



Wethersfield
Volunteer Fire Department
Wethersfield, Connecticut

Fire Department Evaluation

2023



Table of Contents

TABLE OF CONTENTS 3

EXECUTIVE SUMMARY 6

 BACKGROUND..... 6

 SUMMARY FINDINGS 6

 NEXT STEPS..... 12

ACKNOWLEDGMENTS 13

 TOWN OF WETHERSFIELD AND WETHERSFIELD VOLUNTEER FIRE DEPARTMENT 13

 DYNAMIX CONSULTING GROUP..... 13

METHODOLOGY 14

 EVALUATION PROCESS 14

Connecticut State Occupational Safety and Health Administration Approved Plan..... 14

Insurance Services Office..... 15

National Fire Protection Association Standards..... 15

 STAKEHOLDER INPUT 15

TOWN OF WETHERSFIELD 16

 GOVERNANCE..... 17

 DEMOGRAPHICS 17

Population Density..... 17

Race and Ethnicity..... 19

Education..... 20

Employment..... 21

Income..... 21

 DEMOGRAPHIC FACTORS THAT MAY INFLUENCE THE NEED FOR EMERGENCY SERVICES 22

Age 22

People with Limited English Proficiency..... 23

People with Disabilities..... 23

Poverty..... 24

People with Limited Access to Transportation 26

FINANCE..... 27

 REVENUE VERSUS EXPENDITURES 27

WETHERSFIELD VOLUNTEER FIRE DEPARTMENT 28

 DEPARTMENT OF PUBLIC SAFETY 28

 DIVISION OF FIRE..... 28

 VOLUNTEER FIREFIGHTERS 28

 VOLUNTEER FIREFIGHTER APPLICATION PROCESS 29

 NATIONAL VOLUNTEER FIREFIGHTER TRENDS 29

 WETHERSFIELD VOLUNTEER FIREFIGHTERS 31

 LINE OFFICERS 32

 COMMAND STAFF 32

 FIRE DEPARTMENT ORGANIZATIONAL STRUCTURE 33

 WETHERSFIELD VOLUNTEER FIREFIGHTER INCENTIVES 37

 HEALTH AND WELLNESS PROGRAMS 41

 RECORDS MANAGEMENT SYSTEM 41

TRAINING 42

CONNECTICUT OCCUPATIONAL SAFETY AND HEALTH TRAINING REQUIREMENTS 42

INSURANCE SERVICES OFFICES TRAINING REQUIREMENTS 44

WETHERSFIELD VOLUNTEER FIRE DEPARTMENT 2023 TRAINING SCHEDULE 45

COMPARISON OF THE WETHERSFIELD VOLUNTEER FIRE DEPARTMENT 2023 TRAINING SCHEDULE TO OSHA AND ISO ANNUAL TRAINING REQUIREMENTS 46

TRAINING FACILITY..... 46

FIRE MARSHAL’S OFFICE..... 47

WETHERSFIELD FIRE MARSHAL’S OFFICE STAFFING..... 47

CORE FUNCTIONS OF THE FIRE MARSHAL’S OFFICE 47

Fire Safety Inspections 48

Plans Review 49

Customer Service 49

Alarm Monitoring and Reporting..... 50

Fire Investigations 51

Public Education..... 52

TOTAL FIRE MARSHAL ACTIVITY 53

CAPITAL ASSETS..... 54

FACILITIES..... 54

Access Control 56

Cancer Prevention Engineering 56

Back in Bays..... 57

Future Facility Needs..... 57

Apparatus Replacement Methodology 58

VEHICLES, BOATS, AND TRAILERS 61

Number and Types of Types of Apparatus..... 62

EQUIPMENT 63

PLANNING FOR FIRE AND RESCUE SERVICES..... 64

MISSION, VISION, AND VALUES 64

Mission..... 64

Vision..... 66

Values..... 66

ORGANIZATIONAL PLANNING PROCESS 67

Tactical Planning 67

Operational Planning 68

 Wethersfield Volunteer Fire Department Bylaws and Standard Operating Policies 69

Master Planning..... 70

Strategic Planning 71

RESPONSE STANDARDS AND TARGETS..... 72

DYNAMICS OF FIRE IN BUILDINGS..... 72

SERVICE DELIVERY..... 76

SERVICE DEMAND BY INCIDENT TYPE 76

TEMPORAL VARIATION 78

POPULATION DENSITY AND GEOGRAPHICAL DEMAND 79

RESOURCE DISTRIBUTION STUDY 81

NFPA 1720 Criteria 81

ISO Response Performance..... 84

 Engine Company Performance..... 84

 Ladder Company Performance..... 86

 ISO Fire Station Coverage..... 87

RESOURCE RELIABILITY STUDY 88

Call Concurrency 88

Unit Hour Utilization 89

RESPONSE PERFORMANCE SUMMARY 90

Call Processing 92

Turnout Time 92

Travel Time 93

Response Time 93

Total Response Time 93

RESOURCE SHARING IN CONNECTICUT 94

Mutual and Automatic Aid Systems 94

Regional, Intrastate, and State Mutual Aid 96

 Pre-Identified Task Forces and Strike Teams 97

Interstate, Federal, and International Mutual Aid 98

RECOMMENDATIONS AND OPPORTUNITIES FOR REGIONAL COLLABORATION **99**

PRIORITY RECOMMENDATION 99

GENERAL RECOMMENDATIONS 105

OPPORTUNITIES FOR REGIONAL COLLABORATION 116

CONCLUSION **118**

Executive Summary

Background

On October 21, 2022, the Town of Wethersfield, Connecticut contracted Dynamix Consulting Group to conduct a Fire Department Evaluation. This project had three primary deliverables:

1. **Evaluate current operational service delivery.** Evaluate baseline performance using the information provided by the Town of Wethersfield to analyze existing conditions and emergency operations.
2. **Identify future service delivery needs.** Identify potential service gaps and redundancies while considering community expectations, needs, and resources.
3. **Provide recommendations for operational service delivery.** Develop recommendations for improved and enhanced emergency services delivery.

Dynamix Consulting Group notes that the *Wethersfield Volunteer Fire Department Evaluation* was conducted within days after the appointment of a new Volunteer Fire Chief. The conditions identified in this report were all inherited by the new Volunteer Fire Chief and current at the time of the November 2022 Dynamix Consulting Group Site Visit. The new fire chief has implemented a series of changes within the Wethersfield Volunteer Fire Department since November 2022 which are not reflected in this report.

Summary Findings

The Wethersfield Volunteer Fire Department has a proud history of providing outstanding emergency service within the Town of Wethersfield. The department is comprised of a dedicated cadre of volunteer firefighters, but the increased requirements of training, increasing call volume, and decreasing number of volunteer firefighters in the department have begun to take a toll on the department's active members.

Dynamix Consulting Group recommends the organizational structure and chain of command within the Wethersfield Volunteer Fire Department should immediately be better aligned with the current operations of the organization to improve communication, efficiency, and the overall culture of the organization. This will provide an environment that is more conducive to recruiting and retaining volunteer firefighters.

The following table is a summary of the preferred option, as well as two alternative options for consideration. The alternative options are not preferred for the reasons specified.

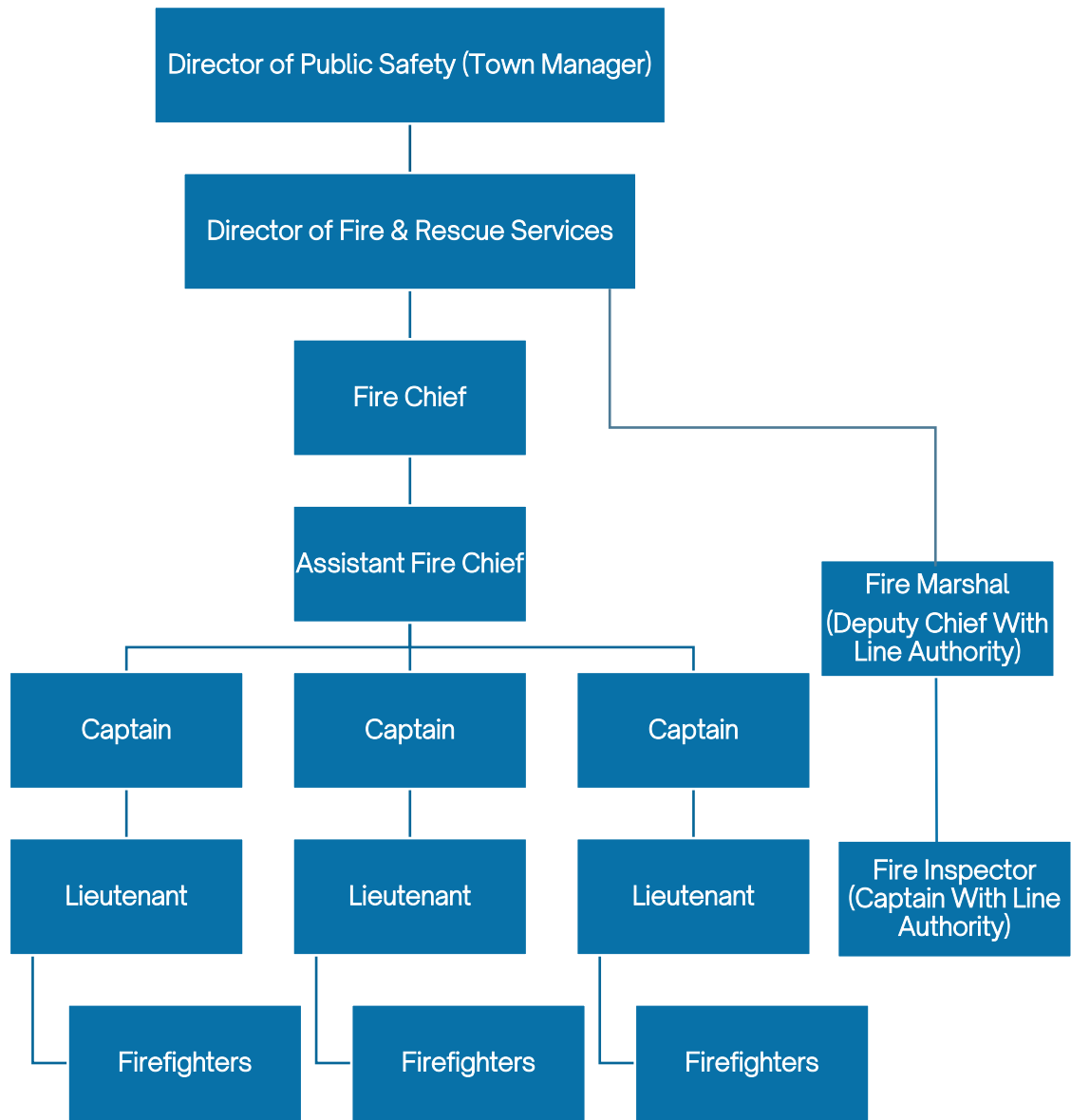
Once the Wethersfield Volunteer Fire Department selects a delivery model, it is imperative that all levels of the organization, from the newest firefighter to the Town's elected officials, understand this model. Equally important is the understanding of the mission and priorities of the Wethersfield Volunteer Fire Department so that decisions made at all levels consistently possess the same focus and priorities.

Options for the Wethersfield Volunteer Fire Department Organizational Structure

Options	Pros and Cons
<p>Option 1 (Recommended by Dynamix Consulting Group):</p> <p>Reconfigure the Organizational Structure to include a Director of Fire and Rescue Services to manage a combination fire department.</p>	<p>Pros</p> <ol style="list-style-type: none"> 1. The design of this organizational structure ensures everyone has only one supervisor and all communications flow through a single path in the Chain of Command. 2. The Director of Fire and Rescue Services position would function as the department head of the fire department under the direction of the Director of Public Safety (Town Manager). 3. Administrative responsibilities for this position could include: <ul style="list-style-type: none"> ▪ Recruitment and retention of volunteer firefighters. ▪ Serving as the fire department health and safety officer. ▪ Developing and managing the budget. ▪ Writing policies and procedures. ▪ Supervision of Fire Chief and Fire Marshal. ▪ Serving as the Emergency Management Director. ▪ Coordination of Firefighter Training. ▪ Functioning as the Fire Department Public Information Officer. ▪ Other similar tasks that would relieve the volunteer fire officers of administrative burdens. 4. This model provides for a Volunteer Chief and Assistant Chief to lead the volunteer firefighters. Volunteer Captains oversee each of the three stations to provide supervision and oversight within each company. A volunteer Lieutenant assists each volunteer Captain. This is a reduction in supervisory positions based on the size of the organization today to improve communications and simplify the chain of command. 5. Relieving the Fire Marshal of Emergency Management responsibilities will allow for more time to perform required inspections and address the number of false fire alarms in town. 6. Since the majority of fire calls in Wethersfield are non-emergency and occur on weekdays, the Fire Marshal and a full-time Fire Inspector could respond to activated fire alarms that are not accompanied by a 911 call reporting a fire and do not have activated smoke detectors or water flow alarms with only the first due volunteer company. Presently, all three volunteer fire companies are dispatched to all calls to ensure a response. The modification of this response protocol would keep the volunteer firefighters at two of the town's three fire companies available for true emergencies and would also reduce the overall response burden on the volunteer firefighters. Dynamix Consulting Group recommends that the Fire Marshal carry the rank of Deputy Chief and the Fire Inspector carry the rank of Captain and that both of these positions have line authority.

Options	Pros and Cons
	<p data-bbox="565 296 1422 457">7. There is a significant value in keeping the Volunteer Fire Chief as a position that volunteer firefighters may aspire to attain for as long as there are volunteer firefighters who are willing to do the job. This creates an incentive for volunteer firefighters to actively train and respond to calls.</p> <p data-bbox="565 464 1422 625">8. Reducing the non-emergency response workload of the volunteer firefighters offers the Town of Wethersfield the best chance to recruit and retain volunteer firefighters. Every year that the Town can sustain volunteer firefighters saves the Town from having to fund additional paid firefighters in the budget.</p> <p data-bbox="467 638 542 667">Cons:</p> <p data-bbox="565 688 1422 785">1. The Town will likely incur an increased personnel cost if a Director of Fire and Rescue Services is hired and the part-time Fire Inspector position is upgraded to a full-time position.</p> <p data-bbox="565 814 1422 1010">2. For a new organizational structure to succeed in the Town of Wethersfield, a dynamic cultural shift will need to occur. This will be a change for everyone associated with the fire department. This will require a commitment from the Town and the volunteer fire department to pursue this path together if it is to be successful and may initially be a challenge.</p>

Recommended Organizational Structure



Options	Pros and Cons
<p>Option 2: Hire a Full Time Paid Fire Chief</p>	<p>Hiring a Paid Fire Chief to run the Wethersfield Volunteer Fire Department would likely provide many of the same pros and cons as hiring a Director of Fire and Rescue Services.</p> <p>Dynamix Consulting Group suggests that while the Town of Wethersfield may decide to hire a Paid Fire Chief at some point in the future, the Director of Fire and Rescue Services position may be an interim step that provides for the administrative needs of the fire department while preserving the position of Volunteer Fire Chief.</p> <p>There is a significant value in keeping the Volunteer Fire Chief as a position that volunteer firefighters aspire to attain for as long as there are volunteer firefighters willing to do the job. This creates an incentive for volunteer firefighters to actively train and respond to calls.</p>

Options	Pros and Cons
<p>Option 3:</p> <p>Continue to operate with the existing fire department organizational structure.</p>	<p>Pros:</p> <ol style="list-style-type: none"> 1. The Town is familiar with this model. This option maintains the status quo without changing the management or operations of the fire department. 2. The Town budget includes allocations to support this current model of service delivery. <p>Cons:</p> <ol style="list-style-type: none"> 1. It is Dynamix Consulting Group’s opinion that the current operational structure for the delivery of fire services in the Town of Wethersfield creates a critical weakness that, if not addressed, will likely result in the Town eventually having to staff a full-time paid fire department without the support of volunteer firefighters. 2. Dedicated people make up the Wethersfield Volunteer Fire Department. They provide outstanding service to the community. It would be a significant loss to Wethersfield if the volunteer fire companies were to fail to thrive and eventually discontinue their service. 3. In recent years, volunteer firefighters have found themselves challenged to respond to an increasing number of calls with a decreasing number of volunteer firefighters in addition to an increased administrative burden related to the operations of the fire department. <p>An all-volunteer service includes a significant risk that emergency calls could go unanswered because of a lack of availability of volunteer firefighters. The highest demand for calls for service in the town is on weekdays. This is also the time when most volunteer firefighters are at work and not available to respond to calls. If the Town does not provide some level of administrative and day-time response of support for the volunteer firefighters, the volunteer fire department is likely to become unsustainable in the not-too-distant future. This will add a significant expense to Wethersfield’s annual budget.</p> <p>For estimating purposes, a community can expect the cost of a full-time paid fire department to be similar to the cost of their full-time paid police department.</p>

Next Steps

Dynamix Consulting Group recognizes this report contains a multitude of recommendations that cannot all be implemented simultaneously. The Town of Wethersfield, in collaboration with the Wethersfield Volunteer Fire Department, should facilitate a Strategic Plan to consider and prioritize and implement the goals and objectives recommended in this *Fire Department Evaluation*.

The strategic planning process would ideally result in a three-to-five-year work plan that will guide the work effort of the entire organization toward a common set of goals and objectives. The process should include representation from every major interest group in the organization.

A successful strategic planning process will result in a plan for the Town of Wethersfield and the Wethersfield Volunteer Fire Department to systematically implement the recommendations contained within this report. Internal or outside facilitators can assist in the strategic planning process.

Organizations that do not engage in the strategic planning process often fail to benefit from the evaluation and planning process. The recommendations contained within this *Fire Department Evaluation* will do little more than exist in the report if not prioritized, assigned to specific individuals for oversight, and then implemented.

Acknowledgments

Town of Wethersfield and Wethersfield Volunteer Fire Department

Dynamix Consulting Group would like to thank the elected and appointed officials of the Town of Wethersfield and Wethersfield Volunteer Fire Department and specifically, Town Manager Fred Presley, Chief Brian Schroll, and Fire Marshal Anthony Dignoti for their assistance with this project. The *Wethersfield Volunteer Fire Department Evaluation* would not have been possible without their cooperation and support.

Dynamix Consulting Group

The Dynamix Consulting Group Project Team for the Wethersfield Volunteer Fire Department Evaluation was:

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Methodology

Evaluation Process

Using organizational, operational, staffing, and geographic information system (GIS) models, this evaluation provides a comprehensive appraisal of the emergency operations of the Wethersfield Volunteer Fire Department as found upon Dynamix Consulting Group's completion of fieldwork and data collection in November 2022.

Dynamix Consulting Group based this evaluation on data provided by the Town of Wethersfield, the Wethersfield Volunteer Fire Department, and information collected during fieldwork. This information was then compared to the Connecticut State Occupational Safety and Health Administration Approved Plan, the Insurance Services Office, National Fire Protection Association Standards, accepted best practices within the emergency services community, and the experience of the Dynamix Consulting Group.

Connecticut State Occupational Safety and Health Administration Approved Plan

State Plans are Occupational Safety and Health Administration (OSHA) approved workplace safety and health programs operated by individual states or U.S. territories. There are currently 22 State Plans covering the private sector, state, and local government workers, and seven State Plans covering only state and local government workers. OSHA monitors state plans to ensure they are at least as effective as OSHA in protecting workers and in preventing work-related injuries, illnesses, and deaths.¹

The Connecticut Department of Labor's Division of Occupational Safety and Health (CONN-OSHA) administers Connecticut's Public Employer Only State Plan and enforces occupational safety and health standards as they apply to all municipal and state personnel. As a State Plan state, CONN-OSHA adopts and enforces standards that are at least as effective as the federal requirements.

CONN-OSHA requirements are law.

¹ <https://www.osha.gov/stateplans>

Insurance Services Office

The Insurance Services Office (ISO) is a data analytics organization that provides insurance carriers with a classification rating of a local community's fire protection. The Property Protection Class (PPC®) score or rating classifies communities based upon an overall scale of 1 (best protection) to 10 (no protection) and assesses all areas related to fire protection. These areas divide into four major categories, which include: emergency dispatch and communications (10% of the rating), water supply system and distribution capabilities (40%), the fire department (50%), and Community Risk Reduction efforts (an additional 5.5% credit is available above 100%).

ISO requirements are not law, but compliance (or lack thereof) with ISO requirements will have a direct impact on a community's fire protection rating.

National Fire Protection Association Standards

The National Fire Protection Association (NFPA) is an industry trade association that develops and provides standards and codes for fire departments and emergency medical services for local governments.

NFPA Standards are national consensus standards, and while they are not law, they are considered to be best practice standards for fire and emergency services.

Stakeholder Input

Dynamix Consulting Group conducted more than two dozen virtual and in-person interviews, meetings, and facility tours to gather information from key stakeholders to provide context for the recommendations identified within this study. The purpose of these interviews was to gain an understanding of the current issues, concerns, and opinions related to the district's service delivery system. General topics discussed during each interview included:

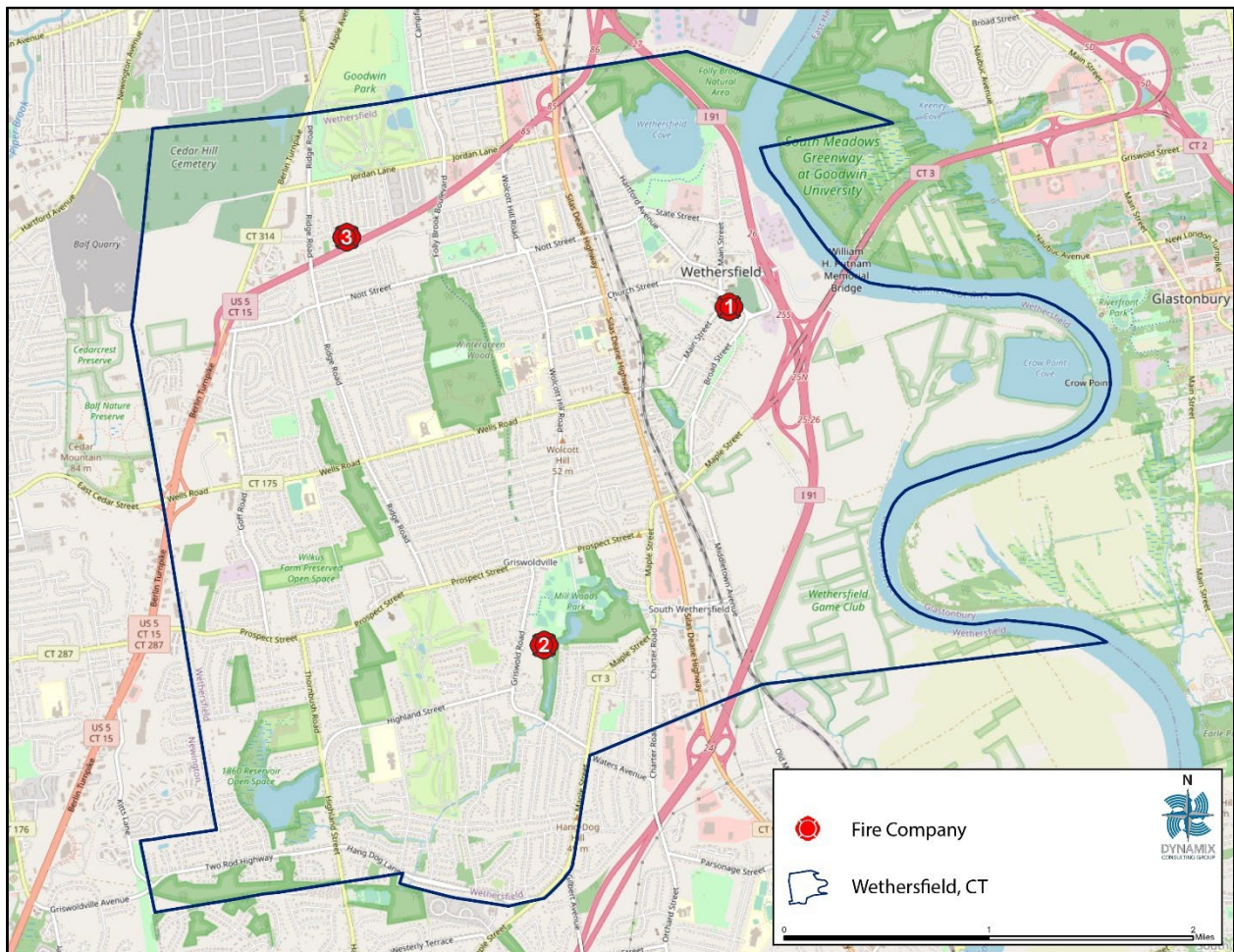
- Perceived strengths and weaknesses of the current system.
- Identified strengths and weaknesses of the current system.
- Opportunities for enhancements to the current system.
- Future challenges that may warrant attention.

Dynamix Consulting Group's interviews with the stakeholders included members from every rank of the Wethersfield Volunteer Fire Department as well as town elected and appointed officials. The purpose of these meetings was to provide qualitative data to give context to the quantitative data collected for this project.

Town of Wethersfield

Wethersfield is a town located in Hartford County, Connecticut. It is located immediately south of Hartford along the Connecticut River and spans 13.1 square miles. Many colonial records list the town’s name as "Weathersfield" and "Wythersfield," Native Americans called it Pyquag, which means “clear open land.”

Wethersfield, CT



The Town of Wethersfield was founded in 1633–34 and is known as “Ye Most Ancient Towne” in Connecticut as set out by the Code of 1650 — "Colonial Records of Connecticut." In May 1781, at the Webb House on Main Street in Wethersfield, George Washington, and Marshal Jean-Baptiste Donatien de Vimeur, comte de Rochambeau planned the battle of Yorktown, which culminated in the independence of the then-rebellious colonies.

Governance

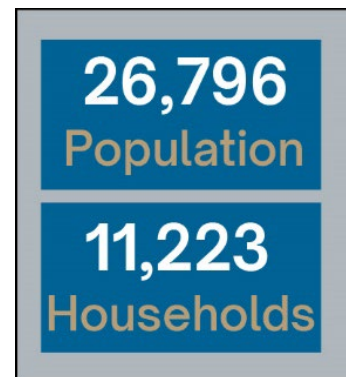
The Town of Wethersfield operates under a Council-Manager form of government. Under the Council-Manager form of government, the Town Manager is the chief administrative officer of the town. The Town Manager supervises and coordinates the departments, makes appointment decisions regarding department directors, prepares the annual budget, and makes reports and recommendations to the council.

The Town Council sets policies and programs for the Town of Wethersfield. Nine members comprise the Wethersfield Town Council, each of whom serves two-year terms. The Council selects the mayor and deputy mayor by a majority vote of the nine members at the first meeting following an election.

Demographics

Unless otherwise noted, all population and demographic information specific to Wethersfield is from the Environmental Systems Research Institute (ESRI).

There are 26,769 people living in 11,223 households in Wethersfield.



Population Density

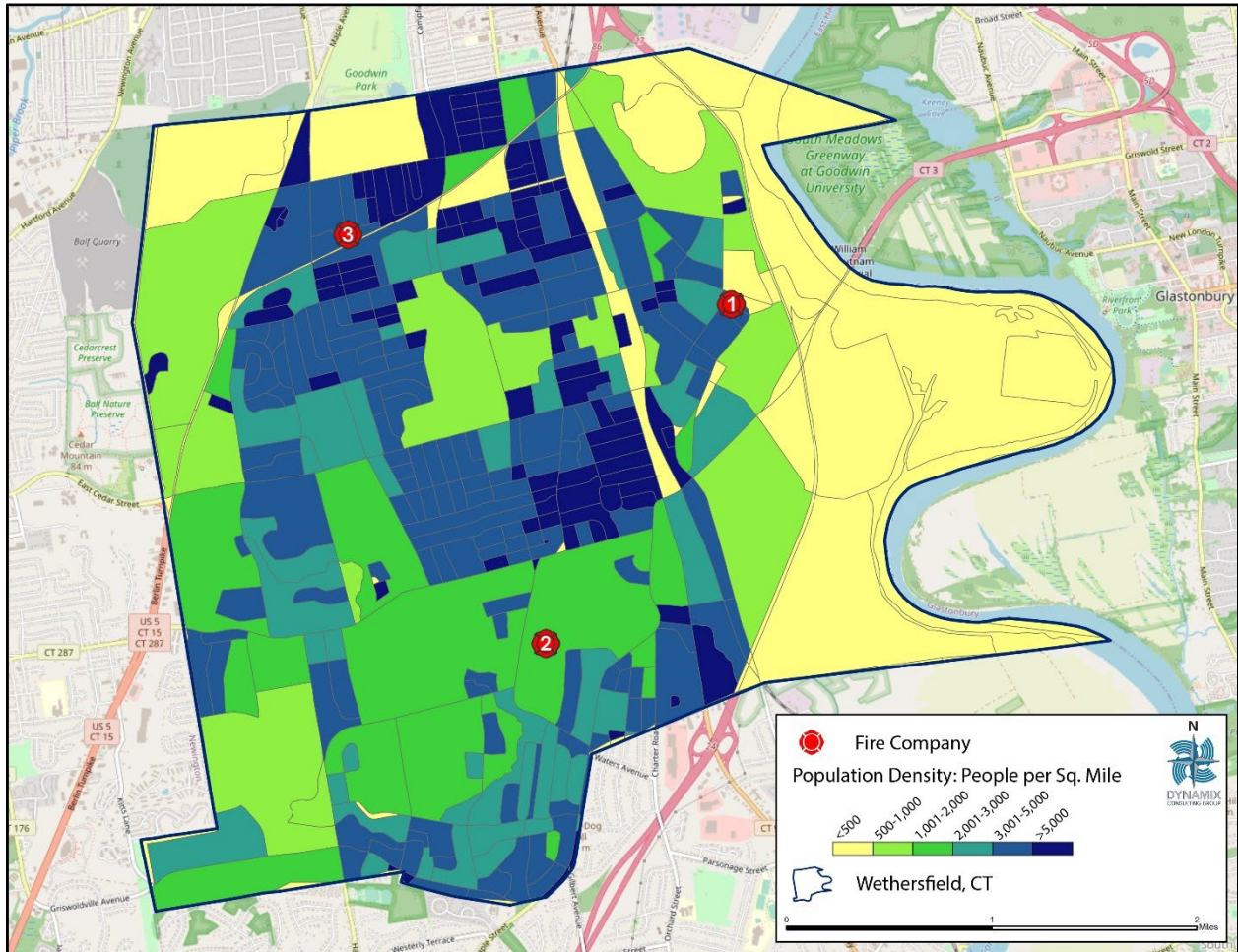
Knowing where the population in Wethersfield is located is an important aspect of classifying risk within the community. A population can cause variations in population density or the population per square mile, which typically affect demand for services. Population density² classification for the Town of Wethersfield is based on the classification table provided by NFPA 1720:

- Urban (> 1,000 people per square mile)
- Suburban (500–1,000 people per square mile)
- Rural (< 500 people per square mile)

The following figure provides population density by U.S. Census block groups, which are the smallest division used by the census. Most of the areas of densest concentration within the Town of Wethersfield are in the center and north-central sections of the town. There are small pockets of densely populated neighborhoods in the south-central and west sections of the town as well.

² Using NFPA definitions for population density classifications.

