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Town of Northfield
Regional Emergency Medical Services Study

Final Report
October 31, 2023

UMASS BOSTON

Contents

1 Introduction

1.1 Project Overview

The Town of Northfield engaged the Edward J. Collins, Jr. Center to study the feasibility of regional expansion of their Emergency Medical Service (EMS) department and make recommendations to develop the necessary framework for an enterprise-level service. At the outset of the study, Northfield was providing services under contract to the Town of Bernardston and a portion of the Town of Erving. During the course of the study, the Town of Gill signed an agreement for EMS as well. This additional new agreement resulted in a service area and revenue base that is currently considered ideal with the current facility and vehicles in the view of the EMS Chief and confirmed by the Center's review. It also allowed a shifting of the study to provide a greater focus on developing recommendations to build the operational, financial, and organizational foundations to ensure the department could effectively perform under the current agreements and for the residents of Northfield and their regional partners.

This report is presented as a draft for review and comment by the Town of Northfield Selectboard. Their comments and direction will guide a final report and next steps.

1.2 Executive Summary

Northfield EMS is, from a functional perspective, providing paramedic-level service at a high level, with a high degree of satisfaction expressed by their partner towns and other public safety agencies. The department has seen strong growth in recent years in their level of service, call volume, revenues, and overall capacity to respond. This growth has unquestionably provided the resources and scale necessary to allow the department to raise the standard of care for Northfield residents. However, like all rapidly growing organizations, they are now faced with an inadequate organizational, financial, and administrative structure and are not positioned for long-term sustainability and continuity.

In order for the gains made under the current leadership to be maintained, it is imperative the department now move toward shoring up its organizational foundations and preparing for the future. This report presents several findings and recommendations to accomplish this, summarized below with corresponding sections:

- Implementing a number of financial management best practices (Section 4.1.1);
- Developing a long-term capital improvement plan (CIP) for the replacement of vehicles and equipment (Sections 3.1.2 and 4.3);
- Recognizing the Total Cost of EMS by capturing indirect costs incurred by other Town departments (Sections 3.1.1 and 4.1.3);
- Transitioning to coverage being provided predominantly by full-time personnel (Sections 2.2 and 4.2);
- Developing additional administrative and management capacity (Sections 2.9, 3.6, 4.1.1, and 4.2); and
- Developing an assessment model that equitably and fairly distributes these costs to the partner towns (Sections 3.5 and 4.4).

This report is structured with Section 2 (Northfield EMS Department & Operations Review) and Section 3 (Financial Review) presenting findings and observations from the Center team, including supporting trends and data. Section 4 (Long-Term Fiscal Sustainability Recommendations) discusses opportunities and options to address those findings and other general recommendations.

2 Northfield EMS Department & Operations Review

Northfield EMS has been operating since the late 1980's. It was formally designated by act of the Northfield Selectboard in 2005 as a standalone department of the Town, beginning as a first response, non-transport service. In October of 2010, Northfield upgraded to Basic Life Support (BLS) transporting, and in January 2012, increased its licensure from BLS to Advanced Life Support (ALS) intermediate level. Since July 2014, Northfield has been licensed at the paramedic level, operating at all levels of pre-hospital care.

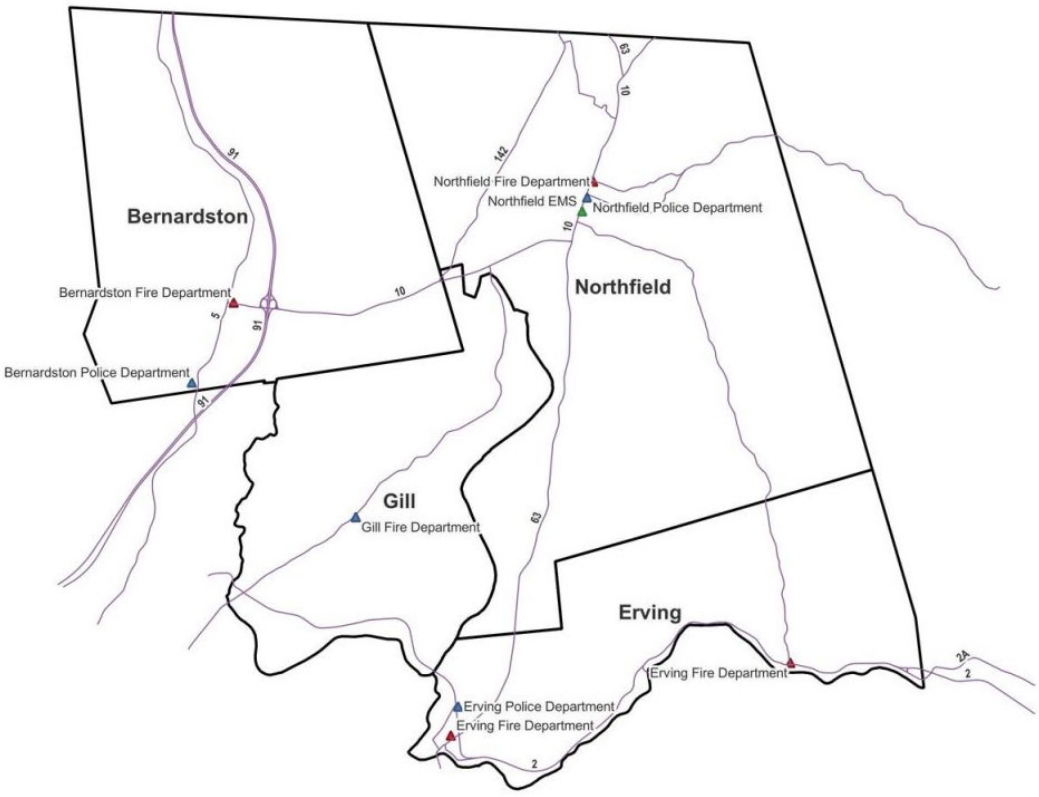
Staffed by a mixed model of paid-in-station, paid on-call and volunteer, the department has continued to grow its service area, providing services under agreement to Bernardston and Erving, as well as Gill beginning in FY2024, and is party to mutual aid agreements with other towns. Northfield currently has written mutual aid agreements with Orange, Turners Falls, and Greenfield Fire Departments. As of October 2023, Northfield is in the process of signing an agreement with Colrain Ambulance, as they are now primary response for the Town of Leyden. Northfield will also call upon out-of-state resources (Winchester EMS in New Hampshire, Rescue Inc. in Vermont, and others) and these calls are reciprocated as necessary.

Northfield EMS operates from a leased facility on Route 10 in Northfield. Northfield EMS is responsible for the rental and utilities of the facility. While centrally located in Northfield, travel distances to remote parts of Bernardston, and parts of Erving impact response times. Operating within a tiered response system, Northfield closely coordinates with local police and fire in each partner town, which are capable of providing first responder patient care, triage, and stabilization until Northfield EMS can arrive on scene.

Dispatch services are provided by the Massachusetts State Police Shelburne Control (B2) in Shelburne Falls, MA. State Police Dispatchers are required to be Emergency Medical Dispatch (EMD) trained and certified. This Regional Dispatch Center dispatches resources from 22 municipalities in northern Franklin County.

The Overall Coverage Area map below shows the partner service area between Northfield, Bernardston, Gill, and Erving. The map also shows the locations of each town's Fire and Police stations.

Overall Coverage Map



2.1 EMS Equipment & Vehicles

Northfield EMS currently has three ambulances in service. Two are equipped for ALS paramedic level care and stationed in the Northfield EMS Station, with a third ambulance equipped for BLS care and transport garaged in Erving's Fire Department Station #2. At this time, Northfield has not determined whether it will continue to maintain three ambulances. The following table shows the EMS fleet and major capital equipment. Note all were placed in service shortly after the model year, and the accompanying equipment is the approximate age of the vehicle in which it is transported.

