Equipment Transport Team (Responsible for the movement of resources from exterior of the building to the requested parties)	2
		External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1
		Outside Rehabilitation with an additional EMS unit	4
		Total/ERF (NFPA Recommends 42-43 ERF)	35 (31 w/out EMS)

EMS Critical Task ERF			
Low Injured and ill people, without airway, breathing, or circulatory problems. BFD does not provide transport. If Bloomfield EMS is out mutual aid is called in for transport.		**Moderate** Cardiac arrest, severe respiratory distress, patients meeting trauma center criteria or other specialty center criteria. If Bloomfield EMS is out, mutual aid is called in for transport. Paramedics are requested while enroute.	
Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Safety, Documentation.	1	IC- Est. CMD, Safety, Documentation	1
Patient Care	2	Patient Care	2
Transport- From different agency	2	Transport/Patient Care- From different agency	2
Total/ERF	5	ALS	2
		Total/ERF	7
High Multi-victim incidents with five or more patients. If Bloomfield EMS is out, mutual aid is called in for transport. Paramedics are requested while enroute.		**Max/Special**	
IC- Est. CMD, Safety.	1		
Documentation	1		
Patient Care	11		
ALS	2		
Transport/Patient Care/Rehab- From different agency and mutual aid	6		
Total/ERF	19		

Hazmat Critical Task ERF	
Low Residential carbon monoxide detector activation, hazardous material investigation, natural gas leaks outside of a structure.	**Moderate** Static hazardous material release – no immediate threat to life, environment, natural gas leak inside the structure or property.

Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1
Investigation	2	Investigation	3
Total/ERF	3	Backup	9
		Total/ERF	13
High Dynamic hazardous material release – immediate threat to life, environment, or property. Additional resources will be dispatched from the county hazardous materials unit operated by the Nutley Fire Department. We also request PSE&G to come the these for any levels that our SOP's have established for life safety.		**Max/Special**	
IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1		
Material Identification (Positively identify material (material data safety sheets, cargo manifests, placards, labels, pipeline information), assess hazard, plume modeling, communicate hazard assessment to IC and safety.)	1		
Perimeter Control (Isolate hazard, control entry points (stop traffic, pedestrian access, building entrances), control perimeter around entry points.)	5		
Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	2		
Incident Safety Officer	1		
Evacuation (Remove people from areas at risk, consider shelter in place, coordinate evacuation with assisting agencies (PD), instruct facility representatives to implement specific plans (schools, business), utilize built in public address systems.):	4		
Containment- Take action to stop, slow, restrict, or redirect the spread of the material (isolate, dam, retain, divert, disperse, dilute, cover, foam, upright 55 gallon drum, protect storm drains.)	4		
EMS/Rehab	2		

DECON- Establish a DECON station for citizens, all emergency personnel and any equipment	3		
EMS- (either by Bloomfield private EMS or mutual Aid) Usually NOT BFD members	2		
Rehabilitation	2		
Total/ERF(PSE&G and Nutley Hazmat Teams)	27 (25 W/out EMS)		

Technical Rescue Critical Task ERF			
Low Elevator Entrapment (non-Injury).		**Moderate** Traffic accident with entrapment, vehicle into a building.	
Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1
Extrication	5	Extrication	4
EMS	2	Stabilization	3
Total/ERF	8(6 w/out EMS)	Patient Care/Transport(From separate organization	2
		State Police/Local Police	2
		Tow Company	1
		EMS	2
		Total/ERF	15 (13 w/out EMS)
High Swift Water Rescue, Floodwater Rescue. Rescues beyond our scope are to be handled at the operations level and we rely on Essex County Mutual Aid Coordinator who dispatches Metro Area UASI Strike team, NJDFS and NJ Task Force 1 to perform higher risk rescue. Metro Area UASI Strike Team is comprised of the closest companies depending on the location. The cities are the following Jersey City, Newark, Paterson, Elizabeth, Newark, Hudson, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and Port Authority.		**Max/Special** Confined space rescue, cave-in or collapse with person trapped, rescue from elevated position, helicopter, wilderness S&R, low angle rope. Rescues beyond our scope are to be handled at the awareness level and we rely on Essex County Mutual Aid Coordinator who dispatches Metro Area UASI Strike team, NJDFS and NJ Task Force 1 to perform higher risk rescue. Metro Area UASI Strike Team is comprised of the closest companies depending on the location. The cities are the following Jersey City, Newark, Paterson, Elizabeth, Newark, Hudson, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and Port Authority.	

IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1
Operations Level surface & Swift water rescuer team (Responsible for identifying, analyzing the rescue situation and rescue any victims. A team is usually consisted of the rescuer, safety and downstream safety rescuer)	3	Incident Safety Officer	1
Swiftwater Rescue boat operator	1	Collapse Zone Officer	4
RIT (Responsible quick activation of any rescue firefighters that have flowed past the downstream safety rescuer)	3	Water Supply	1
Evacuation search and rescue team (Responsible for the evacuation, search and rescue of possible victims that could be in the path of high surface water)	3	Water Monitor Devices (used to protect exposures)	3
Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	1	Search and Rescue (Triage)	3
External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1	Evacuation Management Teams (Responsible for assisting in evacuating exposures in collapse zone)	3
EMS- (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2	External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1
Rehabilitation	2	Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	1
Total/ERF (Additional resources will come when the Technical Rescue Teams arrive.)	17(15 w/out EMS)	EMS- (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2
		Rehabilitation	2
		Total/ERF (Additional resources will come when the Technical Rescue Teams arrive.)	22 (20 w/out EMS)

Incident history

A historical perspective—taking into account the Department's current distribution, concentration, reliability, comparability and baseline performance—is important to consider in helping the Department assess its efficiency and effectiveness.

Concentration

Concentration is defined as the spacing of multiple resources arranged so that an effective response force (ERF) can arrive on scene within a sufficient timeframe. It is about having enough of the right equipment and staff arriving in a timeframe that allows firefighters to be effective servicing the demand/situation. An ERF varies depending on the type and severity of incident.
Evaluating the concentration of resources can also be used to measure efficiency. In an ideal system, each resource would cover an equal share of the workload. While an exact leveling of workload is impossible, extreme variations in workload are not efficient.
The concentration goals of the Department are to provide an effective response force that is able to execute critical tasks necessary to mitigate low, moderate, high and significant-risk fire, EMS, Haz Mat and technical rescue incidents in a timely manner.
There are three measures of concentration: workload by station, overlapping and the time of 1st due engine on scene. The chart below shows that the workload is closely distributed between the four fire stations. This indicates the current concentration of resources is efficient but demanding. When Engine 1 is not in service due to staffing it has a direct impact on life safety and property loss.. As seen below, in the south end of the township, ENG 1, ENG 2, ENG 3 and TRK1 FMZ's are most affected by the shutdown of Engine 1.
The second concentration measurement monitors the overlapping of FMZ's in relationship to the engine designated to that zone. (i.e. ENG 2 on a call and another call comes in for FMZ 2 zone, ENG 3 responds from FMZ 3 zone into FMZ 2 zones) This happens 47% of the time and it occurs mainly when Engine 1 is out of service or when an apparatus goes on a mutual/automatic aid call.

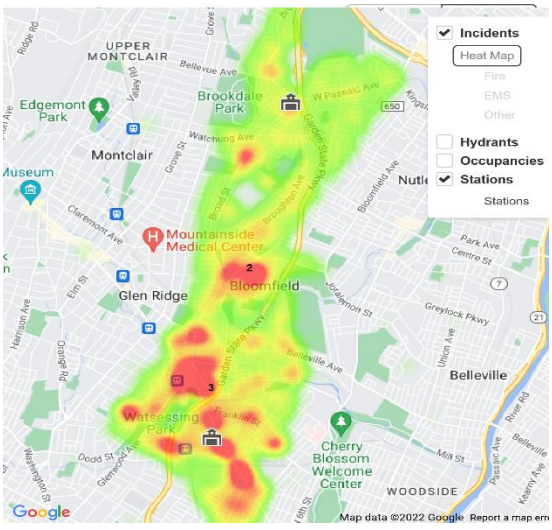


Fig. 53

The third concentration measurement is the time of arrival of 1st due engine. The reason the department go by the time of 1st due engine on scene instead of ERF is because at current deployment levels, the Department would not meet NFPA ERF minimum staffing levels even with automatic aid. However, the department does meet the 90th percentile times of total response time of 1st due engine on-scene do meet the NFPA benchmarks well below the 8 minute timeframe.

Resiliency

Resilience is the ability of the Department to quickly recover from an incident or events, or to adjust easily to changing needs or requirements. The Department at its local level has the capabilities to quickly add or duplicate resources necessary to maintain service levels during incidents beyond normal reliability demands and incidents of rare circumstance and/or magnitude. The Department has in place emergency recall measures through an automated staffing system to quickly staff reserve apparatus. The agency also has the Essex County Mutual Aid Agreement, the automatic aid agreement (between Nutley and Belleville), New Jersey Task Force 1, NJDFS and the Metro Area UASI Strike Team, which allows the agency to call upon neighboring agencies to backfill Bloomfield fire stations or to cover incidents outside the normal capabilities of the department's technical rescue skill levels.
The State of New Jersey has mandated the use of the National Incident Management System (NIMS) for all emergency incidents since 2005.

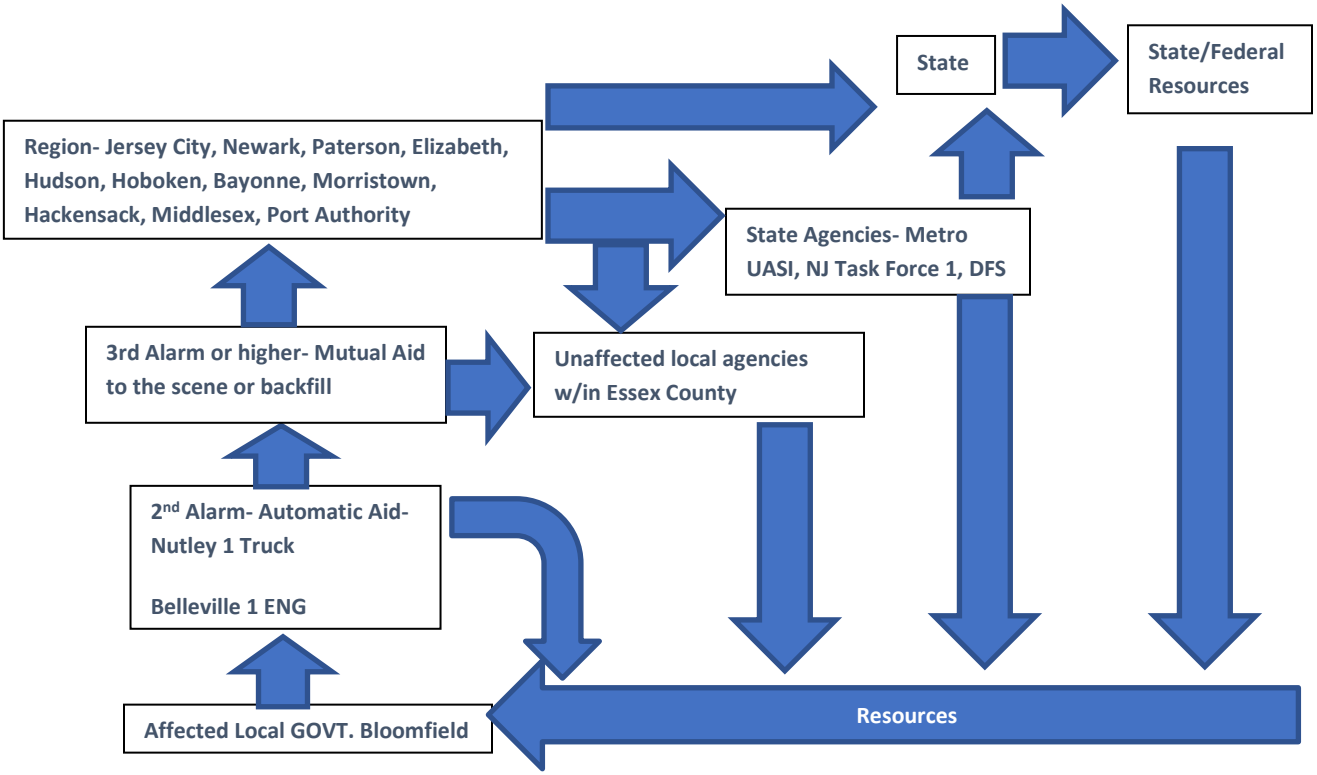


Fig. 54

Restoration

Restoration is the ability to rapidly return to normalcy within the system after a major incident. The Department strategically demobilizes resources at the beginning, during and at the conclusion of an incident as stated by NIMS practice, to put units back into service as quickly as possible. As mentioned previously, emergency recall procedures are in place to assist with restoring services to normal levels. The Department maintains two reserve engines and two reserve aerial ladder trucks and has supplies readily available to restock apparatus returning from major deployments. Noted above is the typical flow of automatic/mutual aid requests. The Incident Commander has the ultimate choice of releasing

automatic/mutual aid companies if he/she thinks that on-duty suppression personnel are properly rehabilitated and able to be return to full duty.

XV. Evaluation of Current Deployment and Performance

After reviewing the critical task analyses, incident history, deployment, concentration and resiliency, the Department can review its baseline performance, which is calculated from the aggregate historical performance for the past four-year time period. Once baseline system performance is determined, the Department has set benchmark performance objectives in alignment with the recommendation of NFPA 1710-26 C.3 performance objectives. Baseline performance describes measures that the Department currently meets 90 percent of the time, while benchmark standards are goals or performance objectives that the Department seeks to meet 90 percent of the time. The below tables show actual times that the department does 90 percent of the time for all risks for the emergency services it provides to the town. The department is constantly trying to improve to lower these times to the recommended benchmarks.

Additionally, the Department conducts bi-annual live burn training as a measure of group performance. This type of training improves the understanding of each member and their role on the fireground. In addition to live burn training, the department has set internal benchmarks that members must meet for specific critical tasks on the fireground. The department also conducts timed group evolutions to measure and validate crew performance once a year. Conducting periodic realistic training drills gives members the opportunity for live hands-on practice of critical fireground skills that will enhance their performance under actual emergency conditions.

Automatic Aid Program Evaluation

With the implementation of the automatic aid agreement in 2021 with the Belleville and Nutley Fire Departments, the department needs to develop an assessment tool to gauge the effectiveness of the program. A method needs to be developed to capture the times that automatic/mutual aid companies arrive on scene to reach effective response force (ERF) totals for response to high and maximum risk structure fires. The department has calculated the 90th percentile baseline performance statistics for all risks and is currently developing a methodology to segregate low, moderate, high and special risks in the report documentation.

Table Definitions

- PSAP- Public Safety Answering Point- facility in which 9-1-1 calls are answered. Central Dispatch
- Central Dispatch- Dispatchers are located to answer emergency calls and collect information to properly send the right resources.
- Turnout- Time period that begins when emergency response facilities and emergency units are notified by an audible alarm and ends when a unit is in route to an emergency incident.
- Travel Time- The time interval that begins when a unit is in route to an emergency incident and ends when the unit arrives at the scene.
- Total Response Time- The time interval from the receipt of the alarm at the primary PSAP to when the first emergency response unit is initiating action or intervening to control the incident.