2022 Population Density



Several relational factors result from a greater number of occupancies and residents within denser areas. Increased probabilities of emergency events or higher service demands can create reduced reliability of first-due and effective response forces. As the population of the town grows or shifts, the fire department’s response should be modified accordingly.

Race and Ethnicity

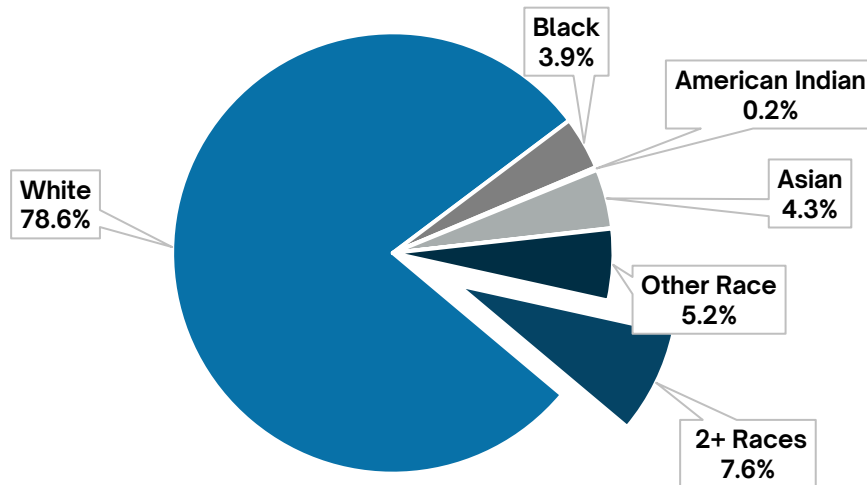
The Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity (OMB Statistical Policy Directive No. 15) define minimum standards for collecting and presenting data on race and ethnicity for all Federal reporting. The race and ethnic categories appear as separate questions, and individuals can select multiple racial categories. The OMB standards have five minimum categories for data on race:

- **White:** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as "White" or report entries such as Irish, German, Italian, Lebanese, Arab, Moroccan, or Caucasian.
- **Black or African American:** A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black or African American," or report entries such as African American, Kenyan, Nigerian, or Haitian.
- **American Indian and Alaska Native:** A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment. This category includes people who indicate their race as "American Indian or Alaska Native" or report entries such as Navajo, Blackfeet, Inupiat, Yup'ik, or Central American Indian groups or South American Indian groups.
- **Asian:** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. This includes people who reported detailed Asian responses such as: "Asian Indian," "Chinese," "Filipino," "Korean," "Japanese," "Vietnamese," and "Other Asian" or provide other detailed Asian responses.
- **Native Hawaiian and Other Pacific Islander:** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who reported their race as "Fijian," "Guamanian or Chamorro," "Marshallese," "Native Hawaiian," "Samoan," "Tongan," and "Other Pacific Islander" or provide other detailed Pacific Islander responses.

In addition to the five required categories for race, OMB permits the Census Bureau to also use a sixth category - Some Other Race. Respondents may report more than one race.

The majority of the population, 78%, identified as White. Residents identifying as Asian, Black, and American Indian comprise 4.3%, 3.9%, and 0.2% of the town’s population respectively. Residents identifying as having two or more races represent 7.6% of the population and those identifying as “Other” comprise 5.2%.

Racial Makeup 2002



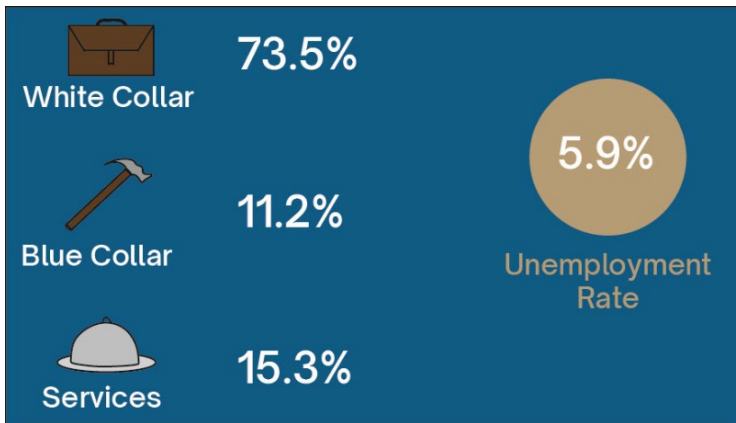
Education

In the Town of Wethersfield, 94% of the adult population graduated with a high school education. This is higher than the percentage of high school graduates in the State of Connecticut (90.9%) and also higher than in the United States (88.5%). Almost half – 46% - of adults have a bachelor’s degree or higher level of education. This is higher than the percentage of college graduates in both Connecticut (40%) and the United States (32.9%).



Employment

The unemployment rate in Wethersfield is 5.9%. This is higher than the Connecticut statewide September 2022 unemployment rate of 4%³ and the national unemployment rate of 3.6%.⁴



Among those who are employed, 73.5% work in “white-collar jobs.” White-collar jobs are those of salaried employees whose duties do not call for the wearing of work clothes or protective clothing.

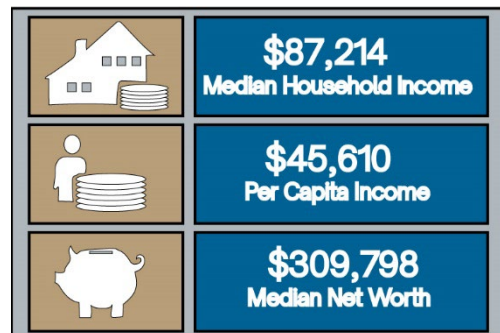
Comparatively, 11.2% of the Wethersfield population works in blue-collar jobs. Blue-collar jobs are usually those of hourly employees who do wear work clothes or protective clothing.

An additional 15.3% of the working population in Wethersfield is employed in the Service Industry.

Income

The median household income in Wethersfield is \$87,214. This is higher than the median income in Connecticut (\$79,855) and the United States (\$64,994).

Wethersfield has a per capita income of 45,610 and a median net worth of \$309,798.



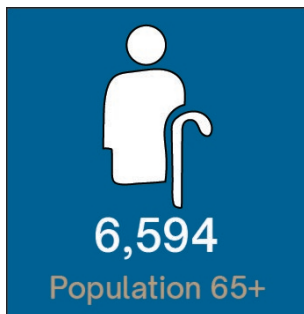
³ <https://www1.ctdol.state.ct.us>

⁴ Bureau of Labor Statistics

Demographic Factors That May Influence the Need for Emergency Services

There are a variety of factors that can influence the need for emergency services in a community. People with access and functional needs that may interfere with their ability to access or receive assistance before, during, or after an emergency. The Wethersfield Volunteer Fire Department should consider the following when planning to provide community risk reduction education and emergency response for its population.

Age



The age of the community served impacts demands for services. Generally, as populations age, their need for emergency services increases. Older adults are more likely than younger populations to have chronic illnesses or functional limitations, and physical, sensory, and cognitive disabilities.

Between 2005 and 2015, the U.S. population 65 years and older increased by 30%, from 36.6 million to 47.8 million. This age group will more than double to 98 million people by the year 2060.

At the time of this report, 24.61%, or 6,594 people within Wethersfield were age 65 and older.

People with Limited English Proficiency

According to the NFPA, “Language barriers, cultural differences, and inexperience with unfamiliar home technologies are factors that mark the challenges of helping newcomers live safely from the threat of fire in the home.” By itself, speaking a language other than English at home does not directly contribute to a higher risk of emergencies; however, if a person has difficulty speaking English, it may contribute to delays or complications during an emergency.

In Wethersfield, most of the population speaks English. There are, however, 184 residents who reported not speaking any English at all, and an additional 1,614 residents who reported not speaking English well. It is important to ensure these residents receive community risk reduction and emergency management information in languages that they understand.

Languages Spoken in Wethersfield

Language Spoken (ACS)	Age 5-17	18-64	Age 65+	Total
English Only	3,201	11,871	4,015	19,087
Spanish	74	1,049	189	1,312
Spanish & English Well	74	942	189	1,100
Spanish & English Not Well	0	46	65	111
Spanish & No English	0	61	40	101
Indo-European	298	2,663	808	3,769
Indo-European & English Well	298	2,320	518	3,136
Indo-European & English Not Well	0	343	244	587
Indo-European & No English	0	0	47	47
Asian-Pacific Island	76	471	73	620
Asian-Pacific Island & English Well	76	349	51	476
Asian-Pacific Island & English Not Well	0	87	22	109
Asian-Pacific Island & No English	0	36	0	36
Other Language	14	157	25	196
Other Language & English Well	14	157	25	196
Other Language & English Not Well	0	0	0	0
Other Language & No English	0	0	0	0

People with Disabilities

Disabilities can relate to physical mobility, sensory, intellectual, developmental, cognitive, or mental challenges. An individual with a disability, as defined by the Americans with Disabilities Act (ADA), is a person who:

- Has a physical or mental impairment that substantially limits one or more major life activities, or
- Has a history of a physical or mental impairment, or
- Others perceive to have such an impairment.

The Federal Emergency Management Agency (FEMA) expanded the term “disability” to include “people with disabilities and others with access and functional needs.” This expanded definition of disability includes people who may or may not fall within the definitions of civil rights laws and encompasses cross-disability issues.⁵

Emergencies in the home can be potentially dangerous and deadly for everyone, but persons with disabilities and impairments face additional challenges. Persons with disabilities often have a challenging time identifying or escaping hazardous situations. There are 2,805 households in Wethersfield that have identified as having at least one member with a disability.



Poverty

Seven percent, or 793 households in Wethersfield, have income levels that are below the Poverty Level.



Persons living in poverty experience increased risk from fire and medical emergencies due to the age and condition of their housing, inability to pay for routine medical care, lack of medical insurance, and general health conditions. Sometimes a lack of access to transportation leads to increased use of emergency medical care and transport. Those living below the poverty line are the most at-risk. The low-income category often combines with other factors such as education, disability, and work status. In addition, facing poverty or near poverty

is more likely to occur if a person is Black or African American, Hispanic, or in a family (of any race) headed by a single woman.

In the October 2018 edition of *Health Briefs*, a peer-reviewed publication supported by the Robert Wood Johnson Foundation, published “Culture of Health.” The article highlighted a strong link between health and income. The key findings were that there are significant morbidity disparities between the lower- and upper-income brackets in the United States, leading to gaps in life expectancy of as much as 15 years for men and 10 years for women. The publication stated that “Poor health also contributes to reduced income, creating a negative feedback loop sometimes referred to as the health-poverty trap.”

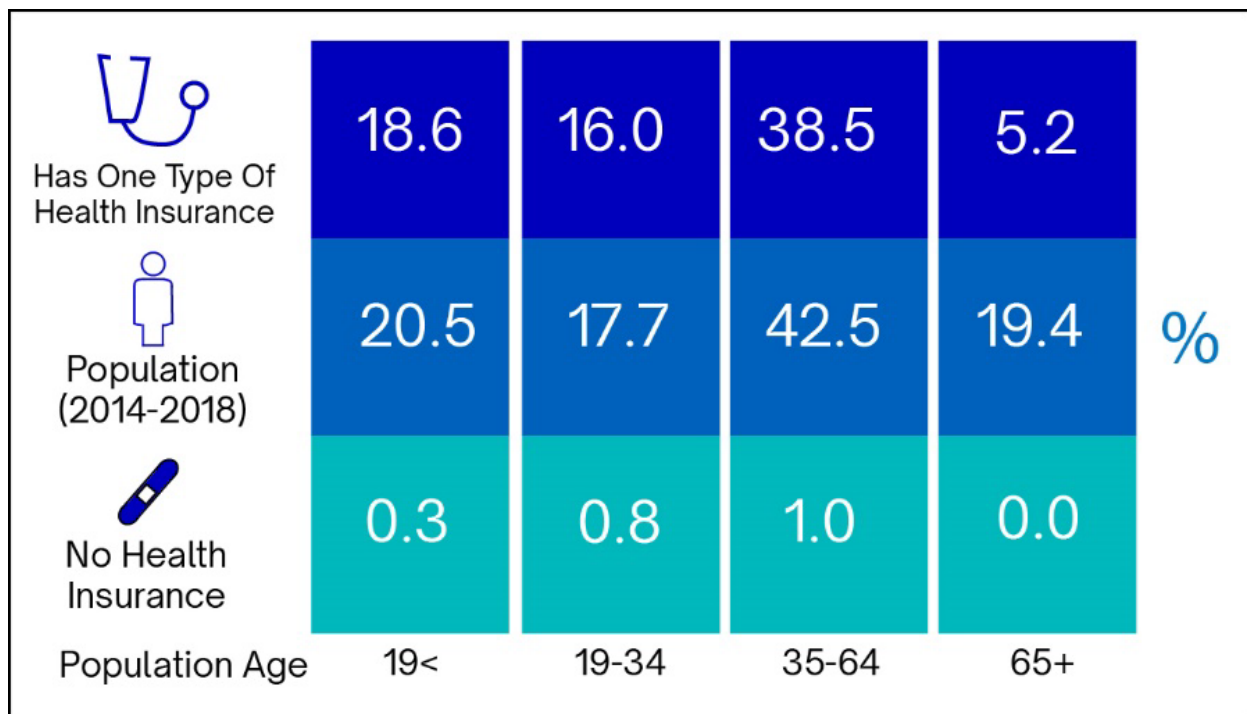
⁵ <https://ncd.gov/publications/2014/05272014>

Poor health can lead to elevated levels of strain on the healthcare system and emergency services system within a community as those agencies are often the first contact for those without a primary care provider. Determinants of Health include:

- Access to Quality Health Care Coverage
- Policies and Interventions
- An Individual’s Behavior and Biology
- Physical Environment
- Social Environment⁶

Employed citizens have increased access to health insurance, and therefore have an increased likelihood of receiving preventative health care. Within Wethersfield, 2.1% of the population does not have access to health insurance. This is lower than the national rate of 10.2%. The benefit of health insurance extends to the frequency of pre-hospital emergency medical incidents, as citizens with health insurance tend to use primary health care providers instead of emergency room facilities when possible.

Insurance



⁶ Health promotion and community health nursing. Retrieved from: <https://nursekey.com/4-health-promotion-and-risk-reduction/>

People with Limited Access to Transportation



“People with limited access to transportation” refers to individuals and families who do not have a personal vehicle. Reasons residents may not have access to transportation can include age, disability, temporary injury, income, legal restriction, or access to a personal vehicle. These individuals rely on public transportation daily for work, school, worship, and leisure.

There are 791 households in Wethersfield that do not have personal vehicles. These individuals depend on public transit and will likely need transportation assistance in an emergency requiring evacuation.

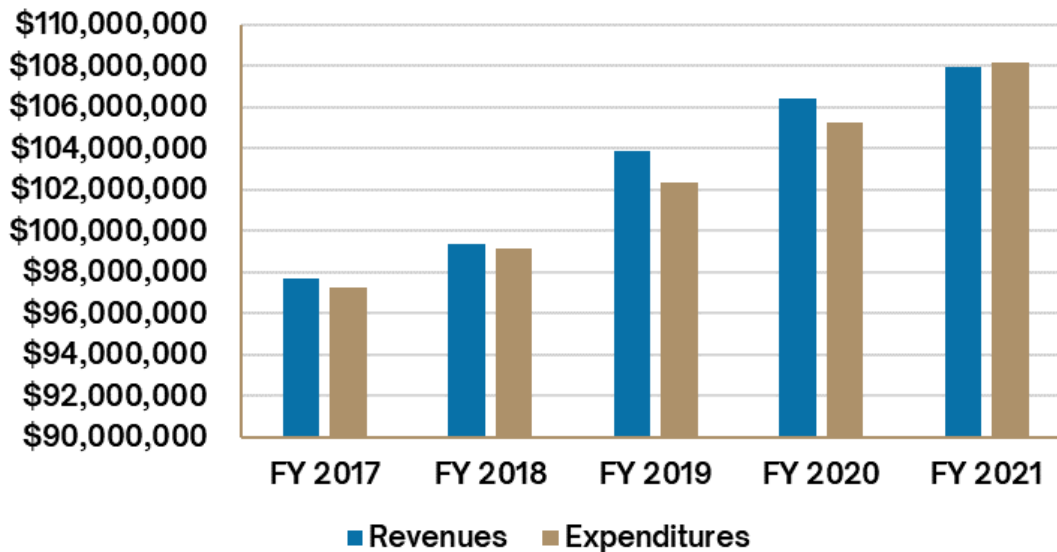
Finance

The Town of Wethersfield uses an accrual basis of accounting to account for all assets and liabilities throughout the year. Property taxes represent approximately 70% of the Town’s annual revenues followed by operating grants and contributions which account for approximately 26%. Several lesser revenue streams also contribute to rounding out the remaining revenues received each year. The Town maintains 36 individual governmental funds with the General Fund representing the largest fund and the fund from which the Town operates. To ensure the continuity of Town operations, several financial policies were established including maintaining 7% to 10% of unassigned funds within the General Fund, 10% reserves within the Medical Self-Insurance Reserves Fund, and \$1.6 million in annual funding for its Other Post Employee Benefits (OPEB) Trust Fund.

Revenue Versus Expenditures

The Town of Wethersfield maintains a healthy revenue-to-expenditure ratio with an average of 0.6%, or \$638,868, of available revenues remaining each year over the 5-year period.

Revenue vs. Expenditures



Wethersfield Volunteer Fire Department

Department of Public Safety

Chapter 602 of the Code of the Town of Wethersfield establishes the Department of Public Safety, which includes the Divisions of Police, Fire, and Building Inspection. The head of the Department of Public Safety is the Town Manager until such time that the Town Council determines otherwise. The Director of Public Safety is also the Traffic Authority as defined by the Connecticut General Statutes.

Division of Fire

Chapter 602 establishes the position of Fire Chief and charges this position to direct the operation of the fire companies at fires; institute and conduct suitable training programs for firefighters in cooperation with company officers; and perform such other duties as prescribed, by ordinance, or the orders of the Director of Public Safety.

Chapter 602 further establishes the position of Fire Marshal. The Fire Marshal has all the powers and duties of fire marshals in towns, as provided in the General Statutes.

Volunteer Firefighters

The category of Volunteer Firefighter in the Wethersfield Volunteer Fire Department includes Interior Firefighters (highest level of minimum standards and meet physical requirements), Exterior Firefighters (lower level of certification and do not enter structures), Drivers, and those Firefighters who are on a leave of absence from the fire department. In November 2022, the number of volunteers in each of these categories was as follows.

Category	Number of Active Volunteers
Interior Firefighter	35
Exterior Firefighter	3
Driver	5
Leave of Absence	3
Total	46

Volunteer Firefighter Application Process

To qualify as a volunteer firefighter for the Wethersfield Volunteer Fire Department, applicants must be:

- At least 18 years of age.
- Hold a high school diploma or equivalent.
- Be a resident of the Town of Wethersfield.
- Be able to successfully pass a criminal history check.
- Be able to successfully pass a medical evaluation and drug screening.

Prospective volunteer firefighters must complete an application and are directed by the fire department website to mail it to the Fire Department Public Information Officer at 505 Silas Deane Highway in Wethersfield or to email it to wvfd@wethersfieldct.gov.

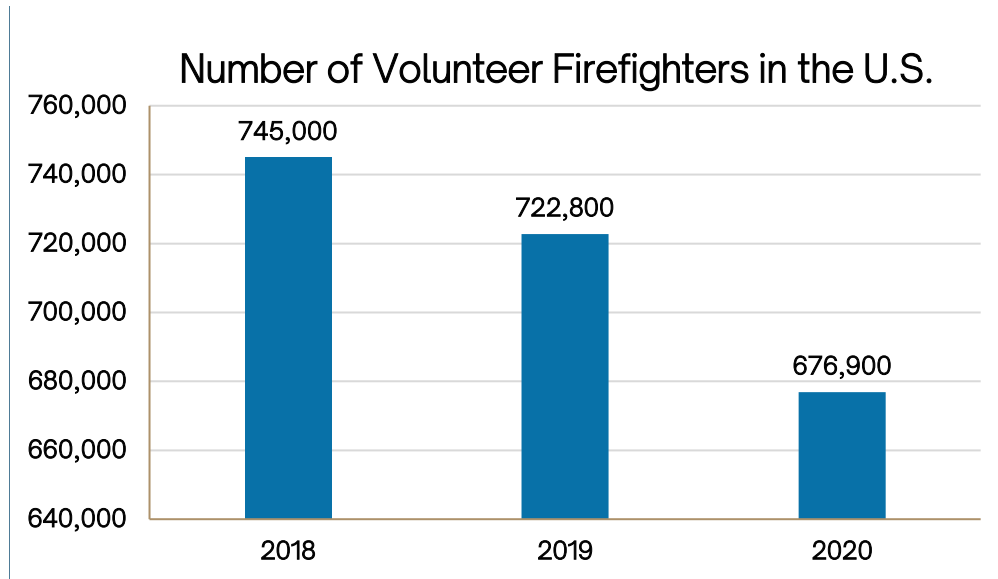
Dynamix Consulting Group suggests the Wethersfield Volunteer Fire Department and the Town of Wethersfield may be able to improve the current volunteer firefighter application process by allowing the Town's Human Resources Department to facilitate the entire process. Reassigning this responsibility to the Human Resources Department could help to reduce some of the administrative burdens placed on the officers in the Wethersfield Volunteer Fire Department.

National Volunteer Firefighter Trends

According to the National Fire Protection Association (NFPA) U.S. Fire Department Profile 2020, there were an estimated 1,041,200 career and volunteer firefighters in the United States in 2020. There were 364,300 career firefighters in 2020, representing an increase of 2 percent from the previous year. In addition, there were 676,900 volunteer firefighters, representing a 6 percent decrease from the previous year, and the lowest number of volunteer firefighters reported over the years.⁷

NFPA further reported that the number of volunteer firefighters declined in the late 1980s and 1990s, each time returning to the same level soon after. From 2005 through 2009, the number of volunteer firefighters was stable at a level slightly higher than any previously recorded other than in 1995. After a dip in 2010 through 2011, the number of volunteers appeared to increase and was in the range of 783,300 to 814,850, an increase of 4 percent. In 2018, the number of volunteer firefighters increased to 745,000 but then dropped in 2019 to 722,800 and in 2020 to 676,900.

⁷ <https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/Emergency-responders/osfdprofile.pdf>

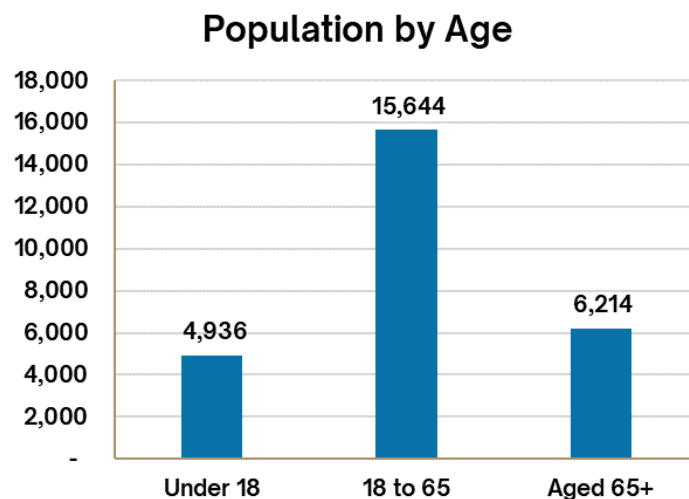


When examining the rates of volunteer firefighters per 1,000 people protected for mostly volunteer or all-volunteer fire departments, NFPA found a downward trend and range from a high of 8.05 in 1987 to a low of 5.66 in 2020 per 1,000 population protected.

If Wethersfield were to follow the current national trend for volunteer firefighters, with a population of 26,796 people, the Wethersfield Volunteer Fire Department could reasonably expect to attract approximately 152 volunteers. Dynamix Consulting Group suggests that in reality, this number is much lower in Wethersfield due to its demographics.

A fire department’s ability to recruit new members is in part dependent on the supply of new, younger people available for service. A community’s age profile can be an indicator of potential volunteer firefighter recruitment problems ahead.

The typical volunteer firefighter is between the ages of 18 and 65. There are 15,644 people in Wethersfield between the ages of 18 and 65. Based on the national trend and the number of people in town that typically volunteer as firefighters, it is more reasonable for the Wethersfield Volunteer Fire Department to expect to attract a cadre of up to 88 volunteers based on its demographics. By this standard, while it is not likely that

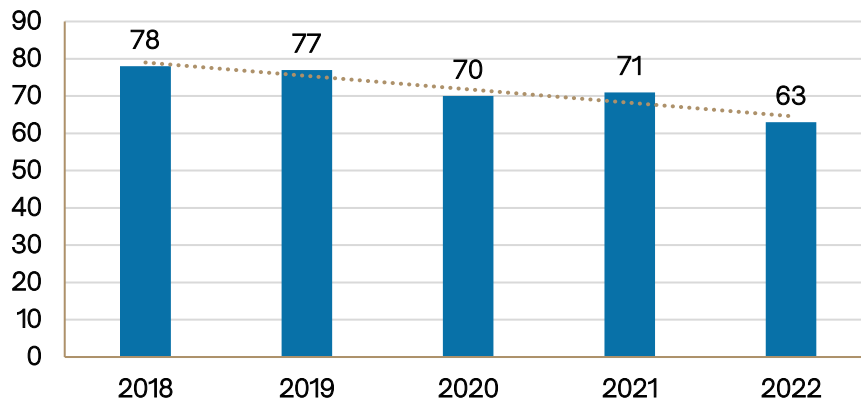


the ranks of the Wethersfield Volunteer Fire Department will swell to over a hundred members as was the case in the past, there may be opportunities to increase fire department membership through recruitment and retention efforts.

Wethersfield Volunteer Firefighters

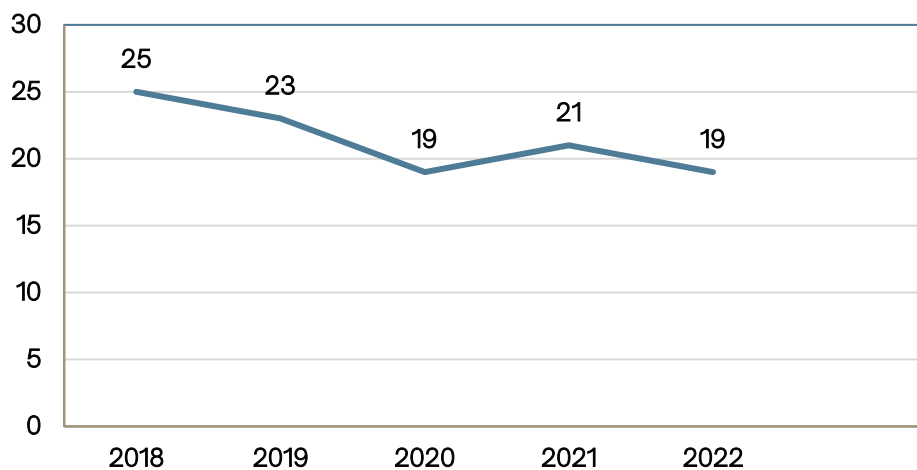
The number of volunteer firefighters in Wethersfield has decreased by 19.23% in the last five years. During just the last year, the number of firefighters has decreased by 11.27%.

Number of Firefighters on the Roster
2018-2022



In addition to an overall decrease in the number of volunteer firefighters, there is also a decrease in the activity levels of Wethersfield’s Volunteer Firefighters. The number of volunteer firefighters who responded to 40% or more of calls per year is down from 25 firefighters in 2018 to 19 firefighters in 2022. This is a 24% decrease.

Number of Firefighters Who Responded to
More than 40% of Calls: 2018-2022



While it is difficult to project exactly how many firefighters will leave the fire department in the coming years, Dynamix Consulting Group does note that the Wethersfield Volunteer Fire Department is comprised of many members who have proudly volunteered for the fire department for multiple decades. For this reason, it is reasonable to anticipate that in the coming years, some of these members will choose to retire, move out of town, or have other life-changing events that will discontinue their service to the community.

Line Officers

Line officers in the Wethersfield Volunteer Fire Department include three Captains and nine Lieutenants. A career fire department would typically assign supervisory functions to a full-time employee whose primary responsibility is to supervise emergency response. The Wethersfield Volunteer Fire Department assigns these supervisory functions to volunteer firefighters who also must actively respond to fire calls. These line officers also attend staff meetings and have additional fire department responsibilities such as coordinating training, purchasing equipment, overseeing apparatus maintenance, and the like. Each of these line officers also maintains a full-time paying job to provide for themselves and their families.

Command Staff

One of the primary responsibilities of the Command Staff is to ensure the operations segment of the organization has the ability and means to respond to and mitigate emergencies safely and efficiently. An effective administration system is critical to the success of the Town. The Command Staff in the Wethersfield Volunteer Fire Department is comprised of the Fire Chief, Assistant Chief, and two Deputy Chiefs. Assisting the Fire Chief is a part-time Administrative Assistant who works three to four mornings per week entering training data into the department database, processing invoices, and submitting requests to the State of Connecticut for reimbursement for fire department responses onto the State's Limited Access Highways.

The Command Staff within the Wethersfield Volunteer Fire Department carries a heavy workload. A career fire department would typically assign these functions to full-time employees whose primary responsibility is the administration of the fire department. The Wethersfield Volunteer Fire Department assigns these administrative functions to volunteer firefighters who are required to be active responders to fire calls. In addition to their volunteer administrative and emergency response work, each of the volunteer members of the Command Staff also maintains a full-time paying job to provide for themselves and their families.