Vehicles and Capital Equipment

Vehicle	Model Year	Chassis	Manufacturer	Onboard Capital Equipment
Ambulance 1 (A1)	2007	Ford E-350 (Van)	AEV Trauma Hawk	None
Ambulance 2 (A2)	2017	Ford F-550	Horton	Stryker PowerPro XT Cot Lucas 2 CPR Device PhysioControl Lifepak 15 Cardiac Monitor
Ambulance 3 (A3)	2022	Ford F-550	Horton	Stryker PowerPro XT Cot Lucas 2 CPR Device PhysioControl Lifepak 15 Cardiac Monitor

At present, there is no plan to replace A1 or expand its onboard equipment and it is expected to remain in a third-out status. It is currently housed in Erving Fire Station #2 as there is no space within the Northfield EMS Station. While all current vehicles and equipment (excluding the A1 reserve) are in good to excellent condition, are well-suited to the operating conditions, and are technologically up to date, there is no long-term or strategic planning for vehicle and equipment replacement. This is discussed further in Sections 3.1.2 and 4.3.

2.2 Staffing and Shift Coverage

Northfield EMS utilizes a primary volunteer/call model, with one full-time paramedic employed by the Town. Some volunteer members opt for paid-on-call, while others work on a call/response basis. Stipends are provided for the Chief, Assistant Chief, and various Captains (all volunteers) with administrative and training responsibilities. The current budget provides for one paramedic and one EMT in station between 8am-12am (allowing for full transport crew), and one between 12am-8am, with additional staff as needed and available on a call basis. Although the department has been appropriated funds for wages for the overnight shift, it is structured as two half-time hourly positions (on call) rather than a full-time, benefited position. Further, as the Department relies on volunteers with full-time employment elsewhere, shifts periodically go unfilled. This, coupled with the overall regional issues in hiring paramedics, has resulted in difficulties maintaining stability and coverage for all shifts as designed. When Northfield is unable, due to staffing/shift coverage, to provide a paramedic on a call, they rely on a third-party ALS intercept.

Northfield EMS has official job descriptions for EMS Director (now titled Chief); Assistant Director (now Assistant Chief); Paramedic and Paramedic Full-Time. These were last updated in 2014, except the Full-Time position, which was created in 2018. There are no job descriptions for the captain positions, nor EMT/Basic Medic.

Unlike many volunteer departments (both Fire and EMS), Northfield does not routinely provide standby payments to on-call members. The fee is available and offered, but not often utilized. A standby fee, typically equivalent to 1-2 hourly wage, is paid to ensure availability for response and is paid regardless of whether a call is received and responded to. The Town's personnel policy provides for a 2-hour minimum payment only if a call is responded to. Members on call without a standby wage are not obligated to respond, but the senior members typically coordinate amongst themselves to ensure coverage is maintained. There is a paid on-call status (1/2 of hourly rate) that obligates response, usually on overnight shifts, but this is rarely utilized. Ensuring coverage without consistent use of a standby rate creates a situation with a considerable amount of uncompensated volunteer hours.

A review of the payroll and roster for FY2023 noted the following:

- There were 26 EMTs or paramedics on the roster, including one full-time employee (authorized in 2021) and the Chief and Assistant Chief, who are both volunteer/call and provided stipends.
- For the fiscal year, 233 hours on average per week were recorded.
- Four individuals exceeded 20 hours per week for at least 26 weeks; this is the threshold at which pension contributions to Franklin Regional Retirement System are required and under which M.G.L. requires individuals to be offered health insurance. Insurance and pension contributions are currently budgeted for only two individuals. A third individual recorded 23 such weeks but has only been with the department for roughly half the year so it is likely this person crossed the threshold in the current fiscal year.

- Of the 26 on roster for FY2023, 14 averaged under 5 hours per week and 14 recorded at least half the year with no hours in a week.
- In general, excluding the Chief, Assistant Chief and FT personnel, the bulk of coverage is provided by about 5 individuals.
- 20% of hourly coverage on average is provided by full-time employees, with the remaining 80% covered by volunteer/call members. As noted below, there is only one official regular, full-time employee, but there is a member that works full-time hours and receives pension contributions.

In 2021, the Town of Northfield engaged the Collins Center to conduct a Public Safety Visioning exercise, which included taking community feedback as well as engagement of staff across all public safety departments, to get a better understanding of the future of the departments and community expectations. As part of this exercise, Collins staff interviewed and surveyed EMS staff and volunteers, in part to better understand the issues facing the department with recruiting and retaining volunteers. A few of the key findings from that exercise are noted below:

- Community service and the camaraderie were major contributing factors for volunteers to continue working with the department.
- While compensation for calls was not a major contributing factor in their decision to join the department, it was a major factor in staying on.
- Career development, training opportunities and résumé-building were identified as key reasons individuals joined and/or stayed.
- Additional training and increased compensation were identified as the strongest incentives to stay.
- Organizational issues at the Town-wide level were identified as potentially problematic; responses to several questions concerning the department's relationship and cooperation with the overall Town and other public safety departments were indicative of organizational disfunction commonly found in volunteer-based services.
- Less than half of the respondents stated they expected to still be with the department in five years.

Lastly, other findings include potentially significant concerns over the status of several volunteer positions as it relates to benefits and/or treatment as regular employees:

- As noted above, four, and potentially five, members exceeded the threshold under M.G.L. for being offered health insurance and the FRRS threshold for enrolling in the pension program.
- One member is essentially treated as a full-time employee, receiving paid time off and is enrolled in the pension program. This individual is not otherwise recognized as a regular, full-time employee.
- The Center was informed members have signed an acknowledgment form that says that if they trigger the town's requirement to offer them benefits and they then request those benefits, they would be restricted to no more than 20 hours moving forward. While it is allowable for individuals to decline health insurance, audits by FRRS may identify additional pension contributions for which the Town has liability.

From a practical perspective, these members are dedicated to the Department and their communities, and the Department has a critical and growing need to maintain coverage, so it is understandable how the predominance of call coverage has evolved over time. However, these practices may expose the Town to liability. Additionally, should members be restricted to 20 hours per week following any determination by FRRS that pension contributions would be required, it is possible that coverage could not be maintained since the impacted members work many of the total hours, leaving the Department unable to provide the level of service desired, and the Town unable to perform under its service agreements.

The findings and data noted above, combined with the anecdotal findings of the 2021 study and interviews with current Town staff all support the reasonable conclusion that the department, with the growing number of runs it is taking on and associated need for coverage, is at a significant risk for staffing shortages in the future if just a few of the current key volunteers were to leave or be restricted on hours. Given the relatively low population of the communities served, it is also unlikely there is sufficient volunteer capacity to provide on-call coverage for minimal hours, given that these members mostly respond to calls from home, thus need to live nearby. Recruiting for a full-time, benefited position opens up a significantly larger recruitment area.

There are also a number of broader, systemic issues impacting Northfield and the region overall. In EMS services across the Commonwealth (public, private, and volunteer) similar issues exist in meeting staffing needs, especially at the paramedic level. During the COVID pandemic, the Department of Public Health/Office of Emergency Medical Services (DPH/OEMS) eased requirements on ALS staffing, allowing for first responder (at any level) to serve as a driver. This staffing waiver (Executive Order 595) was of tremendous benefit with limited licensed EMT's available, and Northfield EMS successfully utilized it at times. Since the conclusion of the pandemic emergency, this staffing waiver has been discontinued, returning to requirements for EMT basic at a minimum for a driver to make a transport crew. Hiring, training, and retaining paramedics is an ongoing problem. With the shortage of paramedics, the increase in workload can result in burnout for regular and volunteer staff left to cover shifts. Departments that are largely volunteer/call also tend to serve as résumé-building and skill development for younger individuals that will move on to permanent, full-time positions in other jurisdictions, increasing turnover levels and decreasing experience.