- Effective Response Force (ERF)- minimum amount of staffing and equipment that must reach a specific emergency zone location within a maximum prescribed total response time and is capable of initial fire suppression, EMS and/or mitigation. The ERF is the result of the critical tasking analysis conducted as part of the Community Risk Assessment/Standard of Cover (CRA/SOC).

Fire Suppression

The Department's baseline statements reflect actual performance during 2019 to 2022. The department relies on the use of automatic/mutual aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The Department's actual baseline service level performance is as follows:
For 90 percent of low risk level fires during this time period, the total response time for arrival of the first unit is 6 minutes and 12 seconds. The first on scene unit, generally an engine, is capable of providing personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established by the Department.
For 90 percent of low risk level fires, the total response time for the arrival of the ERF, staffed with a minimum of 7 firefighters and officers, is 7 minutes and 32 seconds. The ERF used during this period is capable of the following actions: establishing formal command, establishing an uninterrupted water supply, initiating fire attack, conducting searches, providing ventilation, establishing a rapid intervention team (RIT), providing scene lighting, and providing medical care. All of the operations described above are based on the agency's standard operating procedures.

Fire Suppression Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:14	4:27	3:27	1:25	2:25	1:04
Turnout-(Dispatch-Enroute)		1:18	1:03	1:13	1:20	1:46	1:20
Travel Time (Enroute- On Scene)	1st due unit	5:12	4:24	6:11	4:30	3:45	4:00
	Travel Time ER	6:15	5:12	6:11	5:32	7:45	
		N=248	N=81	N=86	N=84	N=77	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due unit on scene	6:12	5:34	6:25	5:56	5:48	8:00
	Total Response Time ER	7:32	6:18	6:32	6:13	9:21	
		N=248	N=81	N=86	N=84	N=77	

The Department's baseline statements reflect actual performance during 2019 to 2022. The department relies on the use of automatic/mutual aid from neighboring fire departments to provide its

effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The department's actual baseline service level performance is as follows:
For 90 percent of moderate risk level fires during this time, the total response time for arrival of the first unit is 6 minutes and 31 seconds. The first on scene unit, generally an engine, can provide personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established by the Department.
For 90 percent of moderate risk level fires, the total response time for the arrival of the ERF, staffed with a minimum of 17 firefighters and officers (without EMS), is 8 minutes and 16 seconds. The ERF used during this period is capable of the following actions: establishing formal command, establishing an uninterrupted water supply, initiating fire attack, conducting a primary search, conducting ventilation, establishing a rapid intervention team (RIT), providing scene lighting, and providing medical care. All of the operations described above are based on the agency's standard operating procedures.

Fire Suppression Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:40	3:39	1:40	2:32	2:40	1:04
Turnout-(Dispatch-Enroute)		1:57	1:24	1:57	1:36	2:44	1:20
Travel Time (Enroute-On scene)	1st due Unit	5:36	4:15	7:11	6:20	2:56	4:00
	Travel Time ERF	6:36	5:53	6:17	6:36	8:26	
		N=228	N=72	N=56	N=55	N=46	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due unit on scene	6:31	5:54	8:03	6:47	4:00	8:00
	Total Response Time ERF	8:16	6:38	8:03	6:47	10:13	
		N-228	N=72	N=56	N=55	N=46	

The Department's baseline statements reflect actual performance during 2019 to 2022. The department relies on the use of automatic/mutual aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The Department's actual baseline service level performance is as follows:
For 90 percent of high risk level fires during this period, the total response time for arrival of the first unit is 6 minutes and 46 seconds. The first on scene unit, generally an engine, can provide personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established by the Department.
For 90 percent of high risk level fires, the total response time for the arrival of the ERF, staffed with a minimum of 22 firefighters and officers, is 6 minutes and 46 seconds. The ERF used during this period is

capable of the following actions: establishing formal command, establishing an uninterrupted water supply, initiating fire attack, conducting searches, providing ventilation, establishing a rapid intervention team (RIT), providing scene lighting, safety officer assignment, deployment of a 3rd hose line, placement of ground ladders, conducting roof operations and provided medical care. All of the operations described above are based on the Department's standard operating procedures.
In order for the Department to reach the proper deployment levels in accordance with the department's critical task ERF deployment requirements the Department needs to have the full shift of suppression personnel, automatic aid and mutual aid companies to come to the scene. The Department is currently taking proactive steps to document when automatic/mutual aid companies arrive on scene.

Fire Suppression High Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:32	3:39	1:40	2:31	2:40	1:04
Turnout-(Dispatch-Enroute)		1:14	1:24	1:57	1:36	3:00	1:20
Travel Time	1st due unit	5:26	4:25	3:10	6:50	2:21	4:00
	Travel Time ER	5:52	6:11	3:19	6:36	7:07	
		N=60	N=32	N=21	N=18	N=18	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due unit on scene	6:46	5:54	6:48	7:15	3:12	10:10
	Total Response Time ERF	6:46	6:38	6:48	7:15	10:13	
		N=60	N=32	N=21	N=18	N=18	

The department's baseline statements reflect actual performance during 2019 to 2022. The department relies on the use of automatic/mutual aid from neighboring fire departments to provide its effective response force complement of personnel. These resources are immediately available as part of a seamless response system. The department's actual baseline service level performance is as follows:
For 90 percent of maximum risk level fires during this period, the total response time for arrival of the first unit is 5 minutes and 54 seconds. The first on scene unit, generally an engine, can provide personnel for rescue and fire suppression abilities. The first due unit, and all subsequent arriving apparatus, follow standard operating procedures established by the Department.
For 90 percent of high risk level fires, the total response time for the arrival of the ERF, staffed with a minimum of 35 firefighters and officers, is 8 minutes and 31 seconds. The ERF used during this period is capable of the following actions: establishing formal command, establishing an uninterrupted water supply, initiating fire attack, conducting searches, providing ventilation, establishing a rapid intervention team (RIT), providing scene lighting, assignment of a Safety Officer, assignment of floor supervisors, establishing elevator control, conducting occupant evacuation, controlling HVAC systems

and providing medical care. All of the operations described above are based on Department's standard operating procedures.

Fire Suppression Significant/Max Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		4:19	6:48	18:08	2:32	1:04	1:04
Turnout-(Dispatch-Enroute)		2:02	1:18	2:02	1:54	3:00	1:20
Travel Time (Enroute-On-scene)	1st due unit	3:47	5:36	1:40	3:47	2:00	4:00
	Travel Time ERF	6:41	6:41	1:15	4:20	9:50	
		N=36	N=14	N=6	N=5	N=11	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	5:54	7:30	4:07	4:38	3:12	10:10
	Total Response Time ERF	8:31	8:31	4:22	5:13	10:13	
		N=36	N=14	N=6	N=5	N=11	

EMS

The Department's baseline statements reflect actual performance during 2019 to 2022. The Department relies upon mutual aid and Bloomfield EMS, to complete the effective response force (ERF) component of its EMS program. The initial arriving apparatus shall have the capabilities of providing basic EMT medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire apparatus shall provide support as needed.

These resources are immediately available as part of a seamless response system. The Department's actual baseline service level performance is as follows:

For 90 percent of low risk level EMS responses, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, is 8 minutes and 48 seconds. The first-due unit is capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of low risk level EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of two firefighters and one officer, is 8 minutes and 48 seconds. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and assisting transportation of the patient to the appropriate receiving facility.

EMS Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		:53	:39	:34	1:02	9:03	1:30
Turnout-(Dispatch-Enroute)		1:36	1:39	1:43	1:39	1:32	1:00
Travel Time (Enroute-On-scene)	1st due unit	7:37	13:14	9:26	7:06	4:40	4:00
	Travel Time ER	NA	3:09	8:22	7:06	4:40	
		N=3,722	N=1,974	N=1,044	N=540	N=164	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	8:48	8:26	10:08	7:41	6:31	8:00
	Total Response Time ERF	8:48	8:30	10:08	7:41	6:31	
		N=3,722	N=1,974	N=1,044	N=540	N=164	

The department's baseline statements reflect actual performance during 2019 to 2022. The department relies upon mutual aid and Bloomfield EMS, to complete the effective response force (ERF) component of its EMS program. The initial arriving apparatus shall have the capabilities of providing basic EMT medical aid including AED, until the third-party provider arrives on scene. If the third-party provider unit arrives on scene first, its personnel shall initiate care and the staff from the initial fire apparatus shall provide support as needed.

These resources are immediately available as part of a seamless response system. The department's actual baseline service level performance is as follows:

For 90 percent of moderate (Risk Level) EMS responses, the total response time for the arrival of the first-due unit, staffed with 2 firefighters and 1 officer, is: 5 minutes and 47 seconds. The first-due unit is capable of: establishing command; maintaining scene safety; evaluating the need for additional resources; initiating basic life support and early defibrillation; and assisting transportation of the patient to the appropriate receiving facility.

For 90 percent of low (Risk Level) EMS response incidents, the total response time for the arrival of the effective response force (ERF), staffed with a minimum of 7 personnel, is 5 minutes and 49 seconds. The ERF is capable of: maintaining command and scene safety; delivering advanced life support including the appropriate treatment; and assisting transportation of the patient to the appropriate receiving facility.

EMS Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		4:02	1:12	:32	:49	11:15	1:30
Turnout-(Dispatch-Enroute)		1:30	1:17	1:12	1:15	1:33	1:00
Travel Time (Enroute-On-scene)	1st due unit	4:34	9:23	6:40	5:01	4:16	4:00
	Travel Time ERF	NA	11:43	6:45	5:12	4:17	
		N=1,069	N=57	N=61	N=232	N=719	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	5:47	10:02	7:39	5:39	5:33	8:00
	Total Response Time ERF	5:49	11:48	8:20	5:47	5:37	
		N=1,069	N=57	N=61	N=232	N=719	

HAZMAT

For 90 percent of low risk level hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 7 minutes and 9 seconds to all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.
For 90 percent of low risk level hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with two firefighters and 1 officer, shall be 7 minutes and 59 seconds in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with Department standard operating guidelines.
The Department relies upon mutual aid from Nutley HazMat to complete the effective response force (ERF) component of its HazMat response program. The initial arriving apparatus shall have the capabilities of establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm and cold zone.

A PSE&G emergency response request will be made for any incidents where elevated carbon monoxide levels are detected, combustible gas levels found to be above the lower explosive limit, and where natural gas odors are detected inside/outside a structure.

HAZMAT Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		1:57	2:00	1:25	1:29	3:01	1:30
Turnout-(Dispatch-Enroute)		1:49	1:15	2:32	1:06	1:59	1:20
Travel Time (Enroute-On-scene)	1st due unit	6:20	8:20	6:20	5:31	3:13	4:00
	Travel Time ERF	7:04	9:01	7:08	5:31	4:26	
		N=127	N=43	N=33	N=36	N=15	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	7:09	9:00	7:09	6:26	4:42	8:00
	Total Response Time ERF	7:54	9:21	9:02	6:26	5:17	
		N=127	N=43	N=33	N=36	N=15	

For 90 percent of moderate (Risk Level) hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 2 firefighters and 1 officer, shall be: 8 minutes and 16 seconds to all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.
For 90 percent of moderate (Risk Level) hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 13 firefighters and officers, shall be: 8 minutes and 23 seconds in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.
The department relies upon mutual aid from Nutley HazMat to complete the effective response force (ERF) component of its HazMat program. The initial arriving apparatus shall have the capabilities of providing establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm and cold zone.

A PSE&G emergency response request will be made for any incidents where elevated carbon monoxide levels are detected, combustible gas levels found to be above the lower explosive limit, and where natural gas odors are detected inside/outside a structure.

HAZMAT Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:02	1:09	1:29	1:42	3:21	1:30
Turnout-(Dispatch-Enroute)		1:47	1:34	1:26	1:43	2:39	1:20
Travel Time (Enroute-On-scene)	1st due unit	7:06	9:03	7:06	6:39	5:01	4:00
	Travel Time ERF	7:06	9:03	7:06	6:39	5:55	
		N=282	N=113	N=66	N=58	N=45	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	8:16	9:16	7:32	8:11	8:02	8:00
	Total Response Time ERF	8:23	9:16	7:32	8:11	8:08	
		N=282	N=113	N=66	N=58	N=45	

For 90 percent of high (Risk Level) hazardous materials response incidents, the total response time for the arrival of the first-due unit, staffed with 2 firefighters and 1 officer, shall be: 2 minutes and 2 seconds to all areas. The first-due unit shall be capable of: establishing command; sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; determining the need for additional resources; estimating the potential harm without intervention; and begin establishing a hot, warm, and cold zone.
For 90 percent of high (Risk Level) hazardous materials response incidents, the total response time for the arrival of the effective response force (ERF) including the hazardous materials response team, staffed with 27 firefighters and officers, shall be: 5 minutes and 57 seconds in all areas. The ERF shall be capable of: appointing a site safety officer; and providing the equipment, technical expertise, knowledge, skills, DECON, evacuation, containment and abilities to mitigate a hazardous materials incident in accordance with department standard operating guidelines.
The department relies upon mutual aid from Nutley HazMat to complete the effective response force (ERF) component of its HazMat program. The initial arriving apparatus shall have the capabilities of providing establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm and cold zone.

A PSE&G emergency response request will be made for any incidents where elevated carbon monoxide levels are detected, combustible gas levels found to be above the lower explosive limit, and where natural gas odors are detected inside/outside a structure.

HAZMAT High Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		1:05:38	NA	NA	:09	1:05:38	1:30
Turnout-(Dispatch-Enroute)		3:56	NA	NA	3:56	:58	1:20
Travel Time (Enroute-On-scene)	1st due unit	2:01	NA	NA	2:01	1:20	4:00
	Travel Time ERF	5:56	NA	NA	5:56	1:20	
		N=5	N=	N=1	N=2	N=2	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	2:02	NA	NA	2:02	1:44	10:10
	Total Response Time ERF	5:57	NA	NA	5:57	1:44	
		N=5	N=	N=1	N=2	N=2	

Technical Rescue

For 90 percent of low risk level technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 6 minutes and 26 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue specialty team response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.
For 90 percent of low risk level technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with seven firefighters and officers, shall be 7 minutes and 16 seconds in all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Tech Rescue Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		1:29	:53	:46	1:46	3:51	1:30
Turnout-(Dispatch-Enroute)		1:28	1:30	:40	1:42	2:24	1:20
Travel Time (Enroute-On-scene)	1st due unit	6:07	6:22	4:58	6:07	3:35	4:00
	Travel Time ERF	7:53	6:22	5:52	6:07	8:05	
		N=59	N=26	N=15	N=19	N=10	
	Total Response Time 1st due unit	6:26	6:23	5:14	7:04	5:23	8:00

Total ERF (Dispatch-On scene)	Total Response Time ERF	7:16	6:23	6:00	7:04	9:07	
		N=59	N=26	N=15	N=19	N=10	

For 90 percent of moderate risk level technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and 1 officer, shall be 7 minutes and 5 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue specialty team response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.
For 90 percent of moderate risk level technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 13 firefighters and officers including the technical response team, shall be 7 minutes and 8 seconds all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

Tech Rescue Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:36	:32	2:36	1:31	2:56	1:30
Turnout-(Dispatch-Enroute)		1:23	1:06	:52	2:01	1:32	1:20
Travel Time (Enroute-On-scene)	1st due unit	7:08	7:05	3:18	1:38	7:05	4:00
	Travel Time ERF	7:04	7:05	2:17	3:28	7:04	
		N=12	N=5	N=2	N=2	N=3	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	7:05	7:23	3:25	3:39	7:08	8:00
	Total Response Time ERF	7:08	7:23	3:25	3:39	7:08	
		N=12	N=5	N=2	N=2	N=3	

For 90 percent of high risk level technical rescue incidents, the total response time for the arrival of the first-due unit, staffed with two firefighters and one officer, shall be 10 minutes and 11 seconds in all areas. The first-due unit shall be capable of: establishing command; sizing up to determine if a technical rescue specialty team response is required; requesting additional resources; and providing basic life support to any victim without endangering response personnel.
For 90 percent of high risk level technical rescue incidents, the total response time for the arrival of the effective response force (ERF), staffed with 17 firefighters and officers including the technical rescue specialty team, shall be 10 minutes and 11 seconds all areas. The ERF shall be capable of appointing a site safety officer; establishing patient contact; staging and apparatus set up; providing technical

expertise, knowledge, skills, and abilities during technical rescue incidents; and providing first responder medical support.