Fire Department Organizational Structure

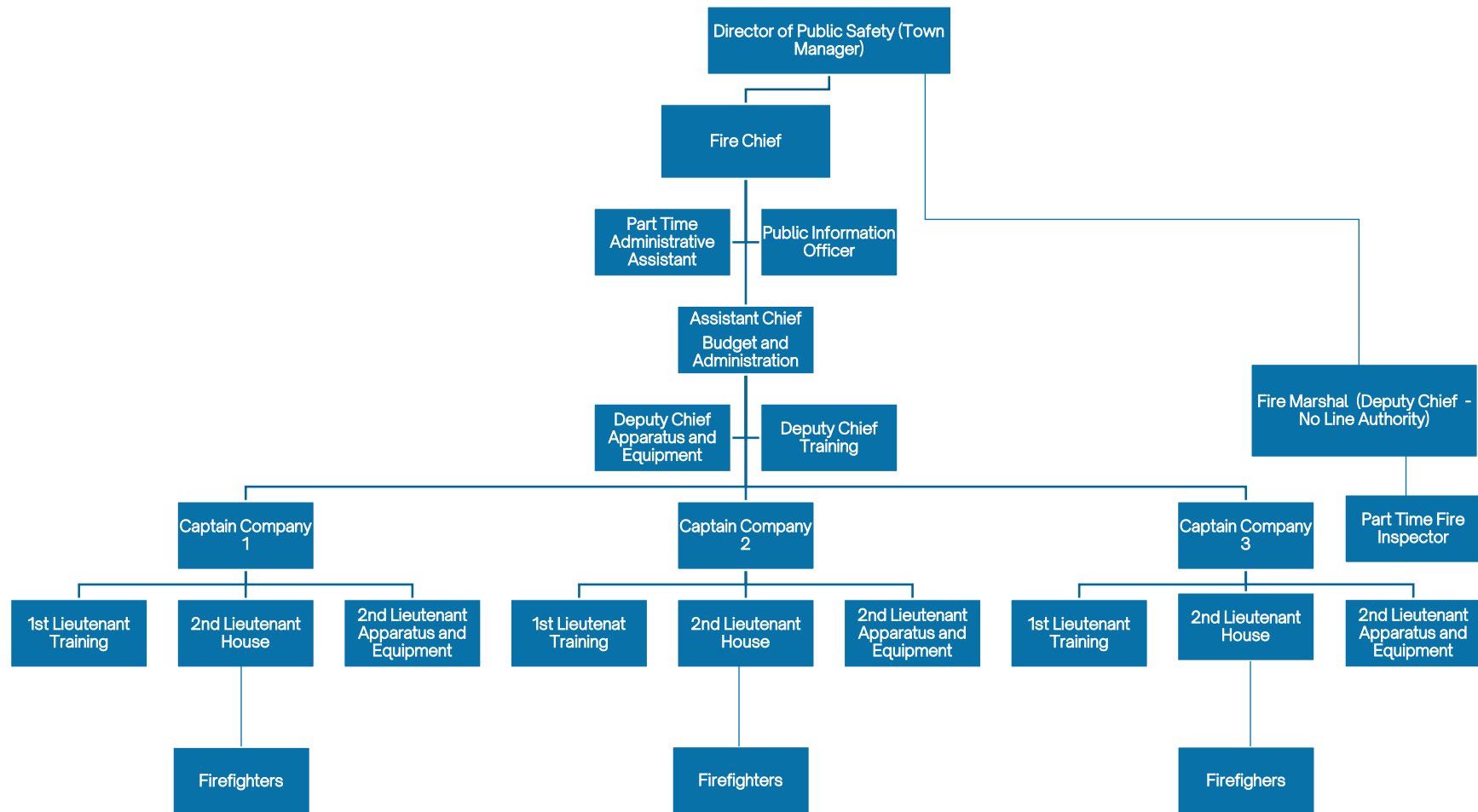
The organizational structure is the method by which work should flow through the organization. The chain of command refers to the line of authority that exists within that organizational structure. When deployed properly, an effective organizational structure combined with a well-defined chain of command establishes accountability, lines of authority, and decision-making power. An effective chain of command ensures that every task, job position, and division has one person who assumes responsibility for performance.⁸

According to the 2017 National Incident Management System, “The optimal span of control for incident management is one supervisor to five subordinates; however, effective incident management frequently necessitates ratios significantly different from this. The 1:5 ratio is a guideline, and incident command personnel use their best judgment to determine the actual distribution of subordinates to supervisors for a given incident or Emergency Operations Center activation.”

The current organizational structure of the Wethersfield Volunteer Fire Department is as follows.

⁸ <https://smallbusiness.chron.com/chain-command-organizational-structure-59110.html>

Wethersfield Volunteer Fire Department Organizational Structure



Multiple stakeholders repeatedly identified communications as an area where there was an opportunity for improvement within the Wethersfield Volunteer Fire Department. It was one of the very first concerns identified in every one of the in-person and virtual meetings conducted by Dynamix Consulting Group for this project.

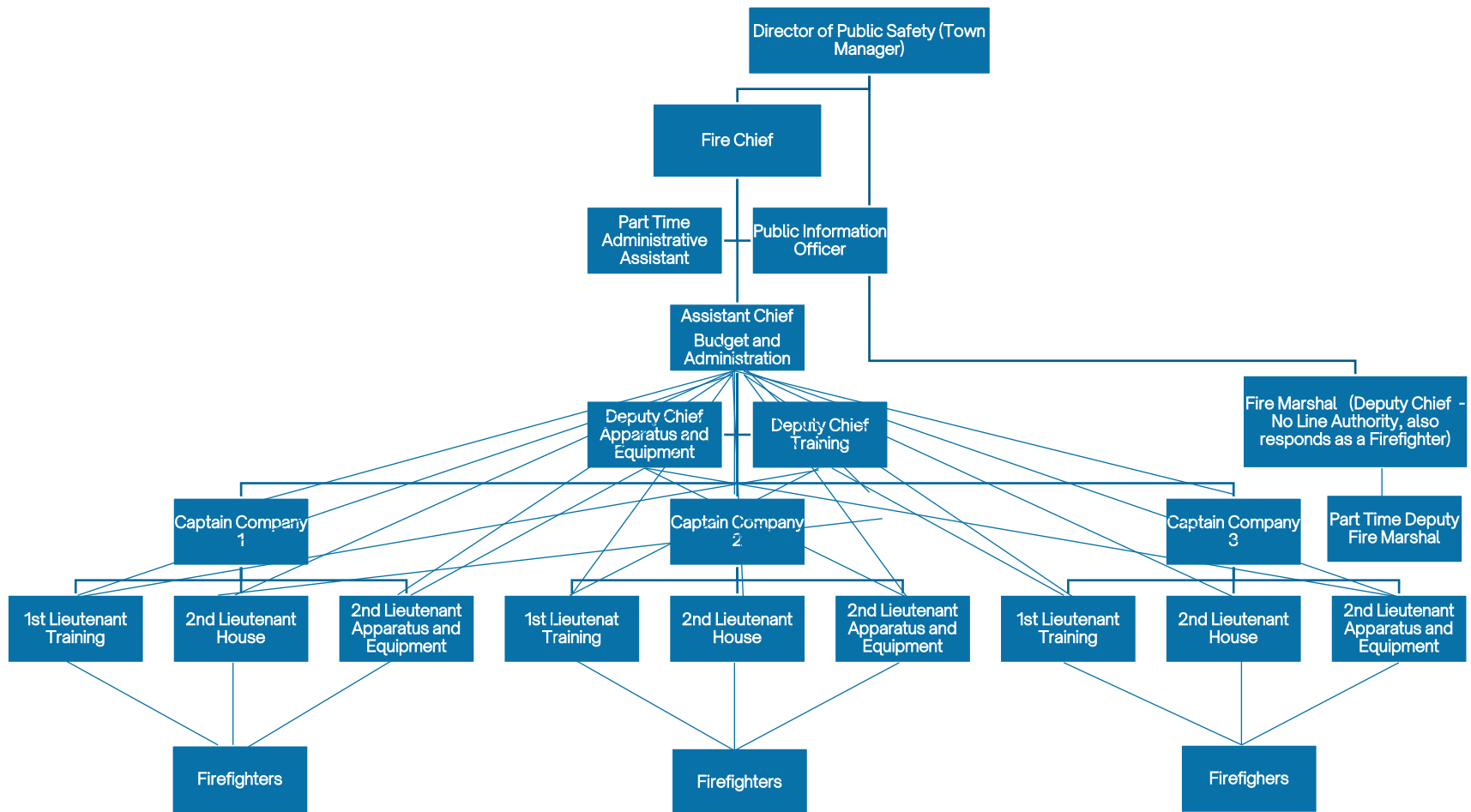
In the current Wethersfield Volunteer Fire Department organizational structure, there is a direct line from the Public Safety Director (Town Manager) to the Chief, and from the Chief to the Assistant Chief. Each of these individuals reports to a single supervisor.

It is the opinion of Dynamix Consulting Group that the organizational structure breaks down between the Deputy Chiefs and the Captains and Lieutenants. The reason for this is the current organizational chart has assigned officer levels within the Chain of Command, but individuals perform tasks and report to other individuals who oversee those tasks, whether or not they are their direct supervisors based on rank.

This arrangement has created a situation where many individuals have multiple supervisors and where individuals supervise people for specific tasks even though they do not fall directly under them in the Chain of Command. An example of this involves the three Training Lieutenants reporting to the Deputy Chief of Training for all issues related to Training even though there are Captains in the Chain of Command who supervise the Lieutenants. A second example involves firefighters reporting to all three Lieutenants assigned to their fire company wherein they report to one for training issues, a second for house/company issues, and a third for equipment issues. Further complicating the situation, the Fire Marshal reports directly to the Director of Public Safety yet has the rank of Deputy Chief, but with no line authority.

The following organizational chart includes lines to illustrate all the different supervisory relationships that currently exist within the Wethersfield Volunteer Fire Department organizational structure.

Wethersfield Volunteer Fire Department Organizational Structure Including Supervisory Relationships



Dynamix Consulting Group suggests that immediate improvement to communications within the Wethersfield Volunteer Fire Department can occur by adopting an organizational structure and chain of command that better aligns with the current operations of the organization.

Wethersfield Volunteer Firefighter Incentives

The following table describes the current incentives the town of Wethersfield offers to its volunteer firefighters. For sake of comparison, Dynamix Consulting Group provided a summary of the incentives offered to volunteer firefighters by the fire departments that work with Wethersfield in Task Force 51 (described in the *Resource Sharing in Connecticut* section of this report) and also those fire departments that border Wethersfield.

Volunteer Firefighter Incentives

Town	Per Call Pay	Annual Officer Stipends	Tax Abatement or Annual Stipends	Other
Berlin	No Response			
Cromwell	No	No	Qualifying Volunteer Firefighters receive an annual stipend of either \$2,000 or \$4,000 depending on their level of activity	No
Glastonbury	Glastonbury \$10.25 a unit (A unit is time spent within a 60-minute time period)	Assistant Chief: \$15,904.99 (1) Deputy Chief: \$7,281.62 (2) Captain: \$3,995.98 (4) Lieutenant: \$2,397.14 (12)	SCBA Lead Tech: \$1,207.65 (1) SCBA Tech: \$662.19 (3) Computer Tech: \$4,148.26 (1) Radio Tech: \$1,416.71 (1) Custodian: \$2,308.39 (4) Engineer: \$1,247.59 (8) 1 – 5 Years of Service - \$750.00	6 – 10 Years of Service: \$1,250.00 10 years and greater: \$2,000.00 25 Years of Service and over age 55: \$2,000.00 for life Fire Watch: \$20.00 an hour Per Diem: \$21.00 an hour

Town	Per Call Pay	Annual Officer Stipends	Tax Abatement or Annual Stipends	Other
Newington	<p>Firefighters receive \$6 per point</p> <p>Lieutenants receive \$7 per point</p> <p>Captains and Chiefs receive \$8 per point</p> <p>Most emergency calls are worth 2 points</p>	<p>Chief: \$9,000</p> <p>Asst. Chief: \$7,700</p> <p>Deputy Chief: \$6,550</p>	<p>Each qualifying volunteer firefighter receives \$1,500 per year in lieu of a tax abatement. This stipend will increase to \$1,750 per year on July 1, 2023.</p> <p>After 25 years of service, volunteer firefighters receive this stipend for life. This has encouraged volunteers to stay active to achieve the 25 years.</p>	<p>The Town of Newington also offers a Pension Program for volunteer firefighters.</p> <p>Firefighters have the option to roll their Annual Stipend into the Pension Program each year if they wish.</p> <p>Firefighters must be active for 10 years to vest in the pension to be able to collect when they retire.</p>
Rocky Hill	<p>\$14/Call going to \$15 on 12/1/22</p> <p>Probationary Firefighters: \$7/Call going to \$7.50 on 12/1/22</p>	<p>Chief: 2 stipends totaling \$21,000</p>	<p>Each qualifying volunteer firefighter receives an annual tax abatement of \$2,000.</p>	<p>Qualifying volunteer firefighters receive pension qualification points based on established activity triggers.</p>

Town	Per Call Pay	Annual Officer Stipends	Tax Abatement or Annual Stipends	Other
Wethersfield	\$9/Call/Hour for Lieutenants and Firefighters	Chief: \$10,000 Assistant Chief \$9,500 Deputy Chiefs: \$7,500 Captains: \$5,000 Lieutenants: \$2,500 and per call stipend Engineers: \$1,000 and per call stipend	Each qualifying volunteer firefighter receives an annual tax abatement of \$1,000 or may receive this as an annual stipend.	Standby Pay: \$18/Hour for the Officer in Charge \$15/Hour for firefighters \$750 contribution to the pension for qualifying volunteer firefighters; vested after 6 years of service

The Town of Wethersfield and the Wethersfield Volunteer Fire Department should collaboratively review the current volunteer firefighter incentive program to ensure the money spent on incentives is effectively incentivizing the volunteer firefighters. There may be value in creating a tiered points program where officers receive a higher per-call rate than firefighters while maintaining incentives to respond to calls as they are paid by the call. This may do more to encourage response to emergency calls than the current annual officer stipend program which does not correlate with activity level. Dynamix Consulting Group further recommends the Town include its labor attorney in this review to ensure all incentives paid to volunteer firefighters are in accordance with the Fair Labor Standards Act (FLSA).

Health and Wellness Programs

Dynamix Consulting Group commends the Town of Wethersfield for providing annual medical evaluations and exams based on NFPA 1582: *Standard on Comprehensive Occupational Medical Program for Fire Departments*. In addition to providing Medical Evaluations, the Town of Wethersfield and Wethersfield Volunteer Fire Department should reactivate the Fire Department Safety Committee. While there is a Standard Operating Procedure that describes the functions of the Safety Committee, interviews with fire department personnel revealed there has not been an active Safety Committee in the Wethersfield Volunteer Fire Department for many years. The reactivation of a Safety Committee can be one of the best tools to increase the safety of firefighters.

The Safety Committee should meet monthly to discuss any safety concerns that occurred, if any, raise awareness within the membership, and ultimately maintain a safe work environment. Additionally, the Safety Committee should review all accidents, injuries, near-miss incidents, and workplace safety suggestions. The Safety Committee should analyze the information before them and report their findings to the Fire Chief.

In contrast to being reactionary through the development of additional rules, Dynamix Consulting Group recommends the Safety Committee work to implement member safety education programs and encourage members' safety self-awareness. The Safety Committee should maintain regular and open meeting times and locations, and record minutes of the meetings to post for all firefighters to review. Dynamix Consulting Group underscores the importance of maintaining a functioning Safety Committee.

Dynamix Consulting Group strongly encourages the Town of Wethersfield and Wethersfield Volunteer Fire Department to ensure that all activities of the Safety Committee are in alignment with Chapter 4 of NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Program*.

Records Management System

During the site visit, the Wethersfield Volunteer Fire Department advised Dynamix Consulting Group of the process of transitioning the Records Management System from Firehouse Software to Alpine's RedNMX. As part of the transition to RedNMX, Dynamix Consulting Group recommends the Fire Marshal's Office cease the practice of finishing incident reports for responses by volunteer firefighters. The officer in charge of an incident has first-hand knowledge of the incident and is best-positioned to accurately complete the report.

Training

The volunteer Deputy Chief serves as the Training Officer for the Wethersfield Volunteer Fire Department. Three volunteer Lieutenants – one at each company - serve as Training Lieutenants.

Connecticut Occupational Safety and Health Training Requirements

The Connecticut Department of Labor's Division of Occupational Safety and Health (CONN-OSHA) administers Connecticut's Public Employer Only State Plan and enforces occupational safety and health standards as they apply to all municipal and state personnel. As a State Plan state, CONN-OSHA adopts and enforces standards that are at least as effective as the federal requirements. The “Required Minimum Training for Connecticut Fire Services to Meet State Regulations” is as follows.

REQUIRED MINIMUM TRAINING FOR CONNECTICUT FIRE SERVICES TO MEET STATE REGULATIONS (rev. 7/04)

<p>Firefighting 1910.156(c)</p> <p>1. Training and Education commensurate with duties 2. Prior to work as firefighter 3. Officers have more comprehensive training than members.</p> <p>1910.156(c)(2) - Training (Frequency) 1. At least quarterly for interior 2. Annual for others</p> <p>The following subjects: (Examples or Key Elements) 1. Safety and Protective Equipment 2. Chemistry of Fire and Fire Behavior 3. Self Contained Breathing Apparatus 4. Fire Streams 5. Hose 6. Pumping Fire Apparatus 7. Ladders 8. Rescue 9. Forcible Entry 10. Ventilation</p> <p>Examples of Training Standards I.F.S.T.A. ESSENTIALS meet 1910 156(c)</p> <p>F.F.I. exceeds or meets this requirement Training can be classroom and hands on.</p>	<p>Hazardous Materials Operations <u>Hazardous Materials Response</u> 1910.120(q)(6) <u>Training of Department Responders to a Haz Mat</u></p> <p>1. (i) Awareness (no set hours). Department takes No action and remains in the cold zone. 2. (ii) Operational (8hrs). When the Department acts in a defensive mode and does not mitigate. (Damming, diking and decontamination is operational level) 3. (iii) Technician (24hrs). This level mitigates (plug & patch) and uses chemical protective clothing. Note - Must meet specific competencies. List in 1910.120(q)(6) for each type of responder.</p>	<p>Command Leaders and Incident Commanders <u>Incident Command and Standard Operating Procedures - HazMat</u> 1910.120(q)(6)(v)</p> <p>1. Requires 24 hours training equal to operations plus - competencies listed in 120(q)(6)(v) (A-F)</p> <p>ICS courses are a means of meeting this requirement as long as employer specific conditions and plans are also addressed.</p> <p>Note: The standard allows for command to be passed on as higher ranking officers arrive. 120(q)(6)(v) applies to employees who are expected to assume command.</p>	<p>Infectious Disease Control 29 CFR 1910.1030</p> <p>I. Communicable Disease Risk Exposure and Prevention of the Transmission of Bloodborne Pathogens for Emergency Responders</p> <p>TB</p> <p>1. Have a program, training, skin test and respirators if: exposed to active or possible active TB and A. Transport them B. Prolonged indoor contact with patient C. High Risk Procedures</p> <p>Note: State EMT, MRT, EMT-P Training covers some elements. Training must be site specific and annual for 1030.</p>	<p>Confined space 1910.146</p> <p>1. Only required for rescue activity. 2. Based on hazards, monitoring and rescue equipment to be used. 3. Annual Training 4. The “employer” must ensure timely, effective rescue where outside service is used. (see appendix “F”)</p> <p>The 1910.146 is intended for employers entering spaces to supply their own rescue capability.</p>
<p>EMERGENCY VEHICLE OPERATIONS Not required but suggested there be a program in place.</p>	<p>It is strongly recommended that a fire department have personnel on the scene of an incident that have at least First Responder certification to provide emergency medical care to any fire fighter injured on the scene.</p>			

1. The local authority having jurisdiction may require additional training and education: **EXAMPLE:** A fire department may require Responder Certification or Emergency Medical Technician Licensure.
2. Curriculum for firefighting practices will be based upon interior or exterior fire attack principles, practices and procedures. The equipment in the department and the instructor will make this determination. (Training on any special hazards (an industrial location, location with particular hazards); have to be included in training.
3. The Department of Labor and the supporting agencies and organizations encourage each fire department to exceed this minimum training. High standards for training and education; and health and safety are key factors to quality job performance and service to the community. State of Connecticut, Commission on Fire Prevention and Control courses often exceed OSHA requirements.
4. All training must have an evaluation component and participants must pass the evaluation to receive credit for the training. A pass/fail system is adequate. Evaluation instruments and/or activities are to be determined by the instructor based upon the instructional objectives of the class. Training activity must be documented.
5. All training and education required by this document must be delivered by an instructor who is capable of delivering subject and trained in the area being taught. (See Appendix A to 1910.156).
6. All training components require annual refresher training of sufficient content and duration needed to maintain competency. Competency can be demonstrated annually in place of refresher training. Means of demonstrating competency must be documented by the Department. Employer could use drills, tests as means of demonstrating competency.
7. Attendance at "state" Fire School could be included as meeting training as long as employer specific conditions are addressed as well.
8. OSHA standards allow flexibility and do not specify that recipients have a certificate. Employer must certify training is done.
9. OSHA does not regulate level of EMS response (i.e., BLS, MRT, EMT, Paramedic, etc.).

Firefighting Practices

29 CFR 1910.156(c) Fire Brigades

1. Training and education commensurate with those duties and functions members are expected to perform, provided before they perform fire emergency activities.
2. Training and education frequently enough to assure each member is able to perform assigned duties and functions satisfactorily and in a safe manner.

All members shall be provided training at least annually. Members who are expected to perform interior structural firefighting shall be provided training at least quarterly.

Hazardous Materials

29 CFR 1910.120(q)(6) and (8) Hazardous Waste Operations and Emergency Response

General Requirements

1. Training shall be based on the duties and function to be performed by each emergency responder. Hazardous Material First Responder Awareness - Individuals who are likely to witness or discover a hazardous substance release and have been trained to initiate an emergency response plan. You can tailor to your operation.
2. Annual refresher training of sufficient content and duration to maintain competencies, or shall demonstrate competencies yearly.
3. 1910.120(q)(1) Emergency response plan. Must cover all elements. Town Plan may meet these requirements.
4. 1910.120(q)(3) Requires provision for having a safety officer, air monitoring prior to SCBA removal, back up personnel, first aid support at site, PPE, implementation of decontamination.

EPA 40 CFR Part 311
EPA Regulations are identical to OSHA.

Incident Command System

CFR 1910.120(q)(3)(ii) Hazardous Waste Operations and Emergency Response

Requires the implementation of an Incident Command System. Training in ICS is inherent in this requirement. For officers who are expected to be I.C. [see .120(q)(6)(v)]

OSHA does not require ICS use at structure fires. (It is suggested). N.F.P.A. does suggest use of ICS at fires.

Infectious Disease Control

29 CFR 1910.1030 Bloodborne Pathogens

All employees with occupational exposure shall participate in a training program at least annually. Occupation exposure means reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from performance of duties. This covers most if not all fire departments in the State of Connecticut.

1910.1030 Requires following:

1. Written exposure control plan
2. Training
3. PPE
4. HBV vaccinations
5. Post exposure follow up
6. Maintain Records of Training (3 years)
7. Maintain medical records 30 years

Breathing Apparatus

Must comply with 1910.134

- 1910.134(e) Written respirator program
- 1910.134(g)(3) Written procedures for dangerous atmospheres planning for communications, standby persons equipped for rescue of entrants.
- 1910.134(g)(1) Facial hair policy - not allowed in face seal area
- 1910.134(h) Monthly SCBA inspections
- Records of inspections
- Low air alarms
- 30 minute bottles
- Cylinders fully charged
- Current hydrostatic test on cylinders
- Flow test apparatus as recommended by manufacturer

Other Requirements General

1. 1910.156(d)(1) - Equipment annual inspection and maintenance
 - a. Hose (To NFPA 1962 or equivalent)
 - b. Ground and aerial ladders (To NFPA 1932 and 1914 or equivalent)
2. 1910.156(b)(1) - Organizational statement
3. 1910.156(e)(1) - PPE provided at no cost
4. 1910.156(e)(1-5) - PPE meets .156 or NFPA
5. 1910.147 - Lockout/Tagout. Employee exposure most likely will apply to large department with a repair facility
6. 1910.1200 - Employee exposure (site chemicals such as cleaners, fuels)
 - a. (e) Program must be in writing
 - b. (g) Material safety data sheets available to employees
 - c. (h) Training (firefighters may have equivalent through 1910.120 awareness level)
7. 31-371 - OSHA notice posted
8. 31-374 - Form 300 must be maintained back 5 years. 300 has to be posted every February - April

Insurance Services Offices Training Requirements

Another factor to consider concerning firefighter training is the Insurance Services Office (ISO). The following is a summary of the items that ISO considers when reviewing a community's firefighter training program.

ISO Annual Training Requirements

ISO Annual Training Component	Description
Training Facilities / Use of Facilities	Drill tower, Live fire training structure (including smoke room) 2-acre training area 18 hours per year per firefighter (for maximum credit)
Company Training	Company training at fire stations, 16 hours per member per month (for maximum credit)
Classes for Officers	Certification of all officers 12 hours per year of continuing education for all officers (for maximum credit)
New Driver and Operator Training	Classes for new drivers and operators, 60 hours (for maximum credit)
Existing Driver and Operator Training	Classes for existing drivers and operators, 12 hours per year (for maximum credit)
Training on Hazardous Materials	6-hour session per member per year (for maximum credit)
Recruit Training	240 hours per recruit in the first year (for maximum credit)
Building Familiarization for Pre-fire Planning Programs	The community should conduct a pre-fire planning inspection of each commercial, industrial, institutional, and other similar structure once a year for maximum credit in the Fire Suppression Rating Schedule (FSRS). Records of the inspections should include complete and up-to-date notes and sketches.

Wethersfield Volunteer Fire Department 2023 Training Schedule

The 2023 Wethersfield Volunteer Fire Department Training Schedule is as follows.

**TOWN OF WETHERSFIELD ** DEPARTMENT OF SAFETY
DIVISION OF FIRE**

2022-2023 MEETINGS & DRILLS

MONTH	new COMPANY ADMIN. MEETINGS	newCOMPANY DRILLS	Extra Training	DEPT. Officers & ADMIN. MEETING	WVFA MEETING	CORE DRILL DATES MANDATORY
January	9	23 F-500 set up/review Meter review	lithium battery Newington	30th officers 1800, dept1900	23 WVFA	
February	6 CPR	20 Fire alarm panel by FMO				6th CPR At Company meeting
March	6 CPR	20 Power equipment/hand tools	28th ropes/knots ca 2			6th CPR at company meeting
April	3	17 company level extrication	driver training	24th Officers 1800 dept 1900	24 WVFA	On Line -TIMS
May	1	15 SPLIT Rocky hill gas props & Forcible entry	driver training			May 22 Live Fire #1of3
MONTH	COMPANY ADMIN. MEETINGS	COMPANY DRILLS	Extra Training	DEPT. ADMIN. MEETING	WVFA MEETING	CORE DRILL DATES MANDATORY
June	5	19	driver training boat ops		26 WVFA	MON 26 LIVE FIRE #2of3

		SPLIT, Rocky hill gas props & Forcible entry				
July	10	17 Split Ground ladders with Nick Esposito Low angle rescue	10	10th Company 1 installation of Officers		
August	7	21 Split Ground ladders with Nick Esposito Low angle rescue				
September	11	18 Split Hose advancement newington & Extrication at stockpile				26TH
October	9	16 Split Hose advancement newington & Extrication at stockpile			23 WVFA	Sun 29 LIVE FIRE #3/3 31st assign core online
November	6	20 SCBA RIT Pack, Inspections, low profile air management	27th COLD WATER RESCUE	13th officers 1800 dept 1900 Co 3		
December	4	18 ALL - Ventilation Drill				31st CORE on line due

Comparison of the Wethersfield Volunteer Fire Department 2023 Training Schedule to OSHA and ISO Annual Training Requirements

OSHA CFR 1910.156 requires “Training and education commensurate with duties and functions members are expected to perform, provided before they perform fire emergency activities.” It further requires “Training and education frequently enough to assure each member is able to perform assigned duties and functions satisfactorily and in a safe manner.” All members “shall be provided training at least annually. Members who are expected to provide interior structural firefighting shall be provided training at least quarterly.”

Dynamix Consulting Group attempted to correlate the Wethersfield Volunteer Fire Department 2023 Training Program with OSHA and ISO requirements and identified training topics not required by OSHA or ISO, as well as required topics not specifically scheduled. While some of those topics not specifically scheduled can occur as part of live fire training, Dynamix Consulting Group recommends reconfiguring the Wethersfield Volunteer Fire Department Training Calendar to provide more efficient training for the volunteer firefighters and to better align with OSHA and ISO to ensure that all training requirements are satisfied.

Training Facility

There is no designated location in the Town of Wethersfield for firefighters to train. Firefighters practice ground ladders on the back of the firehouse and use the parking lot for some training evolutions, but inclement weather often interferes with the ability to train. Wethersfield does use the firefighter training facilities in neighboring towns, but only half of Wethersfield’s firefighters can leave town to train at one time as the other half remains in town to respond to emergency calls.

To attract and retain volunteer firefighters, the Town of Wethersfield must make it as easy as possible for volunteers to complete their required training and respond to emergency calls. Dynamix Consulting Group recommends the Town consider providing a location for the fire department to conduct training in a controlled environment. While a facility to conduct live fire training would be ideal, a phased-in approach to providing a place to train could start with a concrete pad protected by a roof. Connex boxes could then provide areas for firefighters to practice advancing hose lines, search and rescue, and ventilation skills to name a few.

Fire Marshal's Office

Local Fire Marshals in Connecticut are responsible for the enforcement of many of the sections found in Chapter 541 of the Connecticut General Statutes, as well as numerous codes promulgated under the provision of these statutes. State Statutes require the Wethersfield Fire Marshal's Office to:

- Inspect all existing buildings and residential occupancies, three-family and larger.
- Conduct a review of plans and specifications for various occupancies and facilities that proposed within the town for compliance with the Connecticut Fire Safety Regulations
- Inspect buildings under construction.
- Investigate the cause, origin, and circumstances of all fires within the town and report the same to the State Fire Marshal.

Wethersfield Fire Marshal's Office Staffing

Staffing in the Wethersfield Fire Marshal's Office includes:

- One full-time Fire Marshal is scheduled to work 37.5 hours per week.
- One part-time Fire Inspector/Fire Investigator is scheduled to work 19.5 hours per week.
- One volunteer firefighter is paid to work as needed as a Fire Inspector/Fire Investigator.
- One volunteer firefighter paid to work as a Fire Investigator as needed.
- There is one Wethersfield Police Department Detective currently attending classes to become a State Certified Fire Investigator.

Core Functions of the Fire Marshal's Office

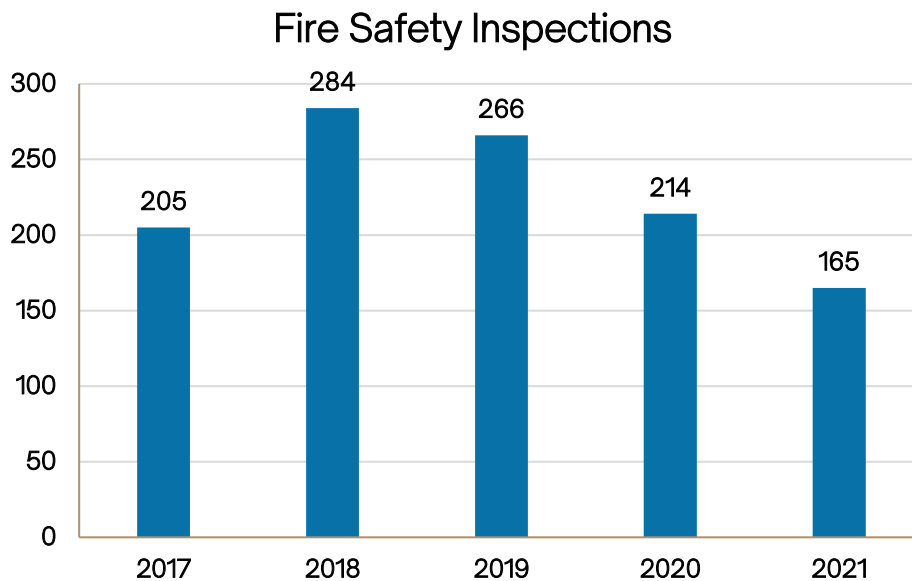
The Fire Marshal's Office is responsible for the following major areas:

- Inspections
- Plans Review
- Customer Service
- Alarm Monitoring and Reporting
- Fire Investigations
- Public Education

The following sections of this report will provide an overview of the work performed by the Wethersfield Fire Marshal’s Office. Dynamix Consulting Group notes that the year 2020 should be considered an outlier because of the unprecedented impact of the COVID-19 Pandemic on all aspects of the operations of the Fire Marshal’s Office. Additional impacts of note include continued COVID-19 in 2021, staffing shortfalls in 2022, and an extended leave of absence (3 months) involving the full-time Fire Marshal. The Fire Marshal’s Office will focus on completing the required inspections scheduled to occur during the three-month medical leave of absence remainder of 2022 and the beginning of 2023.