With the current runs approaching 1,000 per year, and with much of it provided now under contract to the partner towns, the Department needs to transition to the majority of coverage being provided by full-time personnel, with volunteer/call members acting to supplement and filling gaps where needed.

2.3 EMS Facility

Northfield EMS is currently housed in a leased building near Northfield's Town Center. The building is a former gas and service station renovated with largely donations and volunteer labor. The station comprises two vehicle bays, a small office, a lounge/meeting room, restroom, and is extremely limited in size. The Collins Team observed the following issues, concerns, and deficiencies with the facility:

- There are no sleeping quarters; a couch in the meeting room is used for overnight shift sleeping.
- Single use restroom with no shower facilities.
- The bays are undersized; damage observed on bay door jambs due to extremely tight vehicle fit. When vehicles are in bays, cannot maneuver fully around vehicles, and rear bumpers nearly touch

storage cabinets. Bays are not insulated properly, and the HVAC system is inadequate for heating and cooling, making it difficult to do any maintenance or provisioning of vehicles while in bay or in inclement weather.

- With the addition of Ambulance 3 in 2023, Ambulance 1 was moved to Erving's Fire Station #2 due to lack of space.
- Minimal storage on premises; consists primarily of low-grade cabinets, and a small storage closet.
- No training or meeting space unless ambulances are moved out.
- No wash-down, decontamination equipment or equipment servicing space within bays; no sinks, eye wash or shower stations for personnel hazardous material exposures.
- The second floor is unusable.
- No laundry or washing facilities or equipment, other than utility sink in bathroom, for uniforms, linens, personal protective equipment, etc.
- No lockers or individual storage areas.
- No cooking or food storage/prep areas; toaster oven, microwave in garage and mini fridge in meeting room. Only sink is in restroom.
- No secure storage for medical supplies and narcotics.
- The interior and garages spaces appear to lack fireproof separation.

Over the past several years, Town officials have evaluated several options to meet facility needs for EMS. At least 15 separate sites have been evaluated, with preliminary design completed for a combined EMS, Fire and Police facility on one of these sites and presented to Town Meeting. This proposal was rejected by voters, as they did a subsequent Special Town Meeting vote for a reduced scope Police/EMS facility proposed as a renovation of an existing building. The Town's Emergency Services Facility Committee continues to meet with their consultants to investigate alternatives, including a new stand-alone facility. Facility needs for the department, in either a shared or separate facility, are a critical concern for the Department.

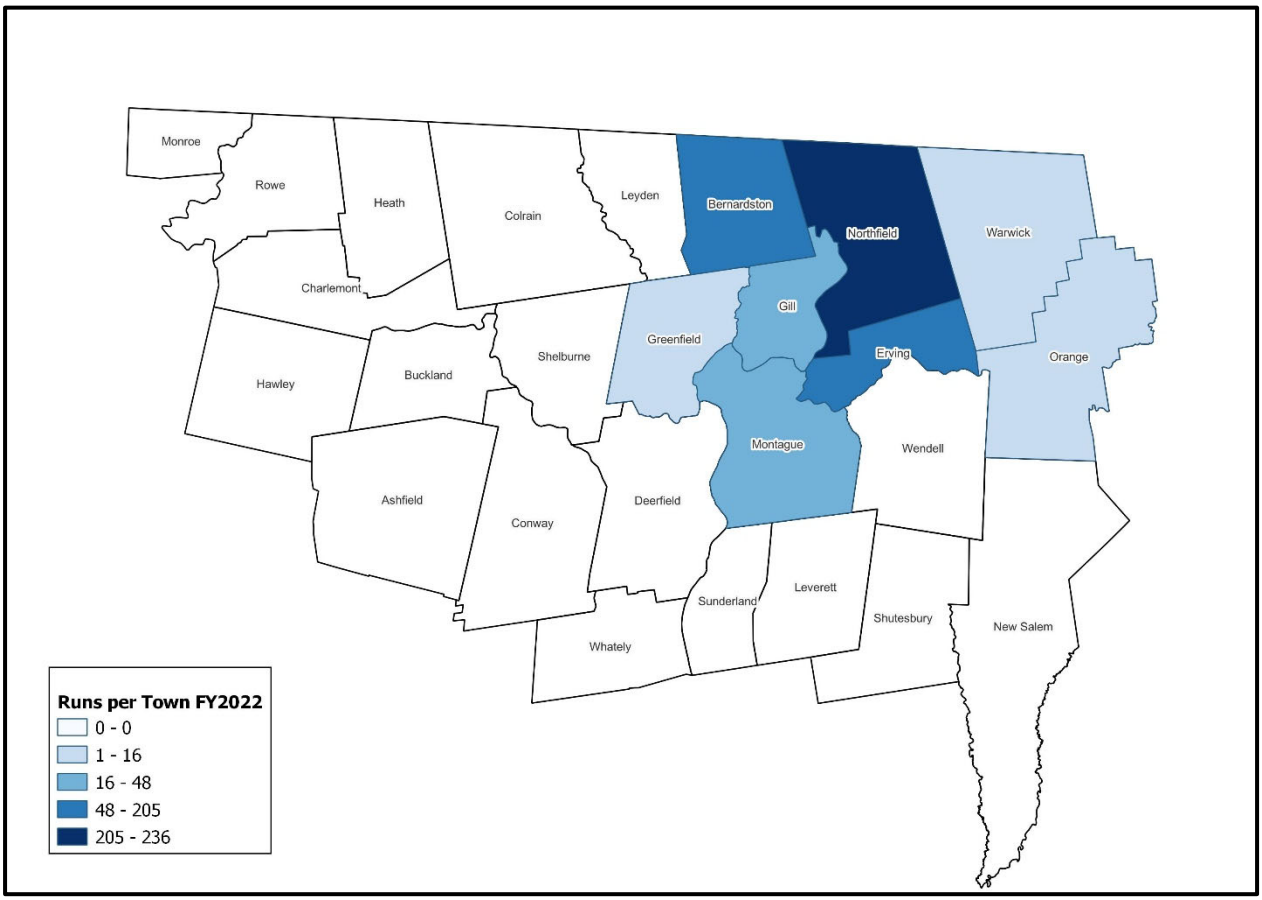
2.4 Historical Run Data

The volume of service provided by Northfield EMS has increased significantly in the past five years. The table below shows the run data for Northfield EMS for the past five completed fiscal years. On average, from FY2018 to FY2023, runs have increased 25% per year, primarily due to the execution of service agreements with Bernardston in 2020 and Erving in 2022, resulting in Northfield assuming primary response for those communities.