The Department will request mutual aid through the Essex County Mutual Aid Coordinator who dispatches the Metro Area UASI Strike team, NJDFS and New Jersey Task Force 1 to perform higher risk rescues. The closest rescue units depending on the location of the incident will be dispatched. The Metro Area UASI Strike Team is comprised of fire and rescue personnel from the following fire departments: Jersey City, Newark, Paterson, Elizabeth, Newark, North Hudson Regional, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and the Port Authority of New York and New Jersey. The initial arriving apparatus shall have the capabilities of providing establishing command, sizing up and assessing the situation to determine the presence of a potential hazardous material or explosive device; estimating potential harm without intervention; and begin establishing a hot, warm and cold zone.

Tech Rescue High Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		:48	NA	NA	:48	:09	1:30
Turnout-(Dispatch-Enroute)		1:02	NA	NA	1:01	1:02	1:20
Travel Time (Enroute-On-scene)	1st due unit	10:11	NA	NA	10:11	2:03	4:00
	Travel Time ERF	10:11	NA	NA	10:11	3:02	
		N=4	N=	N=	N=3	N=1	
Total ERF (Dispatch-On scene)	Total Response Time 1st due unit	10:11	NA	NA	10:11	3:05	10:10
	Total Response Time ERF	10:11	NA	NA	10:11	3:05	
		N=4	N=	N=	N=3	N=1	

The Gaps

Gaps are the spaces of time between the baseline and benchmark performance. They gauge how close (or far away) the Department is to reaching its goal. Gaps are opportunities to improve. There are four factors to observe when assessing the gap—the baseline (i.e., actual) performance, the benchmark (i.e., target or goal performance), the gap (i.e., space between the two), and lastly, a plan for closing the gap. The goal is to constantly work toward decreasing the gap between the two. When the department is getting close to reaching its benchmark, it will do its best to keep a contingency plan and some kind of quality assurance process to keep the department at or below benchmarks. The considerations in this document explain how the Department has been taking proactive steps to reach benchmark performance goals.

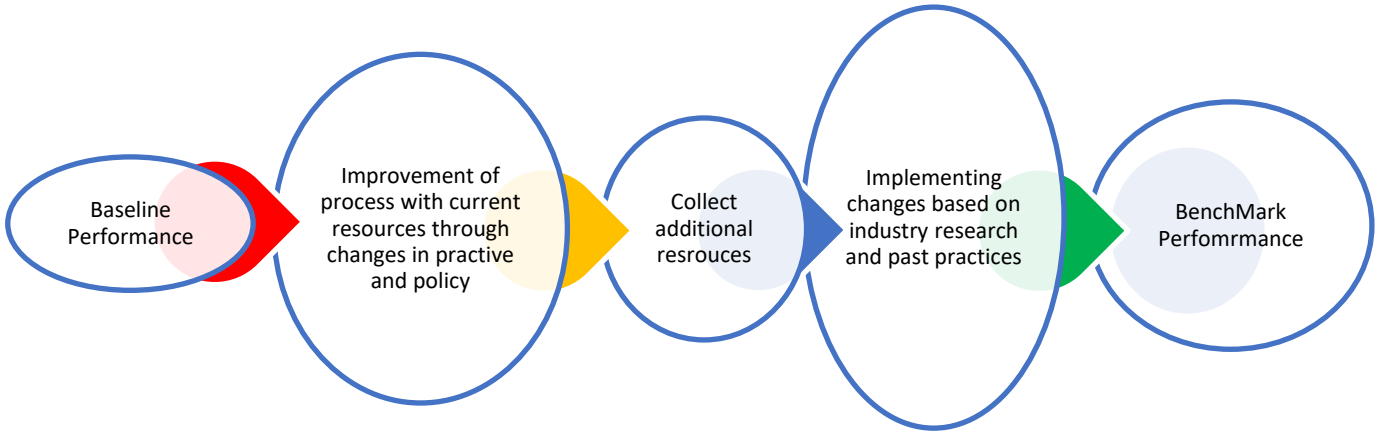


Fig. 55

Fire Suppression- The Gaps- 90th Percentile Baseline Performance-2019-2022						
		Low	MOD	High	MAX	Benchmark
PSAP-Dispatch		+1:00	+1:36	+1:06	+3:19	1:04
Turnout-(Dispatch-Enroute)		-0:02	+0:37	-0:07	+0:42	1:20
Travel Time (Enroute- On Scene)	1st due ENG	+1:12	+1:36	+1:26	-0:13	4:00
	Travel Time ERF	+2:15	+2:36	+1:52	+2:41	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-0:48	-2:31	-3:14	-4:14	8:00
	Total Response Time ERF	-0:28	+0:16	-5:14	-1:39	

EMS- The Gaps- 90th Percentile Baseline Performance-2019-2022				
		Low	MOD	Benchmark
PSAP-Dispatch		-0:27	+3:09	1:30
Turnout-(Dispatch-Enroute)		+0:36	+0:30	1:20
Travel Time (Enroute-On Scene)	1st due ENG	-3:37	+0:34	4:00
	Travel Time ERF	NA	NA	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	+0:48	-2:13	8:00

	Total Response Time ERF	+0:48	-2:11	

Hazmat The Gaps- 90th Percentile Baseline Performance-2019-2022					
		Low	MOD	High	Benchmark
PSAP-Dispatch		+0:26	+0:32	+1:04:08	1:30
Turnout-(Dispatch-Enroute)		+0:19	+0:17	+2:36	1:20
Travel Time (Enroute- On Scene)	1st due ENG	+2:20	+3:06	-1:59	4:00
	Travel Time ERF	+3:04	+3:06	+1:56	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-0:51	+0:16	-8:08	8:00
	Total Response Time ERF	-0:06	+0:23	-4:13	

Technical Rescue- The Gaps- 90th Percentile Baseline Performance-2019-2022					
		Low	MOD	High	Benchmark
PSAP-Dispatch		-0:01	+1:06	-0:42	1:30
Turnout-(Dispatch-Enroute)		+0:08	+0:03	-0:18	1:20
Travel Time (Enroute- On Scene)	1st due ENG	+2:07	+3:08	+6:11	4:00
	Travel Time ERF	+3:53	+3:04	+6:11	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-1:34	-0:55	+0:11	8:00
	Total Response Time ERF	-0:44	-0:52	+0:11	

XVI. Considerations

Dispatch

Emergency call processing and dispatch services in the Township are handled by Central Communications, a unit of the Police Department which staffed by civilian dispatchers and police supervisors. Located in the Municipal Complex, the Police and Fire radio system received a $2.8 million radio overhaul in accordance with the NJ P25 radio emergency services mandate. The Fire Department was updated with a new digital trunking radio system, which allowed interoperability with other public safety agencies in the field.

The collection of information during the alarm handling time by dispatchers has been identified as a weakness. Accuracy in the collection of information is critical to emergency services so that dispatchers

can deploy the right resources to mitigate the reported emergency. Bloomfield emergency services use three different types of emergency software modules; the Police Department uses LawSoft, the Fire Department uses Emergency Reporting, and EMS uses ImageTrend for the collection and documentation of dispatch data. This patchwork of software modules has caused confusion with dispatch personnel. After several meetings with the supervisory staff of Central Communications, plans were made to improve fire response data collection to assist with improvements to alarm handling times. Dispatchers are now using tablets that are programmed with an algorithm to ask fire-specific questions to emergency callers so that accurate information is collected and the proper resources can be dispatched in a timely manner.

Another consideration at Central Communications is the annual refresher training of dispatch personnel. All dispatchers are required to complete a basic training dispatcher course approved by the State of New Jersey Office of Emergency Telecommunications Services (OETS). Initial orientation training includes 320 hours of work experience as a call-taker. Dispatchers that are hired by Central Communications must complete an annual in-service training program consisting of an 8-hour course developed by the local Public Safety Answering Point (PSAP). If a dispatcher transfers emergency medical service calls that dispatcher is required to be CPR certified. Since the annual training is completed by Bloomfield police personnel, most of the training has been focused on police emergencies and fire department related emergencies were often not adequately covered. For several years, police personnel were dispatched to every type of incident first and then the arriving police officer would determine the need for fire or EMS resources (i.e., house fire, cardiac arrest, odor of gas). This delay in the dispatch of appropriate emergency resources ultimately lengthened overall response times to critical incidents. Survival rates of critical care EMS patients and the time of fire control, occupant rescue and property conservation at structural fires were each greatly affected. In order to address this issue, Central Communications dispatchers have been trained in the use of a quick reference sheet that has been formatted to assist with matching the appropriate resources to be dispatched to various types of fire and EMS emergency incidents.

Fire Incident Report Training

The Department in 2021 completed a report writing course with all suppression firefighters. The results of this training proved to be a positive outcome. While collecting incident data to calculate 90th percentile response times, more accurate numbers started to emerge especially in years 2021 and 2022. However, better report writing is still required to ensure that data for incidents is not diluted by incomplete times or wrongly identified incident types and other parameters that make up the daily incidents in town. Consideration should be given to establishing a formal fire reporting quality assurance program to ensure accuracy in fire and EMS response data collection.

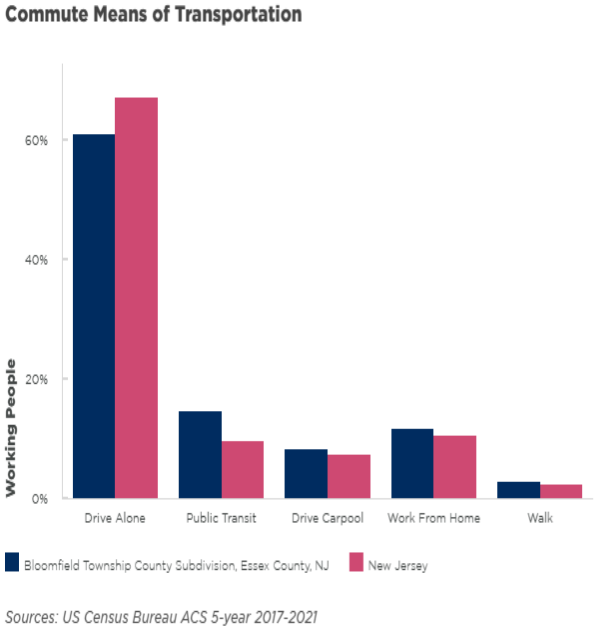
Deployment Levels

As stated earlier, the current shift staffing levels provide for a minimum of 13 firefighters and fire officers on duty daily. Department overall staffing levels have dropped from 88 in 2006 to the current level of 76 firefighting personnel. This results in the frequent closure of an engine company normally assigned to Fire Headquarters/Station No. 1/FMZ 1 due to insufficient shift staffing. This decrease in deployment levels was as a result of the loss of tax revenue due to the closure of several large manufacturing locations in the Township. However, since 2015, there has been the addition of

4,152,632 square feet of new residential development and 2,964 additional apartment units, many of which are located in several high-density transit village complexes. Most of the sites of the formerly closed industries have been redeveloped and occupied by high-density mixed-use residential and commercial properties with very low vacancy rates. The periodic closure of Engine 1 has a direct impact on the number of on-duty firefighters that can be quickly deployed to the scene of a structural fire and/or any emergency incident, especially when simultaneous incidents require the response of fire units from distant stations. When Engine 1 is closed due to low staffing levels, the engine companies in FMZs 2 & 3 pickup additional territory to provide first due fire and EMS coverage in FMZ 1. The increased development and accompanying increase in emergency incident service demand and the almost daily closure of Engine 1 has stretched Fire Department resources and poses a daily challenge for firefighters to protect life safety and property in the Township. This shift in demographics has yielded a positive economic shift for the Township yet the Fire Department has yet to see an increase in on-duty staffing to match the increase in new development and economic activity.

The most recent advantageous change to help bridge this response coverage gaps was made in 2021 when the Department adopted and implemented a policy to provide increased staffing levels for structural fire incidents in light of the rapid population growth. The Department negotiated and implemented an interlocal cooperative automatic aid agreement with the fire agencies of the neighboring communities of Belleville and Nutley. The policy provides from the automatic response of an engine company to the scene of a reported structure fire from each department to supplement staffing for the host community. The use of the automatic aid policy is intended to provide response strategies within the staffing level recommendations as outlined in NFPA 1710. However, proper training and requesting greater capabilities from the software vendor of the ER module is needed to more accurately document the arrival of additional resources to the scene on an automatic aid incident.

Even though the Township of Bloomfield is considered a commuter town, the data still shows that 60% of Bloomfield residents drive alone to work. This correlates to the fact that travel times are affected during morning and evening rush hours and on the tight streets at nights and weekends. The number of cars that come in and out of the service boundaries of Bloomfield has continued to increase. Bloomfield is long and narrow, so when Engine 1 is closed and an incident occurs during rush hours, effective response force (ERF) response times are delayed due to the distance that responding apparatus have to travel. However, as seen from the analysis of 90th percentiles, with proper training and supervision at Central Communications, the time that is lost during alarm handling can made up in the total response time for 1st due apparatus to bring response times under the 8-minute benchmark.