Fire Safety Inspections

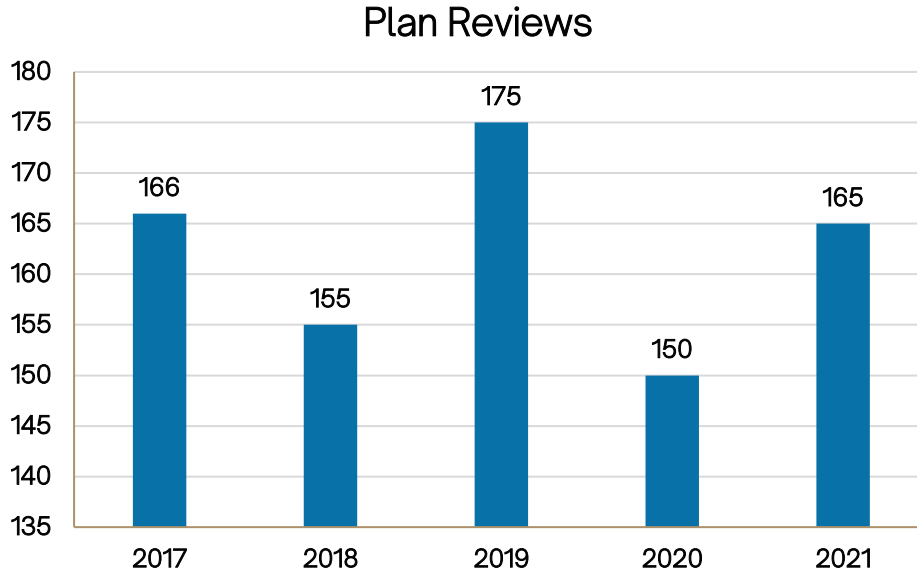
A core role of Wethersfield’s fire prevention efforts is fire safety inspections. These inspections provide not only fire code compliance but are an opportunity for inspectors to educate and build goodwill between the fire department and the community. When a sufficient number of personnel are available to conduct annual fire safety inspections of all commercial, educational, and institutional occupancies, the community becomes better informed, and the fire department becomes better equipped to successfully mitigate incidents.



Connecticut General Statutes govern the frequency of inspections; however, the current staffing of the Wethersfield Fire Marshal’s Office is inadequate to meet all requirements. Educational and healthcare facilities are typically large campuses that often include multiple buildings and levels and can take an inspector several days to thoroughly inspect. Additionally, inspectors must complete inspections for new businesses, childcare, liquor business inspections, and new construction in a timely manner and are typically worked into the regular inspection schedule.

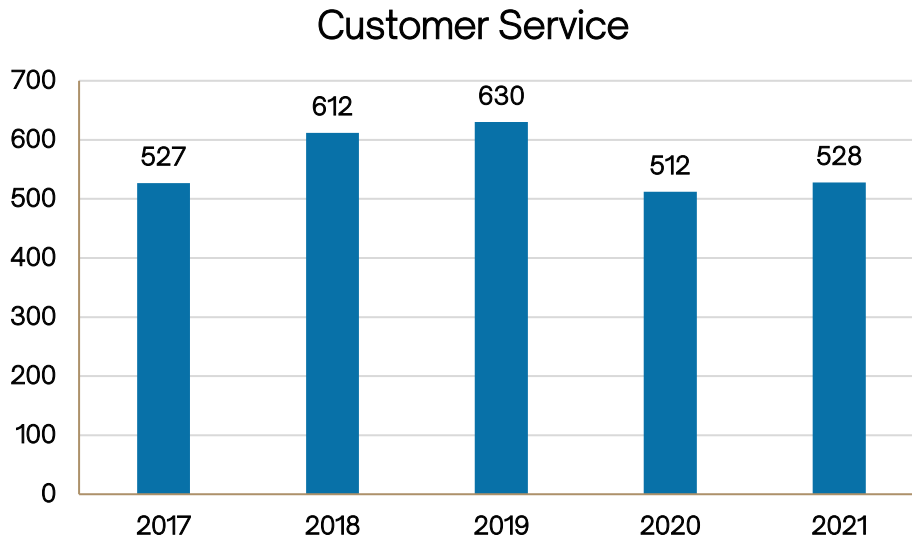
Plans Review

The Wethersfield Fire Marshal’s Office reviews plans for proposed occupancies in Town for compliance with Connecticut Fire Safety Regulations.



Customer Service

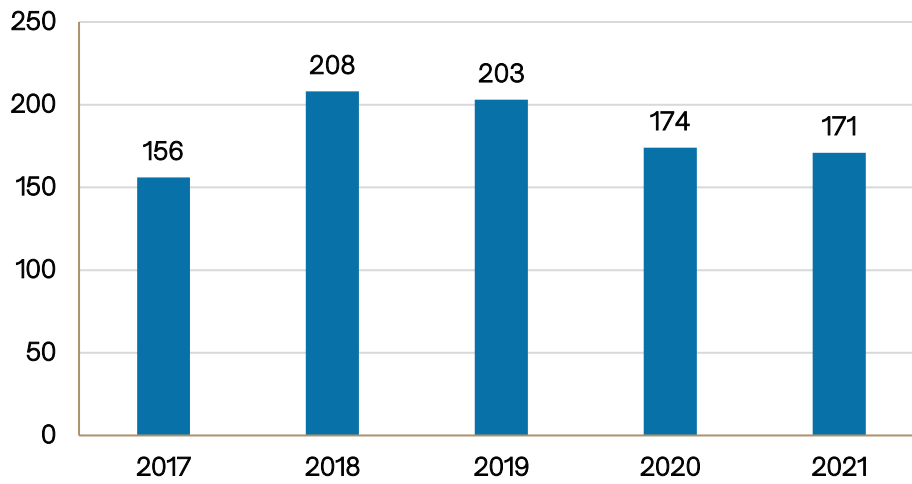
Customer Service includes code consultations, other plan reviews, and all other customer service activities.



Alarm Monitoring and Reporting

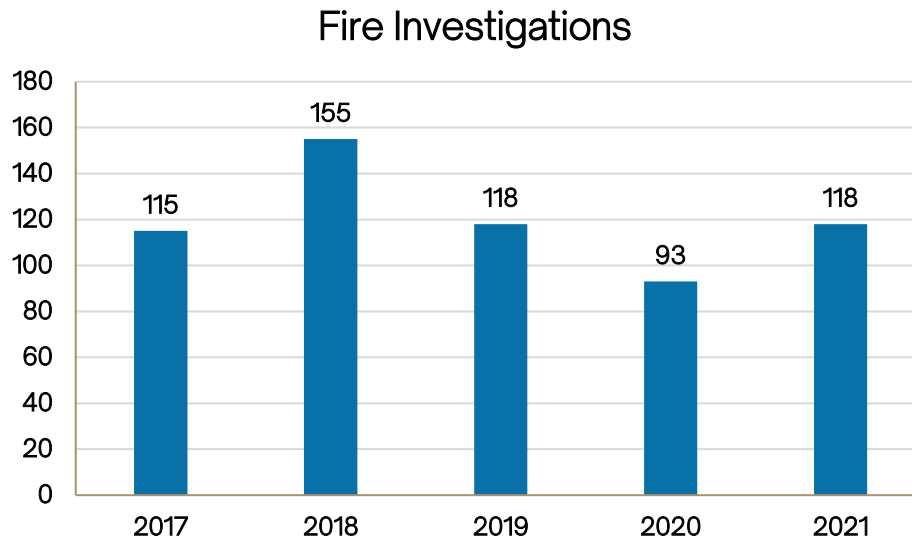
The Town of Wethersfield has its own fire alarm receiver in the Town Dispatch Center. The fire alarm receiver monitors all town schools, and housing authority buildings equipped with fire alarms. This totals approximately 20 buildings. The Fire Marshal is the caretaker of the system and works with the Town’s Information Technology Department and the Town Electrician to maintain the system. All Trouble Alarms route to the Fire Marshal for investigation and correction.

Alarm Monitoring / Reporting



Fire Investigations

Fire investigations occur when the origin and cause of a fire cannot be determined by the responding crews, a death or serious injury occurs, or when a criminal act, such as arson, is suspected. For large or serious incidents, the State Fire Marshal’s Office and the Fire and Explosion Investigations Unit (FEIU) of the Connecticut State Police are also available to assist.



Public Education

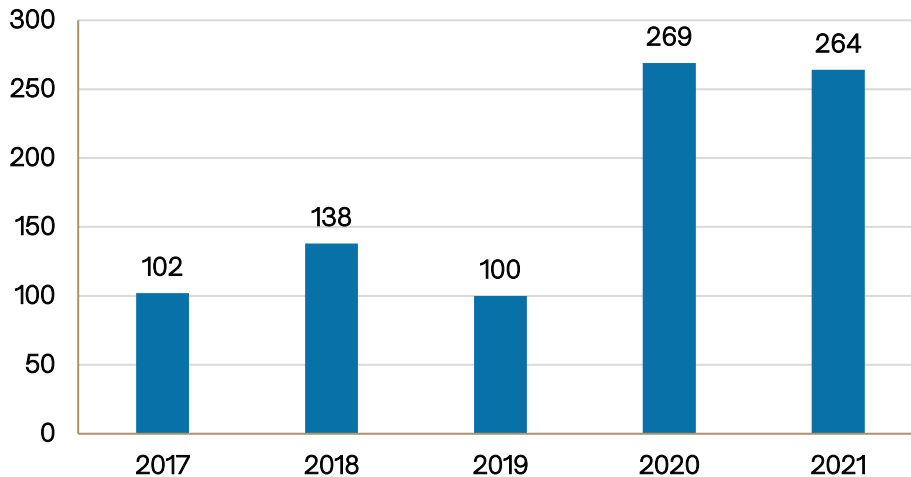
Public Education allows fire departments to educate the community and prevent accidents from occurring. Public Education includes:

- Fire Drills / Lockdown Drills
- Training / Fire Prevention
- Smoke and Carbon Monoxide Detector Installation
- Emergency Management

The Wethersfield Board of Education receives security and safety grants through the Department of Emergency Management and Homeland Security. Grant funding requires that the Wethersfield Fire Marshal’s Office monitors, critiques, and participates in all required fire drills and lockdown drills for all schools in Wethersfield, including three private schools.

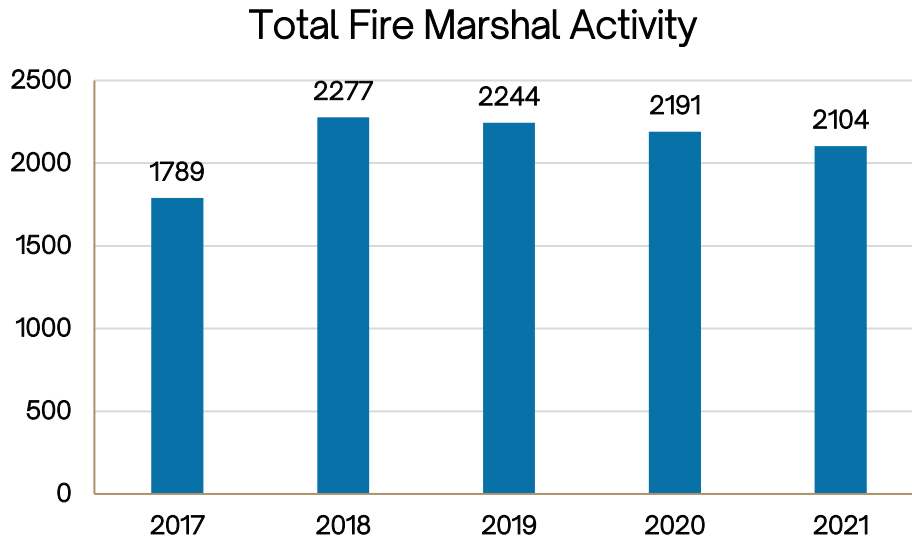
The Wethersfield Fire Marshal was appointed as the Town’s Emergency Management Director in 2019. The Lead Dispatcher serves as the Assistant Emergency Management Director.

Public Education / Fire Prevention



Total Fire Marshal Activity

Dynamix Consulting Group notes that while the year 2020 is considered an outlier because of the COVID-19 Pandemic and that 2021 is also not representative of the actual demand for service because the Fire Marshal’s Office was understaffed for part of the year due to a medical leave of absence, that overall, the Fire Marshal’s Office is getting busier. The office continues to absorb additional responsibilities such as Emergency Management and administrative support for the volunteer firefighters in addition to its traditional functions.



It is the opinion of Dynamix Consulting Group that the current staffing levels are not sufficient to allow prevention personnel to complete required inspections and other responsibilities charged to the Wethersfield Fire Marshal’s Office.

Capital Assets

If appropriate capital equipment is not available for use by emergency responders, it will be impossible to deliver services to the community effectively. The two primary capital assets that are essential to the provision of emergency response are facilities and apparatus.



Facilities

Three fire stations comprise the fixed facility assets of the Wethersfield Volunteer Fire Department. Dynamix Consulting Group visited each of the fire department facilities in November 2022 and categorized them according to the following criteria:

Fire Station Condition Classifications

Excellent	Like new condition. No visible structural defects. The facility is clean and well-maintained. The interior layout is conducive to function with no unnecessary impediments to the apparatus bays or offices. No significant defect history. Building design and construction match the building’s purposes. Age is typically less than 10 years.
Good	The exterior has a good appearance with minor or no defects. Clean lines, good workflow design, and only minor wear on the building interior. The roof and apparatus apron are in good working order, absent any significant full-thickness cracks or crumbling of the apron surface or visible roof patches or leaks. Building design and construction match the building’s purposes. Age is typically less than 20 years.
Fair	The building appears structurally sound with a weathered appearance and minor to moderate non-structural defects. The interior condition shows normal wear and tear but flows effectively to the apparatus bay or offices. Mechanical systems are in working order. Building design and construction may not match the building’s purposes well. Shows increasing age-related maintenance, but with no critical defects. Age is typically 30 years or more.
Poor	The building appears cosmetically weathered and worn with potential structural defects, although not imminently dangerous or unsafe. Large, multiple full-thickness cracks and crumbling concrete on the apron may exist. The roof has evidence of leaking and/or multiple repairs. The interior is poorly maintained or shows signs of advanced deterioration with moderate to significant non-structural defects. Problematic age-related maintenance and/or major defects are evident. May not be well suited for its intended purpose. Age is typically greater than 40 years.

Wethersfield Volunteer Fire Department Facility Evaluation

Wethersfield Volunteer Fire Department Facilities	Photo	Address	Condition	Notes
Company 1		171 Main Street	Fair	No Electronic Access Control Requires improved cancer prevention engineering Back-In Bays No Sleeping Facilities
Company 2		188 Griswold Road	Fair	No Electronic Access Control Requires improved cancer prevention engineering Back-In Bays No Sleeping Facilities
Company 3		Keleher Court	Fair	No Electronic Access Control Requires improved cancer prevention engineering Back-In Bays No Sleeping Facilities

Access Control

Fire stations were historically places where residents and visitors from the community accessed any part of a fire station with very few limitations. Unfortunately, the current social environment requires emergency services providers to implement specific security measures limiting and controlling access to fire rescue facilities. The need to protect firefighters drives the control of limited access, installation of expensive equipment, and protection of sensitive data from inadvertent access by individuals desiring to harm the community. Presently, fire station access in Wethersfield is by keys or key codes. This is not a reliable method for securing buildings as members can copy keys or share access codes. The town should consider installing electronic access control systems that monitor who enter and exits the buildings and allows the Town to turn off access to individuals as needed in all facilities.

Cancer Prevention Engineering

Firefighting is an occupation with higher rates and varieties of cancer than many other occupations. Regrettably, exposure to cancer-causing agents (carcinogens) does not end with fire extinguishment. Exposure for firefighters continues when returning to the fire station, and up until gear, equipment, and the firefighters themselves become “clean” of the carcinogens from the smoke and other products of the fire through decontamination efforts. Until this time, the risk of continued cross-contamination remains for the firefighters.

Within the Wethersfield Volunteer Fire Department, there are cancer prevention policies in place and firefighters have access to gear washers and extractors. Firefighters have received training and protocols for both cancer prevention and decontamination. To limit or reduce firefighter exposure to toxic products of combustion which occur *after the fire*, firefighters must store turnout gear in well-ventilated rooms to prevent additional firefighter exposure to off-gassing of chemicals absorbed into turnout gear during a fire.

None of the town’s fire stations have vehicle exhaust systems. Diesel engine exhaust emissions in fire stations expose firefighters to health risks, including certain types of cancers as well as pulmonary and cardiac diseases. NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Programs* recommends fire departments contain all vehicle exhaust emissions to a level of no less than 100 percent effective capture.

There is an exercise area set up in the bay of Station 3 and ice and soda machines in the bays at all three fire stations. These arrangements present additional opportunities for firefighter exposure to carcinogens from turnout gear not stored in well-ventilated rooms and exposure to off gasses not removed by exhaust systems.

The Town should consider steps to protect firefighters from cancer including pressurizing corridors to keep contaminants out of designated clean areas, private showers, providing a second set of turnout gear or access to a second set of turnout gear to all firefighters, installing vehicle exhaust systems in all of the bays, and relocating the current fitness area that is in the apparatus bay at Station 3 to a location where firefighters can exercise without exposure to the toxic products of combustion.

Back in Bays

All Wethersfield fire stations have “back-in bays.” The lack of drive-through bays at these facilities constitutes a safety concern as many firefighter injuries and accidents occur when backing emergency vehicles into the bays. Dynamix Consulting Group notes that all stations use “back in” procedures; however, drive-through bays are the recommended configuration. For all future buildings that will house apparatus, the Town should consider a design that allows for drive-through bays that are large enough to accommodate all frontline and reserve apparatus.

Future Facility Needs

Dynamix Consulting Group noted that, at the time of the November 2022 site visit, there was not an effective preventative maintenance plan in effect for the fire stations. The Town and Fire Department should work together to establish Building Maintenance Plans to ensure the regular maintenance and scheduled replacement of building systems and components such as Heating, Ventilation, and Air Conditioning (HVAC), generators, roofs, driveways, parking lots, painting, and carpet replacement, to keep the stations in good general repair. For example, during the November 2022 site visit, Dynamix noted that the exterior concrete stairs at Company 2 are crumbling and have become a trip hazard.

Future needs for the fire department also include adequate storage as there is presently equipment stored outside and in remote locations. This is not ideal to protect equipment from the elements or for having it readily available for emergency response.

Dynamix Consulting Group also suggests the Town should begin planning to renovate one or more of the fire stations to include sleeping quarters. Some local towns have successfully built apartments in or adjacent to their fire stations, where volunteer firefighters live in return for responding to emergency calls and paying a nominal monthly rent. These sleeping quarters would also be necessary if the fire department were to eventually staff with paid firefighters as well.

Apparatus Replacement Methodology

The Wethersfield Volunteer Fire Department does not have a current Fire Apparatus Replacement Plan. In evaluating the Wethersfield Volunteer Fire Department fleet, leadership should consider a variety of factors in determining the department's operational capabilities and developing an apparatus replacement plan. These considerations include age, cost of operation (i.e., repair costs), and out-of-service time. As with any mechanical device, a fire apparatus possesses a finite life. Fire departments typically classify emergency responses as either being frontline or reserve. At a point when a frontline apparatus reaches a certain threshold regarding age or wear and tear, or begins to require increasing maintenance costs, it is either moved to reserve status or decommissioned. The decision to move an apparatus to reserve status or decommission is a local decision and no definitive industry standards or fixed rules exist. However, Annex D of NFPA 1901: *Standard for Automotive Apparatus* (2016) suggests the following:

It is recommended that apparatus more than 15 years old should that have been properly maintained and that are still in serviceable condition be placed in reserve status; be upgraded in accordance with NFPA 1912⁹; and incorporate as many features as possible of the current fire apparatus Standard (see Section D.3). This will ensure that, while the apparatus might not totally comply with the current editions of the automotive fire apparatus standards, many of the improvements and upgrades required by the current editions of the standards are available to the firefighters who use their apparatus.

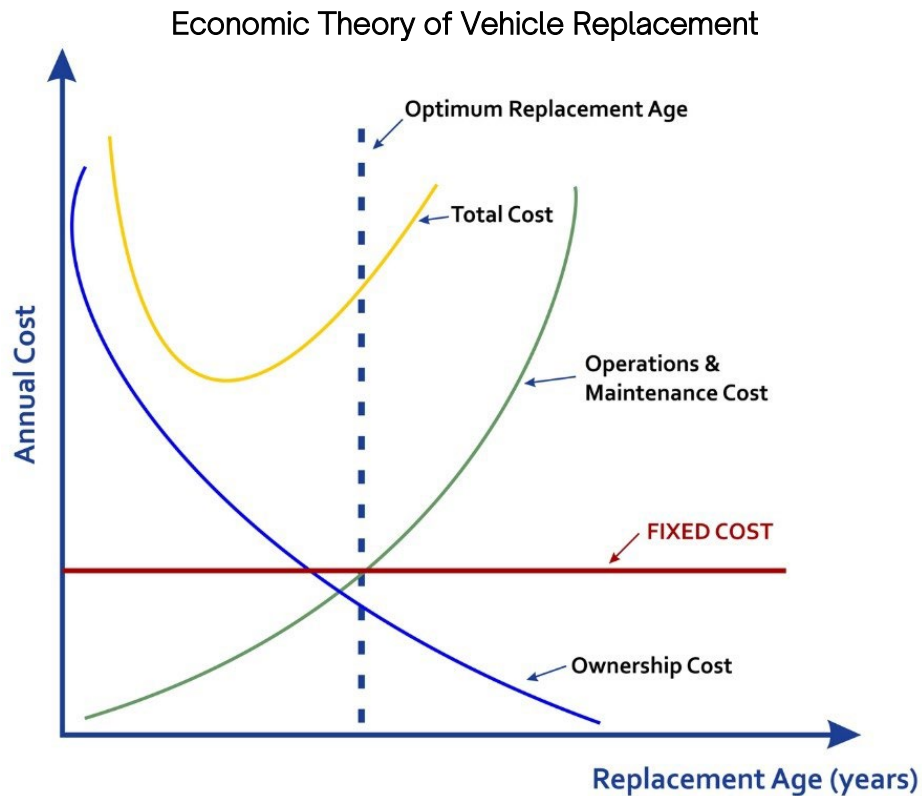
Apparatus not manufactured to the applicable NFPA fire apparatus standards or that are over 25 years old should be replaced.

This is a general guideline, and the standard recommends using the following objective criteria in evaluating fire apparatus lifespan:

- Vehicle road mileage
- Engine operating hours
- The quality of the preventative maintenance program
- The quality of the driver-training program
- Whether the department's use of the apparatus occurred within its design parameters
- Whether the fire apparatus was manufactured on a custom or commercial chassis
- The quality of workmanship by the original manufacturer
- The quality of the components used in the manufacturing process
- The availability of replacement parts

⁹ *Standard for Apparatus Refurbishment*

A conceptual model available when considering a replacement cycle is the Economic Theory of Vehicle Replacement. The theory states that as a vehicle ages, the cost of capital diminishes, and its operating cost increases. The combination of these two costs produces a total cost curve. The model suggests the optimal time to replace any piece of apparatus is when the operating cost begins to exceed the capital costs. This optimal time may not be a fixed point but rather a range over time. The flat spot at the bottom of the total curve in the following figure represents the replacement window.



Dynamix Consulting Group suggests that aligning the replacement cycle to this window allows for apparatus replacement at optimal savings to the Town. If the town does not routinely replace apparatus in a timely manner, the overall reduction in replacement spending can result in a quick increase in maintenance and repair expenditures. Officials who assume that deferring replacement purchases is a good tactic for balancing the budget must understand that two events may occur:

- Costs transfer from the capital budget to the operating budget.
- Such deferral may increase overall fleet costs.

Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs. For this reason, Dynamix Consulting Group advises clients that the day a new piece of fire apparatus arrives, they should start to set funds aside for its replacement. Each piece of fire apparatus and the related support equipment has a predictable expected useful service life based on a practical balance of use and maintenance cost. By analyzing age, projected service life, and replacement costs with an inflation factor, the department can establish a replacement schedule that looks farther into the future than simply the annual budget process enabling the agency to forecast future financial demands and plan more effectively for them.

The following figure is one example of criteria available for determining apparatus replacement based on a points system. The method examines not only the age of the apparatus, but also apparatus mileage or hours, service, condition, and general reliability. Consider all of these factors when developing an apparatus replacement plan for the Wethersfield Volunteer Fire Department.

Criteria & Method for Determining Apparatus Replacement

Evaluation Components	Points Assignment Criteria	
Age:	One point for every year of chronological age, based on in-service date.	
Miles/Hours:	One point for every 10,000 miles or 1,000 hours	
Service:	1, 3, or 5 points based on the service type received (e.g., a pumper would receive a 5 since it is classified as severe duty service).	
Condition:	This category takes into consideration body condition, rust, interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the assignment of points.	
Reliability:	1, 3, or 5 points depending on the frequency a vehicle is in for repair (e.g., a vehicle in the shop two or more times per month on average would receive a 5, while a vehicle in the shop an average of once every three months or less would receive a 1.)	
	Condition Rating	Condition Description
Under 18 points	Condition I	Excellent
18–22 points	Condition II	Good
23–27 points	Condition III	Consider Replacement
28 points or higher	Condition IV	Immediate Replacement

Vehicles, Boats, and Trailers

Shown below is the full inventory of the Fire Department’s 19 vehicles.

Dynamix Consulting Group observed the Wethersfield Volunteer Fire Department vehicles to be clean and in fair to good condition. Wethersfield Volunteer Fire Department units range in age from a high of 46 years of age to a low of just three years. By averaging the total apparatus list, Dynamix Consulting Group calculates an overall combined average of 17.74 years.

Fire Apparatus

Vehicle Year	Age in 2023	Vehicle Make	Vehicle Model	Other Description
1. 2020	3	Sutphen	Engine Pumper	Engine 21
2. 2020	3	Sutphen	Engine Pumper	Engine 31
3. 2019	4	Ford	F350	Utility 37
4. 2017	6	Zodiac	Inflatable Boat	Marine 26
5. 2016	7	Chevrolet	Tahoe	Car 1
6. 2014	9	Sutphen	Ladder Truck	Truck 22
7. 2013	10	Chevrolet	Tahoe	Car 2
8. 2009	14	Sutphen	Aerial Platform	Truck 12
9. 2007	16	Ford	F350	Utility 27
10. 2007	16	Other	Trailer	Storage Trailer
11. 2003	20	Sutphen	Fire Pumper	Engine 11
12. 2001	22	Other	Trailer	Deck Gun Trailer
13. 2001	22	Ford	Excursion	Command 14
14. 2000	23	Spartan	HD Rescue	Rescue 23
15. 1997	26	Sutphen	Pumper / Ladder	Truck 32
16. 1997	26	Ford	Pickup	Utility 17
17. 1992	31	Sutphen	Pumper (Spare)	Engine 33
18. 1990	33	Boston Whaler	Boat	Marine 16
19. 1977	46	GMC	Mini Pumper	Engine 15

Number and Types of Types of Apparatus

Dynamix Consulting Group noted that when comparing the number of volunteer firefighters who actively respond to emergency calls to the number of apparatuses, the Wethersfield Volunteer Fire Department is heavy on apparatus. Excluding the Chiefs’ vehicles, trailers, and boats, there are 11 fire apparatus and 1 spare fire engine in service for a total of 12 apparatuses. At the time of this report, there were 46 active members in the Wethersfield Volunteer Fire Department. This is an average of 3.8 volunteer firefighters for each fire apparatus maintained by the Town of Wethersfield. Dynamix Consulting Group further noted that five of these apparatus responded to an average of fewer than 10 calls per month during the last five years.

Average Number of Responses by Apparatus; 2017-2021

	2017	2018	2019	2020	2021	Total	Average Number of Responses Per Month 2017-2021
1. Engine 15	1.00	4.00	1.00	8.00	2.00	16.00	0.27
2. Utility 27	33.00	25.00	35.00	104.00	62.00	259.00	4.32
3. Engine 33 (Spare)	3.00	4.00	40.00	87.00	164.00	298.00	4.97
4. Utility 17	66.00	83.00	54.00	91.00	50.00	344.00	5.73
5. Utility 37	63.00	77.00	72.00	135.00	96.00	443.00	7.38
6. Truck 12	119.00	151.00	131.00	180.00	135.00	716.00	11.93
7. Truck 32	104.00	149.00	126.00	212.00	138.00	729.00	12.15
8. Truck 22	104.00	140.00	133.00	203.00	177.00	757.00	12.62
9. Rescue 23	135.00	150.00	167.00	159.00	162.00	773.00	12.88
10. Engine 11*	239.00	307.00	264.00	253.00	89.00	1152.00	19.20
11. Engine 21	217.00	300.00	259.00	379.00	311.00	1466.00	24.43
12. Engine 31	248.00	289.00	256.00	401.00	305.00	1499.00	24.98

* Engine 11 was out of service for approximately 6 months in 2021 for significant body and tank repairs.

The cost of maintaining apparatus places a significant burden on a fire department’s operating budget, in addition to the burden that replacement costs will incur on the capital budget. Dynamix Consulting Group recommends evaluating all apparatus in the Wethersfield Volunteer Fire Department fleet with the goal to eliminate apparatus that do not see regular use and do not serve a specific and necessary need.

Equipment

Dynamix Consulting Group commends the Town of Wethersfield for its aggressive Turnout Gear Replacement Program. Through all the listening sessions conducted with the town's volunteer firefighters, there was a unanimous consensus the department outfits firefighters with appropriately fitting turnout gear replaced before the condition deteriorates or the gear expires. This past year, the Town purchased 14 new sets of turnout gear.

The Town should work with the Wethersfield Volunteer Fire Department to create Equipment Replacement Plans for the rest of the high-value equipment in service within the fire department. Planning for the replacement of these items will eliminate the one-time expense needed to purchase 68 new Self-Contained Breathing Apparatus all at once. Other high-value equipment to consider including in the Equipment Replacement Plan are fire hoses, radios, defibrillators, thermal imaging cameras, and gas monitors.

Planning for Fire and Rescue Services

Mission, Vision, and Values

The mission of an organization creates focus, the vision provides direction, and the values define the expected behavior of the members of the organization.

Mission

A mission statement is an explanation of the organization's reason for existence. The mission statement supports the vision and communicates purpose and direction to employees, customers, and other stakeholders. The mission statement should answer the questions, "What is our organization's purpose?" and, "Why does our organization exist?"

According to the Lucas Group¹⁰, there are three key areas where mission statements really help to transform the employee experience and ultimately drive productivity¹¹:

- 1. Clarity in organizational values helps employees prioritize better.**

When the entire organization aligns with a clear set of written objectives that are visible to everyone, employees make the right decisions about how to allocate their time and effort. A clearly articulated mission statement also helps employees to know what not to do because all potential activities can be evaluated based on whether they support the mission.

- 2. Mission statements help employees find meaning in their work.**

A good mission statement shows employees how their work will improve the lives of their customers, their community, and even the world. An example of this is the clothing manufacturer Patagonia's mission statement: *"Build the best product, cause no unnecessary harm, use business to inspire and implement solutions to the environmental crisis"* Basic human nature is to want to be part of something bigger than oneself. When employees understand how their work contributes toward a larger goal, they find meaning in their work. This creates a sense of ownership which leads to a stronger commitment to the work and improved productivity.