Six Year Historical Runs per Town by Fiscal Year

Town	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	Total
Bernardston	20	86	202	195	205	238	946
Boston						2	2
Brattleboro				1	5	1	7
Charlemont						1	1
Colrain		1					1
Conway		1					1
Erving	5	8	3	7	125	132	280
Gill	20	20	18	27	48	73	206
Greenfield	6	19	6	10	13	20	74
Guilford						1	1
Hinsdale					1		1
Lake Pleasant						2	2
Leyden	1						1
Ludlow				1			1
Millers Falls		2	1	4	6	20	33
Montague	1	16	9	25	32	39	122
Northampton				1			1
Northfield	248	238	208	207	236	296	1,433
Orange	8	4	2	6	16	18	54
Shelburne						1	1
Turners Falls		1	2	3	57	90	153
Warwick	1	5	2	6	8	3	25
Winchester	6	9	5	4	7	8	39
(blank)	4	13	2				19
Grand Total	**320**	**423**	**460**	**497**	**759**	**945**	**3,404**

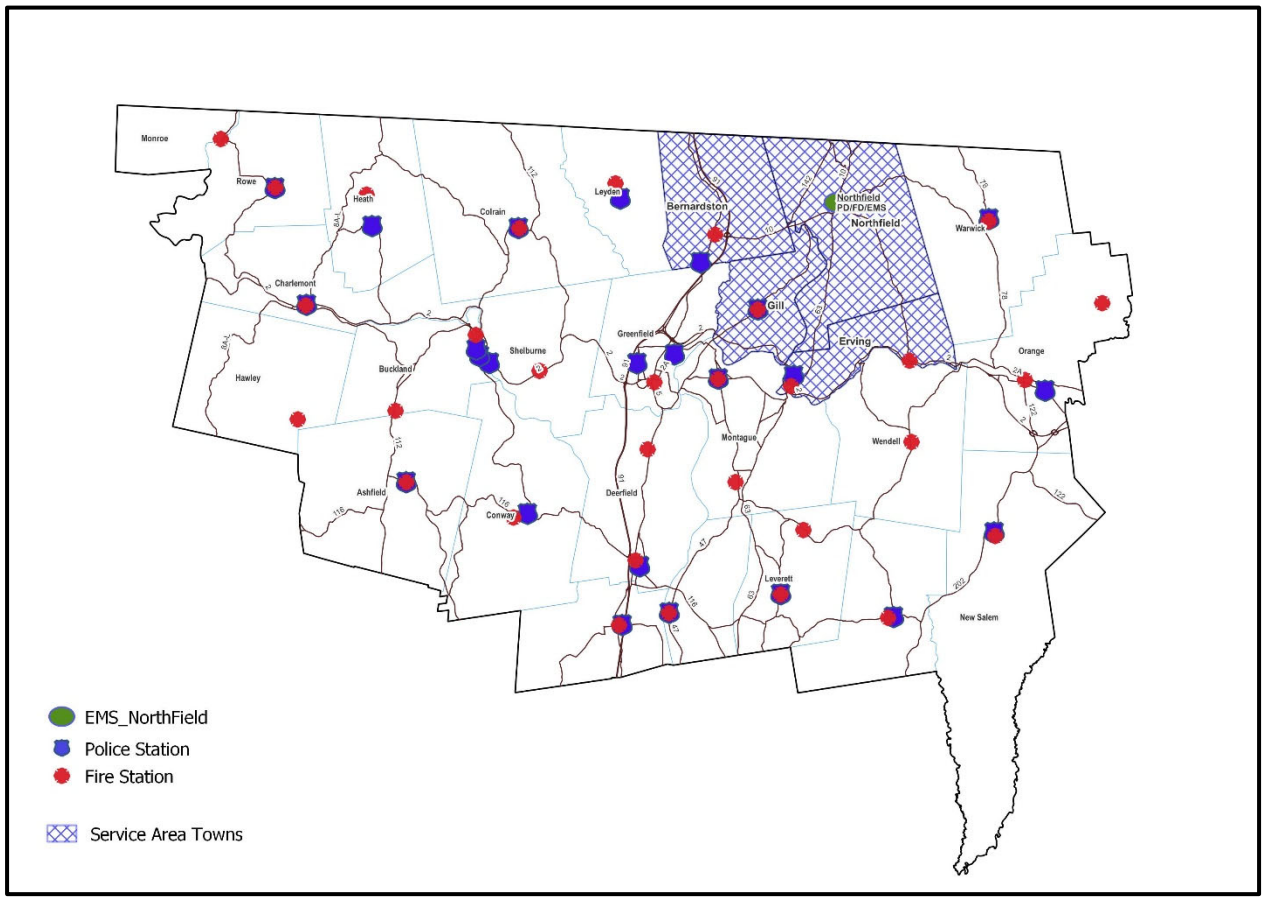
The trend in service volume increases has continued in the current fiscal year. The map shown below also shows calls by town for FY2022.



2.5 Service Area

Northfield EMS has service agreements with the Towns of Bernardston and Erving (partial) and is party to mutual aid agreements in the greater Franklin County region. An agreement was recently executed with Gill, and other towns have expressed interest in contracting with Northfield. The EMS Chief has stated that expanding beyond the current service area is not feasible without additional facilities, ambulances, and equipment as well as additional full-time staff. Adjoining jurisdictions, I.e., Warwick, Greenfield and the other half of Erving have existing contracts for EMS services in place, and the Chief believes the current boundaries are optimal, so further expansion is not envisioned without further major investment.

The map below shows the overall regional service area, with the cross-hatched areas denoting those towns with which Northfield EMS currently has signed agreements.



2.6 Response Time Trends

Meeting response time standards in a sparsely populated area over difficult geography and limited roadway infrastructure is a challenge for many rural departments. Many of the roads and bridges in Franklin County are a challenge in any season, but more so in winter conditions. Travel times to and from the hospital and time at the hospital impact service across Franklin County, which directly impacts patient care and survivability rates. National Fire Protection Association (NFPA) standards outline specific call-taking, dispatch, response, and hands-on patient time requirements. Computer Aided Dispatch, Automatic Vehicle Location Systems, and mapping solutions can assist in working towards meeting these NFPA recommendations, but these are not currently available either at Shelburne Control, or with Northfield EMS. Further, without the data these technologies provide, it is also difficult to develop a quality assurance program to justify service expansions.

Northfield EMS is often unable to meet the minimum response times recommended under NFPA 1710 (8-10 minutes) for patient care and viability outside of their current service area and has some difficulty meeting this time even within the current service area. However, under the outdated Service Zone Plan (SZP) discussed in Section 2.7 below, the average response time for all towns under primary service agreements is well below the primary response time of 25 minutes and has been generally decreasing each year.