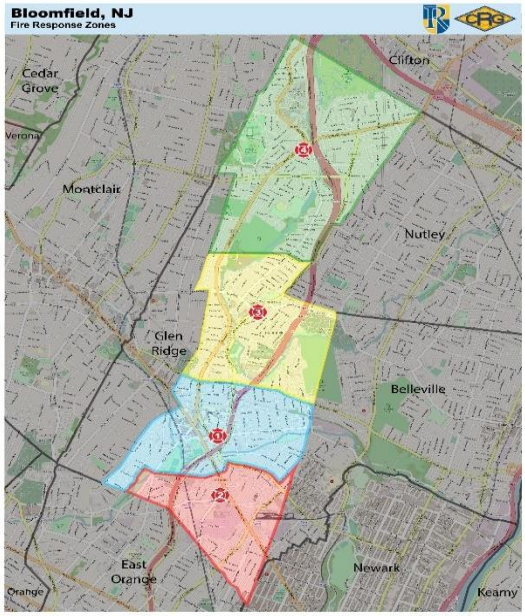


Fig. 56 **Segregation of NFIRS Codes**

The Department uses the Emergency Reporting software program to document fire and EMS incident responses under the National Fire Incident Reporting System (NFIRS) requirements. Common incident type NFIRS codes that are prefilled by dispatch personnel and programmed into the ER module can be improved upon. Breaking down some high probability NFIRS codes can help reduce alarm handling times. For example, a call comes in for a low hanging wire, the dispatcher can ask a question to the caller: Is the wire the highest, middle or lowest wire attached to the electrical pole? If the caller states the wire is the lowest one, we may assume that the low hanging wire may be a cable TV wire which poses a lower risk as opposed to a wire hanging from an upper portion of the pole. If simultaneous incidents occur, the officer in charge can redirect resources to the higher priority call if needed.

XVII. Community Feedback

Over the course of several months in 2019, the Bloomfield Fire Department held a series of meetings with parties that are directly interested in the functions and advancement of the fire department. These meetings included members of the fire department, Township administration, members of the town council, and community members.

The following is a list of the scheduled meetings and their attendees:

July 8th, 2019: Tour #2: Shift Commander, Officers, and Tour Members
July 9th, 2019: Tour #3: Shift Commander, Officers and Tour Members
July 18th, 2019: Tour #4: Shift Commander, Officers and Tour Members
July 19th, 2019: Tour #1: Shift Commander, Officers and Tour Members

July 24th, 2019: A meeting was held with the Bloomfield Administration to go over the Fire Department Strategic Goal and Plan. As part of this meeting, the Administration was given an opportunity to provide their answers to the same questions that were presented to each of the four duty shifts.

August 26th, 2019: A meeting was held with members of the Bloomfield Council. They were given an opportunity to provide answers to the same questions that were presented to each duty shift and to the Administration.

August 28th, 2019: A community meeting was held. The purpose of this meeting was to receive input from the community regarding their thoughts on the future direction of the Bloomfield Fire Department. Members of the public that attended were asked the same series of questions that were asked of the four duty shifts, the Administration, and the Bloomfield Council.

Each target group was asked to weigh in on the following areas:

- Developing a vision of the future.
- Establishing the values of the members of the organization.
- Identifying the strengths of the organization.
- Identifying any weaknesses of the organization.
- Identifying areas of opportunity for the organization.
- Identifying potential threats to the organization.
- Defining the services provided to the community.
- Establishing the community's service priorities.
- Establishing the community's expectations of the organization.
- Identifying any concerns, the community may have about the organization and its services.
- Identifying those aspects of the organization and services the community views positively.
- Establishing realistic goals and objectives for the future.
- Identifying implementation tasks for each objective.
- Defining service outcomes in the form of measurable performance objectives and targets.
- Developing organizational and community commitment to the plan.

Community Priorities

- EMS
- Equipment
- Update SOP's/SOG's
- Fire Fighter Safety
- Getting more service out of the Department

XVIII. Program Goals and Objectives

1. Community Risk Reduction
    a. Expand existing school programs to include dormitory fire safety to High School students using Seton Hall University's "After the Fire."

b. Expand existing school programs to include the NJ-DFS's "Fire Is" programs.
c. Develop a fire safety program for preschool aged children.
d. Develop a fire safety program for senior citizen groups.
e. Implement a voluntary fire inspection program for one- and two-family homes.
f. Expand building fire incident pre-planning program to meet NFPA 1620.
g. Expand use of mobile data terminals to provide fire incident pre-planning and other pertinent building information to on scene responders at emergencies.

2. Training and Education
   a. The Fire Department will conduct annual Right to Know, Confined Space Awareness & Operations, Bloodborne Pathogen exposure training, and EMS refresher classes for all personnel to comply with all state mandated annual training and education requirements.
   b. Before being assigned to a fire suppression unit, all new recruits will attend an NJDFS approved fire academy and successfully complete Firefighter 1 and 2 courses.
   c. All Fire Department members will obtain a New Jersey Hazardous Materials Operations certificate.
   d. All members will complete a NIMS compliant I-200 and IS-700 course. and maintain a NJ-DFS Incident Management Certificate
   e. All members with 5 years of completed service must possess a certification for Incident Management Level 1.
   f. All Captains must possess a certification for Incident Management Level 2.
   g. All Chief Officers will complete NIMS compliant ICS-300 and ICS-400 courses and maintain a NJ-DFS Incident Level 3 certification.
   h. All officers will receive (and maintain) NJ-DFS Fire Officer 1 Certification.
   i. All fire suppression units of the Fire Department will attend live burn training, as units along with other companies on their shift. This will be conducted twice a year at a State approved training facility.
   j. Create a set of standardized tactical evolutions for operations that include: stretching and putting into operation pre-connected hose lines from pumpers; ground ladder and aerial ladder evolutions and will consist of hands-on skills that will have benchmark times for completion. Testing of all companies will be done on all pertinent evolutions once a year in the Fall and conducted during daytime and nighttime hours.
   k. A schedule of daily drills will be posted in each fire house. The on-duty companies on each shift will conduct "in-service" classes on these training and education topics. This will include a regular review of occupancy pre-plans. To maximize agency effectiveness, this program will include regularly scheduled drills involving members of both the career and volunteer staff training together. The joint training drills will increase in frequency and intensity to increase the proficiency of the members of the volunteer branch.
   l. All department Deputy Chiefs will receive and maintain, at a minimum, a NJ-DFS Fire Instructor 2 Certification.
   m. All Captains will receive and maintain, at a minimum, a NJ-DFS Fire Instructor 1 Certification.
   n. All department officers will complete an NFPA compliant National Fire Academy Incident Safety Officer Course.

o. All Chief Officers will receive and maintain a NJ-DFS Fire Officer 2 Certification.
p. All Chief Officers and Captains will receive and maintain Blue Card Command Certification.

3. Apparatus
    a. Daily and weekly apparatus checks are being completed and documented on a standard Fire Department form. Records will be kept and accessible for review. This will lead to better maintained apparatus and lower maintenance costs.
    b. An apparatus replacement program will be put in place, which will factor in yearly and projected maintenance and repair costs for existing apparatus. Budget requests for apparatus replacement will be based off the replacement plan.
    c. An apparatus operator training program will be established, and all personnel will receive training and certification from the department in apparatus operations. This will lead to improved apparatus care and maintenance by all personnel.
    d. Maintenance records will be standardized, and tracking will be improved. This will lead to more accurate data which can be used to adjust the apparatus replacement plan based on the condition and reliability of each apparatus.
    e. All apparatus will be placed on a 6-month preventative maintenance schedule. This improved preventative maintenance schedule will aid in keeping apparatus in better shape, reducing out of service time and money spent on minor issues that become major repairs.
4. Health and Safety
    a. The Chief of the Department will act as the department Health and Safety Officer (HSO) who will receive and/or maintain all appropriate certifications including NFPA HSO, National Fire Academy (NFA) Safety Officer, etc.
    b. Develop a Labor Management Health and Safety Team.
    c. Institute a Risk Management Program based on NFPA 1500 that will aim to reduce injuries to department personnel, and also reduce incidence of loss or damage to department equipment and facilities.
    d. Purchase and install a new personal protective equipment (PPE) washer and dryer at Fire Headquarters for cleaning and maintaining PPE as per NFPA 1851, to reduce firefighter exposure to toxic products.
    e. Expand on and further promote the use of voluntary annual physicals and health evaluations for all members.
5. EMS
    a. Evaluate and revise as needed the current emergency first responder program.
    b. Train and certify all new firefighters as NJ EMTs.
    c. Train and certify existing firefighters as NJ EMTs.
    d. Work with the membership of the Bloomfield Emergency Squad to examine ways for the Department to assist when they are not available for EMS response.
    e. Explore partnerships with area hospitals and health departments to create a paramedicine-like program to check on residents who may need at home assistance that can be provided by BLS level responders.
6. Staff Engine 1 Full Time
    a. Apply for a FEMA SAFER grant to hire additional firefighters.
    b. Identify future budgetary funding mechanisms to hire additional firefighters.

XIX. Plan of Maintaining and Improving Response Capabilities

Maintaining and improving the services that the Fire Department provides to its stakeholders is vital. The Department uses a four-part methodology to identify areas in need of improvement:

1. Share and follow the objectives stated in the Fire Department Strategic Plan.
2. Train junior personnel for the replacement of retiring senior firefighters and fire officers.
3. Continuity of training and operations across the four different group shifts and firefighting members assigned to staff positions.
4. Improve training and continuity between Central Communications and the Fire Department.
5. Appoint, delegate, implement and monitor a Superior Officer assigned to work on each of the Critical Issues identified in the Strategic Plan.

Objectives Stated in the Strategic Plan

In the most recent four-year Strategic Plan, maintaining transparency and open communications was identified as a key issue between the Fire Department administration, the municipal governing body and fire personnel. Keeping these channels of communication open and transparent will convey to all stakeholders, internal and external, what the department's goals are and what resources or funding may be required to achieve these goals in the near future. Maintaining transparency and open communications with the collective bargaining units will also help to shape the outcome of the goals for the critical issues. If there is not support from the stakeholders to complete the objectives, the outcomes can fail. For example, one key issue from the community feedback process was the desire to improve EMS response in the Township. In order to achieve the overall goal of providing better EMS response, the collective bargaining units agreed to be have new firefighter hires trained to state and national EMT Level B certification levels and to have current firefighters trained and certified to these levels as well. This has resulted in 92% of Fire Department personnel being certified to state and national EMT Level B certification levels. The agencies also combined EMS and Fire Department operations onto the same radio communications channel so that each agency can monitor ongoing fire and EMS operations and anticipate potential incidents that may require additional resources be dispatched from either agency.

Career Development Training

The Fire Department is on a constant rotation of new hires, promotions and retirements. Knowledge, skills and abilities developed over a long firefighting career can potentially become lost when a senior member leaves the Department. The Department has made great improvements to lessen the impact of retirements by providing career development training for all personnel. In 2021, the Department required every Acting Officer, Captain and Deputy Chief complete Fire Instructor 1 and FEMA Incident Safety Officer training. In 2022, the department had every Acting Officer, Captain and Deputy Chief complete the Fire Officer 1 course. Since 2019, every Department officer and every newly promoted Captain has completed Blue Card Command training. Certification testing of personnel in all of these disciplines is ongoing.

Certification	Fire Officers- Captains & Deputy Chiefs Percentage complete
Blue Card Command	96%
Incident Management Level 1- State	86%
Incident Management Level 2- State	33%
Fire Officer 1- IFSAC/ProBoard	75%
Fire Instructor 1- IFSAC/ProBoard	75%

Creating Continuity between Four Groups

The advancement of NIFR report writing technology allowed fire departments across the nation to streamline data collection, notice trends, spot deficiencies faster while providing an overall improvement in communication up and down the chain of command. The Fire Department has taken advantage of these breakthroughs by acquiring, testing and implementing several reporting modules to convey problems to the right department head.

In 2018 the Department deployed a fire reporting and records management software suite called Emergency Reporting (ER, recently acquired by ESO). Initially the department mainly used ER for NFIRS incident reporting on all emergency response incidents. As members became more experienced in using the software package, the Department started to use some of the expanded capabilities that ER offers. Currently the ER module is used for maintenance records for all apparatus and equipment, training documentation, training records management, hydrant inspections, hydrant flow tests, daily schedules, company inspections, pre-planning reports, station watch duties and to inventory and track each item of serialized fire and rescue equipment and assigned PPE. Allowing each member to quickly access and submit a maintenance request for any apparatus or piece of equipment found to be a need of repair or replacement allows for faster turnaround times prevents longer out of service times and promotes more consistent in service use. Members can also place apparatus and equipment out of service and notification to the proper department head is automatically communicated through the module.

PSTRAX is another accountability management software tool used by fire personnel for daily apparatus and equipment checks that helps reduce redundancy and provides another level of accountability while helping to maintain apparatus and equipment in serviceable condition. The Vehicle Module automates apparatus inspections. Each apparatus can be customized based on its checklists (daily/weekly/monthly/preventive maintenance) and equipment inventories. The vehicle checks are scheduled based on the frequency of completion. Crew members simply login and complete the checks scheduled for each shift. Completed checks are automatically documented and rescheduled. This helps to more effectively manage and maintain apparatus and assigned equipment inventories. The Station Module schedules inspections for EMS supplies inventories, station supplies, building maintenance chores, and other specialty checks.

All personnel are notified of any new policies and any change in existing rules or procedures through two digital memo systems that are done through cloud-based software programs called Power DMS Document Management System and Lexipol Knowledge Management System KMS. Thanks to the use of these platforms, policies can be revised and distributed faster when compared to traditional paper-

based processes. Members are held accountable to policies by tracking signatures, building custom tests, and storing document history. The systems allow 24/7 access to updated policies and procedures and ensures that fire personnel are up-to-date with changes as the systems verify that employees have read and acknowledged important updates. The systems communicate critical updates to all four shift groups and staff fire personnel, provide access to policies from any device, ensure only one version of each document exists, and help to ensure that personnel understand the relationship between department policies and industry standards and best practices.

The Chief of the Department requests and reviews daily and monthly reports from all line officers to ensure continuity of operations between each work group. He also attends periodic township department head staff meetings to ensure that the Department is aware of the activities of other township agencies and to share Fire Department activities and concerns with agency heads and the township administration.