¹⁰ The Lucas Group is rated in the top 10 by Forbes as both one of America's Best Professional Recruiting Firms and one of America's Best Executive Recruiting Firms

¹¹ <https://www.lucasgroup.com/your-career-intel/mission-statements-matter/>

3. A strong mission statement helps employees to become ambassadors.

A great mission statement defines why a company exists and what makes it different than every other competitor. When employees can articulate why the company is the best, they become more passionate about being part of the organization. This makes them effective brand ambassadors.

The mission of the Wethersfield Volunteer Fire Department as stated on the department's website is:

The Wethersfield Volunteer Fire Department's Mission is to maintain an adequate number of highly trained and professional individuals who are provided with the safest and latest personal protective equipment and provided with the tools necessary to do the functions that they are called upon to perform. We will work to the best of our abilities, with the resources provided, to limit the impact of any emergency to which we respond on life, the environment, and property.

Dynamix Consulting Group suggests that the only thing more important than having a solid mission statement is to regularly reevaluate this mission statement. The changing needs of communities, especially during the current global COVID-19 Pandemic, have placed changing demands on the fire service. While the fire service nationally has risen to the occasion, it is important to pause in the organization to realign the mission with the services it provides and then communicate this information verbally and in writing to every member. This keeps the entire organization focused and working together to achieve the same goals and objectives.

The process of reevaluating a fire department mission statement, when done correctly, will create buy-in from the members and employees. Bringing together a cross-section of the members of the fire department to discuss the mission, and potentially how it has or needs to change, shows that the department values the input from its members. Adopting an updated mission statement based on this input further reaffirms the department values the member's input.

The Wethersfield Volunteer Fire Department should reevaluate and update its mission statement and then communicate this updated mission statement both verbally and in writing to all members of the organization and the community. The updated mission statement should then be visible to all the fire companies. It is critical that every member of the Wethersfield Volunteer Fire Department understands the mission and priorities, so decisions at all levels of the organization focus on the same priorities.

Vision

A vision statement establishes the ideal image the organization wishes to achieve. The vision statement should answer the questions, “Where are we headed?” and, “If we achieved all strategic goals, what would we look like 10 years from now?”

Dynamix Consulting Group did not find any evidence of a Vision Statement for the Wethersfield Volunteer Fire Department. Provided below is a sample Vision Statement.

Sample Vision Statement

To be the premier emergency services provider in our region that is constantly striving for excellence in service delivery through education, innovation, teamwork, and collaboration.

Values

An organizational values statement includes the core principles that guide the organization and its culture. In a values-led organization, the values guide decision-making and establish a standard to assess actions. The values statement should answer the questions, “What values should guide the operations of our organization?” and, “What conduct should our personnel uphold?” The Organizational Values Statements should clearly identify the values that guide the operations of the fire department, upheld by all members.

Dynamix Consulting Group did not find any evidence of a Values Statement for the Wethersfield Volunteer Fire Department. Provided below is a sample Values Statement.

Sample Organizational Values

Our core values are driven by:

<i>Accountability</i>	<i>Personal, to each other and our community</i>
<i>Compassion</i>	<i>We demonstrate kindness and empathy</i>
<i>Dedication</i>	<i>We are committed to our organization and community</i>
<i>Ethics</i>	<i>We will consistently strive to always do the right thing</i>
<i>Honesty</i>	<i>Truth and fairness in endeavors large and small</i>
<i>Integrity,</i>	<i>We adhere to sound moral principals</i>

Ideally, the Wethersfield Volunteer Fire Department will, following the completion of this *Fire Department Evaluation*, work to establish clear mission and vision statements as well as relevant organizational values during the Strategic Planning process. Just as the operations of the fire service are dynamic, so are the guiding principles of the organization. These components can change as the department and community change.

Organizational Planning Process

Now, more than at any other time in United States history, fire, and emergency services agencies operate in a rapidly changing environment. Along with improved tools and technologies used to provide service, there is increased regulation of activities, new risks to protect, and other challenges that can quickly catch the unwary off guard. Only through continuous internal and external environmental awareness, and periodic course corrections, can an organization stay on the leading edge.

To be truly effective, the Wethersfield Volunteer Fire Department must consider planning on four distinct levels:

Organizational Planning Processes

Planning Level	Description
1. Tactical Planning	The development of strategies for potential emergency incidents.
2. Operational Planning	The organization of day-to-day activities, as primarily outlined by a department's standard operating guidelines and procedures. This includes the integration of the agency into other local, regional, or national response networks.
3. Master Planning	Preparation for the long-term effectiveness of the agency as the operating environment changes over time.
4. Strategic Planning	The process of <i>identifying</i> an organization's mission, vision, and values <i>and prioritizing goals and objectives</i> for things to accomplish in the near future.

Without effective planning, no organization can know when it is reaching milestones or providing exceptional services to its constituency. The National Fire Protection Association established NFPA 1600: *Standard on Disaster/Emergency Management and Business Continuity/Continuity of Operations Programs* and NFPA 1201: *Standard for Providing Fire and Emergency Services to the Public*, as standards to assist fire departments in establishing and maintaining planning documents and conducting planning activities.

Tactical Planning

Beyond the fire station, the firefighter's emergency operational work environment is, more often than not, an unknown environment. Normally, a firefighter's first visit to a building occurs during a fire or another emergency. In the case of a fire, the internal environment is at its worst. Contrary to movie portrayals, visibility during a fire is at or near zero due to smoke. When firefighters are unfamiliar with building layouts, equipment, hazards, and unfamiliar processes, they experience the risk of becoming disoriented, lost, or suffering an injury.

It is critically important that firefighters and command staff have comprehensive, accurate information readily at hand to identify hazards, direct tactical operations, and use built-in fire-resistive features. Building familiarization tours, developing pre-fire or pre-incident plans, and conducting tactical exercises, either on-site or by tabletop simulation. Is the only way to accomplish this familiarity.

The Wethersfield Volunteer Fire Department completed approximately 37 pre-incident plans for properties in town. The department stores these pre-incident plans on a shared Google Drive accessible through the iPads in the fire apparatus. The Fire Marshal's Office is currently working to complete additional preplans.

It is critically important that firefighters and command staff have comprehensive, accurate information readily at hand to identify hazards, direct tactical operations, and use built-in fire-resistive features. Administrators can best accomplish this through building familiarization tours, developing pre-fire plans, and conducting tactical exercises, either on-site or by tabletop simulation.

The Wethersfield Volunteer Fire Department advised Dynamix Consulting Group during the site visit of a transition in its Records Management System from Firehouse Software to Alpine's RedNMX. This program includes a module specifically designed to capture pre-incident plan information and to make it readily accessible to fire department personnel. Dynamix Consulting Group recommends the Town develop a plan for the members of the Fire Marshal's Office to complete pre-incident plans for occupancies in town as they complete their required life safety inspections and that this information be kept up-to-date and accessible to all fire department personnel in RedNMX.

Operational Planning

Operational planning includes the establishment of minimum staffing policies, standardized response plans or protocols, regional incident command planning, mutual and automatic aid planning (locally and regionally), resource identification and planning, and disaster planning. In the absence of these documents, an organization will tend to operate in a random and generally ineffective manner.

Within any fire department, operational plans should be in place that ensures adequate and appropriate types of resources deployed to an emergency. Doing so involves:

- Identification of potential risk types
- Determination of resources needed to mitigate an incident affecting the particular risk type; and
- A methodology of ensuring the dispatching of adequate resources to an incident via the Public Safety Communications Center Protocols.

Wethersfield Volunteer Fire Department Bylaws and Standard Operating Policies

The Wethersfield Volunteer Fire Department last updated the Bylaws in 2011. Dynamix Consulting Group reviewed these 2011 Bylaws, and while they were reflective of the normal practices in Connecticut Fire Service at the time they were adopted, the time has come for the Wethersfield Volunteer Fire Department to update its operations. The Wethersfield Volunteer Fire Department last completed a comprehensive overhaul of its Bylaws in 2016. The fire department essentially stopped following the 2011 Bylaws at this time, but never adopted the 2016 revised Bylaws. Members of the fire department shared multiple examples of situations in recent years where they perceived members of the fire department receiving treatment inconsistent from other members of the fire department and inconsistent with the department's Bylaws.

The Wethersfield Volunteer Fire Department Standard Operating Policies are comprised of three books – Organization and Administration, Routine Operations, and Emergency Operations – that include 170 policies. Of these 170 policies, two are “under review by the Town” (04-11: Town Vehicles and 04-12: Vehicle Accident – Town Vehicle) and one Standard Operating Procedure was updated on January 1, 2008. The other 167 Standard Operating Policies are all more than 15 years old, having all been issued on April 1, 2007.

The Wethersfield Volunteer Fire Department's Bylaws and Standard Operating Procedures require a complete review. Dynamix Consulting Group suggests that as the Wethersfield Volunteer Fire Department plans for the future delivery of fire service in the community, it may be an opportune time to completely replace the bylaws with updated Fire Department Policies that are issued by the Fire Chief. Empowering the Fire Chief to issue policies creates an efficient mechanism to immediately replace outdated bylaws with policies that meet current industry standards and best practices. The Fire Chief can request assistance from members of the fire department or outside resources when developing these policies, but as the authority issuing such policies, changes can occur going forward as needed without a vote of the membership. This may also be a good time to change the promotional process from a popular vote to an assessment center with interviews to further professionalize the Wethersfield Volunteer Fire Department.

Dynamix Consulting Group suggests that in whatever manner the Wethersfield Volunteer Fire Department and Town of Wethersfield chose to update the current Bylaws and Standard Operating Policies, the priority becomes updating, implementing, and consistently following the new policies and Bylaws as soon as possible. Following a complete review of the governing documents for the Wethersfield Volunteer Fire Department, leadership should establish a review schedule to review and update every policy no less than every three years. This review should also include an annual gap analysis to identify the need for new rules and regulations.

Master Planning

Master or long-range planning is preparation for Wethersfield Volunteer Fire Department's future service delivery effectiveness based on projections of the future service delivery environment. This long-range master plan focuses on the big-picture perspective and distant future needs of the fire department and community. Fire service organizations that engage in a long-range master planning process will be able to utilize this valuable information to answer the following three questions:

1. Where is the organization today?
2. Where will the organization need to be in the future?
3. How will this organization get there?

The Town of Wethersfield contracted Dynamix Consulting Group to conduct a *Fire Department Evaluation*. This evaluation will provide the Town with a clear picture of the current conditions of the fire department based on an in-depth evaluation. The *Fire Department Evaluation* will also project some of the future fire services needs of the Wethersfield Volunteer Fire Department, along with providing strategies to meet them.

Dynamix Consulting Group notes that the scope of work for a master plan is more comprehensive than that of a *Fire Department Evaluation*. The master plan traditionally includes a full community risk assessment of the environment in which the emergency service operates and provides a deeper analysis of the details of an organization than exists within an agency evaluation. The evaluation provided by Dynamix Consulting Group will provide a strong foundation for a master plan should the Town of Wethersfield choose to engage in the master planning process either internally or with outside assistance. Master Plans typically include a 10-15-year planning period.

Strategic Planning

Strategic planning supports the organization's mission and sets and prioritizes short-term internal goals. A strategic plan typically involves a three-to-five-year planning window. Community involvement in the process is critical, as the strategic plan should be customer-oriented while accomplishing the following:

1. Development of a mission statement giving careful attention to the services currently provided and potentially provided in the future.
2. Development of a vision statement for the agency moving forward.
3. Establish the values of the members of the agency.
4. Identification of the strengths, weaknesses, opportunities, and challenges of the agency.
5. Determination of the community's service priorities.
6. Understanding the community's expectations of the agency.
7. Establishment of realistic goals and objectives for the future.
8. Identification of implementation tasks for each objective.
9. Definition of service outcomes in the form of measurable performance objectives and targets.
10. Identification of personnel in charge of each objective and associated work timelines.

At the time of this report, there was not a strategic plan in place for the Wethersfield Volunteer Fire Department. Ideally, the leadership of the Town of Wethersfield will accept the *Fire Department Evaluation* or some variation of the study. The recommendations, guidance for changes, and new initiatives detailed within the *Fire Department Evaluation* will provide direction for developing a strategic plan. This is the most effective way to prioritize and plan for the implementation of the *Fire Department Evaluation* findings.

The strategic planning process would ideally result in a three-to-five-year work plan, intended to guide the work effort of the entire organization toward a common set of goals and objectives. The process should include representation from every major interest group in the organization. Each firefighter should feel that someone represents their interests through attendance on the planning team.

Response Standards and Targets

Three main factors lead to the successful mitigation of emergencies; sufficient numbers of well-trained *personnel*, arriving on reliable and well-equipped *apparatus* appropriate to the task at hand, and *quickly enough* to make a positive difference in property preserved or lives saved.

The previous sections of this report have laid out the current staffing levels, facilities and equipment, and response performance for Wethersfield Volunteer Fire Department. The following describes the consequences of failing to deliver sufficient personnel and equipment early enough to mitigate the emergency.

Dynamics of Fire in Buildings

Most fires within buildings develop predictably unless influenced by highly flammable material. Ignition, or the beginning of a fire, starts the sequence of events. It may take several minutes or even hours from the time of ignition until a flame is visible. This smoldering stage is very dangerous, especially during times when people are sleeping, since the fire generates large amounts of highly toxic smoke during this phase.

Once flames do appear, the sequence continues rapidly. Combustible material adjacent to the flame heat and ignite, which in turn heats and ignites other adjacent materials if sufficient oxygen is present. As the objects burn, heated gases accumulate at the ceiling of the room. Some of the gases are flammable and highly toxic.

The spread of the fire from this point continues quickly. Soon the flammable gases at the ceiling as well as other combustible material in the room of origin reach ignition temperature. At that point, an event termed “flashover” occurs; the gases and other materials ignite, which in turn ignites everything in the room. Once a flashover occurs, damage caused by the fire is significant and the environment within the room can no longer support human life. Flashover usually occurs about five to eight minutes from the appearance of flames in typically furnished and ventilated buildings. Since flashover has such a dramatic influence on the outcome of a fire event, the goal of any fire agency is to extinguish a fire before flashover occurs.

Although modern codes tend to make fires in newer structures more infrequent, today's energy-efficient construction (designed to hold heat during the winter) also tends to confine the heat of a hostile fire. In addition, research has shown that modern furnishings generally ignite more quickly and burn hotter (due to synthetics). In the 1970s, scientists at the National Institute of Standards and Technology found that after a fire broke out, building occupants had about 17 minutes to escape before becoming overcome by heat and smoke. Today, that estimate is as short as three minutes.¹² The necessity of effective early warning (smoke alarms), early suppression (fire sprinklers), and firefighters arriving on the scene of a fire in the shortest period is more critical now than ever.

The prompt arrival of at least four personnel is critical for structure fires. Federal regulations (29 CFR 1910.134) require that personnel entering a building involved in fire must be in groups of two. Further, before personnel can enter a building to extinguish a fire, at least two personnel must be on the scene and assigned to conduct search and rescue in case the fire attack crew becomes trapped. The fire and emergency services industry refers to this as the two-in, two-out rule. However, if responders know or suspect victims to be trapped inside the building, a rescue attempt can be performed without additional personnel ready to intervene outside the structure. Further, there is no requirement that all four arrive on the same response vehicle. Many fire departments rely on more than one unit arriving to initiate an interior fire attack.

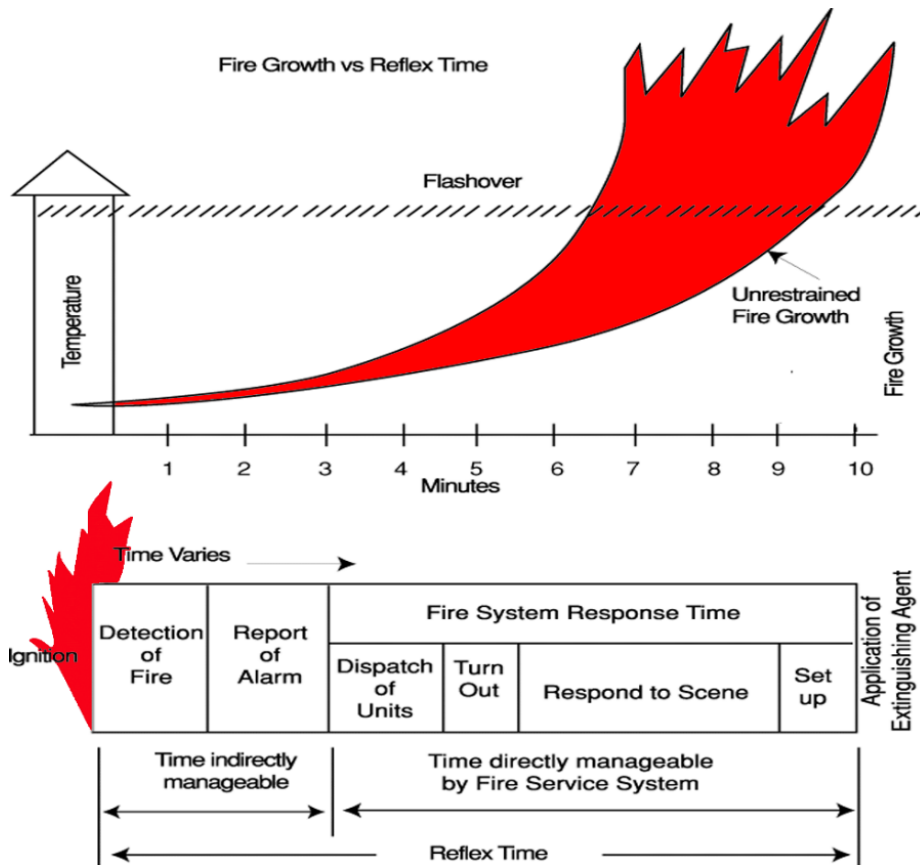
Perhaps as important as preventing flashover is the need to control a fire before it does damage to the structural framing of a building. Materials used to construct buildings today are often less fire-resistive than the heavy structural skeletons of older frame buildings. Roof trusses and floor joists are manufactured with lighter materials that weaken more easily from the effects of fire. "Lightweight" roof trusses fail after five to seven minutes of direct flame impingement. Plywood I-beam joists can fail after as little as three minutes of flame contact. This creates a dangerous environment for firefighters.

In addition, the contents of buildings today have a much greater potential for heat production than in the past. The widespread use of plastics in furnishings and other building contents rapidly accelerates fire spread and increases the amount of water needed to effectively control a fire. All these factors make the need for early application of water essential to a successful fire outcome.

The next figure illustrates the sequence of events during the growth of a structure fire over time.

¹² *National Institute of Standards and Technology, Performance of Home Smoke Alarms, Analysis of the Response of Several Available Technologies in Residential Fire Settings, Bukowski, Richard, et al.*

Fire Growth vs. Reflex Time



As is apparent by this description of the sequence of events, the application of water in time to prevent flashover is a serious challenge for any fire department. It is critical, though, as studies of historical fire losses can demonstrate.

The National Fire Protection Association (NFPA) found that fires contained to the room of origin (typically extinguished before or immediately following flashover) had significantly lower rates of death, injury, and property loss when compared to fires that had an opportunity to spread beyond the room of origin (typically extinguished post-flashover). As evidenced in the following figure, fire losses, casualties, and deaths rise significantly as the extent of fire damage increases.

Fire Extension in Residential Structures¹³

Fire Extension	Rates per 1,000 Fires		
	Civilian Deaths	Civilian Injuries	Average Dollar Loss Per Fire
Confined to the room of origin or smaller	1.8	24.8	\$4,200
Confined to the floor of origin	15.8	81.4	\$36,300
Confined to the building of origin or larger	24.0	57.6	\$67,600

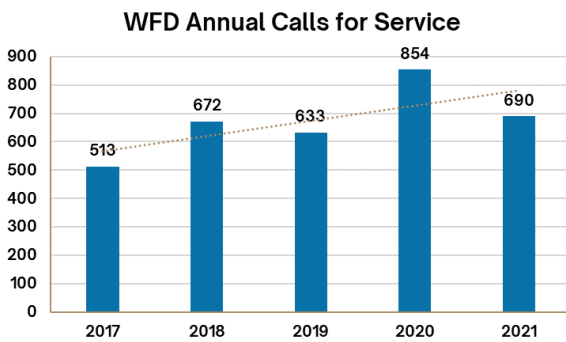
¹³Source: National Fire Protection Association

Service Delivery

One of the most visible elements of a fire department is its response performance. How quickly units arrive on the scene and the efficiency with which they resolve emergencies could be the only interaction most residents will have with the organization. The Town of Wethersfield provides fire suppression and extrication services using volunteer firefighters deployed from three fire stations within the Town.

Service Demand by Incident Type

Demand for services is what drives the need for public safety organizations. As service demands and demographics of the community change over time, so should the fire companies. This section provides an overview of the total demand for the Town, as well as call volume for individual companies providing services.

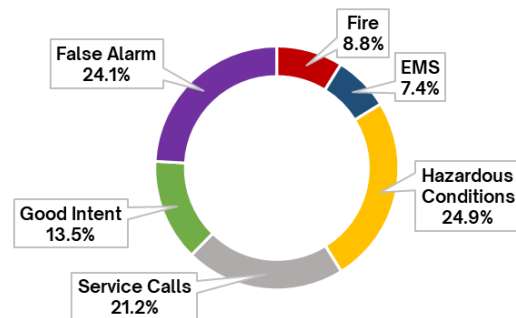


Demand for services increased 66.5% from 2017 to 2020 and although a decline occurred in 2021, demand has still risen 34.5% from 2017 to 2021. Additionally, as the membership of the volunteer fire companies has diminished, so fewer volunteers must absorb this rise in call volume. This is important to understand because as the demand for services on Wethersfield’s volunteer firefighters

increases with fewer members to absorb the load, it is likely that burnout and fatigue will further impact membership and participation, exacerbating the problem.

A review of incident types and their relative frequency indicates that a majority, 58.9%, of the incidents the Wethersfield Volunteer Fire Department responded to were nonemergent. This is particularly troubling as each of these incidents represents a request upon volunteers to leave their families or jobs to respond to an incident to which their response was unnecessary. Nonemergent call types include False Alarms, Service Calls (requesting nonemergency assistance), and Good Intent (caller believed that there was an emergency when in fact, there was none, or the unit cancels enroute).

Service Demand by Frequency 2017-2021

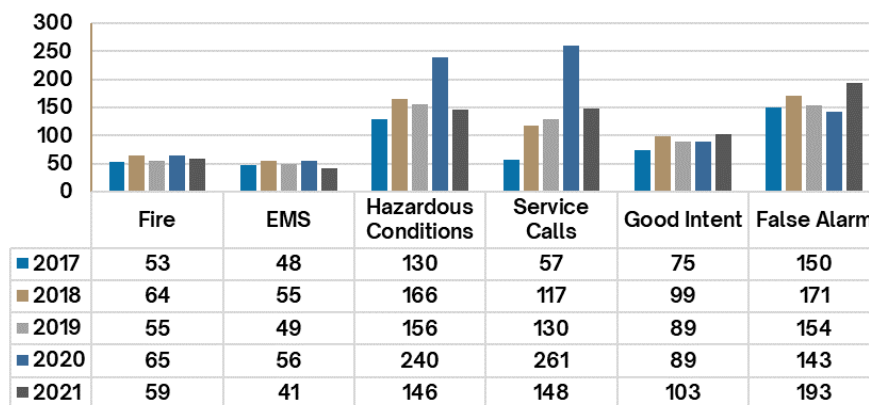


The Town of Wethersfield has a False Alarm Ordinance to reduce the number of false alarms reported to the fire and police departments with a fee structure established for multiple false alarms. The police department, via the communications center, coordinates the billing for this ordinance; however, when the communications center receives an alarm, it is assumed to be an actual emergency until responders confirm no emergency exists and deem it a false alarm. In the case of the fire department responding to false alarms, no information regarding the final determinate (or what the responders deemed the incident to be) is currently forwarded to the communications center. This most likely explains the extremely high incidents of false alarms across multiple years and why the False Alarm Ordinance does not appear to be working. The Wethersfield Fire Marshal’s Office and the Police Department should review the existing False Alarm Ordinance to ensure that it meets the current needs of the Town and further establish a defined communication process to report all false alarms and addresses to the communications center as well as follow up with building owners to ensure the proper maintenance and inspection of alarm systems.

Fire represented nearly 9% of demand, EMS 7.4%, and Hazardous Conditions nearly 25%. This number of hazardous conditions call types is unusually high when compared to most organizations. Wethersfield Volunteer Fire Department should consider implementing a Quality Assurance (QA) program to ensure accuracy when creating incident reports as well as free training on the National Fire Incident Reporting System (NFIRS) classifications offered through the National Fire Academy.

Finally, when grouping calls by call type and arranging calls by year, a large spike in demand for hazardous conditions and service calls appears. As this occurred in 2020 during the global pandemic, these increases could be at least partially to blame; however, there is a general upward trend in the three non-emergency call types year over year.

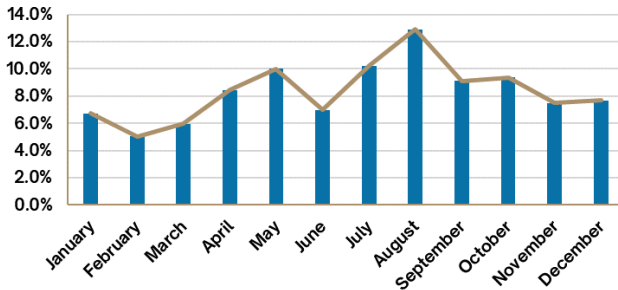
Annual Service Demand Totals by Call Type



Temporal Variation

Temporal variation describes the patterns that occur over time. When analyzed and tracked over time, these patterns provide valuable insight as to when demands for services are greatest and when they are lowest. This is particularly important because knowing when the majority of service demand is likely to occur allows administrators to plan accordingly based on anticipated demand and available resources.

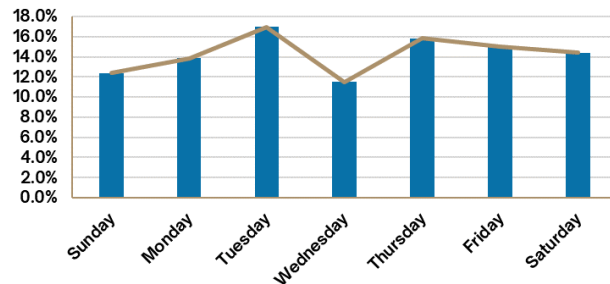
Service Demand by Month
11/1/19 - 10/31/22



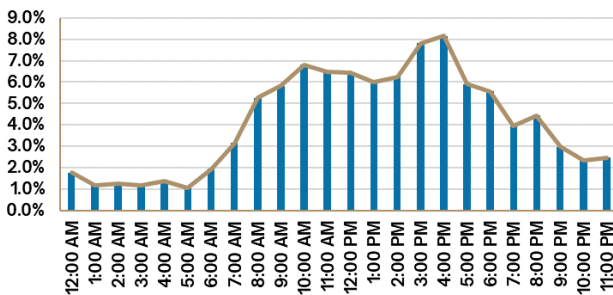
Service demand by month indicates the greatest levels of demand will occur during the late spring through the summer months when people tend to become more active outdoors. A significant drop occurred in June, which is counterintuitive to normal trends; however, it may be possible to account for this trend.

Service demand by week displays a typical pattern with increased activity during the workweek; however, the sharp decrease on Wednesdays is rarely observed and may suggest data loss. The highest levels of demand usually occur when people are most active and outdoors.

Service Demand by Day
11/1/19 - 10/31/22



Service Demand by Hour
11/1/19 - 10/31/22



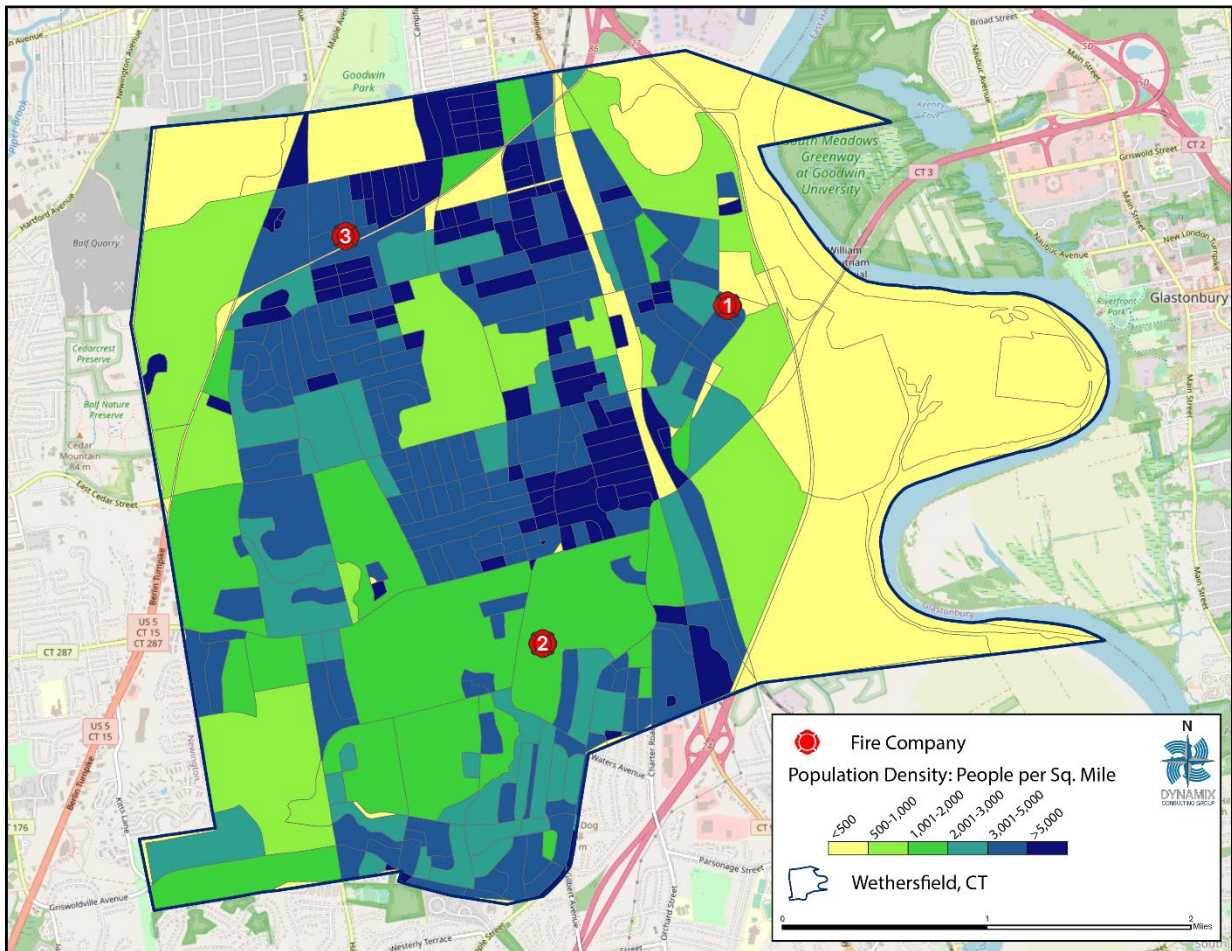
Finally, demand by the hour of the day also presents the expected pattern of activity when most people are awake and active. These patterns illustrate that the majority of service demand occurs near or during normal workweek hours and could present challenges for volunteers as they are also most likely at work during this time.