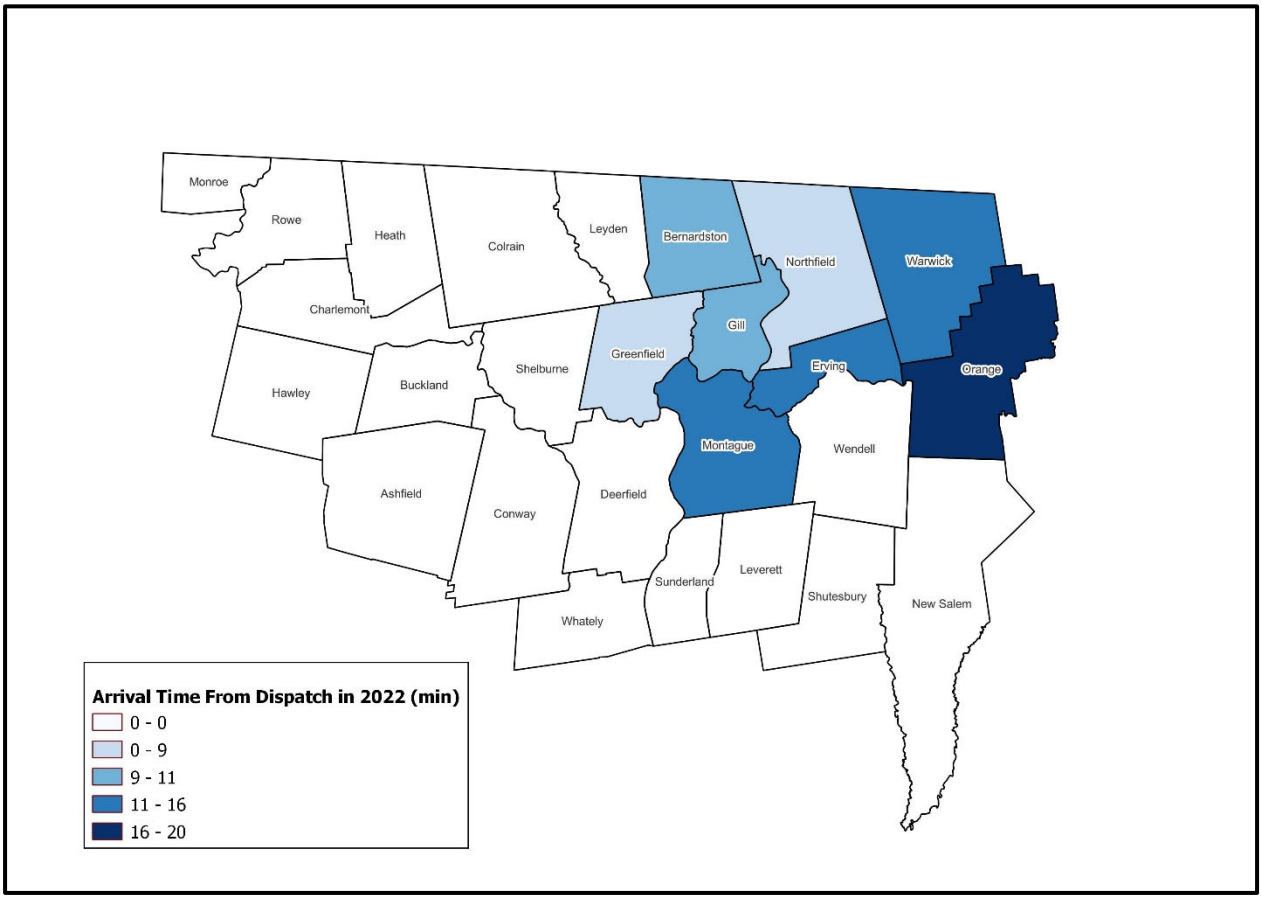
Analysis of run data for the past five years illustrates the response times for the past six years.

Average Time from Dispatched to Arrival per Town

Town	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	Average
Bernardston	13.4	14.4	11.7	11.8	11.2	10.5	**11.6**
Charlemont						27.0	**27.0**
Conway		23.0					**23.0**
Erving	14.0	15.7	23.0	10.6	13.5	12.8	**13.2**
Gill	14.2	11.1	12.7	12.4	11.6	11.6	**12.0**
Greenfield	8.0	11.8	8.7	15.0	11.5	9.1	**10.0**
Guilford						13.0	**13.0**
Lake Pleasant						14.0	**14.0**
Millers Falls		11.0		13.0	13.3	10.4	**11.1**
Montague		19.7	12.0	16.9	17.1	15.5	**16.1**
Northfield	10.3	9.8	9.3	7.6	8.4	8.0	**8.9**
Orange	28.0	18.3	7.0	25.3	24.2	17.7	**21.4**
Shelburne						10.0	**10.0**
Turners Falls		3.0	14.0	14.0	13.0	13.0	**12.9**
Warwick	18.0	22.6	22.0	15.3	17.8	22.5	**19.3**
Winchester	15.0	14.9	10.0	12.8	10.3	11.3	**12.8**
(blank)	9.0	14.5	10.0				**12.5**
Average	**11.0**	**11.5**	**10.6**	**10.1**	**11.1**	**10.5**	**10.8**

Note: Only calls with patient contact are included in run-time analysis. Calls such as cancelled, unable to provide service, no patient found, standby, and transfer were not used.

Below, the data from the table above is presented in the service area map. Note that response times to Greenfield represent a significant number of calls responded to while departing Baystate Franklin Medical Center, resulting in shorter travel times.



2.7 Service Zone Planning

Massachusetts General Law Chapter 111C requires local jurisdictions to develop and submit for approval a Service Zone Plan (SZP) to the Massachusetts Department of Public Health (DPH) Office of Emergency Medical Services (OEMS). These plans define the local EMS resources and describe how those resources will be used and coordinated. The plans allow for significant local control and discretion in how the plans are developed, including flexibility in developing response time standards based on local conditions, but they must be kept up to date and updated should major plan elements change.

Northfield has an approved plan on file with OEMS, which was initially submitted in November 2006 and updated and approved in November 2009. The plan has not been updated since entering into the ambulance service agreements with Bernardston, Erving, or Gill, nor has it been updated to reflect the suspension of service by Baystate Ambulance Service and designation of Northfield EMS as primary response. In order for Northfield EMS to meet their current service requirements, an updated Service Zone Plan should be presented for approval to DPH/OEMS Region 1. Under the current staffing and administrative structure, it is unlikely that this update will be completed without additional staff or consultant time for which resources are not currently available.

Additionally, in reviewing the current agreements with Bernardston, Erving, and Gill, it is not stated which party is responsible for submitting the plans for each municipality as required under M.G.L. c. 111C. Article IV states that each partner town is responsible for retaining Northfield as primary ambulance provider, while Attachment A states Northfield will provide "proper notification" to DPH/OEMS. While OMS has been made aware of the change for each of the partner towns via updated licensing documents, the service agreements should specify the towns are each responsible for submitting their own SZP. Alternatively, if additional resources were allocated to department management and administration, this is an administrative service Northfield could provide as part of a full-service agreement.

2.8 Regional Demographic Trends & Projections

Like much of central and western Massachusetts, Northfield and the surrounding communities are seeing population decline in recent years. In the five-year period preceding the 2020 Census, the service area of Northfield EMS, which includes Northfield, Bernardston, Gill and roughly half of Erving, has seen an overall population decline of 2.6%, although the 10-year trend is relatively stable at roughly 0.3% growth. The table below illustrates overall population trends for each partner town, Franklin County, and the current Northfield EMS service area.

Total Population

Municipality/County	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bernardston	2,193	2,122	2,205	2,173	2,187	2,160	2,191	2,051	2,064	2,014
Erving	1,755	1,737	1,784	1,832	1,875	1,871	1,841	1,791	1,740	1,673
Gill	1,428	1,565	1,532	1,573	1,641	1,656	1,604	1,608	1,596	1,732
Northfield	3,034	3,043	3,033	3,031	3,022	3,006	3,012	2,997	2,981	2,973
Current Service Area*	7,533	7,599	7,662	7,693	7,788	7,758	7,728	7,552	7,511	7,556
Franklin County	71,495	71,489	71,408	71,300	71,144	70,916	70,926	70,935	70,577	70,529
Service Area										
Pop. Inc/Dec		*66*	*64*	*31*	*95*	*(30)*	*(30)*	*(176)*	*(41)*	*45*
as %		*0.9%*	*0.8%*	*0.4%*	*1.2%*	*-0.4%*	*-0.4%*	*-2.3%*	*-0.5%*	*0.6%*
								10-year Inc/(Dec)		*23*
									as %	*0.3%*
								5-year Inc/(Dec)		*(202)*
									as %	*-2.6%*
Franklin County										
Pop. Inc/Dec		*(6)*	*(81)*	*(108)*	*(156)*	*(228)*	*10*	*9*	*(358)*	*(48)*
as %		*0.0%*	*-0.1%*	*-0.2%*	*-0.2%*	*-0.3%*	*0.0%*	*0.0%*	*-0.5%*	*-0.1%*
								10-year Inc/(Dec)		*(966)*
									as %	*-1.4%*
								5-year Inc/(Dec)		*(387)*
									as %	*-0.5%*

Source - American Community Survey (Census Bureau)
** Service area assumes 50% of Erving ACS Population*

And, like the rest of the region, the communities of Franklin County are aging. Over the past 10 years, the population aged 55 and over has consistently increased, as well as that age group's proportion of the overall population. The table below shows this trend.