Daily

Daily reports submitted and meetings with the Chief of the Department include:

- Daily training report
- Daily Department Head Meeting with Departments of Public Works and Police.
- Daily Deputy Chief or Acting Deputy Chief shift change meeting.
- Apparatus inventory and maintenance report
- SCBA inventory and maintenance report
- Incident run reports fully completed.
- Employee compensation inputs
- Building inspections and maintenance requests

Weekly

Weekly reports and meetings with the Chief of the Department include:

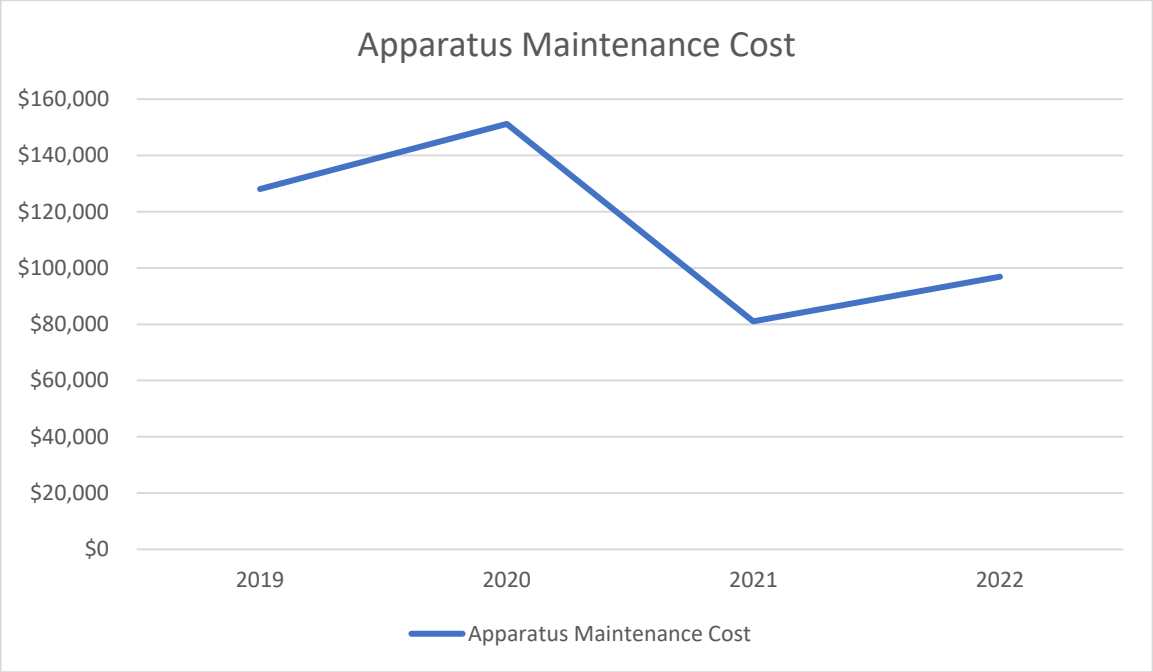
- EMS supply requests
- General supply requests
- Apparatus and vehicles echelon checklists
- All power tools and emergency preparedness equipment inventory and maintenance reports

Monthly

Monthly reports and meetings with the Chief of the Department include:

- Township Department Head Meeting with Mayor, Township Council, Health Department, Building Department, Finance Department, Police Department, Department of Public Works, Township Administrator, and Township Attorney.
- Meeting with collective bargaining unit (FMBA Local 19)
- Meeting with every line officer
- Meeting with Fire Prevention Bureau staff.
- Building maintenance reports

The implementation of ER, PowerDMS, KMS and the meetings that the Chief of the Department conducts with all line officers and department heads from other township agencies has improved continuity of operations across all four work groups and staff personnel, and continuity of operations between fire personnel and other township agencies. This has resulted in an atmosphere of partnership while maximizing township resources. The processes have improved the maintenance program leading to a decrease in apparatus out of service time, better tracking of training hours, and better documentation of services that are provided to the township which was one of the community priorities identified during the community feedback meetings held in 2019. The chart below shows a reduction in spending in the maintenance budget throughout the years 2019-2022 due to improved tracking of apparatus condition and needed repairs. By better documenting repair needs, multiple repairs and preventive maintenance to apparatus can be performed in a single session without having to place an apparatus out of service multiple times for minor repairs.



Improved Training for Central Communications

As stated earlier all dispatchers that are hired by Central Communications must complete an annual in-service training program consisting of an 8-hour course developed by the local Public Safety Answering Point. Since the annual training is completed by Bloomfield police personnel, most of the training has been focused on police emergencies and fire department related emergencies were often not adequately covered. For several years, police personnel were dispatched to every type of incident first and then the arriving police officer would determine the need for fire or EMS resources (i.e., house fire, cardiac arrest, odor of gas). This delay in the dispatch of appropriate emergency resources ultimately lengthened overall response times to critical incidents. Survival rates of critical care EMS patients and the time of fire control, occupant rescue and property conservation at structural fires were each greatly affected. In order to address this issue, Bloomfield superior officers came up with a couple of solutions:

1. Have Fire and EMS operate on a shared dispatch radio frequency.

2. Stop sending a police unit first to every incident and follow an emergency request flow chart designed to match the right resources to the reported emergency and dispatch the appropriate resources on the initial dispatch.

Since the implementation of these changes, response times did not seem to improve until around 2021–2022 time frame. However, when superior officers compared the baseline response times to desired benchmarks, expanded training was deemed to be needed at the dispatch level. An emergency request flow chart that a dispatcher can use to decide what resources to send was developed and the use implemented after training with the dispatch staff. Since implementation of the emergency request flow charts, resource selection has improved and response times have improved.

Another idea for improving the training for Central Communications personnel was implemented during the new officer orientation period. Each new officer should observe and work with dispatch personnel in Central Communication for a day and learn what processes and steps the dispatch staff perform while taking a fire emergency calls. The positive outcomes that may come from this program include:

1. Officers might spot an issue that the dispatchers might not recognize and can correct and train on the spot. Or that officer can elaborate why the issue exists; is it a human error or a computer module error?
2. Officers can see the issues in collecting the right information, so that the right resources can be matched and dispatched to emergency incidents.

Appoint, delegate, implement and monitor a Superior Officer to each of the Critical Issues in the Strategic Plan

During the creation of the 2020-2024 Strategic Plan, certain officers were appointed to be tasked in completing certain Critical Issues identified during the process. These officers have authority from the Chief of the Department to delegate objectives to other personnel to assist with completing tasks in the identified critical issue area. However, some critical issues do not have a completion time frame and are ongoing program being addressed. For example, training - the fire service is a constant revolving door of new hires, promotions, and retirements, resulting in some critical issues too large for a single person to take on by themselves. This is why multiple officers and superior officers are working on the same critical issues as the deputy chief's collateral duties. Below is a list of each Deputy Chiefs collateral duties but may have another officer that helps monitor or has been delegated to help improve and/or organize the following areas of responsibility. The assigned Deputy Chief will act as the lead in each of the assigned areas and will be assisted by additional personnel as needed:

DC 1- Radios
Fuel Pumps
Office of Emergency Management (OEM)
Preplanning
Central Communications

DC 2- Apparatus and Fire Department Vehicles
Personal Protective Equipment (Turnout gear – PPE)

Tools and Equipment

DC 3- Facilities
House Supplies
Right to Know
Medical Supplies

DC 4- Self-Contained Breathing Apparatus (SCBA)
Training and Education
Public Education
Public Relations
Employee Safety and Health Program compliance (PEOSH)

XX. Conclusions and Recommendations

The development of the CRA-SOC was identified as a critical component of the Fire Department continuous improvement program. This all-inclusive process to develop the document included a professional and scientific approach to identifying and assessing community risk; and analyzing emergency deployment and performance; and identifying areas in need of improvement. Completing this process steers the department and its members in keeping true with the stated Mission and Vision Statement of the Department. This process created useful conclusions and recommendations.

Conclusions

The Department assessed risks within the Township by OVAP score, occupancy type, incident type and other measurable factors including:

- Demographic data of the township
- Fire Management Zones (FMZs)
- Incident classifications- Fire, EMS, HAZMAT, Technical Rescue
- Categorized risk - Low, Moderate, High, Significant
- Automatic/Mutual Aid Risks

The results of the CRA/SOC assisted the department with creating a rating risk categorization for each of the classifications throughout the community's four FMZ's. The CRA/SOC also had the upper chain of command review and evaluate baseline deployment data and benchmark performance data. The data and objectives had factual quantitative components including response time standards for the first arriving/due (distribution) and effective response force (ERF - deployment).

Recommendations

The comprehensive community risk assessment process created reputable and validated conclusions, that were utilized to construct achievable recommendations for improvement.

- **Recommendation 1:** Evaluate current Fire Department staffing and deployment levels. Current deployment levels result in the periodic closure of Engine 1 when shift staffing drops below proscribed levels. This places a burden on the adjoining Fire Response Zones of Engines 2 & 3 by increasing their primary first-due coverage areas and potentially increasing overall response times, especially in their primary coverage areas. The department should seek financial assistance opportunities such as the federal Staffing for Adequate Fire and Emergency Response (SAFER) grant program to obtain additional funding to be used to increase current staffing levels. This would allow for the restoration of Engine 1 as a full-time deployed response unit. The increase in staffing will serve the needs of the community by providing better response coverage to fire and rescue incidents Township-wide while also ensuring firefighter operational efficiency and safety. This additional staffing will also help the Department achieve improved response times for the arrival of the first-due unit and the effective response force 90th percentile benchmarks for structural fires as recommended by NFPA 1710.
- **Recommendation 2:** Enhance relationships with key internal partners- Dispatch. Bloomfield Emergency Services Dispatch provides services for Fire, Police, EMS, and also public questions. The Department can conduct more training with the dispatch staff and qualitative conclusions can be discovered.
  Recommendations 3: Enhance the emergency documentation module. Have all three Township emergency services work under one computer module system, instead of three or four different operating systems.
- **Recommendation 4:** Improve NFIRS data management. Consider further segregation of certain high probability NFIRS codes. Some NIFR codes can be broken down to better suit the documentation for report writing, data searching and other capabilities that computer modules can be formatted to look for. Additional support at the Fire department administrative level is needed for dedicating quality assurance personnel for review of incident reporting.
- **Recommendation 5:** Request additional capabilities from the current records management software module vendors. Create a working relationship with the third-party provider in creating algorithms in the modules that can be automatically applied to certain occupancies if they hit certain thresholds for Risk Categorization.
- **Recommendation 6:** Additional administrative support is needed for training, apparatus maintenance, equipment maintenance, vehicle maintenance, SCBA maintenance, building maintenance, SOG/SOP maintenance and the other sub-systems that allows a fire department to work on a 24-hour/365-day schedule.
- **Recommendation 7:** Improve documentation of the arrival of automatic/mutual aid. Since 2020, 14% of calls for service were for automatic/mutual aid given or received. Better documentation of response times of incoming automatic and mutual aid units is needed to have more accurate data to calculate more precise effective response force 90^{th} percentile numbers.
- **Recommendation 8:** Install a mobile radio repeater in the Deputy Chief/Shift Commander vehicle (Car 30) for improvement of on-scene radio communications. Radio coverage gaps create a serious firefighter safety issue that may be corrected with the implementation of a mobile repeater system. This is a growing concern as radio coverage deficiencies have been identified in many of the recently constructed high-density residential/commercial developments (transit villages).

- **Recommendation 9:** The department can improve in tracking and documenting of public events and other community risk reduction activities to show quantitative data for the request to the AHJ to seek funding to support the expansion of these programs.
- **Recommendation 10:** The AHJ and department can improve continuity of operations by improving the promotional process so that the potential promotional candidates are prepared to assume the new roles and responsibilities of their new titles.

XXI. Correlation of CRA/SOC

PI/CC	CRA-SOC Location
	Category 1- Governance and Administration
CC 1A.1	Section V
1A.3	Section V
1A.5	Section V
1A.7	Section VI
CC 1B.2	Section VII
	Category 2 Assessment and Planning
2A.1	Section IX
2A.2	Section IX
CC 2A.3	Section IX
CC2A.4	Section IV
2A.5	Section XIII
2A.6	Section X
2A.7	Section X
2A.8	Section XI
2A.9	Section X
CC 2B.1	Section XIII
2B.2	Section XIII
2B.3	Section XIII
CC 2B.4	Section XIII
2B.5	Section XIII
2B.6	Section XIII
2B.7	Section XVII
CC 2C.1	Section XIII
CC 2C.2	Section XIII
2C. 3	Section XIII
CC 2C.4	Section XIII & XIV
CC 2C.5	Section XV
2C.6	Section XV
2C.7	Section XV
CC 2C.8	Section XIX
2C.9	Section XIV
CC 2D.1	Section XIV

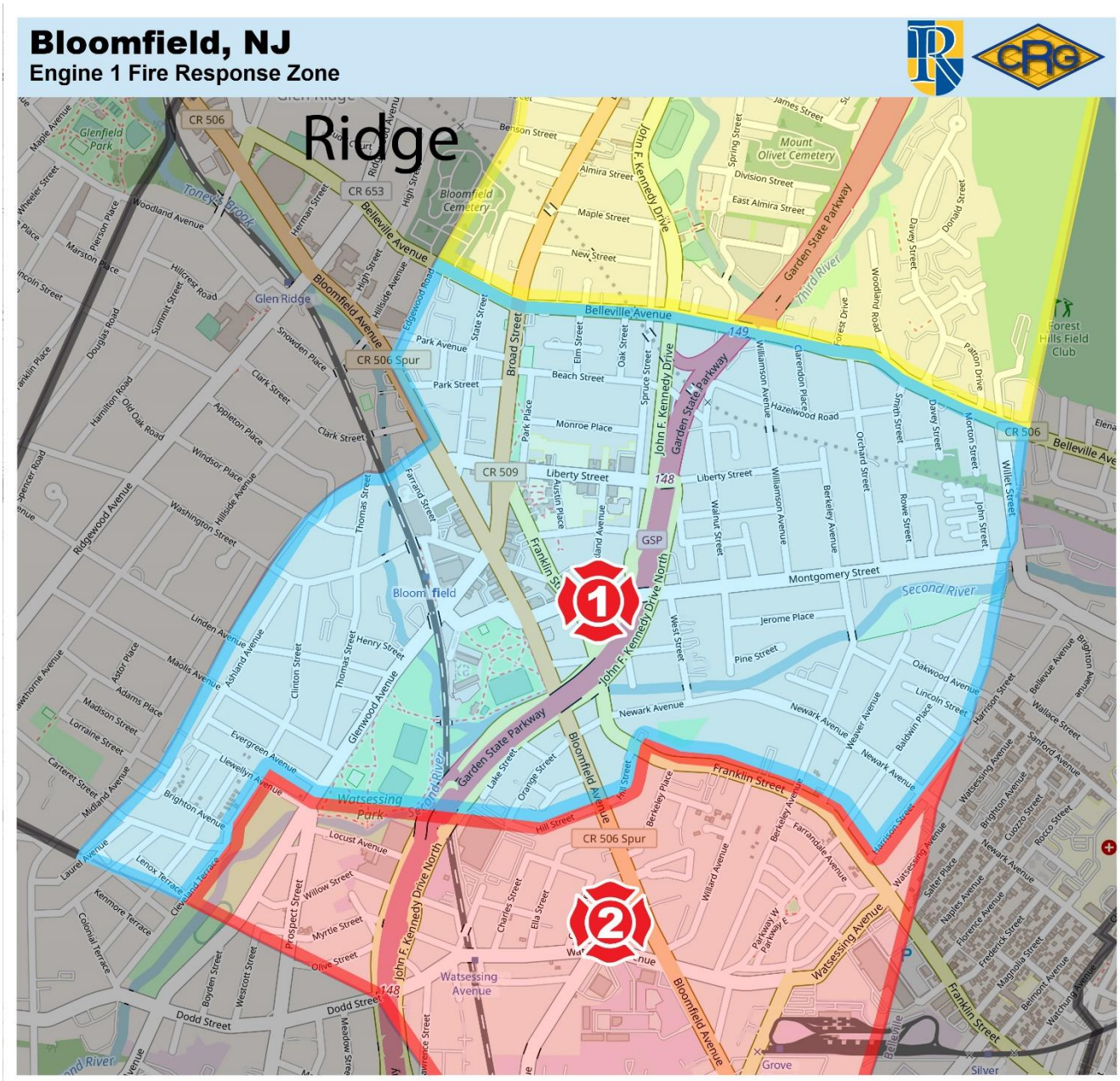
2D.2	Section XIX
CC 2D.3	Section XIX
2D.4	Section XIX
2D.5	Section XIII
CC 2D.6	Section XIX
CC 2D.7	Section XVIII
2D.8	Section I
CC 2D.9	Section XIX
2D.10	Section XVII
	Category 3 Goals and Objectives
CC 3A.1	Section I
3A.2	Section XIX
CC 3B.1	Section XIX
CC 3B.3	Section XVII & XIX
3B.4	Section XIX
3B.5	Section VII
3B.6	Section XVII
CC 3C.1	Section XIX
CC 3C.2	Section XIX
3C.3	Section XIX
CC 3D.1	Section XIX
3D.3	Section XIX
	Category 4- Financial Resources
CC 4A.7	Section VII
CC 4C.1	Section VII
4C.3	Section VII
	Category 5- Community Risk Reduction
CC 5A.2	Section XIII
5A.6	Section XIII
CC 5A.7	Section XIX
CC5B.1	Section XI
5B.3	Section XI
CC 5B.4	Section XI
CC 5C.4	Section XIII
CC 5D.1	Section XIII
5D.5	Section XI
5D.6	Section XI
CC 5D.9	Section XI
CC 5E.1	Section XIV
CC 5E.3	Section XIX
CC 5F.1	Section XIV
CC 5F.2	Section XIII
CC 5F.5	Section XI