At the time of this report, insufficient data was available to determine when fires were most likely to occur in Wethersfield; however, knowing that nearly 60% of demand is non-emergency call types and most service requests occur during daytime workweek hours, the Town of Wethersfield should consider whether an alternate arrangement of response is appropriate for the Town.

Population Density and Geographical Demand

One of the best predictors of service demand is population density. It stands to reason that more people concentrated in a given area will result in higher demand in that area. While the specific demographics of a population can also affect the frequency of service requests, an understanding of the distribution of population densities is a fundamental element of developing an optimized deployment strategy. For incidents such as fires or major medical events such as cardiac arrest or severe traumatic injuries, the speed at which first-due resources can reach the incident scene will have a dramatic effect on the responder’s ability to resolve the event with a positive outcome. First depicted is the population density of the District by US Census Blocks using 2021 American Community Survey (ACS) estimates.

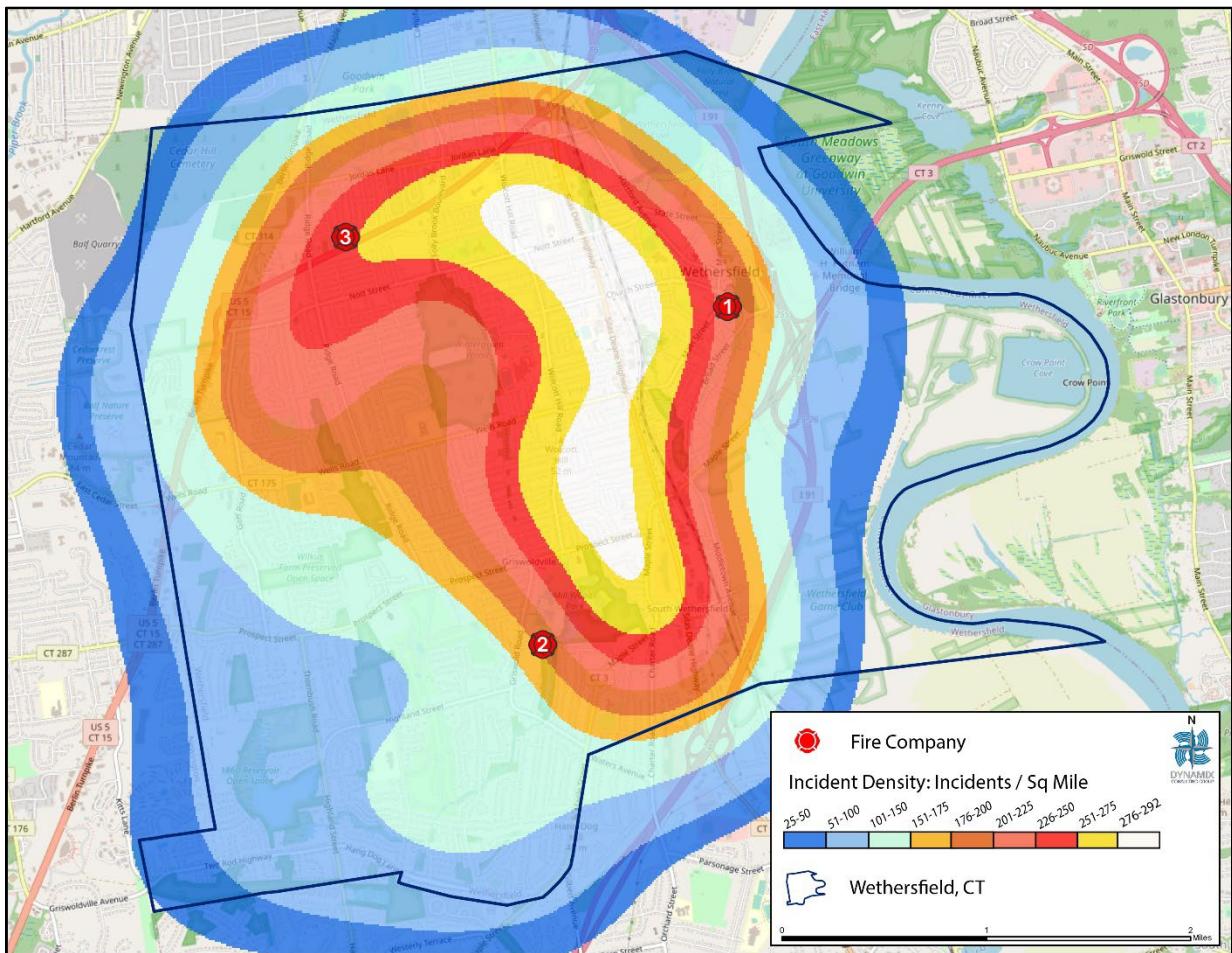
Population Density by 2022 Census Block – ACS Estimates



The areas of greatest population density occur through the center of the Town, in an approximately north-to-south direction. The eastern side of Wethersfield is rural and sparsely populated while the western side of Town has mixed pockets of population.

Next, using GIS software to conduct an incident density analysis, or Hot Spot analysis determines how commercial areas impact service demand within the Town. Law enforcement uses this type of analysis to identify areas of densest activity relative to other areas. While other areas may have a greater overall call volume, hot spots appear when multiple incidents occur near each other. This analysis does not suggest that a certain number of calls occurred in each area but instead provides a way to compare incident density in different areas across the Town. Depicted below is a Hot Spot analysis using incident data for all Wethersfield Volunteer Fire Department responses from 11/1/2019 – 10/31/2022.

Incident Density Analysis 11/1/2019 – 10/31/2022



Similar to the findings of the population density map, the densest activity occurs through the center of the Town moving roughly from north to south. The current locations of the three fire stations suggest that if units were available for response, this configuration should provide adequate coverage.

Resource Distribution Study

The distribution of available resources is one of the key methods to providing higher levels of service to the greatest number of residents possible. In this section is an evaluation of the Town using industry standards with a gap analysis. There are two main industry standards for evaluating and benchmarking volunteer fire department performance, NFPA 1720 and the Insurance Services Office (ISO) which uses proprietary evaluation criteria based on NFPA 1710.

NFPA 1720 Criteria

The National Fire Protection Association (NFPA) is an industry trade association that develops and provides standards and codes for fire departments and emergency medical services for local governments. One of these standards, NFPA 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*, serves as a national consensus standard for volunteer and combination fire department performance, operations, and safety. Although this standard differs slightly from its career standard counterpart NFPA 1710, for urban areas with population densities of 1,000 people per square mile, the two standards are similar, varying only in the metric selected to use (turnout, travel, or response time), 20 seconds less time overall to arrive on the scene with all required resources and the number of firefighters on the scene is one less (15 instead of 16). With an overall population density of 2,100 per square mile, the Town of Wethersfield is considered urban by NFPA 1720 definitions.

The standard identifies a response time (time from the initial notification until the resource arrives on the scene) of 9 minutes. This includes all required units and personnel. For perspective, the career standard NFPA 1710 requires the first unit turnout within 80 seconds, arrive on scene within a 4-minute travel time, and the balance of all remaining resources to arrive within 8 minutes of going enroute for a total of 16 firefighters if no aerial apparatus deploys. The 90th percentile is the metric for all measurements, which is explained further in the performance section.

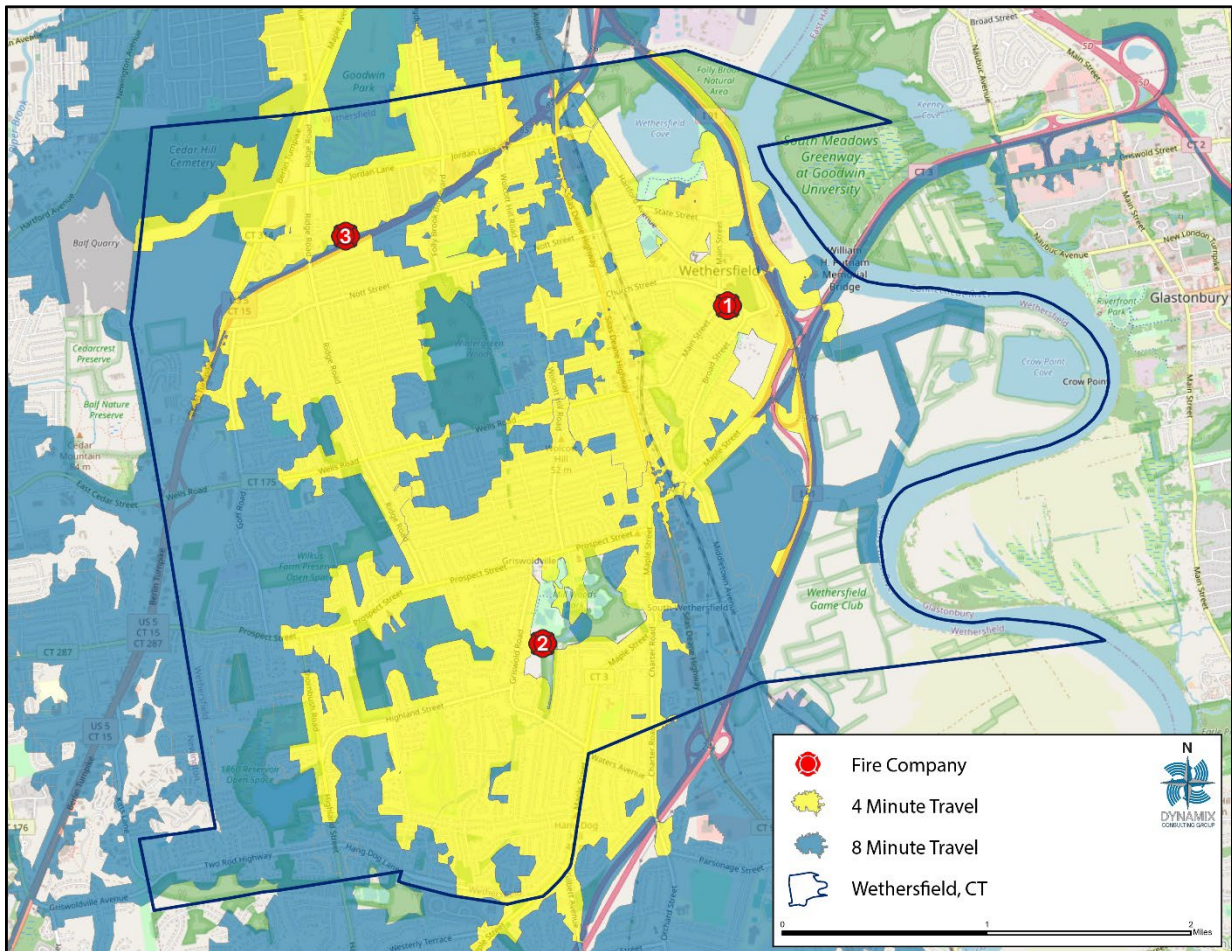
NFPA 1720 Table 4.3.2 Staffing and Response Time

Demand Zone	Demographics	Minimum Staff to Respond	Response Time (minutes)	Meets Objective
Urban Area	> 1,000 people/mi ²	15	9	90%
Suburban Area	500–1,000 people/mi ²	10	10	80%
Rural Area	< 500 people/mi ²	6	14	80%
Remote Area	Travel distance ≥ 8 mi	4	Directly dependent on travel distance	90%
Special Risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90%

Because turnout time, the time from initial notification until the unit begins traveling toward the scene, rolls into the response time within NFPA 1720’s standard, some debate could occur as to how well a fire department can provide coverage. Because of this, NFPA 1710 travel times of 4 minutes for the first unit and 8 minutes for all remaining resources provide a more detailed understanding of actual capabilities.

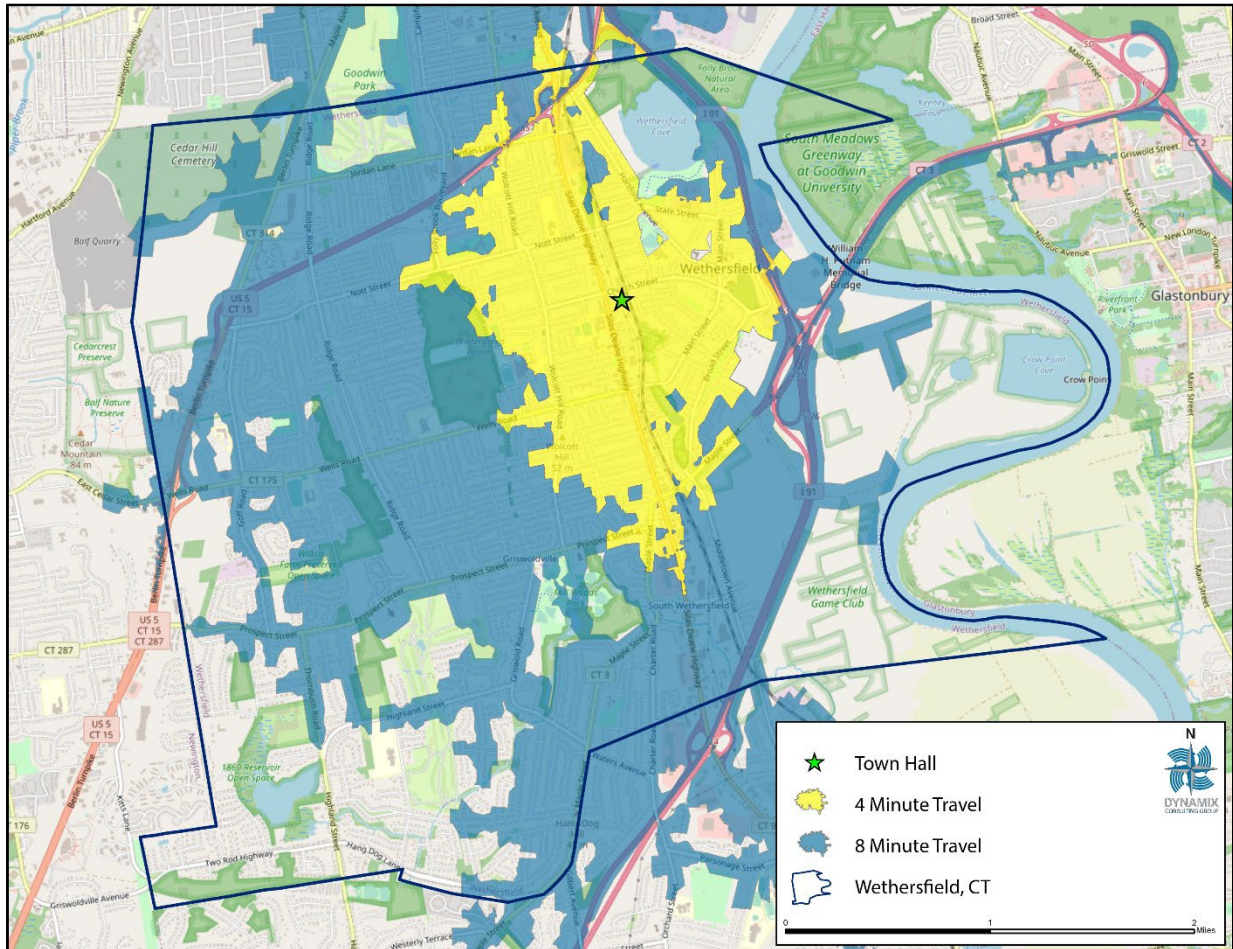
The following map provides a synopsis of the Town’s ability to meet these standards based on predicted travel times using historical traffic data from Esri for traffic patterns at 8 a.m. on Monday mornings. Unshaded pockets indicate the area falls outside of the model’s maximum extension from the road network.

Predicted Travel Performance – NFPA 1710 4- and 8-Minute Travel Times



While generally, the most intense areas of activity lie within 4 minutes of Station 1's coverage area, much of the densest activity lies greater than a 4-minute travel from a fire station. The next map illustrates the location of Town Hall, where fire prevention staff who are also firefighters, work during regular business hours.

Predicted Travel Performance with Town Hall – NFPA 1710 4- and 8-Minute Travel Times



Situated farther west than Station 1 and on a major roadway, deployment of Fire Marshal's Office staff from Town Hall during the daytime and workweek hours could provide a faster response to the areas with the greatest incident activity, while also providing relief to the volunteers. Since most incidents happen during the workweek, and because the majority of these incidents are nonemergent with nearly a quarter being false alarms, Wethersfield may consider sending a representative of the Fire Marshal's Office and only the first due volunteer fire company to activated fire alarms that are not accompanied by a 911 call reporting a fire and do not have activated smoke detectors or water flow alarms. Presently, all three volunteer fire companies are dispatched to all calls to ensure a response.

The modification of this response protocol would keep the volunteer firefighters at two of the town's three fire companies available for true emergencies and would also reduce the overall response burden on the volunteer firefighters. For this model of deployment to work safely and effectively, the Fire Marshal's Office requires at least two or more full-time staff; however, this would also help the Town in reducing false alarms, completing inspections, and providing public fire education.

In this model, Fire Marshal's Office staff can assist with decreasing the demands on volunteer firefighters during the daytime hours during the week while also completing other necessary functions. This model is not intended to replace volunteers during moderate-risk events such as structure fires; volunteers would still perform suppression functions. Additionally, for most nonemergency calls, a staff vehicle would be appropriate for the response as opposed to relocating an engine or aerial apparatus at Town Hall. Should the inspector deem the requirement of this type of response, they could request additional volunteer fire company activation, mutual aid, or send an inspector for an apparatus, which is generally what is happening now.

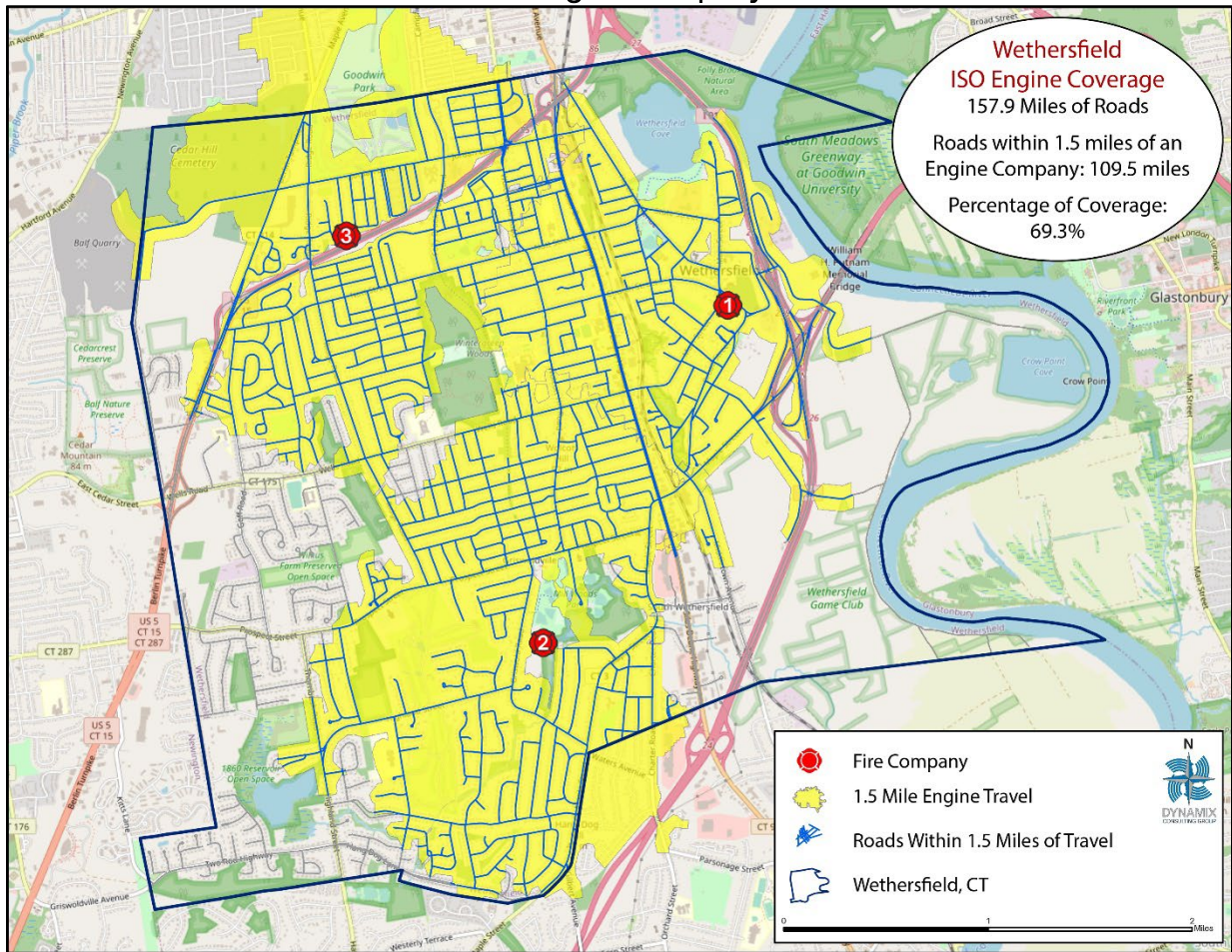
ISO Response Performance

The Insurance Services Office (ISO) is a data analytics organization that provides insurance carriers with a classification rating of a local community's fire protection. The Property Protection Class (PPC®) score or rating classifies communities based upon an overall scale of 1 (best protection) to 10 (no protection) and assesses all areas related to fire protection. These areas divide into four major categories, which include: emergency dispatch and communications (10% of the rating), water supply system and distribution capabilities (40%), the fire department (50%), and Community Risk Reduction efforts (an additional 5.5% credit is available above 100%).

Engine Company Performance

A key area of credit towards a jurisdiction's PPC® score is the degree to which structures protected by the fire department fall within a 1.5 road-mile service area of a fire station. ISO uses this 1.5 road-mile standard as an estimate for a 4-minute travel time for first responding units as required by NFPA 1710. Below, is an analysis of current fire stations with areas in yellow indicating those structures within a 1.5-mile drive. Based on the ISO engine company travel criteria, 69.3% of the Town falls within the 1.5-mile travel distance.

ISO 1.5 Mile Engine Company Criteria

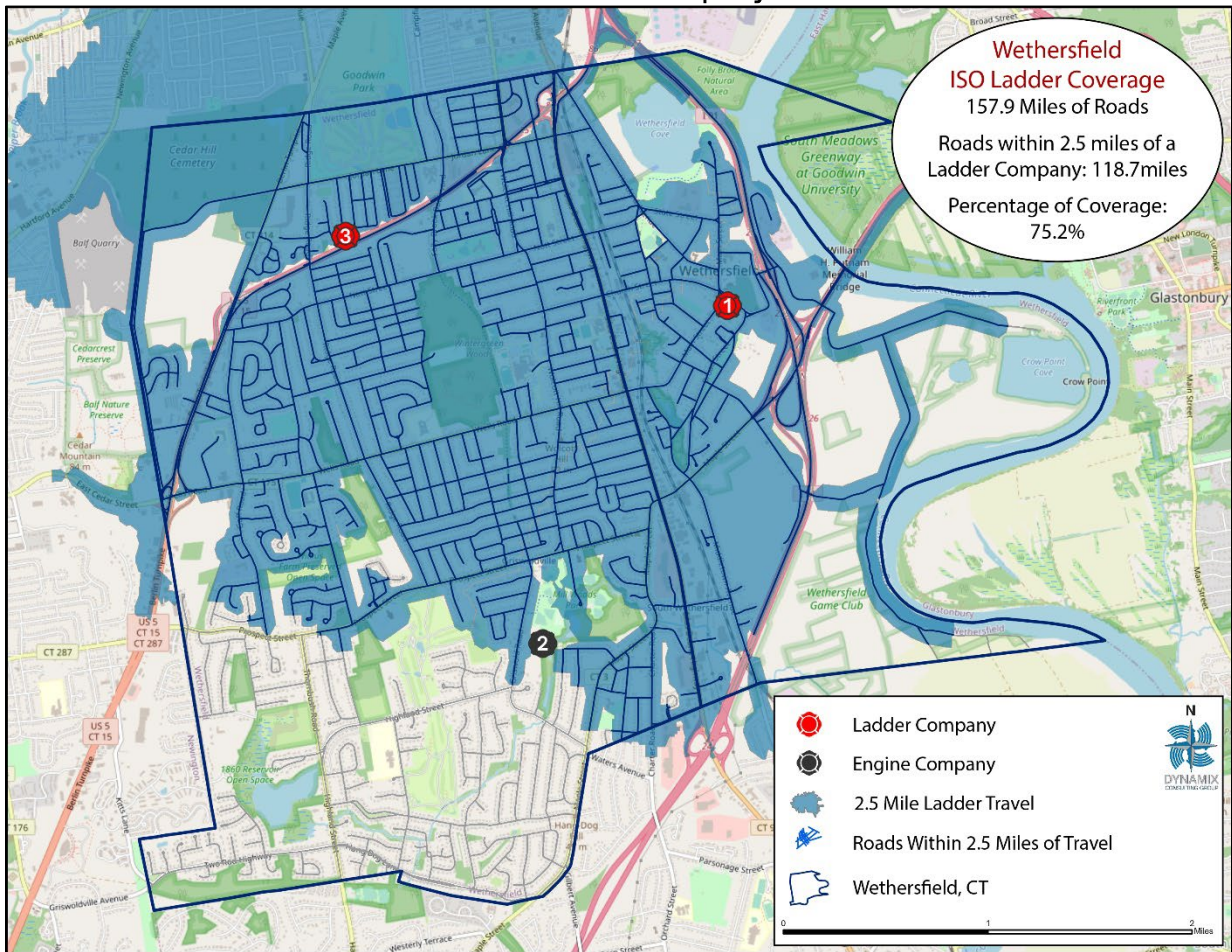


Wethersfield currently has good coverage based on ISO criteria. While some areas lie outside of the 1.5-mile range of an engine company, the majority of the population falls within this area. Reducing engine or ladder companies will result in a decrease in credit awarded and impact coverage based on ISO calculations.

Ladder Company Performance

In many jurisdictions across the country, ladder companies deploy to only certain types of incidents and are not necessarily considered the first due unit for all other incident types. Because of this, ISO uses a 2.5 road-mile travel distance for ladder companies to estimate an 8-minute travel time in urban and suburban areas by ladder companies to provide the balance of personnel and equipment needed for incidents such as working fires. The next figure displays Wethersfield’s ladder company performance in the Town.

ISO 2.5 Mile Ladder Company Criteria

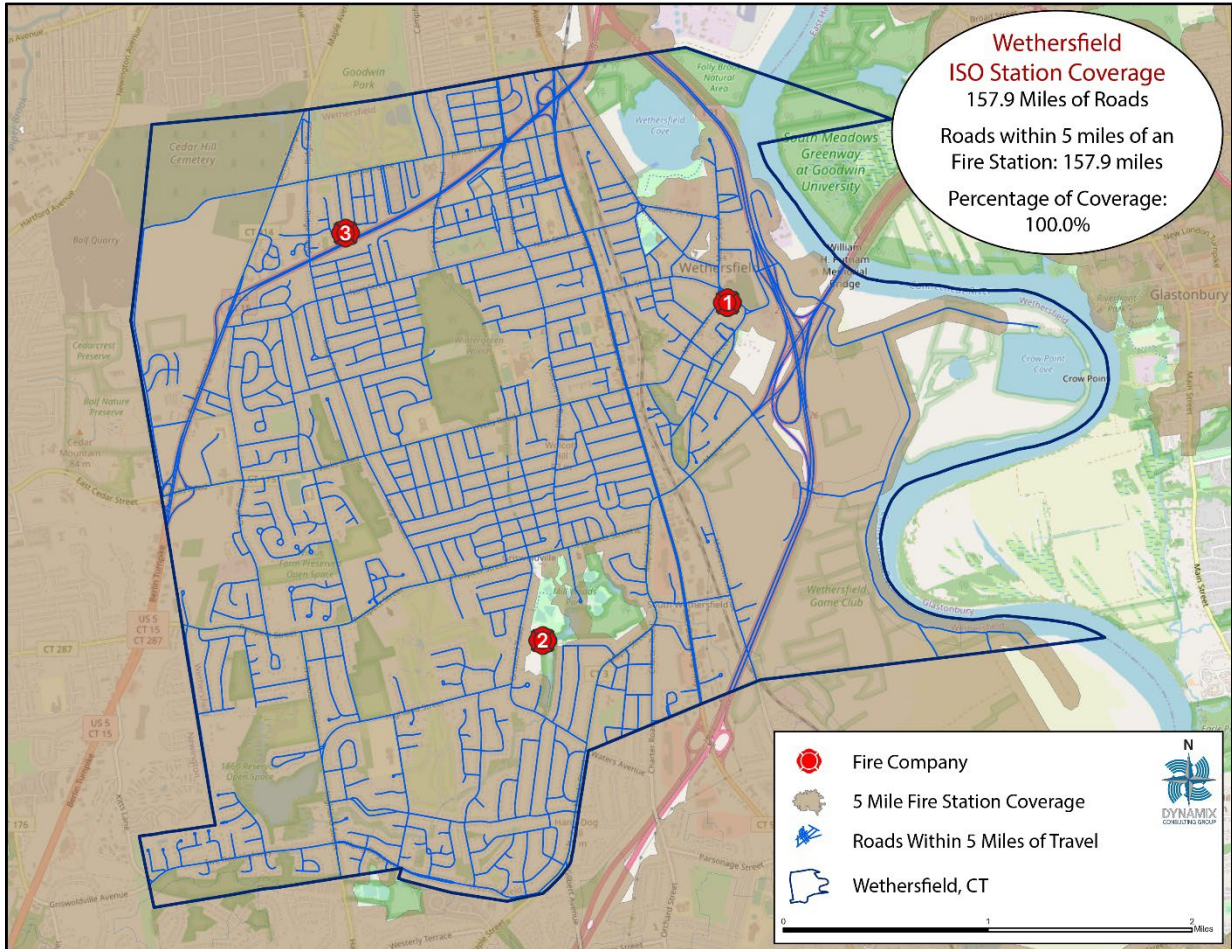


With a ladder company at stations 1 and 3, 75% of the road base within the Town is credited with ladder coverage. As with the engine companies, the loss of either or all these units for frontline response would negatively impact the Town’s ISO rating.

ISO Fire Station Coverage

To receive a PPC® rating that indicates fire coverage is available from ISO, structures must fall within 5 miles of a fire station. Areas outside of 5 miles are subject to receiving a PPC® rating of 10, meaning that no fire department coverage is available. Using this criterion, all of Wethersfield (100%) lies within 5 miles of a fire station and is eligible to receive a rating based upon the performance of the fire department.

ISO 5 Mile Fire Station Criteria



Resource Reliability Study

No matter how many fire stations or apparatus protect a community, if crews are committed to other tasks, incidents, or otherwise unavailable to respond to emergency incidents, delays occur during a time-sensitive situation. Determining resource reliability involves using several metrics to establish a global perspective on the Wethersfield Volunteer Fire Department’s ability to provide sufficient responding resources to meet service demand within the Town. When all volunteers are available and the units are in quarters, supplying sufficient resources is typically not a problem; however, when multiple calls occur simultaneously, units are committed to incidents for extended periods, or when insufficient resources exist to mitigate an emergency, further preparation and planning assists in safely and effectively mitigating all incidents.

Call Concurrency

The first evaluation is call concurrency. Call concurrency is a comparison of how often multiple calls occur and place additional demand on resources. In the next figure, a concurrent call is when a second unit is dispatched to a separate incident before the first unit clears the original scene and becomes available. When two incidents are occurring simultaneously and a third separate incident emerges, three concurrent calls are present, and so on.