Population Aged 55 & Over

Municipality/County	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Bernardston	728	764	844	857	850	851	860	863	838	787
Erving	496	484	482	509	557	599	582	623	589	503
Gill	511	547	528	559	590	594	597	615	629	585
Northfield	1,115	959	1,039	1,027	999	1,063	1,136	1,180	1,198	1,103
Current Service Area*	2,602	2,512	2,652	2,698	2,718	2,808	2,884	2,970	2,960	2,727
Franklin County	22,220	22,907	23,587	24,193	24,792	25,360	26,180	26,720	27,139	27,591
Aged 55 & Over as % of Total Population	34.5%	33.1%	34.6%	35.1%	34.9%	36.2%	37.3%	39.3%	39.4%	36.1%
Service Area										
Pop. Inc/Dec		*(90)*	*140*	*46*	*20*	*90*	*77*	*86*	*(10)*	*(233)*
as %		*-3.5%*	*5.6%*	*1.7%*	*0.7%*	*3.3%*	*2.7%*	*3.0%*	*-0.3%*	*-7.9%*
								10-year Inc/(Dec)		*125*
									as %	*4.8%*
								5-year Inc/(Dec)		*(81)*
									as %	*-2.9%*
Franklin County										
Pop. Inc/Dec		*687*	*680*	*606*	*599*	*568*	*820*	*540*	*419*	*452*
as %		*3.1%*	*3.0%*	*2.6%*	*2.5%*	*2.3%*	*3.2%*	*2.1%*	*1.6%*	*1.7%*
								10-year Inc/(Dec)		*5,371*
									as %	*24.2%*
								5-year Inc/(Dec)		*2,231*
									as %	*8.8%*

Source - American Community Survey (Census Bureau)
** Service area assumes 50% of Erving ACS Population*

While the population by age has seen long-term declines, the 55-and-over cohort is increasing as a proportion of the total population. This cohort typically places a larger burden on EMS services in particular, while also having an inverse impact on revenues as the proportion of Medicare/Medicaid calls (and lower Medicare/Medicaid rates of reimbursement) also increases. Please note that this data was provided through the American Community Survey population estimate program, which is conducted annually to provide communities information they may need for programming considerations. This differs from the official count from the decennial census.

Service Area* By Age

Municipality/County	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Aged 19 & Under	1,676	1,714	1,684	1,652	1,679	1,613	1,625	1,564	1,590	1,673
% Inc/(Dec)		*2.2%*	*-1.7%*	*-1.9%*	*1.6%*	*-3.9%*	*0.8%*	*-3.8%*	*1.7%*	*5.2%*
									10-year Inc/(Dec) %	*-0.2%*
									5-year Inc/(Dec) %	*3.7%*
Aged 20 to 55	3,255	3,373	3,326	3,344	3,392	3,338	3,219	3,018	2,962	3,157
% Inc/(Dec)		*3.6%*	*-1.4%*	*0.5%*	*1.4%*	*-1.6%*	*-3.6%*	*-6.2%*	*-1.9%*	*6.6%*
									10-year Inc/(Dec) %	*-3.0%*
									5-year Inc/(Dec) %	*-5.4%*
Aged 55 & Over	2,602	2,512	2,652	2,698	2,718	2,808	2,884	2,970	2,960	2,727
% Inc/(Dec)		*-3.5%*	*5.6%*	*1.7%*	*0.7%*	*3.3%*	*2.7%*	*3.0%*	*-0.3%*	*-7.9%*
									10-year Inc/(Dec) %	*4.8%*
									5-year Inc/(Dec) %	*-2.9%*

Source - American Community Survey (Census Bureau)
** Service area assumes 50% of Erving ACS Population*

Overall, the population in the partner towns is projected to continue to decline overall in the future. The UMass Donahue Institute compiles projections based on a variety of factors, including cohort survival ratios, economic development activity, and several other areas that can impact future growth. With the exception of Erving, all partner towns are projected to continue their decline in population. The table below shows their most recent projections out to 2050.

Population Projections through 2050

Town	2020 (ACS)	2020 (Census)	2025	2030	2035	2040	2045	2050
Northfield	2,973	2,866	2,784	2,678	2,551	2,377	2,182	2,009
Bernardston	2,014	2,102	2,024	1,931	1,818	1,672	1,527	1,395
Erving	1,673	1,665	1,765	1,873	1,978	2,026	2,153	2,223
Gill	1,732	1,551	1,611	1,642	1,631	1,592	1,552	1,520
Total	**8,392**	**8,184**	**8,184**	**8,124**	**7,978**	**7,667**	**7,414**	**7,147**
Inc./(Dec.)			**-**	**(60)**	**(146)**	**(311)**	**(253)**	**(267)**
As %			0.0%	-0.7%	-1.8%	-3.9%	-3.3%	-3.6%

Source: UMass Donahue Institute (UMDI) for 2025 forward.

As with any projections, there is certainly the possibility that these trends may not continue in the future. Rural areas throughout the state saw migration westward during the COVID-19 pandemic, and there are bright spots economically throughout Franklin County. However, it is likely that the aging trends will continue, placing an increasing burden on all emergency services, and in particular EMS. These same trends may also impact the pool of interested and able individuals willing to be volunteer/call EMTs and paramedics. Both factors will put increasing pressure on Northfield EMS to bring on regular, full-time personnel.

2.9 Additional Administrative and Management Challenges

With the expanded service area and current service agreements, Northfield has grown into a capable regional service provider. However, as discussed in Section 2.2 and in other sections, this growth has resulted in Northfield being in a very tenuous position from an organizational perspective. Senior leadership and management are provided by a core group of dedicated volunteers, as is, to a large degree, full in-station and call coverage. This creates an operation that is dependent on key individuals, not the organizational structure itself. There is no succession plan in place, and dedication to community is not a practical or realistic recruiting tool. Put simply, the organization has matured to the point where a more professional and institutionalized leadership structure is required to ensure sustainability of the service.

There is presently a clear need to grow and develop the management structure to provide a high level of service at a regional level. The preceding sections identified a number of specific challenges in staffing, facility, and capital planning. The need to update the Service Zone Plan (discussed in Section 2.7) remains, and there are also opportunities to better utilize a Medical Quality Assurance Program (MQAP) in developing training, policies and long-term capital and budgetary planning. The Department's Medical Control Officer of record is provided by Baystate Franklin Medical Center and is responsible for authorization to practice for department personnel and agency licensure.

In addition to licensing and practice authorization, Medical Control also serves to identify, in the current patient care record software, any issues with patient care and department protocol. Currently, this is an informal and as-needed practice and not a formal, structured process. Developing a written and standardized continuous quality improvement (CQI) process is considered a best practice and important to identify gaps in training and service. These plans should also be utilized to educate municipalities and their citizens on reasonable expectations of EMS services and ensure all stakeholders understand the need for adequate funding and should be priorities as the department continues to grow.

Most of the issues were also identified in a January 2019 study completed by the Franklin Regional Council of Governments (*Town of Northfield EMS: Future Considerations*), so it is clear that these are ongoing concerns that must be addressed given the current volume of service and area of service. To do so, additional managerial and administrative organizational structure is needed. As discussed in Section 2.2, Northfield EMS's Chief is charged with managing a roster of volunteer/call and regular EMTs and paramedics with the vast majority working regular full-time positions elsewhere, resulting in a very challenging scheduling environment. With the addition of recent addition of Gill, the Chief also manages four service intermunicipal service agreements, as well as handling the invoicing for other municipalities for which Paramedic Intercept Agreements are in place.