CC 5F.9	Section XVIII
CC 5G.1	Section XV
CC 5G.2	Section XIX
CC 5H.1	Section XV
CC 5H.3	Section XI
	Category 6- Physical Resources
6A.1	Section VII
CC 6A.2	Section VII
6B.1	Section XII
CC 6B.3	Section XII
CC 6C.1	Section XII
6C.2	Section XII
CC 6D.5	Section XII
6E.1	Section XII
6E.2	Section XII
CC 6E.3	Section XII
6E.5	Section XII
6F.1	Section XII
	Category 7- Human Resources
7B.10	Section XX
	Category 8- Training and Competencies
CC 8A.1	Section XIX
8A.2	Section XIX
8A.4	Section XIX
8B.1	Section XIX
8B.3	Section XIX
8B.4	Section XIX
CC 8B.6	Section XIX
CC 8C.2	Section XIX
CC 8C.8	Section XIX
	Category 9- Essential Resources
CC 9A.1	Section XI
CC 9A.2	Section XI
9A.4	Section XI
9A.5	Section XI
9A.6	Section XI
9A.7	Section XI
9A.8	Section XI
CC 9B.1	Section XI
9B.3	Section XII
9B.5	Section XII
9B.7	Section XV
9B.9	Section XII

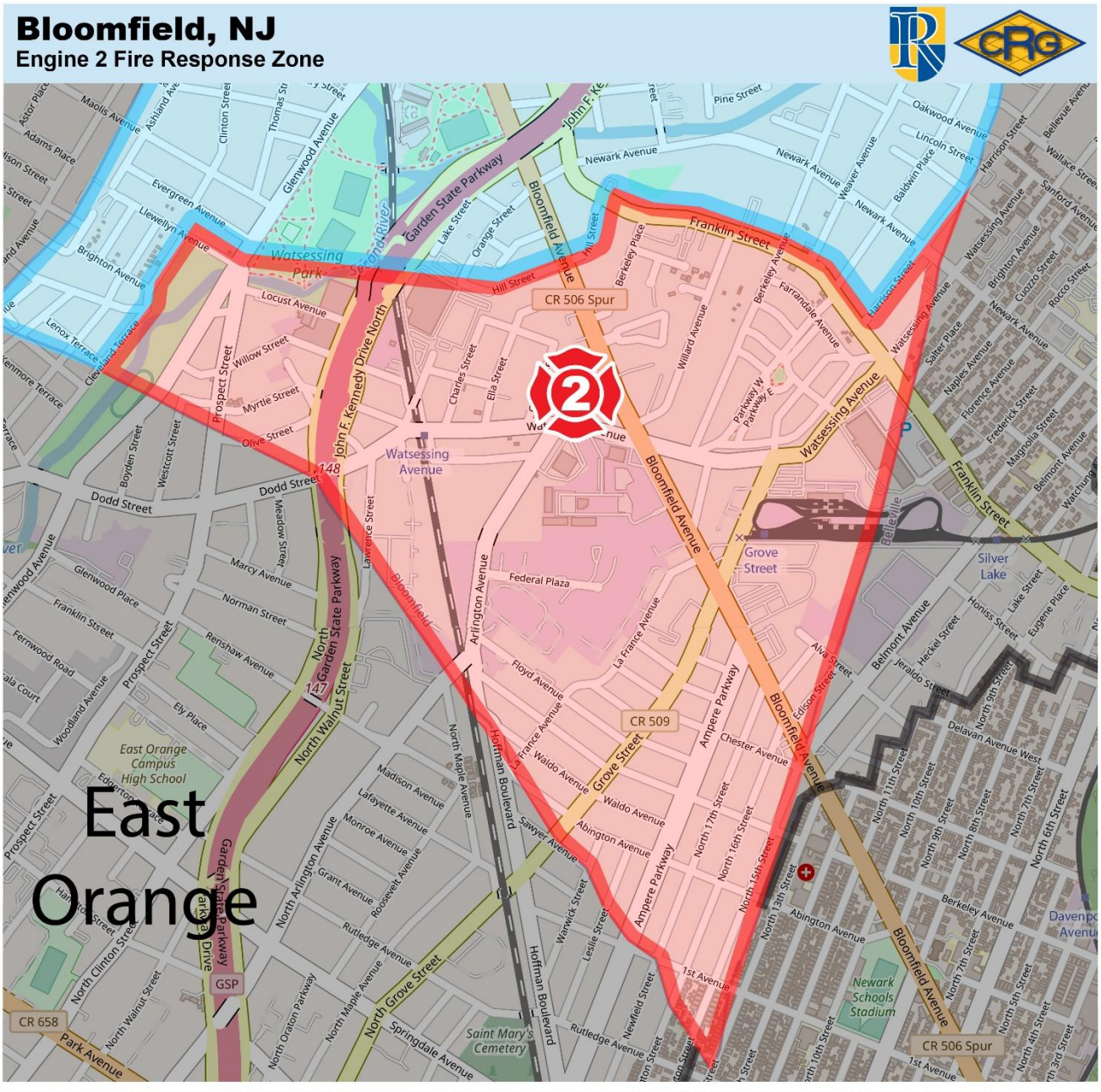
9B.10	Section XII
9B.11	Section XII
9B.12	Section XII
9B.13	Section XIX
CC 9C.1	Section VI
CC 9C.3	Section VI
CC 9D.1	Section VI
9D.3	Section XIII & XIX
	Category 10- External Systems Relationships
CC 10A.1	Section IX
10A.2	Section IX
10A.3	Section IX
CC 10B.1	Section IX
10B.2	Section IX
10B.3	Section IX
	Category 11- Health and Safety
CC 11A.5	Section XIX

Appendix 1

FMZ 1



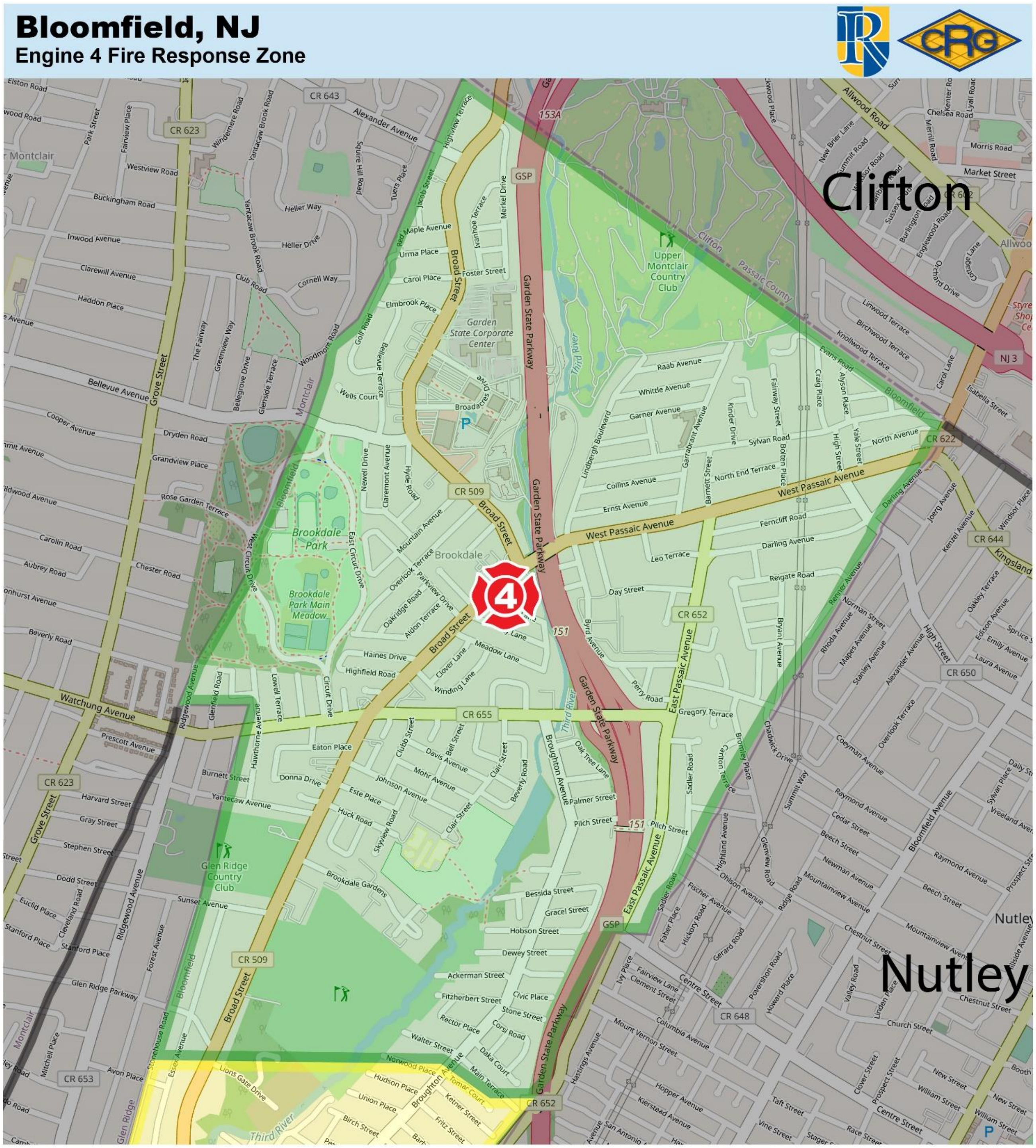
FMZ 2


Bloomfield, NJ
Engine 2 Fire Response Zone
East Orange
Watsessing Park
Second River
Garden State Parkway
Bloomfield Avenue
Franklin Street
CR 506 Spur
John F. Kennedy Drive North
Watsessing Avenue
Grove Street
CR 509
Dodd Street
North Walnut Street
Ampere Parkway
Federal Plaza
Arlington Avenue
Hoffman Boulevard
North Grove Street
Springdale Avenue
Park Avenue
CR 658
GSP
Saint Mary's Cemetery
Newark Schools Stadium
Silver Lake
East Orange Campus High School
148
147