Call Concurrency 11/1/19-10/31/22	
Single Incident	83.6%
2	9.2%
3	1.6%
4 or more	5.6%

In Wethersfield, two or more incidents occur simultaneously 16% percent of the time. Dynamix Consulting Group has further identified that the majority of all incidents occur during the workweek and the middle of the day. Those members of the fire department who met with Dynamix Consulting Group consistently articulated concerns about the number of firefighters who were on scene at emergency calls, particularly on weekdays, and their level of training, as in many cases the firefighters responding during the day were exterior firefighters or drivers and not able to perform interior structural firefighting.

Dynamix Consulting Group suggests that the immediate priority for the Town of Wethersfield should be to ensure that the Wethersfield Volunteer Fire Department is consistently able to respond an appropriate number of people with the appropriate level of training to emergency calls while considering the fact that most of these calls occur on weekdays and that 16% of the time, two or more calls are occurring in Town simultaneously.

Unit Hour Utilization

Another component considered when evaluating resource reliability is Unit Hour Utilization (UHU). UHU provides an expression of the workload placed on the crew assigned to that unit and describes the amount of time a unit is not available for response because it is already committed to another incident. The larger the percentage, the greater its utilization, and the less available it is for assignment to subsequent calls for service, training, and ancillary duties. Expressed as a percentage, UHU rates represent the percentage of the total hours of use in a year.

An important factor regarding UHU and response performance is the relationship between how often a unit is available to respond to calls versus the performance metric used to evaluate performance. The next section assesses the Town’s performance using NFPA 1720 criteria at the 90th percentile. If a unit is unavailable greater than 10% of the time, some portion of the 90th percentile fractile performance will be negatively affected as units from other stations must leave their respective response district and travel into that area where the unit is unavailable. This degrades response performance, increases wait times on scene, and results in another area where the first due unit is available and not in quarters.

Displayed below are the Town’s UHU rates for front-line units. It is important to understand

that UHU is seeking to measure how busy a crew is and not how many hours a particular apparatus accrues over the year. When too few crews are available for response and UHU levels exceed performance thresholds, the ability of that crew to complete required training, additional duties, and have time for meals or recovery diminishes. While it is understood volunteer crews are often different, for Wethersfield this analysis provides an understanding of which units are most active.

Unit Hour Utilization rates for the Wethersfield Volunteer Fire Department are within acceptable ranges for volunteer fire departments. Engine 31 and Car 1 are

the most consistently used response vehicles, followed by Engine 21. Engine 11 and Truck 32 are utilized approximately 40% less and Rescue 23 has a UHU rate of 1.1%. All other units fall below a 1% utilization rate.

Unit Hour Utilization Rates 11/1/2019 - 10/31/2022			
Unit	Count	Sum	UHU
C1	1056	518:39:50	2.0%
C14	28	11:00:04	0.0%
C2	300	133:13:02	0.5%
E11	866	310:07:20	1.2%
E15	10	7:26:05	0.0%
E21	1304	504:47:59	1.9%
E31	1398	529:55:55	2.0%
E33	539	195:17:28	0.7%
M16	12	8:22:54	0.0%
M26	9	6:28:36	0.0%
R23	742	300:56:42	1.1%
T12	716	244:25:27	0.9%
T32	759	311:45:19	1.2%
T22	735	258:57:48	1.0%
U17	256	148:41:28	0.6%
U27	247	142:01:25	0.5%
U37	385	217:44:30	0.8%

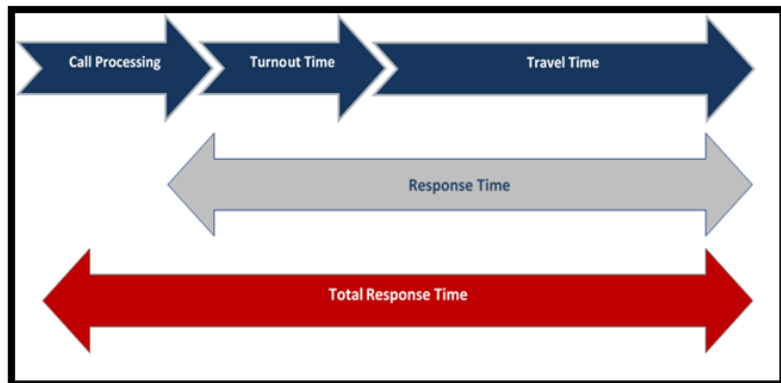
Response Performance Summary

The most visible element of a fire department is its response performance. How quickly units arrive on the scene and the efficiency with which they resolve an emergency is typically the only interaction most residents will have with the fire department. To evaluate the district system performance, NFPA 1710 is the applicable standard for career fire departments.

Response time performance is comprised of the following components:

- **Call-Processing Time:** The amount of time between answering a call by the 911 Primary Public Safety Answering Point, or dispatch center, and dispatching of resources.
- **Turnout Time:** The time interval between response unit notification of the incident and apparatus response.
- **Travel Time:** The amount of time the responding unit actually spends on the road traveling to the incident until arrival at the scene. This is a function of speed and distance.
- **Response Time:** This time calculation is from the time of dispatching the fire department to the arrival of the first apparatus. Response Time equals the sum of “Turnout Time” and “Travel Time.”
- **Total Response Time:** This is the most apparent time to the caller requesting emergency services. Total response time is the amount of time that occurs from the time they place the emergency call until the units arrive. This time often includes factors both within and outside the control of the fire department, particularly when another agency provides dispatch services.

Tracking the individual components of response time will enable the Town to identify deficiencies and areas for improvement. Once understood, the current performance for Call Processing, Turnout Time, and Travel Time, develop response goals and standards that are both relevant and achievable. Fire service best practices recommend that fire service organizations monitor and report the components of Total Response Time.



The Time Continuum is comprised of the three elements described above—Call Processing, Turnout Time, and Travel Time. Response Time is a combination of Turnout and Travel Time, and Total Response Time is the sum of all the times starting with the Call-Processing Time, Turnout Time, and Travel Time.

The next section includes a more detailed discussion of the components of the Response Time Continuum, including the results of analyses where possible.

Historically, fire rescue service providers have used the performance measurement of average response time to describe the levels of performance. The average is a commonly used descriptive statistic, also called the mean of a data set. Averages may not accurately reflect the performance of the entire data set because data outliers can significantly skew averages, especially in small data sets. One extremely good or bad value can skew the “average” for the entire data set. Percentile measurements are a better measure of performance since they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 90% of responses were equal to or better than the performance identified and the other 10% are data outliers, inaccurate data, or situations outside of normal operations that delayed performance. This compares to the desired performance objective to determine the degree of success in achieving the goal.

An important consideration when evaluating fractile performance is that the results of each category are not additive, meaning that the sum of two or more constituent metrics cannot be simply added together to find the sum. This is because each dataset is discrete and as such requires individual evaluation, particularly when data quality is an issue. If a metric, such as response time possesses most of its data points, while turnout time is not accurately documented, a significant difference can exist between the response time calculated using the fractile descriptive and the sum of turnout time and travel.

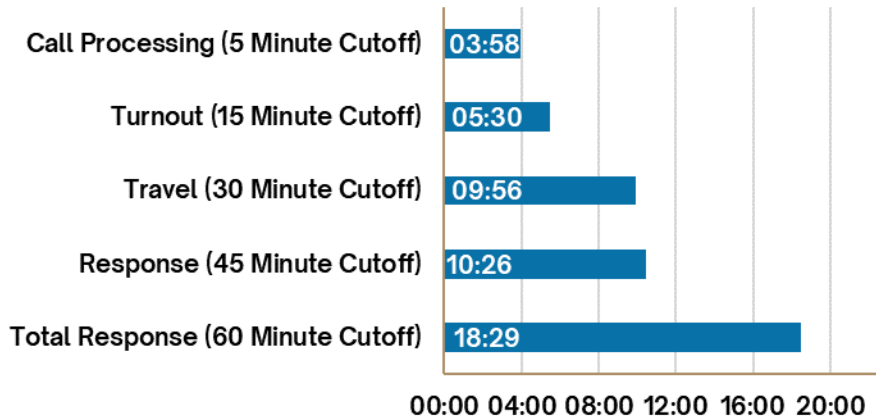
Evaluating the various response time components using the fractile analysis method requires that each component requires individual evaluation separately, as the available data, and the quality of the data may vary significantly.

Providing an analysis of performance for emergency calls within the Town required removing the following incidents:

- Cells containing zeros or no value
- Incidents with values greater than the cutoff point (assumed as inaccurate data)

At the time of this project, the CAD data provided contained no incident-type information and only summary data was available from the Records Management System (RMS). This limited the calculation to only the overall performance for each benchmark. When the overall call processing time was initially evaluated, it displayed an extremely high value. Upon further research, it was determined that for certain call types, such as motor vehicle collisions or general alarms, Wethersfield Police Department is initially dispatched to investigate and then requests the fire department. In these cases, as much as 15 to 20 minutes may elapse after the initial dispatching of the police officer prior to fire department notification. Because the time when the fire department was notified was not available and due to the lack of incident typing within the data, an accurate assessment of call processing was not possible; however, to provide some insight into performance, a cutoff time of five minutes was applied.

Wethersfield Fire Performance at the 90th Percentile 11/1/2019-10/31/2022



Although not required within NFPA 1720, all performance benchmarks were calculated to provide Wethersfield with additional performance information.

Call Processing

The industry standard for call processing (or alarm handling) is NFPA 1221: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*. This standard provides for communication centers to have processing times of not more than 60 seconds, 90% of the time. For special operations, calls requiring translation, or other factors described in the standard, times should not exceed 90 seconds at the 90th percentile. The Wethersfield Police Department provides emergency 911 dispatch for the fire department and has direct supervision over the initial processing, transferring, and dispatching of emergency calls. At 3 minutes 58 seconds, it appears that performance improvements could occur within the communication center. Dynamix Consulting Group recommends that the Town of Wethersfield conduct a full evaluation of call processing performance that includes analysis of calls by type of incident.

Turnout Time

The second component of the response continuum, and one directly affected by response personnel, is turnout performance. Turnout is the time it takes personnel to receive the dispatch information, move to the appropriate apparatus, and begin responding to the incident.

As a volunteer fire department, turnout times are not generally applicable as members could be initially responding to the fire station or incident scene from anywhere. However, to provide baseline data as to how quickly members responded to a fire station and placed the apparatus enroute at the 90th percentile, the calculation occurred. At 5 minutes 30 seconds, Wethersfield Volunteer Fire Department members respond relatively quickly compared to other volunteer departments observed in the region and should receive accolades for such.

Travel Time

The third component of the response continuum is travel time. It is important to understand that travel time is not specifically a factor of speed as much as it is the result of the proper placement of fire stations from which emergency responses begin. Travel time is the amount of time between when the apparatus departs for the call and when it arrives on the scene.

Travel time is a function of distance, roadway, and traffic conditions. Typically, the only way to improve travel time is to locate additional resources throughout the service area. At 9 minutes 56 seconds. In the case of Wethersfield, data quality is an issue as a relatively low call volume coupled with as high as a 40% data loss due to missing fields provides for marginal confidence in the results.

Response Time

Response time is the amount of time from initial notification to the fire department until the first unit arrives on the scene. Response time performance is the calculation of the difference between the initial notification time and the arrival time. NFPA 1720 calls for a response time of 9 minutes for all required resources to assemble on the scene. For Wethersfield, a response time of 10 minutes and 26 seconds places them very near industry standards for performance.

Total Response Time

The culmination of the Response Time Continuum is total response time. When citizens call for emergency assistance, this metric represents what they experience as they place the call and wait for help to arrive. Total response time is the amount of time that elapsed from when the call was initiated at the communications center until the first emergency unit arrived on the scene.

Measured at the 90th percentile, the total response time for Wethersfield Volunteer Fire Department was 18 minutes and 29 seconds. Wethersfield Volunteer Fire Department should initiate an active data tracking and reporting methodology to determine if data quality factors affect these results or if the department needs other measures to improve overall performance.

Resource Sharing in Connecticut

The state of Connecticut has 169 municipalities, all of which must provide fire protection pursuant to Chapter 104 of the General Statutes of Connecticut. At the time of this report, there were 310 fire departments in the State of Connecticut, 74 of which were independent taxing districts.

All emergencies start and end at the local level. This means that local resources will usually be the first to arrive at an emergency and the last to leave. When the magnitude of an event expands beyond the capabilities of the local municipality in Connecticut, the local municipality has several options for requesting assistance from surrounding towns and the state. These options include Local, Regional, Intrastate, and State Mutual Aid.¹⁴

Mutual and Automatic Aid Systems

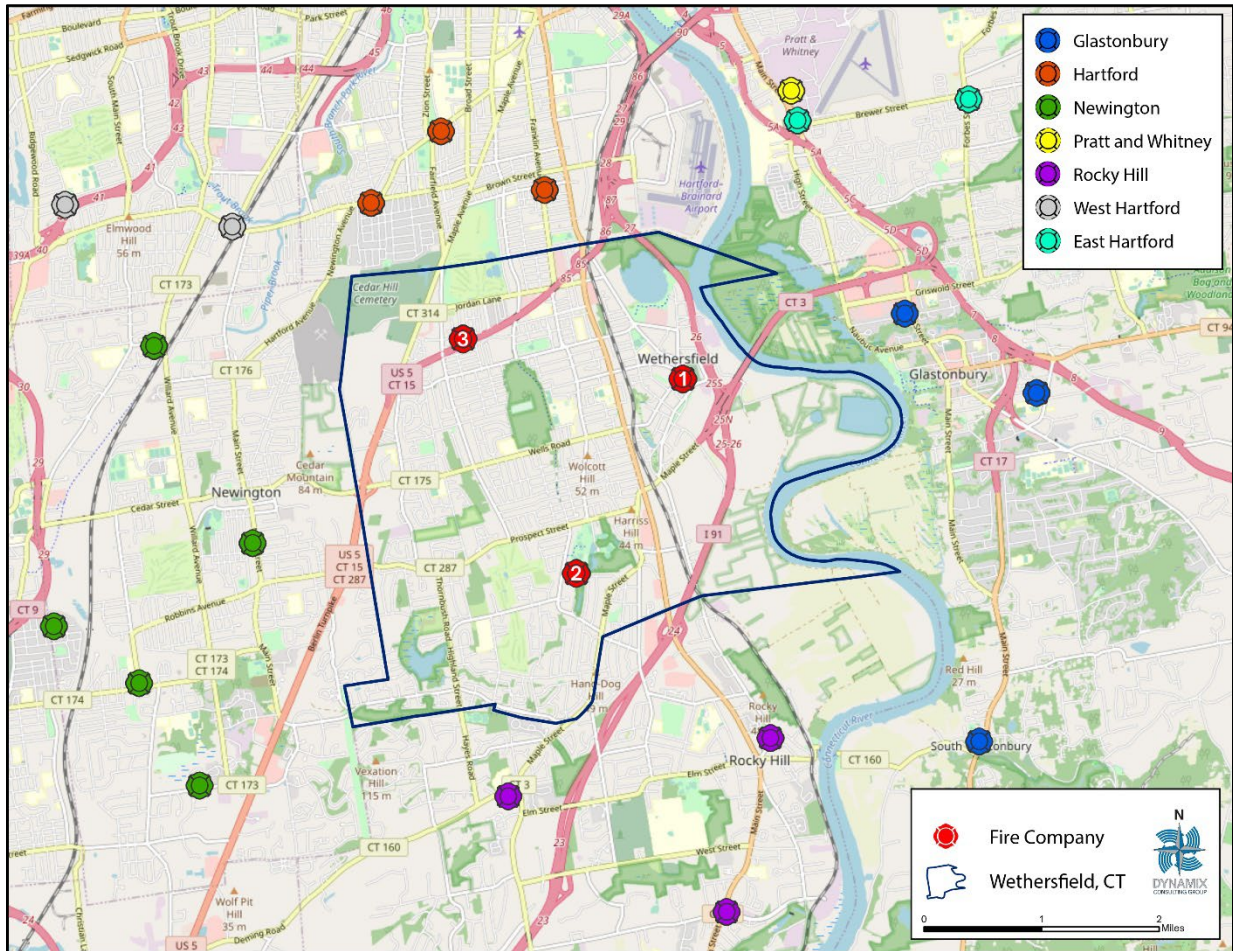
Mutual aid is the sharing of resources between organizations. Local mutual aid is the sharing of resources between geographically proximal organizations. The Connecticut Statewide Response Framework¹⁵ specifies that local governments are to utilize available resources and access town-to-town mutual aid before requesting state assistance.

Few if any organizations possess all the resources needed to mitigate every type of incident. Additionally, when mutually beneficial agreements are possible, particularly when they occur at little cost to the organizations, good governance suggests that these opportunities provide higher service levels to the communities involved. Two types of agreements in this section include mutual and automatic aid agreements. In mutual aid agreements, two or more organizations agree that, when requested, they will supply the other agency with the requested resources if available. For emergency services, this typically occurs at the request of responding or on-scene personnel. The other type of agreement, automatic aid, occurs, as the name implies, automatically. When the dispatch center receives an emergency call, all available resources are examined based on the appropriate unit type and their proximity to the call, typically with the closest unit responding regardless of the jurisdiction in which the incident occurred. The following figure presents the locations of the Town's fire stations, as well as the locations of automatic and mutual aid fire stations surrounding the boundaries of the Town.

¹⁴ <https://portal.ct.gov/DEMHS/Legal-Resources/Mutual-Aid-and-EMAC>

¹⁵ https://portal.ct.gov/-/media/CFPC/_old_files/StateResponseFrameworkFinalVersion4091914pdf.pdf

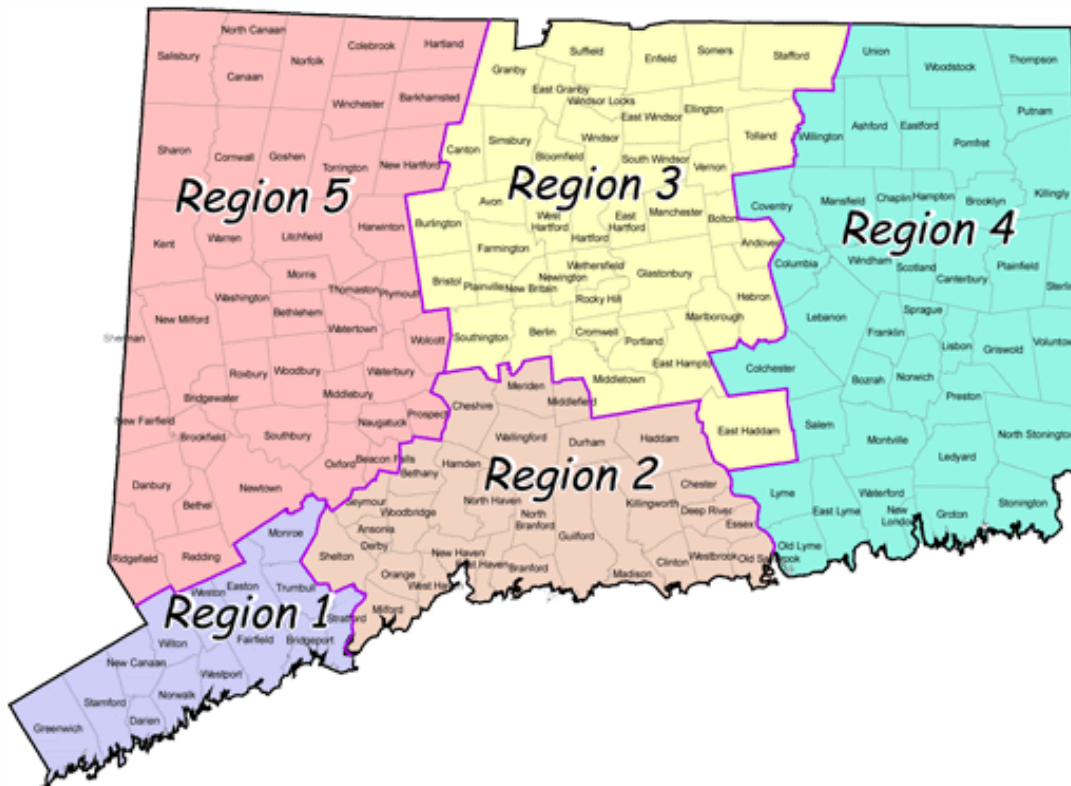
Mutual and Automatic Aid Departments



Regional, Intrastate, and State Mutual Aid

There is no county government structure in Connecticut. In 2007, the Connecticut Department of Emergency Management and Homeland Security (DEMHS) partnered with local governments to create five emergency preparedness regions to facilitate planning and regional collaboration. The Town of Wethersfield is in region 3.

Connecticut Emergency Preparedness Planning Regions



The Regional Emergency Planning Team (REPT) in each region operates under regional bylaws which address their mission, membership, and procedures. Regional Emergency Support Functions (RESF) support these REPTs. The RESFs are discipline-oriented working groups that provide collaborative planning and resource support within each discipline. Each REPT is comprised of members from each municipality and tribal government in the DEMHS Region as well as each Emergency Management discipline.

When local resources become exhausted during emergencies, the local agencies then coordinate through the five REPTs and the five DEMHS Regional Offices for additional resources.

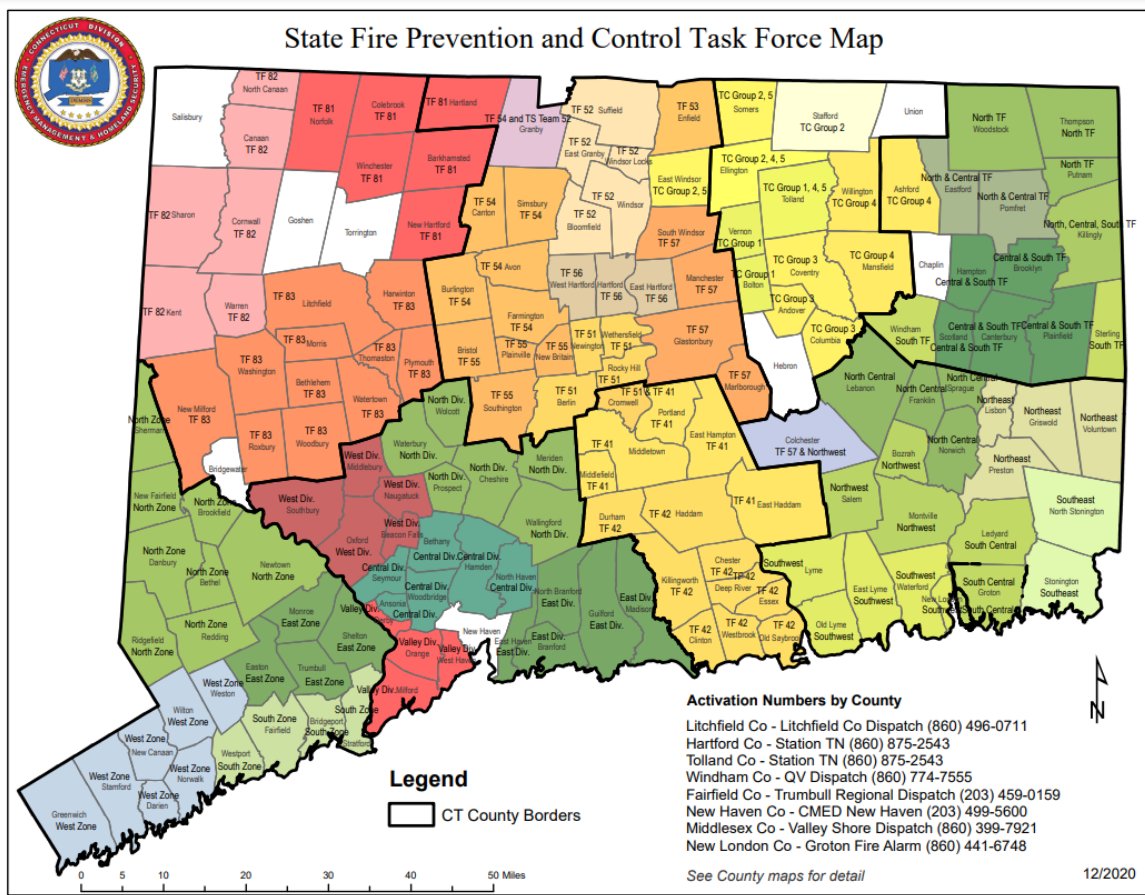
To request mutual aid resources from other regions of the state, municipalities can use the Connecticut Intrastate Mutual Aid system, as authorized by the Connecticut Intrastate Mutual Aid Compact, Connecticut General Statutes Section 28-22a.

Pre-Identified Task Forces and Strike Teams

As part of the Connecticut Statewide Fire Service Disaster Response Plan, each region has been encouraged to pre-identify Strike Teams that are made up of five like resources and Task Forces that are made up of five mixed resources. The purpose of these Strike Teams or Task Forces is to respond to areas that are affected by a disaster and work within the Command Structure for that affected area.

The following State Fire Prevention and Control Task Force map illustrates the geographical proximity of each of these fire departments to the Town of Wethersfield.

State Fire Prevention and Control Task Force Map



The Wethersfield Volunteer Fire Department is assigned to Task Force 51. Task Force 51 is comprised of:

1. Berlin Fire Department
2. Cromwell Fire District
3. Newington Volunteer Fire Department
4. Rocky Hill Fire Department
5. Wethersfield Volunteer Fire Department

Interstate, Federal, and International Mutual Aid

When state resources and capabilities become exhausted, additional resources are available from other states, nationally, or internationally, through the Emergency Management Assistance Compact (EMAC), the International Emergency Management Compact (IEMC), and the federal government.

Recommendations and Opportunities for Regional Collaboration

Dynamix Consulting Group developed a series of recommendations and opportunities for the Wethersfield Volunteer Fire Department. Within the Recommendations Section, Dynamix identified a *Priority Recommendation* to address before considering any of the *General Recommendations*.

Subsequent to the *Priority Recommendations* and *General Recommendations*, Dynamix Consulting Group has identified a series of *Opportunities for Regional Collaboration* for consideration.

Priority Recommendation

1. Realign the organizational structure and chain of command of the fire department with current operations.

Dynamix Consulting Group recommends the organizational structure and chain of command within the Wethersfield Volunteer Fire Department should better align with the current operations of the organization to improve communication, efficiency, and the overall culture of the organization. This will provide an environment that is more conducive to recruiting and retaining volunteer firefighters.

The following table is a summary of the preferred option, as well as two alternative options for consideration. The alternative options are not preferred for the reasons specified.

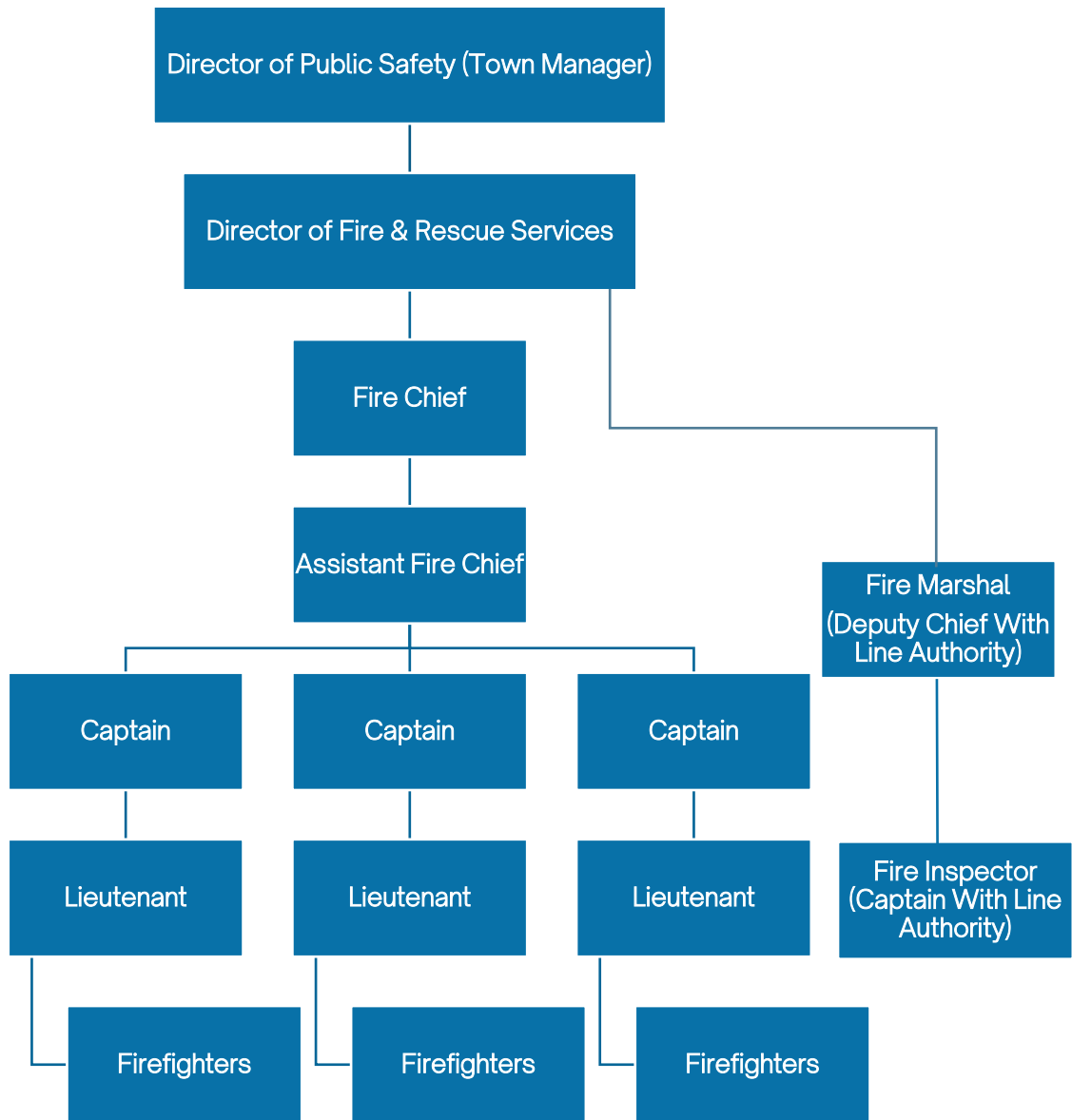
Once the Wethersfield Volunteer Fire Department selects a delivery, it is imperative that all levels of the organization, from the newest firefighter to the Town's elected officials, understand this model. Equally important is the understanding of the mission and priorities of the Wethersfield Volunteer Fire Department so that decisions made at all levels consistently possess the same focus and priorities.