Until FY2024, this level of managerial oversight was compensated with a marginal annual stipend of $4,446, which was recently raised to $20,000. The Assistant EMS Chief also received an increase from $1,759 to $10,000 annually. While this was a necessary adjustment to their compensation, these positions remain volunteer positions with compensation that likely would not be adequate to recruit similarly qualified applicants should either of them leave their roles. As the Town and its partners weigh options moving forward, careful consideration should be given to how the senior leadership positions and any new regular positions are developed. There may be opportunities for a "working chief" model that would result in competitive compensation and more reliable shift coverage. In any event, given the need to address a number of administrative and financial management issues (discussed above in Section 2.9 and

in Section 4.1 later in this report) the Town should consider additional funding for management and administration of the department, whether internally provided or outsourced.

3 Financial Review

As part of its engagement with the Town of Northfield, the Collins Center conducted an analysis of the estimated total costs of delivering its current ambulance services to the residents of Northfield and Bernardston and a subset of the residents of Erving as compared to estimated revenue to finance costs.

Expenditures made to provide ambulance services comprise direct costs, overhead/indirect costs, and capital costs.

- Direct costs are accounted for in the annual budget of the EMS Department as appropriated at Town Meeting and consists of recurring salaries and wages and operating expenses.
- Overhead and indirect costs are accounted for in other Town departmental budgets and include those costs that indirectly support the operations of the EMS Department.
- Capital costs historically included expenditures to replace vehicles and capital equipment. Funding has typically been provided through annual or special Town Meeting appropriations or with retained earnings or grants and is not currently budgeted or planned for the long term.

As the bulk of departmental operating costs are related to staffing and the department operates relatively lean, the review of expenditures focused on those cost categories that are not currently accounted for, including indirect costs and capital investments, in order to arrive at a "total cost" for the operation. The findings are discussed in greater detail in Sections 3.1.1 and 3.1.2, respectively, and recommendations to address discussed in Section 4. Since operating costs are directly proportional to revenues and can be scaled up or down based on activity, and the Department has a track record of under budget performance and cost control, analysis of potential cost efficiencies was not part of this review.

Revenues are derived from insurance reimbursements and collections from customers, with insurance providing the bulk of overall funding, as well as charges to neighboring municipalities for providing ALS intercepts. Revenues are supplemented with annual assessments from the Towns of Bernardston and Erving, with an agreement with the Town of Gill beginning in FY2024. Some miscellaneous revenues, such as interest income, are also part of the revenue stream.

As trends in revenue, invoicing/collections, and future opportunities are a primary factor in the Department's budgeting and fiscal sustainability, additional analysis of revenue trends is presented in Section 3.2.

An Enterprise Fund is used to account for the financial activities of Northfield EMS, and essentially functions similarly to private sector business accounting, with profit or loss represented by changes in retained earnings at the end of the fiscal year. A separate Ambulance Donations Fund is also maintained, and receives donations from individuals, businesses, and organizations to fund future capital equipment replacement. Additionally, the assessment received from the Town of Bernardston was recorded in the Ambulance Donations Fund through FY2023 as the agreement specified their contribution was restricted to ambulance replacement; as Northfield does not have a separate EMS Capital Equipment Replacement Fund, the EMS Donations Fund received this revenue. This has since been changed to move this payment into the EMS Enterprise Fund.

The table below shows the Enterprise Fund's retained earnings history. It should be noted that $280,000 of July 1, 2021, EMS retained earnings – supplemented with $20,000 from the Ambulance Donation Account - was appropriated under Article 7 of the 2022 annual town meeting to purchase a new ambulance.

Annual Certifications of EMS Enterprise Fund Retained Earnings

As of 7/1/2016	As of 7/1/2017	As of 7/1/2018	As of 7/1/2019	As of 7/1/2020	As of 7/1/2021	As of 7/1/2022
59,436	80,332	90,243	128,343	25,931	336,010	170,837
Inc/(Dec) $	20,896	9,911	38,100	(102,412)	310,079	(165,173)

Retained earnings for an enterprise fund, like Free Cash in the General Fund, undergoes an annual certification process following the close of the fiscal year. During this reconciliation, factors such as timing of year-end payments and encumbrances affect the certified retained earnings, as can receivables and discharge of uncollectible accounts. Retained earnings, then, are somewhat difficult to predict when developing annual budgets and can be highly volatile depending on service levels (and capital costs as the fund is currently structured) during any given year.

A summary of revenue, expenditure and surplus/deficit history is presented in Section 3.4.

3.1 Enterprise Fund Expenditures

While the summary in the preceding section illustrates relatively strong growth and overall financial performance, the Center's review identified two major shortcomings with the current fund structure and budgeting practices. First, there is no explicit indirect cost recovery by the Town's General Fund, and, secondly, there is no long-term plan for the replacement of capital assets or future facility improvements. These omissions effectively understate the true and full cost of operating the EMS enterprise and directly result in underpricing the service to partner towns. Sections 3.1.1 and 3.1.2 discuss these findings, while recommendations for addressing them moving forward are presented in Sections 4.1.3 and 4.3 later in this report.

3.1.1 Indirect Costs

The EMS Department relies on administrative support from other Town departments such as Accounting, payroll, IT support, and human resources to operate. With enterprise fund activities that do not include dedicated, budgeted (in the enterprise fund) administrative costs, it is necessary to identify and recover administrative and indirect costs from the enterprise activity and consider these costs as operating expenses within the fund. Indirect costs typically include costs borne by administrative departments in supporting the activities of an enterprise activity. or in specific costs incurred in non-departmental accounts.

Currently, no indirect costs are paid to the Town's General Fund by the EMS Enterprise Fund, resulting in an incomplete financial picture of the overall cost of EMS operations. There is some history of budgeting certain costs in the Enterprise Fund, but the actual recording of applicable expenditures by journal entry has not been consistent, and these costs are not factored into the bigger fiscal picture of the enterprise

fund. It should be noted, however, that in FY2023 and FY2024, certain insurance payments (MIIA premiums and health insurance) were budgeted in the EMS fund, but it is not clear if they were fully paid from the fund. A more complete discussion of indirect costs is included in Section 4.1.3.

3.1.2 Capital Planning

The Town of Northfield adopted Financial Policies in FY2022 requiring the development and maintenance of a six-year capital improvement plan as part of the annual budget. This process has been started by the Town to aid in long-term fiscal planning, but this effort is still being integrated into the Town's overall budget process.

The Financial Policies defines a capital project as a major, non-recurring expenditure that generally meets the following criteria:

- Massachusetts General Law permits the Town to issue bonds to finance the expenditure;
- Project cost is $25,000 or greater;
- Proposed project or asset to be acquired has a useful life of 5 years or more including:
- New public buildings, or additions to existing buildings, including land acquisition costs and equipment needed to furnish the new building or addition for the first time;
- Alterations, renovations, or improvements to existing buildings;
- Land acquisition and/or improvements, unrelated to public buildings, but necessary for conservation, recreation or off-street parking;
- Major equipment acquisition, replacement or refurbishment, including but not limited to vehicles, furnishings, and information technology systems' hardware and software or other items that combined in purpose together make it a Capital Project;
- New construction or major improvements to Town's physical infrastructure, including streets, sidewalks, stormwater drains, and the sanitary sewer system. Infrastructure improvements must extend the useful life of the infrastructure by at least ten (10) years to be appropriately classified as a Capital Project;
- Feasibility studies, engineering design services, or consultant services which are ancillary to a future Capital Project.