FMZ 3

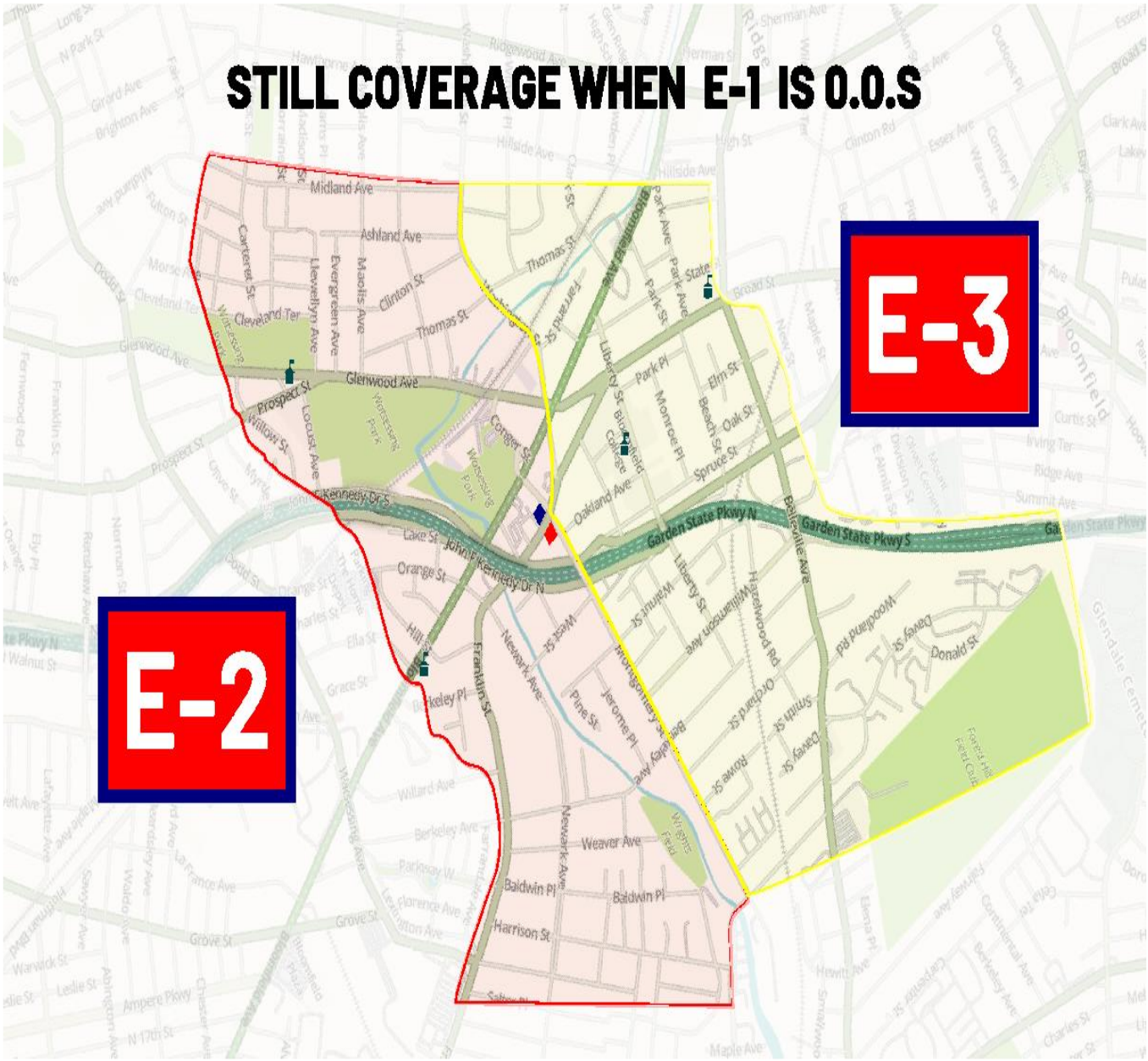

Bloomfield, NJ
Engine 3 Fire Response Zone
Glen Ridge
Bloomfield
Glendale Cemetery
Mount Olivet Cemetery
Bloomfield Cemetery
Forest Hills Field Club
Third River
Broad Street
John F. Kennedy Drive
Garden State Parkway
East Passaic Avenue
Bay Avenue
Hoover Avenue
Belleville Avenue
Bloomfield Avenue
Glen Ridge Parkway
Norwood Place
Fitzherbert Street
Civic Place
Stone Street
Rector Place
Corsi Road
Walter Street
Daka Court
Main Terrace
Tomar Court
Broughton Avenue
Hudson Place
Union Place
Ketner Street
Fritz Street
Birch Street
Barbara Street
Pettit Street
Elston Street
Martin Street
Howard Street
Pleasant Avenue
Mill Street
Lakewood Terrace
Clark Avenue
Lions Gate Drive
Chapel Street
Pulaski Street
Morris Place
Chapman Street
Vernon Terrace
Comley Place
Warren Street
Baldwin Street
Pitt Street
Waverly Terrace
Osborne Street
Benson Street
Almira Street
Maple Street
New Street
Division Street
East Almira Street
Spring Street
James Street
Summit Avenue
Irving Terrace
Ridge Avenue
Curtis Street
North Spring Street
East Passaic Avenue
Valentine Road
Bukowski Place
Milton Avenue
Craig Place
Briar Lane
Limn Road
Pake Street
Cook Road
Plymouth Road
Carrie Court
Wilson Street
Van Winkle Avenue
San Antonio Avenue
Margaret Avenue
Harrison Street
Hopper Avenue
Kierstead Avenue
Mount Vernon Street
Columbia Avenue
Hastings Avenue
Centre Street
Clement Street
View Lane
Ackerman Street
Outlook Place
Laurel Place
Sherman Avenue
Ridgewood Avenue
Forest Avenue
Essex Avenue
Stonehouse Road
Avon Place
Tuxedo Road
Ardsley Road
Tremont Place
Mitchell Place
Montclair
Cambridge Road
Linness Place
Oswell Terrace
Glen Ridge
Clinton Road
Hillside Avenue
High Street
Edgewood Road
State Street
Park Avenue
Park Street
Beach Street
Monroe Place
Clark Street
Elm Street
Oak Street
Spruce Street
Park Place
Liberty Street
Williamson Avenue
Clarendon Place
Hazelwood Road
Orchard Street
Smith Street
Davey Street
Morton Street
Willet Street
Patton Drive
Woodland Road
Forest Drive
Donald Street
Riverdale Avenue
Celia Terrace
Continental Avenue
Fairway Avenue
Berkeley Avenue
Hamilton Circle
Carpenter Street
Elena Place
Deluc
Rutan Road
Bernice Road
Joralemon Street
Belleville
Cresthaven
Jefferson
Hope Street
CR 653
CR 654
CR 652
CR 651
CR 651 Spur
CR 509
CR 506
CR 506 Spur
GSP
150
149
148

FMZ 4

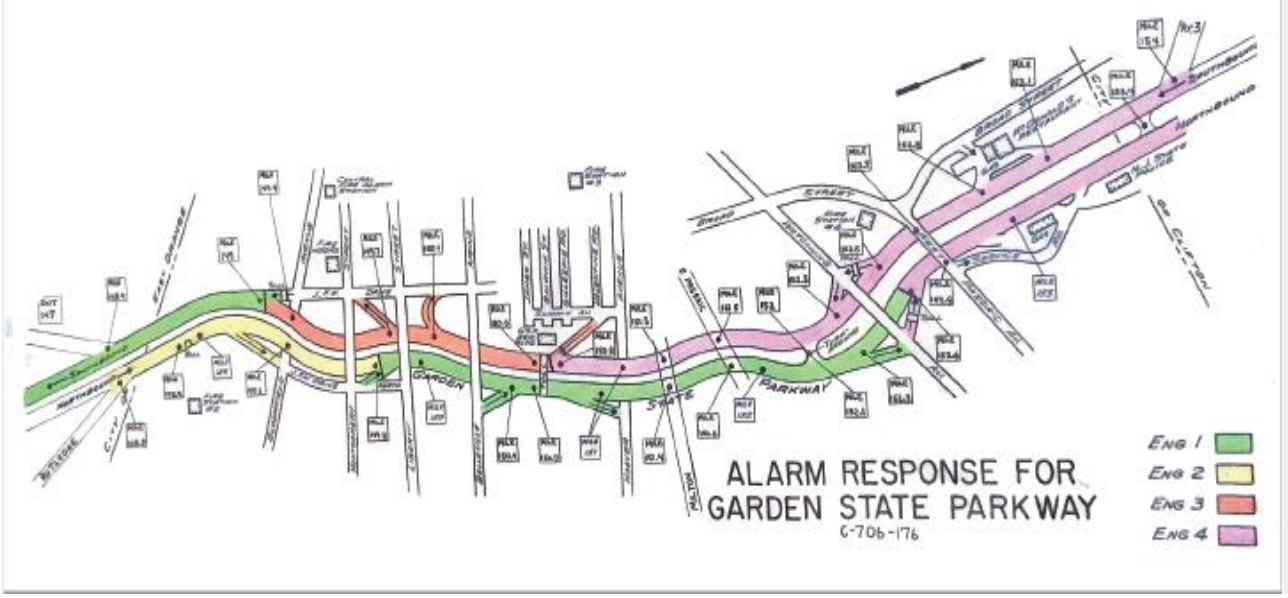


Bloomfield, NJ
Engine 4 Fire Response Zone
Clifton
Nutley
4
Upper Montclair Country Club
Garden State Corporate Center
Brookdale Park
Brookdale Park Main Meadow
Brookdale
Glen Ridge Country Club
Garden State Parkway
Broad Street
West Passaic Avenue
East Passaic Avenue
Watchung Avenue
Grove Street
CR 509
CR 652
CR 655
CR 623

FMZ 2/3 When ENG 1 OOS



Garden State Parkway Response Zone



Appendix 2

Critical Tasking Charts- Fire

Fire Risk Critical Task ERF			
Low Vehicle fire, outside rubbish, brush, vegetation fire. OVAP 13.99 or less		**Moderate** Structure fire in a typical 2000 square foot, two-story single-family dwelling without a basement and with no exposures. OVAP 14-39.99	
Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1
Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd lines)	1	Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd lines)	1
Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2	Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2
Vehicle Stabilization, secure power, force entry	3	Back-up hose team (Responsible for back-up hose to either the same floor/above/below)	2
Total/ERF	7	Hydrant Support/Utilities (Usually 2nd/3rd due engine and they are responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place and attacking the fire)	2
		Aerial, ladders, ventilation, Utilities (Responsible for establishing a secondary means of egress for interior teams, vertical ventilation if the IC requests, horizontal ventilation in coordination with the interior hose teams and rescue operations. NOTE: this is usually divided up by either a 3 person truck crew or between the truck and 3rd due Engine)	4
		RIT (Team of firefighters in the standby position for quick rescue of any firefighters in distress)	3
		EMS (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2
		Rehabilitation	2
		Total/ERF	19(17 w/out EMS)
High		**Max/Special**	

Commercial buildings ranging from 13,000 to 196,000 square feet. Automatic Aid will be dispatched to the scene. Structure fire in a typical 1200 square foot apartment within a three-story, garden-style apartment building. Automatic Aid will be dispatched to the scene. Bringing an additional Truck-3 FF's & Engine-3 FF's. Mutual Aid will be requested for backfill. OVAP 40-59.99		Structure fire in a building with the highest floor greater than 75 feet above the lowest level of fire department vehicle access. Automatic Aid will be dispatched to the scene. Bringing an additional Truck-3 FF's & Engine-3 FF's. Mutual Aid will be requested for backfill. Newark FD will be requested and bring Truck- 3FF's, Engine 3FF's and Supervisor 1Off directly to the scene. OVAP 60 & up.	
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1
Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd and 3rd lines)	1	Water Pump Ops- Water Supply (responsible for establishing a secured water supply and provide pressurized water for the 1st, 2nd, 3rd lines and FDC)	1
Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2	Initial Hose Attack (Responsible for 1st hose line and Primary Search)	2
Back-up hose team (Responsible for back-up hose to either the same floor/above/below)	2	Back-up hose team (Responsible for back-up hose to either the same floor/above)	2
Hydrant Support/Utilities (Usually 2nd/3rd due engine and they are responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place and attacking the fire)	2	Hydrant Support/Utilities (Usually 2nd/3rd due engine and they are responsible for ensuring the 1st due engine has a working water supply, 1st and 2nd attack lines are in place, secured to standpipe and attacking the fire)	1
Aerial, Roof OPS (Responsible for establishing a secondary means of egress for interior teams, vertical ventilation if the IC requests, horizontal ventilation in coordination with the interior hose teams and rescue operations. NOTE: this is usually divided up by either a 3 person truck crew or between the truck and 3rd due Engine)	2	Search and Rescue	3
Ladders, Ventilation Team, Search and Rescue (Responsible for establishing a secondary means of egress for interior teams, vertical ventilation if the IC requests, horizontal ventilation in coordination with the interior hose teams and rescue operations)	2	Evacuation Management Teams (Responsible for assisting fire floor supervisor in safely evacuating civilians to either the floor above if injured or out of the building if capable)	2
RIT (Team of firefighters in the standby position for quick rescue of any firefighters in distress)	3	RIT (Team of firefighters in the standby position for quick rescue of any firefighters in distress)	2
3rd Hose Team (Ensure that 1st and 2nd hose line is in operation and is supplied by a reliable water source. Stretch 3rd line to either the floor above/below/basement IC discretion.)	3	Fire Floor Below Supervisor (Responsible for allocating actions to fight the fire, requesting needs to the interior staging supervisor and relaying conditions to the IC)	2
EMS (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2	Interior EMS/Rehab (either by Bloomfield private EMS or on-scene firefighters)	2
Rehabilitation	2	Safety Off and Acct. Off	1

Total/ERF (NFPA Recommends 27-28 EFR)	22 (20 w/out EMS)	Elevator Operations (Responsible for Elevator operations	1
		Fire Floor Above the Fire Supervisor (located 2 floors above fire): (Responsible for allocating EMS needs and supply needs to the fire floor supervisor)	2
		Interior Staging Area Supervisor (Responsible for establishing rehab station for firefighters and the staging floor for additional tools, air and any other needs that the fire floor supervisor and floor above may need): 1 officer (two floors below the fire floor) Firefighter Rehabilitation (Responsible to assess firefighter rehabilitation needs located 2 floors below)	2
		Lobby Control (Responsible for firefighter accountability, elevator operations, notification of resources to the floor supervisors, utility controls)	2
		Equipment Transport Team (Responsible for the movement of resources from exterior of the building to the requested parties)	2
		External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1
		Outside Rehabilitation with an additional EMS	4
		Total/ERF (NFPA Recommends 42-43 EFR)	35 (31 w/out EMS)

Critical Tasking Charts- EMS

EMS Critical Task ERF	
Low	**Moderate**
Injured and ill people, without airway, breathing, or circulatory problems. BFD does not provide transport. If Bloomfield EMS is out mutual aid is called in for transport.	Cardiac arrest, severe respiratory distress, patients meeting trauma center criteria or other specialty center criteria. If Bloomfield EMS is out, mutual aid is called in for transport. Paramedics are requested while enroute.

Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Safety, Documentation.	1	IC- Est. CMD, Safety, Documentation	1
Patient Care	2	Patient Care	2
Transport- From different agency	2	Transport/Patient Care- From different agency	2
Total/ERF	5	ALS	2
		Total/ERF	7
High Multi-victim incidents with five or more patients. If Bloomfield EMS is out, mutual aid is called in for transport. Paramedics are requested while enroute.		**Max/Special**	
IC- Est. CMD, Safety.	1		
Documentation	1		
Patient Care	11		
ALS	2		
Transport/Patient Care/Rehab- From different agency and mutual aid	6		
Total/ERF	19		

Critical Tasking Chart- HAZMAT

Hazmat Critical Task ERF			
Low Residential carbon monoxide detector activation, hazardous material investigation, natural gas leaks outside of a structure.		**Moderate** Static hazardous material release – no immediate threat to life, environment, natural gas leak inside the structure or property.	
Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1
Investigation	2	Investigation	3
Total/ERF	3	Backup	9

		Total/ERF	13
High Dynamic hazardous material release – immediate threat to life, environment, or property. Additional resources will be dispatched from the county hazardous materials unit operated by the Nutley Fire Department. We also request PSE&G to come the these for any levels that our SOP's have established for life safety.		**Max/Special**	
IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1		
Material Identification (Positively identify material (material data safety sheets, cargo manifests, placards, labels, pipeline information), assess hazard, plume modeling, communicate hazard assessment to IC and safety.)	1		
Perimeter Control (Isolate hazard, control entry points (stop traffic, pedestrian access, building entrances), control perimeter around entry points.)	5		
Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	2		
Incident Safety Officer	1		
Evacuation (Remove people from areas at risk, consider shelter in place, coordinate evacuation with assisting agencies (PD), instruct facility representatives to implement specific plans (schools, business), utilize built in public address systems.):	4		
Containment- Take action to stop, slow, restrict, or redirect the spread of the material (isolate, dam, retain, divert, disperse, dilute, cover, foam, upright 55 gallon drum, protect storm drains.)	4		
EMS (either by Bloomfield private EMS or mutual aid)	2		
DECON- Establish a DECON station for citizens, all emergency personnel and any equipment	3		
Rehabilitation	2		
Total/ERF(PSE&G and Nutley Hazmat Teams)	27 (25 w/out EMS)		

Critical Tasking Chart- Technical Rescue

Technical Rescue Critical Task ERF			
Low Elevator Entrapment (non-Injury).		**Moderate** Traffic accident with entrapment vehicle into a building.	
Tasks	Personnel	Tasks	Personnel
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1
Extrication	5	Extrication	3
EMS	2	Stabilization	3
Total/ERF	8 (6 w/out EMS)	Patient Care/Transport(From separate organization	2
		State Police/Local Police	2
		Tow Company	1
		EMS	2
		Total/ERF	14 (12 w/out EMS)
High Swift Water Rescue, Floodwater Rescue. Rescues beyond our scope are to be handled at the operations level and we rely on Essex County Mutual Aid Coordinator who dispatches Metro Area UASI Strike team, NJDFS and NJ Task Force 1 to perform higher risk rescue. Metro Area UASI Strike Team is comprised of the closest companies depending on the location. The cities are the following Jersey City, Newark, Paterson, Elizabeth, Newark, Hudson, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and Port Authority.		**Max/Special** Confined space rescue, cave-in or collapse with person trapped, rescue from elevated position, helicopter, wilderness S&R, low angle rope. Rescues beyond our scope are to be handled at the awareness level and we rely on Essex County Mutual Aid Coordinator who dispatches Metro Area UASI Strike team, NJDFS and NJ Task Force 1 to perform higher risk rescue. Metro Area UASI Strike Team is comprised of the closest companies depending on the location. The cities are the following Jersey City, Newark, Paterson, Elizabeth, Newark, Hudson, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and Port Authority.	
IC- Est. CMD, Develop IAP, Safety Off., Acct. Off., 360, Resource Allocation, Comms.	1	IC- Est. CMD, Develop IAP, Acct. Off., 360, Resource Allocation, Comms.	1
Operations Level surface & Swift water rescuer team (Responsible for identifying, analyzing the rescue situation and rescue any victims. A team is usually consisted of the rescuer, safety and downstream safety rescuer)	3	Incident Safety Officer	1