Options for the Wethersfield Volunteer Fire Department Organizational Structure

Options	Pros and Cons
<p>Option 1 (Recommended by Dynamix Consulting Group):</p> <p>Reconfigure the Organizational Structure to include a Director of Fire and Rescue Services to manage a combination fire department.</p>	<p>Pros</p> <ol style="list-style-type: none"> 1. The design of this organizational structure ensures everyone has only one supervisor and all communications flow through a single path in the Chain of Command. 2. The Director of Fire and Rescue Services position would function as the department head of the fire department under the direction of the Director of Public Safety (Town Manager). 3. Administrative responsibilities for this position could include: <ul style="list-style-type: none"> ▪ Recruitment and retention of volunteer firefighters. ▪ Serving as the fire department health and safety officer. ▪ Developing and managing the budget. ▪ Writing policies and procedures. ▪ Supervision of Fire Chief and Fire Marshal. ▪ Serving as the Emergency Management Director. ▪ Coordination of Firefighter Training. ▪ Functioning as the Fire Department Public Information Officer. ▪ Other similar tasks that would relieve the volunteer fire officers of administrative burdens. 4. This model provides for a Volunteer Chief and Assistant Chief to lead the volunteer firefighters. Volunteer Captains oversee each of the three stations to provide supervision and oversight within each company. A volunteer Lieutenant assists each volunteer Captain. This is a reduction in supervisory positions based on the size of the organization today to improve communications and simplify the chain of command. 5. Relieving the Fire Marshal of Emergency Management responsibilities will allow for more time to perform required inspections and to address the number of false fire alarms in town. 6. Since the majority of fire calls in Wethersfield are non-emergency and occur on weekdays, the Fire Marshal and a full-time Fire Inspector could respond to activated fire alarms that are not accompanied by a 911 call reporting a fire and do not have activated smoke detectors or water flow alarms with only the first due volunteer company. Presently, all three volunteer fire companies are dispatched to all calls to ensure a response. The modification of this response protocol would keep the volunteer firefighters at two of the town's three fire companies available for true emergencies and would also reduce the overall response burden on the volunteer firefighters. Dynamix Consulting Group recommends that the Fire Marshal carry the rank of Deputy Chief and the Fire Inspector carry the rank of Captain and that both of these positions have line authority.

Options	Pros and Cons
	<p data-bbox="488 579 565 611">Cons:</p> <ul style="list-style-type: none"> <li data-bbox="586 254 1446 415">7. There is a significant value in keeping the Volunteer Fire Chief as a position that volunteer firefighters may aspire to attain for as long as there are volunteer firefighters who are willing to do the job. This creates an incentive for volunteer firefighters to actively train and respond to calls. <li data-bbox="586 422 1446 583">8. Reducing the non-emergency response workload of the volunteer firefighters offers the Town of Wethersfield the best chance to recruit and retain volunteer firefighters. Every year that the Town can sustain volunteer firefighters saves the Town from having to fund additional paid firefighters in the budget. <li data-bbox="586 632 1446 730">1. The Town will likely incur an increased personnel cost if a Director of Fire and Rescue Services is hired and the part-time Fire Inspector position is upgraded to a full-time position. <li data-bbox="586 751 1446 951">2. For a new organizational structure to succeed in the Town of Wethersfield, a dynamic cultural shift will need to occur. This will be a change for everyone associated with the fire department. This will require a commitment from the Town and the volunteer fire department to pursue this path together if it is to be successful and may initially be a challenge.

Recommended Organizational Structure



Options	Pros and Cons
<p>Option 2: Hire a Full Time Paid Fire Chief</p>	<p>Hiring a Paid Fire Chief to run the Wethersfield Volunteer Fire Department would likely provide many of the same pros and cons as hiring a Director of Fire and Rescue Services.</p> <p>Dynamix Consulting Group suggests that while the Town of Wethersfield may decide to hire a Paid Fire Chief at some point in the future, the Director of Fire and Rescue Services position may be an interim step that provides for the administrative needs of the fire department while preserving the position of Volunteer Fire Chief.</p> <p>There is a significant value in keeping the Volunteer Fire Chief as a position that volunteer firefighters aspire to attain for as long as there are volunteer firefighters willing to do the job. This creates an incentive for volunteer firefighters to actively train and respond to calls.</p>

Options	Pros and Cons
<p>Option 3:</p> <p>Continue to operate with the existing fire department organizational structure.</p>	<p>Pros:</p> <ol style="list-style-type: none"> 1. The Town is familiar with this model. This option maintains the status quo without changing the management or operations of the fire department. 2. The Town budget includes allocations to support this current model of service delivery. <p>Cons:</p> <ol style="list-style-type: none"> 1. It is Dynamix Consulting Group’s opinion that the current operational structure for the delivery of fire services in the Town of Wethersfield creates a critical weakness that, if not addressed, will likely result in the Town eventually having to staff a full-time paid fire department without the support of volunteer firefighters. 2. Dedicated people make up the Wethersfield Volunteer Fire Department. They provide outstanding service to the community. It would be a significant loss to Wethersfield if the volunteer fire companies were to fail to thrive and eventually discontinue their service. 3. In recent years, volunteer firefighters have found themselves challenged to respond to an increasing number of calls with a decreasing number of volunteer firefighters. <p>An all-volunteer service includes a significant risk that emergency calls could go unanswered because of a lack of availability of volunteer firefighters. The highest demand for calls for service in the town is on weekdays. This is also the time when most volunteer firefighters are at work and not available to respond to calls. If the Town does not provide some level of administrative and day-time response of support for the volunteer firefighters, the volunteer fire department is likely to become unsustainable in the not-too-distant future. This will add a significant expense to Wethersfield’s annual budget.</p> <p>For estimating purposes, a community can expect the cost of a full-time paid fire department to be similar to the cost of their full-time paid police department.</p>

General Recommendations

2. Reassign the responsibility for processing volunteer firefighter applicants to the Town's Human Resources Department.

Dynamix Consulting Group suggests the Wethersfield Volunteer Fire Department and the Town of Wethersfield may be able to improve the current volunteer firefighter application process by allowing the Town's Human Resources Department to facilitate the entire process. Reassigning this responsibility to the Human Relations Department could also help to reduce some of the administrative burdens presently placed on the officers in the Wethersfield Volunteer Fire Department.

3. Initiate a townwide volunteer firefighter recruitment drive.

A fire department's ability to recruit new members is in part dependent on the supply of new, younger people available for service. A community's age profile can be an indicator of potential volunteer firefighter recruitment problems ahead. The typical volunteer firefighter is between the ages of 18 and 65. There are 15,644 people in Wethersfield between the ages of 18 and 65. Based on the national trend and the number of people in town that typically volunteer as firefighters, it is more reasonable for the Wethersfield Volunteer Fire Department to expect to attract a cadre of up to 88 volunteers based on its demographics. By this standard, while it is not likely that the ranks of the Wethersfield Volunteer Fire Department will swell to over a hundred members as was the case in the past, there may be opportunities to increase fire department membership.

4. Reduce the administrative burdens placed on all of its volunteer fire officers.

Volunteer firefighters tend to volunteer to respond to emergency calls. To do this, they must also volunteer to attend training to perform emergency response functions. The most active volunteer firefighters tend to promote to the officer ranks where they must continue actively training and responding to emergencies, and then perform extensive administrative responsibilities. Dynamix Consulting Group specifically crafted the *Priority Recommendation* to reduce the administrative burdens placed on volunteer fire officers, thereby freeing them up to attend training and respond to emergency calls. If Wethersfield chooses not to implement the *Priority Recommendations*, it should still be a priority to relieve the volunteer fire officers of as much of the administrative burden they now carry as possible.

5. Develop a succession plan for the Wethersfield Volunteer Fire Department.

While it is difficult to project exactly how many firefighters will leave the fire department in the coming years, Dynamix Consulting Group does note that the Wethersfield Volunteer Fire Department is comprised of many members who have proudly volunteered for the fire department for multiple decades. For this reason, it is reasonable to anticipate that in the coming years, some of these members will choose to retire, move out of town, or have other life-changing events that will discontinue their service to the community. It would behoove the Wethersfield Volunteer Fire Department to develop a succession plan.

A succession plan identifies future staffing needs and the people with the skills and potential to perform in these future roles. The fire department should annually evaluate the critical positions within the organization and develop action plans for individuals to assume those positions. Taking a holistic view of current and future goals, this type of preparation will ensure the Wethersfield Volunteer Fire Department has the right people in the right jobs today and in the years to come. Annual Succession Planning will strengthen the overall capability of the department by:

- Identifying critical positions and highlighting potential vacancies.
- Identifying key competencies and skills that are necessary for these positions.
- Focusing on the development of individuals to meet future department needs.

6. The Town of Wethersfield and the Wethersfield Volunteer Fire Department should collaboratively review the current volunteer firefighter incentive program to ensure the money spent on incentives is effectively incentivizing the volunteer firefighters.

There may be value in creating a tiered points program where officers receive a higher per-call rate than firefighters while maintaining incentives to respond to calls as they are paid by the call. This may do more to encourage response to emergency calls than the current annual officer stipend program which does not correlate with activity level. Dynamix Consulting Group further recommends the Town include its labor attorney in this review to ensure all incentives paid to volunteer firefighters are in accordance with the Fair Labor Standards Act (FLSA).

7. Reactivate the Fire Department Safety Committee.

While there is a Standard Operating Procedure that describes the functions of the Safety Committee, interviews with fire department personnel revealed that there has not been an active Safety Committee in the Wethersfield Volunteer Fire Department for many years. The establishment and empowerment of a Safety Committee can be one of the best tools to increase the safety of firefighters.

The Safety Committee should meet monthly and include in its mission the raising of awareness and modifying of member behaviors that will result in a safe work environment. Additionally, the Safety Committee should review all accidents, injuries, near-miss incidents, and workplace safety suggestions. The Safety Committee should analyze the information before them and report their findings to the Fire Chief. Dynamix Consulting Group strongly encourages the Town of Wethersfield and Wethersfield Volunteer Fire Department to ensure that all activities of the Safety Committee are in alignment with Chapter 4 of NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Program*.

8. Discontinue the practice of the Fire Marshal's Office finishing incident reports for responses by volunteer firefighters.

The Wethersfield Volunteer Fire Department advised Dynamix Consulting Group during the site visit of the process of transitioning the Records Management System from Firehouse Software to Alpine's RedNMX. As part of the transition to RedNMX, Dynamix Consulting Group recommends the Fire Marshal's Office cease the practice of completing incident reports for responses by volunteer firefighters. The officer in charge of an incident has first-hand knowledge of the incident and is best positioned to accurately complete the report.

9. Reconfigure the Training Calendar to provide more efficient training for the volunteer firefighters and to better align with OSHA and ISO to ensure that all training requirements are satisfied.

OSHA CFR 1910.156 requires "Training and education commensurate with duties and functions members are expected to perform, provided before they perform fire emergency activities." It further requires "Training and education frequently enough to assure each member is able to perform assigned duties and functions satisfactorily and in a safe manner." All members "shall be provided training at least annually. Members who are expected to provide interior structural firefighting shall be provided training at least quarterly."

Dynamix Consulting Group attempted to correlate the Wethersfield Volunteer Fire Department 2023 Training Program with OSHA and ISO requirements and identified training topics not required by OSHA or ISO as well as topics not specifically scheduled. While some of those topics not specifically scheduled can occur as part of Live Fire Training, Dynamix Consulting Group recommends reconfiguring the Wethersfield Volunteer Fire Department Training Calendar to provide more efficient training for the volunteer firefighters and to better align with OSHA and ISO to ensure that all training requirements are satisfied.

10. Provide a designated safe location for firefighter training in the Town of Wethersfield.

There is no designated safe location in the Town of Wethersfield for firefighters to train. Firefighters practice ground ladders on the back of the firehouse and use the parking lot for some training evolutions, but inclement weather often interferes with the ability to train. Wethersfield does use the firefighter training facilities in neighboring towns, but only half of Wethersfield's firefighters can leave town to train at one time as the other half remains in town to respond to emergency calls.

To attract and retain volunteer firefighters, the Town of Wethersfield must make it as easy as possible for volunteers to complete their required training and respond to emergency calls. Dynamix Consulting Group recommends that the Town consider providing a location for the fire department to conduct training in a controlled environment. While a facility to conduct live fire training would be ideal, a phased-in approach to providing a place to train could start with a concrete pad protected by a roof. Connex boxes could then provide places for firefighters to practice advancing hose lines, search and rescue, and ventilation skills to name a few.

11. Increase the existing part-time fire inspector position to full-time.

Connecticut General Statute governs Fire and life safety inspection frequency; however, the current staffing of the Wethersfield Fire Marshal's Office is inadequate to meet all requirements. Increasing the existing part-time fire inspector position will better position the Wethersfield Fire Marshal's Office to complete the required inspections and also respond to weekday non-emergency calls for service, thereby relieving the burden on volunteer firefighters.

12. Provide electronic access control to all Wethersfield Volunteer Fire Stations.

Fire stations were historically places where residents and visitors from the community accessed any part of a fire station with very few limitations. Unfortunately, the current social environment requires emergency services providers to implement specific security measures limiting and controlling access to fire rescue facilities. The need to protect firefighters drives the control of limited access, installation of expensive equipment, and protection of sensitive data from inadvertent access by individuals desiring to harm the community. Presently, fire station access in Wethersfield is by keys or key codes. This is not a reliable method for securing buildings as members can copy keys or share access codes. The town should consider installing electronic access control systems that monitor who enter and exits the buildings and allows the Town to turn off access to individuals as needed in all facilities.

13. Install vehicle exhaust systems in all of the fire stations.

None of the town's fire stations have vehicle exhaust systems. Diesel engine exhaust emissions in fire stations expose firefighters to health risks, including certain types of cancers as well as pulmonary and cardiac diseases. NFPA 1500: *Standard on Fire Department Occupational Safety, Health, and Wellness Programs* recommends fire departments contain all vehicle exhaust emissions to a level of no less than 100 percent effective capture.

14. Relocate the exercise area that is in the bay at Station 3 and the soda machines at all three fire stations.

There is an exercise area set up in the bay of Station 3 and ice and soda machines in the bays at all three fire stations. These arrangements present additional opportunities for firefighter exposure to carcinogens from both the turnout gear not stored in well-ventilated rooms and also the exhaust fumes that are not captured by exhaust systems.

15. Incorporate cancer prevention measures into all future programs and building plans.

The Town should consider steps to protect firefighters from cancer including pressurizing corridors to keep contaminants out of designated clean areas, private showers, providing a second set of turnout gear or access to a second set of turnout gear to all firefighters, installing vehicle exhaust systems in all of the bays, and relocating the current fitness area in the apparatus bay at Station 3 to a location where firefighters can exercise without exposure to the toxic products of combustion.

16. Incorporate plans for drive-through bays into all future Wethersfield Volunteer Fire Station renovations or construction.

All of the Wethersfield fire stations have “back-in bays”. The lack of drive-through bays at these facilities constitutes a safety concern as many firefighter injuries and accidents occur when backing emergency vehicles into the bays. Dynamix Consulting Group notes that all stations use “back in” procedures; however, drive-through bays are the recommended configuration. For all future buildings that house apparatus, the Town should consider a design that allows for drive-through bays that are large enough to accommodate all frontline and reserve apparatus.

17. Develop Building Maintenance Plans for all Wethersfield Volunteer Fire Stations.

The Town and Fire Department should work together to establish building maintenance plans to ensure the regular maintenance and scheduled replacement of building systems and components such as Heating, Ventilation, and Air Conditioning (HVAC), generators, roofs, driveways, parking lots, painting, and carpet replacement to keep the stations in good general repair. For example, during the November 2022 site visit, Dynamix noted the exterior concrete stairs at Company 2 are crumbling and have become a trip hazard.

Future needs for the fire department also include adequate storage as there is presently equipment stored outside and also at remote locations. This is not ideal to protect equipment from the elements or for having it readily available for emergency response.

Dynamix Consulting Group also suggests the Town should start planning to renovate one or more of the fire stations to include sleeping quarters. Some local towns have successfully built apartments in or adjacent to their fire stations, where volunteer firefighters live in return for responding to emergency calls and paying a nominal monthly rent. These sleeping quarters would also be necessary if the fire department were to eventually staff with paid firefighters as well.

18. Develop a Fire Apparatus Replacement Plan.

In evaluating the Wethersfield Volunteer Fire Department fleet, leadership should consider a variety of factors in determining the department's operational capabilities and developing a Fire Apparatus Replacement Plan. These considerations include age, cost of operation (i.e., repair costs), and out-of-service time.

19. Conduct an evaluation of all the apparatus in the Wethersfield Volunteer Fire Department fleet with the goal of eliminating apparatus that does not see regular use and does not serve a specific and necessary need.

Dynamix Consulting Group noted that when comparing the number of volunteer firefighters who actively respond to emergency calls to the number of apparatuses, the Wethersfield Volunteer Fire Department is heavy on apparatus. Excluding the Chief's vehicles, trailers, and boats, there are 11 fire apparatus and 1 spare engine in service for a total of 12 apparatus. At the time of this report, there were 46 active members in the Wethersfield Volunteer Fire Department. This is an average of 3.8 volunteer firefighters for each fire apparatus maintained by the Town of Wethersfield. Dynamix Consulting Group further noted that five of these apparatus responded to an average of fewer than 10 calls per month during the last five years. The cost of maintaining apparatus does place a significant burden on a fire department's operating budget, in addition to the burden that replacement costs will incur on the capital budget.

20. Develop an Equipment Replacement Plan.

The Town should work with the Wethersfield Volunteer Fire Department to create Equipment Replacement Plans for the high-value equipment in service within the fire department. Other high-value equipment to consider including in the Equipment Replacement Plan are fire hoses, radios, defibrillators, thermal imaging cameras, and gas monitors.

21. Evaluate, and update as necessary, the mission of the Wethersfield Volunteer Fire Department.

Dynamix Consulting Group suggests that the only thing more important than having a solid mission statement is to regularly reevaluate this mission statement. The changing needs of communities, especially during the global COVID-19 Pandemic, have placed changing demands on the fire service. While nationally, the fire service has risen to the occasion, it is important to pause in the organization to realign the mission with the services it provides and then to communicate this information verbally and in writing to every member of the organization. This keeps the entire organization focused and working together to achieve the same goals and objectives.

22. Develop a vision statement for the Wethersfield Volunteer Fire Department.

A vision statement establishes the ideal image that the organization wishes to achieve. The vision statement should answer the questions "Where are we headed?" and "If we achieved all strategic goals, what would we look like 10 years from now?"

Dynamix Consulting Group did not find any evidence of a Vision Statement for the Wethersfield Volunteer Fire Department.

23. Develop organizational values for the Wethersfield Volunteer Fire Department.

An organizational values statement includes the core principles that guide the organization and its culture. In a values-led organization, the values guide decision-making and establish a standard to assess actions. The values statement should answer the questions “What values should guide the operations of our organization?” and “What conduct should our personnel uphold?” The Organizational Values Statements should clearly identify the values that guide the operations of the fire department, upheld by all members.

Dynamix Consulting Group did not find any evidence of a Values Statement for the Wethersfield Volunteer Fire Department.

24. Develop a plan for the members of the Fire Marshal’s Office to complete pre-incident plans for occupancies in town as they complete their required life safety inspections.

The Wethersfield Volunteer Fire Department has completed approximately 37 pre-incident plans for properties in town. The department stores these pre-incident plans on a shared Google Drive that is accessible through the iPads in the fire apparatus. The Fire Marshal’s Office is currently working to complete additional preplans. Dynamix Consulting Group recommends the development of a plan for the members of the Fire Marshal’s Office to complete pre-incident plans for occupancies in town as they complete their required life safety inspections and that these records be kept up to date in the town’s new Records Management System.

25. The Wethersfield Volunteer Fire Department’s Bylaws and Standard Operating Procedures require a complete review.

Dynamix Consulting Group suggests that as the Wethersfield Volunteer Fire Department plans for the future delivery of fire service in the community, it may be an opportune time to completely replace the bylaws with updated Fire Department Policies that are issued by the Fire Chief. Empowering the Fire Chief to issue policies creates an efficient mechanism to immediately replace outdated bylaws with policies that meet current industry standards and best practices. The Fire Chief can request assistance from members of the fire department or outside resources when developing these policies, but as the authority issuing such policies, changes can occur going forward as needed without a vote of the membership. This may also be a good time to change the promotional process from a popular vote to an assessment center with interviews to further professionalize the Wethersfield Volunteer Fire Department.

Dynamix Consulting Group suggests that in whatever manner the Wethersfield Volunteer Fire Department and Town of Wethersfield chose to update the current Bylaws and Standard Operating Policies, the priority becomes updating, implementing, and consistently following the policies and Bylaws as soon as possible. Following a complete review and documentation of the governing documents of the Wethersfield Volunteer Fire Department, leadership should establish a review schedule to review and update every policy no less than every three years. This review should also include an annual gap analysis to identify the need for new rules and regulations.

26. Develop a long-term master plan for the fire department.

Master or long-range planning is preparation for Wethersfield Volunteer Fire Department's future service delivery effectiveness based on projections of the future service delivery environment. This long-range master plan focuses on the big-picture perspective and future needs of the fire department and community. Fire service organizations engaging in long-range master planning processes will be able to utilize this valuable information to answer the following three questions:

1. Where is the organization today?
2. Where will the organization need to be in the future?
3. How will this organization get there?

The Town of Wethersfield contracted Dynamix Consulting Group to conduct a *Fire Department Evaluation*. This evaluation will give the Town a clear idea of the current conditions of the fire department based on an in-depth evaluation. The *Fire Department Evaluation* will also project some of the future fire services needs of the Wethersfield Volunteer Fire Department, along with providing strategies to meet them. The scope of work for a master plan is more comprehensive than that of a *Fire Department Evaluation*. The master plan traditionally includes a full community risk assessment of the environment in which the emergency service operates and provides a deeper analysis of the details of an organization than exists within an agency evaluation. The evaluation provided by Dynamix Consulting Group will provide a strong foundation for a master plan should the Town of Wethersfield choose to engage in the master planning process either internally or with outside assistance. Master Plans typically include a 10-15-year planning period.

27. Develop a short-term strategic plan for the fire department.

At the time of this report, there was not a strategic plan in place for the Wethersfield Volunteer Fire Department. Ideally, the leadership of the Town of Wethersfield will accept the *Fire Department Evaluation* or some variation of the study. The recommendations, guidance for changes, and new initiatives detailed within the *Fire Department Evaluation* will provide direction for developing a strategic plan. This is the most effective way to prioritize and plan for the implementation of the *Fire Department Evaluation* findings.

The strategic planning process would ideally result in a three-to-five-year work plan, intended to guide the work effort of the entire organization toward a common set of goals and objectives. The process should include representation from every major interest group in the organization.

The members of the Wethersfield Volunteer Fire Department need to be involved in achieving some successes to stabilize the culture of the fire department. The work associated with implementing a strategic plan provides the perfect opportunity for the Town to collaborate with the members of the fire department to establish the direction for the future by achieving the goals that are set forth in the strategic plan.

28. The Fire Marshal's Office and the Police Department should review the existing False Alarm Ordinance to ensure that it meets the current needs of the Town and further establish a defined communication process to report all false alarms and addresses to the communications center as well as follow up with building owners to ensure the system is properly maintained and inspected.

The Town of Wethersfield has a False Alarm Ordinance to reduce the number of false alarms reported to the fire and police departments with a fee structure established for multiple false alarms; however, it should be reviewed and possibly updated to meet the current needs of the Town of Wethersfield. The police department, via the communications center, coordinates the billing for this ordinance; however, when the communications center receives an alarm, it is assumed to be an actual emergency until responders confirm that no emergency exists and deem it a false alarm. In the case of the fire department responding to false alarms, no information regarding the final determinate (or what the responders determined the incident to be) is currently forwarded to the communications center. This most likely explains the extremely high incidents of false alarms across multiple years and why the False Alarm Ordinance does not appear to be working. Additionally, the current ordinance does not allow for billing for false Carbon Monoxide Alarms. The Town may want to consider modifying the ordinance to include Carbon Monoxide alarms.

29. Implement a Quality Assurance (QA) program to ensure accuracy when creating incident reports.

Free training on the National Fire Incident Reporting System (NFIRS) classifications offered through the National Fire Academy will improve the quality of the data collected by the Wethersfield Volunteer Fire Department.

30. The majority of calls for service in Wethersfield occur on weekdays and are non-emergency. The Town of Wethersfield should consider an alternate arrangement to respond to these calls instead of activating the volunteer fire department.

At the time of this report, insufficient data was available to determine when fires were most likely to occur in Wethersfield; however, knowing that nearly 60% of demand is non-emergency call types and that most service requests occur during daytime workweek hours, the Town of Wethersfield should consider whether an alternate arrangement of response is appropriate for the Town. The Fire Marshals' Office may be well-positioned to handle these non-emergency calls with the assistance of a single volunteer fire company instead of the current arrangement where all three volunteer fire companies are activated.

31. Consider duty shifts or other ways to reduce the number of calls to which volunteer firefighters respond.

The Wethersfield Volunteer Fire Department moved from single and double fire company responses to dispatching all three fire companies to all calls when leadership became concerned that there were fewer firefighters responding. This created a bigger response burden on those firefighters who were responding to calls. The Wethersfield Volunteer Fire Department should collaborate with its members to identify ways to reduce the number of calls volunteers respond to. This could include assigning duty shifts so volunteers only respond to calls on certain nights of the week unless there is a major emergency.

32. The Town of Wethersfield should actively work with the communications center to ensure compliance with NFPA 1221.

The industry standard for call processing (or alarm handling) is NFPA 1221: Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems. This standard provides for communication centers to have processing times of not more than 60 seconds, 90% of the time. For special operations, calls requiring translation, or other factors described in the standard, times should not exceed 90 seconds at the 90th percentile. The Wethersfield Police Department has direct supervision over the initial processing, transferring, and dispatching of emergency calls. A preliminary call processing time of 3 minutes 58 seconds was calculated at the 90th percentile.

33. The Wethersfield Volunteer Fire Department should conduct a full Community Risk Assessment.

The purpose of a Community Risk Assessment is to determine exactly what risks exist in the community, what resources (personnel and equipment) are required to respond to these risks, and what educational or enforcement efforts can reduce the number of emergency calls for service.

34. The Wethersfield Volunteer Fire Department should minimize the number of apparatus and vehicles that respond to calls; additionally, all call types should be evaluated for response type with only true emergencies including a lights and sirens response from multiple fire companies

The Wethersfield Volunteer Fire Department is currently responding apparatus, “driver only”, to calls. The department should adopt a risk-based response and staffing plan. Wethersfield is routinely deploying more apparatus than it can appropriately staff. Dynamix Consulting Group recommends the Wethersfield Volunteer Fire Department establish a minimum staffing policy and a minimum crew size for each type of apparatus, with not less than two personnel responding to an emergency call on any type of apparatus.

35. The Town of Wethersfield should establish “trigger points” related to meeting performance objectives that identify when it is necessary to augment the volunteer fire service with additional paid personnel. Further, a plan should be developed to fund the additional personnel.

The Town should establish performance standards for the Wethersfield Volunteer Fire Department. These performance standards should include “trigger points” where the Town will supplement the volunteer fire companies with additional paid staff.

If at some point, performance declines to a level necessitating paid staff to supplement the volunteers, the Town should be prepared to fulfill that need and maintain reliable delivery of services.

36. The Town of Wethersfield should monitor fire department performance monthly and communicate the performance to all stakeholders.

Following the development of performance standards for the Wethersfield Volunteer Fire Department, the Town should monitor the performance of the fire department monthly. Administrators should communicate this performance to all stakeholders to allow for full transparency and a data-driven approach to any changes that may be required to fire department staffing.

Opportunities for Regional Collaboration

As part of evaluating the Wethersfield Volunteer Fire Department, Dynamix Consulting Group reached out to neighboring fire departments as well as those that are part of Task Force 51 with the Wethersfield Volunteer Fire Department.

37. Investigate the feasibility of partnering with the Newington Volunteer Fire Department on a Recruitment and Retention Program.

The Newington Volunteer Fire Department is thriving. The department has implemented an aggressive recruitment and retention program which has attracted more than a dozen new firefighters and fire cadets this year. The Newington Fire Chief has invited the Wethersfield Volunteer Fire Department to work with his Recruitment and Retention Committee to expand the reach of these successful efforts into the Town of Wethersfield and attract new volunteers. Dynamix Consulting Group suggests that it would be more efficient to assign members of the Wethersfield Volunteer Fire Department to work with Newington than for Wethersfield to try to create its own program.

38. Investigate the feasibility of partnering with the Newington Volunteer Fire Department for a Fire Cadet Program.

The Newington Volunteer Fire Department Cadet Program expanded to include a Junior Cadet Program (for students ages 14-15) and a Cadet Program (ages 16-17) to prepare students to become firefighters at age 18. The Newington Fire Chief has offered to include the Wethersfield Volunteer Fire Department in this program. Students from Wethersfield could participate in Newington's program in return for Wethersfield supporting a part of this program with personnel and/or other resources. Dynamix Consulting Group suggests that this is another opportunity for Wethersfield to join a successful program and expand the benefits into their town.

39. Investigate the feasibility of partnering with the Newington Volunteer Fire Department for a Training Program.

Newington owns a training facility which it already makes available to Wethersfield. The Newington Volunteer Fire Department trains on Monday nights, which is the same night that the Wethersfield Volunteer Fire Department trains. Newington has recently added Sunday training sessions to accommodate members who are not available on Monday evenings.

The Newington Fire Chief has offered to include Wethersfield in the Training Program. Dynamix Consulting Group suggests that a joint training program will allow for more efficient on-scene operations between the two departments. It would eliminate the redundancy associated with the development of two separate training programs, the joint training sessions will likely have increased attendance of firefighters, thereby allowing for more variety and complexity in training evolutions, and the ability to participate in Sunday and Monday training sessions would provide more flexibility for Wethersfield's volunteer firefighters.

40. Review the Newington Volunteer Fire Department's Organizational Structure, By-Laws, and Standard Operating Procedures.

The Newington Volunteer Fire Department has recently updated its Organizational Structure, By-Laws, and Standard Operating Procedures. The Newington Fire Chief has offered the assistance of his department to Wethersfield if they initiate similar undertakings. Dynamix Consulting Group suggests that Wethersfield may benefit from Newington's assistance in this area.

41. Cooperative services agreement for paid firefighters to respond to calls in the Town of Wethersfield.

Dynamix Consulting Group suggests that the logical first step for the Wethersfield Volunteer Fire Department is to reorganize its fire marshal's office to respond to non-emergency calls on weekdays since that is when the majority of calls in town occur. This effort will likely allow the volunteer firefighting force in Wethersfield to meet the performance objectives established by the Town for at least the short-term future.

If the volunteer firefighting force becomes unable to meet the performance objectives established by the Town of Wethersfield, there may be value in approaching the City of Hartford or the Town of East Hartford about the possibility of a cooperative service agreement for paid firefighters from one of those municipalities to respond to calls in the Town of Wethersfield. Both Hartford and East Hartford border Wethersfield and operate full-time paid fire departments.

This recommendation is designed to support, rather than replace, the volunteer fire department in the Town of Wethersfield. It is the experience of Dynamix Consulting Group that when fire departments begin to staff fire stations with paid personnel, volunteer firefighters tend to become less active at those stations because they know that there is someone available to respond. By staffing a selected fire station in Town or close to the border of Wethersfield, there is still a need for volunteer firefighters to respond to the unstaffed stations; firefighters responding to calls near those unstaffed stations will likely be the first to arrive and help those in need. This arrangement will provide support for the volunteer firefighters while also preserving the need for them to respond. As both Hartford and East Hartford staff large fire departments, those departments would likely have the capacity to backfill if the firefighters(s) assigned to Wethersfield are off from work. Wethersfield may struggle in this regard if the Town hires one or two firefighters and does not have a mechanism in place to cover for those firefighters when they are off from work.

Conclusion

It is Dynamix Consulting Group's sincere hope the information contained in this report serves to its fullest extent, and that the emergency services the Wethersfield Volunteer Fire Department provides to the Wethersfield community will improve by its implementation.