Swiftwater Rescue boat operator	1	Collapse Zone Officer	4
RIT (Responsible quick activation of any rescue firefighters that have flowed past the downstream safety rescuer)	3	Water Supply	1
Evacuation search and rescue team (Responsible for the evacuation, search and rescue of possible victims that could be in the path of high surface water)	3	Water Monitor Devices (used to protect exposures)	3
Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	1	Search and Rescue (Triage)	3
External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1	Evacuation Management Teams (Responsible for assisting in evacuating exposures in collapse zone)	3
EMS- (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2	External Base Operations (Responsible for establishing a place of operation for the Command Staff and IC to effectively deploy needed resources other parties that might be here is the building maintenance supervisor, Red Cross, Building Dept and other resources that the IC deems to be needed)	1
Rehabilitation	2	Staging Officer (Responsible for staging proper equipment to the rescue team and the establishment of the staging area for incoming apparatuses)	1
Total/ERF (Additional resources will come when the Technical Rescue Teams arrive.)	17 (15 w/out EMS)	EMS- (either by Bloomfield private EMS or mutual aid) Usually NOT BFD members	2
		Rehabilitation	2
		Total/ERF (Additional resources will come when the Technical Rescue Teams arrive.)	22 (20 w/out EMS)

Appendix 3

90th Percentile- Fire

Fire Suppression Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:14	4:27	3:27	1:25	2:25	1:04
Turnout-(Dispatch-Enroute)		1:18	1:03	1:13	1:20	1:46	1:20
Travel Time (Enroute- On Scene)	1st due ENG	5:12	4:24	6:11	4:30	3:45	4:00
	Travel Time ERF	6:15	5:12	6:11	5:32	7:45	
		N=248	N=81	N=86	N=84	N=77	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	6:12	5:34	6:25	5:56	5:48	8:00
	Total Response Time ERF	7:32	6:18	6:32	6:13	9:21	
		N=248	N=81	N=86	N=84	N=77	

Fire Suppression Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:40	3:39	1:40	2:32	2:40	1:04
Turnout-(Dispatch-Enroute)		1:57	1:24	1:57	1:36	2:44	1:20
Travel Time (Enroute-On scene)	1st due ENG	5:36	4:15	7:11	6:20	2:56	4:00
	Travel Time ERF	6:36	5:53	6:17	6:36	8:26	
		N=228	N=72	N=56	N=55	N=46	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	6:31	5:54	8:03	6:47	4:00	8:00
	Total Response Time ERF	8:16	6:38	8:03	6:47	10:13	
		N-228	N=72	N=56	N=55	N=46	

In order for the department to reach the proper deployment levels IAW with the departments critical task ERF deployment levels the department needs to have the full shift of on-line personnel, automatic aid and mutual aid companies to come to the scene. The department is currently, taking proactive steps to document when automatic/mutual aid companies arrive on scene.

Fire Suppression High Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:32	3:39	1:40	2:31	2:40	1:04
Turnout-(Dispatch-Enroute)		1:14	1:24	1:57	1:36	3:00	1:20
Travel Time	1st due ENG	5:26	4:25	3:10	6:50	2:21	4:00
	Travel Time ERF	5:52	6:11	3:19	6:36	7:07	
		N=60	N=32	N=21	N=18	N=18	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	6:46	5:54	6:48	7:15	3:12	10:10
	Total Response Time ERF	6:46	6:38	6:48	7:15	10:13	
		N=60	N=32	N=21	N=18	N=18	

Fire Suppression Significant/Max Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		4:19	6:48	18:08	2:32	1:04	1:04
Turnout-(Dispatch-Enroute)		2:02	1:18	2:02	1:54	3:00	1:20
Travel Time (Enroute-On-scene)	1st due ENG	3:47	5:36	1:40	3:47	2:00	4:00
	Travel Time ERF	6:41	6:41	1:15	4:20	9:50	
		N=36	N=14	N=6	N=5	N=11	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	5:54	7:30	4:07	4:38	3:12	10:10
	Total Response Time ERF	8:31	8:31	4:22	5:13	10:13	
		N=36	N=14	N=6	N=5	N=11	

90th Percentile- EMS

***BFD is only dispatched if the town requests mutual aid from an adjoining town for an ambulance. Once BFD members arrive on the scene their main priority is to stabilize the patient and prepare for transport once the ambulance arrives. ***

EMS Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		:53	:39	:34	1:02	9:03	1:30
Turnout-(Dispatch-Enroute)		1:36	1:39	1:43	1:39	1:32	1:00
Travel Time (Enroute-On-scene)	1st due ENG	7:37	13:14	9:26	7:06	4:40	4:00
	Travel Time ERF	NA	3:09	8:22	7:06	4:40	
		N=3,722	N=1,974	N=1,044	N=540	N=164	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	8:48	8:26	10:08	7:41	6:31	8:00
	Total Response Time ERF	8:48	8:30	10:08	7:41	6:31	
		N=3,722	N=1,974	N=1,044	N=540	N=164	

EMS Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		4:02	1:12	:32	:49	11:15	1:30
Turnout-(Dispatch-Enroute)		1:30	1:17	1:12	1:15	1:33	1:00
Travel Time (Enroute-On-scene)	1st due ENG	4:34	9:23	6:40	5:01	4:16	4:00
	Travel Time ERF	NA	11:43	6:45	5:12	4:17	
		N=1,069	N=57	N=61	N=232	N=719	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	5:47	10:02	7:39	5:39	5:33	8:00
	Total Response Time ERF	5:49	11:48	8:20	5:47	5:37	
		N=1,069	N=57	N=61	N=232	N=719	

90th Percentile- HAZMAT

***Once the 1ST Due apparatus identifies the HAZMAT and categorizes it, additional resources will be dispatched from the county hazardous materials unit operated by the Nutley Fire Department, if it exceeds our level of training. If the HAZMAT is within our knowledge, skills and abilities members will

address the incident IAW SOP's. We also request PSE&G to come for any CO levels, LEL's and natural gas odors either inside/outside a structure for life safety.***

HAZMAT Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		1:57	2:00	1:25	1:29	3:01	1:30
Turnout-(Dispatch-Enroute)		1:49	1:15	2:32	1:06	1:59	1:20
Travel Time (Enroute-On-scene)	1st due ENG	6:20	8:20	6:20	5:31	3:13	4:00
	Travel Time ERF	7:04	9:01	7:08	5:31	4:26	
		N=127	N=43	N=33	N=36	N=15	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	7:09	9:00	7:09	6:26	4:42	8:00
	Total Response Time ERF	7:54	9:21	9:02	6:26	5:17	
		N=127	N=43	N=33	N=36	N=15	

HAZMAT Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:02	1:09	1:29	1:42	3:21	1:30
Turnout-(Dispatch-Enroute)		1:47	1:34	1:26	1:43	2:39	1:20
Travel Time (Enroute-On-scene)	1st due ENG	7:06	9:03	7:06	6:39	5:01	4:00
	Travel Time ERF	7:06	9:03	7:06	6:39	5:55	
		N=282	N=113	N=66	N=58	N=45	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	8:16	9:16	7:32	8:11	8:02	8:00
	Total Response Time ERF	8:23	9:16	7:32	8:11	8:08	
		N=282	N=113	N=66	N=58	N=45	

HAZMAT High Risk- 90th Percentile Baseline Performance						
	2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch	1:05:38	NA	NA	:09	1:05:38	1:30

Turnout-(Dispatch-Enroute)		3:56	NA	NA	3:56	:58	1:20
Travel Time (Enroute-On-scene)	1st due ENG	2:01	NA	NA	2:01	1:20	4:00
	Travel Time ERF	5:56	NA	NA	5:56	1:20	
		N=5	N=	N=1	N=2	N=2	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	2:02	NA	NA	2:02	1:44	10:10
	Total Response Time ERF	5:57	NA	NA	5:57	1:44	
		N=5	N=	N=1	N=2	N=2	

90th Percentile- Technical Rescue

***The agency currently responds to elevator rescue and small vehicle extrication as the most common rescue incidents. Rescues beyond the department's scope are to be handled at the awareness level and requests mutual aid through Essex County Mutual Aid Coordinator who dispatches Metro Area UASI Strike team, NJDFS and NJ Task Force 1 to perform higher risk rescues. Metro Area UASI Strike Team is comprised of the closest companies depending on the location. The cities are the following Jersey City, Newark, Paterson, Elizabeth, Newark, Hudson, Hoboken, Bayonne, Morristown, Hackensack, Middlesex and Port Authority. ***

Tech Rescue Low Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		1:29	:53	:46	1:46	3:51	1:30
Turnout-(Dispatch-Enroute)		1:28	1:30	:40	1:42	2:24	1:20
Travel Time (Enroute-On-scene)	1st due ENG	6:07	6:22	4:58	6:07	3:35	4:00
	Travel Time ERF	7:53	6:22	5:52	6:07	8:05	
		N=59	N=26	N=15	N=19	N=10	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	6:26	6:23	5:14	7:04	5:23	8:00
	Total Response Time ERF	7:16	6:23	6:00	7:04	9:07	
		N=59	N=26	N=15	N=19	N=10	

Tech Rescue Moderate Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		2:36	:32	2:36	1:31	2:56	1:30
Turnout-(Dispatch-Enroute)		1:23	1:06	:52	2:01	1:32	1:20
Travel Time (Enroute-On-scene)	1st due ENG	7:08	7:05	3:18	1:38	7:05	4:00
	Travel Time ERF	7:04	7:05	2:17	3:28	7:04	
		N=12	N=5	N=2	N=2	N=3	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	7:05	7:23	3:25	3:39	7:08	8:00
	Total Response Time ERF	7:08	7:23	3:25	3:39	7:08	
		N=12	N=5	N=2	N=2	N=3	

Tech Rescue High Risk- 90th Percentile Baseline Performance							
		2019-2022	2019	2020	2021	2022	Benchmark
PSAP-Dispatch		:48	NA	NA	:48	:09	1:30
Turnout-(Dispatch-Enroute)		1:02	NA	NA	1:01	1:02	1:20
Travel Time (Enroute-On-scene)	1st due ENG	10:11	NA	NA	10:11	2:03	4:00
	Travel Time ERF	10:11	NA	NA	10:11	3:02	
		N=4	N=	N=	N=3	N=1	
Total ERF (Dispatch-On scene)	Total Response Time 1st due ENG	10:11	NA	NA	10:11	3:05	10:10
	Total Response Time ERF	10:11	NA	NA	10:11	3:05	
		N=4	N=	N=	N=3	N=1	

90th Percentile Gaps

Fire Suppression- The Gaps- 90th Percentile Baseline Performance-2019-2022						
		Low	MOD	High	MAX	Benchmark
PSAP-Dispatch		+1:00	+1:36	+1:06	+3:19	1:04
Turnout-(Dispatch-Enroute)		-0:02	+0:37	-0:07	+0:42	1:20
Travel Time (Enroute- On Scene)	1st due ENG	+1:12	+1:36	+1:26	-0:13	4:00
	Travel Time ERF	+2:15	+2:36	+1:52	+2:41	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-0:48	-2:31	-3:14	-4:14	8:00
	Total Response Time ERF	-0:28	+0:16	-5:14	-1:39	

EMS- The Gaps- 90th Percentile Baseline Performance-2019-2022				
		Low	MOD	Benchmark
PSAP-Dispatch		-0:27	+3:09	1:30
Turnout-(Dispatch-Enroute)		+0:36	+0:30	1:20
Travel Time (Enroute-On Scene)	1st due ENG	-3:37	+0:34	4:00
	Travel Time ERF	NA	NA	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	+0:48	-2:13	8:00
	Total Response Time ERF	+0:48	-2:11	

Hazmat The Gaps- 90th Percentile Baseline Performance-2019-2022				
	Low	MOD	High	Benchmark
PSAP-Dispatch	+0:26	+0:32	+1:04:08	1:30
Turnout-(Dispatch-Enroute)	+0:19	+0:17	+2:36	1:20

Travel Time (Enroute- On Scene)	1st due ENG	+2:20	+3:06	-1:59	4:00
	Travel Time ERF	+3:04	+3:06	+1:56	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-0:51	+0:16	-8:08	8:00
	Total Response Time ERF	-0:06	+0:23	-4:13	

Technical Rescue- The Gaps- 90th Percentile Baseline Performance-2019-2022					
		Low	MOD	High	Benchmark
PSAP-Dispatch		-0:01	+1:06	-0:42	1:30
Turnout-(Dispatch-Enroute)		+0:08	+0:03	-0:18	1:20
Travel Time (Enroute- On Scene)	1st due ENG	+2:07	+3:08	+6:11	4:00
	Travel Time ERF	+3:53	+3:04	+6:11	
Total Response Time (Dispatch-On Scene)	Total Response time 1st due on scene	-1:34	-0:55	+0:11	8:00
	Total Response Time ERF	-0:44	-0:52	+0:11	

Mission Statement

The Bloomfield Fire Department exists to provide the highest level of public safety services to the great community that we serve. We are dedicated to saving lives and property through fire suppression, emergency medical response, disaster management, hazardous material response, fire prevention and education. Our members are committed to excellence, providing the highest level of service to those that we serve, treating everyone with respect regardless of race, color, creed, sex, age, lifestyle, national origin or economic status.

Vision Statement

The vision of the Bloomfield Fire Department is to become a leader in the fire service. We will attain this vision by continuing to provide the community we serve with the tools, programs and services necessary to create and ensure the highest standards of safety. We will provide continuing educational opportunities to our members, seek accreditation from the industry and nation's most respected accrediting agency, increase efficiency of services we provide as well as enhancing those services to include emergency medical response. We will also continue creating a high reliability organization by establishing an internal risk management program and maintain fiscal responsibility while upholding standards of excellence through a creative and carefully planned equipment replacement program.

Values Statement

The core values of the Bloomfield Fire Department establish a foundation of expectations for its members. Members of the Bloomfield Fire Department react instantly, unselfishly, compassionately and professionally in mitigating a wide array of emergency calls.

Integrity- Maintain the highest level of ethical standards. Instill community trust by demonstrating honesty and fairness in all our actions and decisions.

Citizenship- We advocate collaborative relationships with other governmental agencies. We maintain community through professional behaviors and open communication.

Respect- We honor the rights, beliefs, and differences of all our members and those within the community we serve. We value diversity in our department and within the township.

Teamwork- We are a team of dedicated and hard-working individuals that believe in professional development, continual improvement and working together towards common goals.

Bloomfield Fire Department

Fire Chief's Office

375 Franklin St

Bloomfield, NJ 07003

973-259-3097