Historically, the EMS Department has not followed a long-term capital improvement plan or investment strategy, and instead has relied on retained earnings and periodic Town Meeting appropriations, replacing equipment when it has exceeded (sometimes significantly) its useful life or when grant funds have been awarded. More recently, some funding has come from service agreements; however, the agreement with the Town of Bernardston restricted the full amount of the assessment to ambulance replacement although this restriction was removed in FY2024. The Town has also generally been averse to utilizing debt as a strategic financing tool, although Ambulance 2 was acquired with debt issued under the State House Note Program.

The current long-term CIP provided to the Center for this review does not include replacements of vehicles and equipment consistent with the service life of the assets. The equipment and vehicles presented in Section 2.1 were targeted for replacement at service cycles at roughly twice the industry recommended life. Ambulances were estimated at 20-years (compared to 5-7 years), and major equipment at 15-years (compared to 5-8 years).

Capital equipment replacement has not been considered in establishing assessments to partner towns, which has resulted in an understatement of true cost over time and could result in relatively volatile costs variances as equipment must be replaced in the future and these communities will be expected to assist in funding them. Further, the financial policies establish a guideline of $25,000 or more to include in the CIP; this threshold excludes future equipment replacement that would likely have a significant impact on the operating budget, such as radio replacements (approximately $10,000) and CPR devices (approximately $15,000) and potentially result in that needed equipment replacement being delayed.

No facility investments, which are severely needed as discussed in Section 2.3, are included in the CIP. Finally, the Town does not maintain a dedicated EMS Capital Stabilization Fund or have clear policies for set-aside of retained earnings or dedicating any donations or gifts to capital, which leave both categories of funding open to use for operations instead of planned capital investment.

3.2 EMS Revenues

Revenue to the EMS Enterprise Fund is earned primarily from user charges, which comprise insurance reimbursements and amounts collected from balance billing customers. Revenues from partner towns (Bernardston and Erving currently) as an annual assessment based on service agreements and are included in the user charges totals, as are amounts collected directly from other ambulance providers for ALS intercepts. The total revenues, as reported on Form A-2 Tax Rate Recapitulation Sheet, are shown below.

EMS Revenue History

Revenues	Actual FY2019	Actual FY2020	Actual FY2021	Actual FY2022	Unaudited FY2023
User Charges	192,454	240,312	319,002	440,235	516,106
Other Departmental Revenue	450	-	3,024	91	375
Investment Income	606	724	1,501		6,093
Total Revenues	**193,510**	**241,036**	**323,527**	**440,326**	**522,573**
$ Change over prior year		*47,526*	*82,491*	*116,799*	*82,247*
% Change over prior year		*24.6%*	*34.2%*	*36.1%*	*18.7%*

3.2.1 Revenue Environment

As the bulk of revenues derive from insurance payments for services, this section looks primarily at the data provided by the Town's ambulance billing provider to analyze revenue trends. Northfield EMS contracts with Comstar Ambulance Billing Service, a Massachusetts-based company which processes medical claims, invoices customers, and provides collections services. The project team was provided data sets for five years of fee for service revenues. It is important to note that only a portion of the services provided by Northfield EMS result in a "billable event", so there is a significant variance between the number of runs Northfield EMS makes and the data provided by Comstar. In general, only responses that result in patient transport generate revenues, although certain other services (primarily ALS intercepts) may be revenue-producing. Evaluating the level of services Northfield provides to partner

towns that do not produce revenues is an important factor when considering how assessments are structured.

Also important are trends in insurance reimbursement rates, the types of payees, and the contractual allowances that Comstar must account for in claim processing and write-offs of the difference between what is initially charged by Northfield EMS and what is ultimately collected. Since Medicare is the largest single payor and has a substantial contractual allowance, the rate of aging in the service area discussed in Section 2.8 results in an increase in overall Medicare eligibility, directly impacting the revenues collected per run. The table below illustrates the share of Medicare, Medicaid, and Commercial insurance as a payor to Northfield EMS.

Primary Payor Type Summary - Trends by Fiscal Year

Insurance	FY2019	FY2020	FY2021	FY2022	FY2023	FY2019-2023 Total
Commercial Insurance	54	77	73	129	129	462
Medicaid	19	41	28	53	95	236
Medicare	151	127	179	241	332	1,030
Other	17	25	32	35	32	141
Grand Total	**241**	**270**	**312**	**458**	**588**	**1,869**
% Commercial Insurance	**22%**	**29%**	**23%**	**28%**	**22%**	**25%**
% Medicaid	**8%**	**15%**	**9%**	**12%**	**16%**	**13%**
% Medicare	**63%**	**47%**	**57%**	**53%**	**56%**	**55%**
% Other	**7%**	**9%**	**10%**	**8%**	**5%**	**8%**

**Other includes patient direct pay, workers compensation, municipalities, unions, and 3rd party billing.*

Collected Revenue by Primary Payor Type - Trends by Fiscal Year

Insurance	FY2019	FY2020	FY2021	FY2022	FY2023	FY2019-2023 Total	% of Total Collected
Commercial Insurance	99,128	156,529	159,386	251,402	195,563	862,008	53%
Medicaid	5,778	13,933	10,338	16,432	38,802	85,282	5%
Medicare	83,244	69,974	97,812	134,683	187,717	573,430	35%
Other	14,416	6,310	36,065	36,458	25,247	118,497	7%
Grand Total	**202,567**	**246,746**	**303,602**	**438,976**	**447,328**	**1,639,218**	**100%**

The project team also looked at towns individually over the past five fiscal years, shown in the table below, and found that only Northfield is currently above the 55% baseline for the proportion of Medicare-reimbursed calls. However, three partner towns (Bernardston, Gill, and Erving) are close to the baseline with the majority of their calls having Medicare as the primary payor.

Primary Payor Type Summary - Five Year Total						
Town	Commercial Insurance	Medicaid	Medicare	Other	FY2019-2023 Total Billed Calls	FY2019-2023 % Medicare of Total
Northfield	182	92	474	40	788	60%
Bernardston	157	74	342	64	637	54%
Erving	60	31	102	17	210	49%
Gill	29	20	67	8	124	54%
Montague (Center + Villages)	5	8	15	3	31	48%
Orange	8	3	8		19	42%
Greenfield	4	4	7	2	17	41%
Winchester	3		7	3	13	54%
Warwick	4	1	5	2	12	42%
Brattleboro	4		1	2	7	14%
Mount Hermon	3		1		4	25%
Boston		2			2	0%
Easthampton		1			1	0%
Ludlow	1				1	0%
Northampton	1				1	0%
Shelburne	1				1	0%
Shelburne Falls			1		1	100%
Grand Total	**462**	**236**	**1,030**	**141**	**1,869**	**55%**

Based on the data available, it was not possible to directly tie annual revenues to the fund with the Comstar billing data, or to correlate run data provided by Shelburne Control regional dispatch with the Comstar data. The project team attempted to chart revenues received per run using the Comstar data. Since the Comstar data is somewhat dynamic (in the most recent years) as it is updated as collections occur and contractual allowances entered based on insurance type, it may be useful to run this analysis for a lagged period to examine prior years to see what trends emerge.

3.2.2 Revenue Collections

As Northfield EMS has expanded its primary service area, it has seen steady increases in revenues. It should be noted again that the Comstar data is dynamic, and this analysis uses actual collections rather than considering receivables, but further analysis is necessary to determine an appropriate way to include those without a more in-depth review of historical write-offs of uncollectable receivables. The table below shows actual revenue collections on a per-town basis for the past five fiscal years.

Revenues Collected FY2019-FY2023

Town	FY2019	FY2020	FY2021	FY2022	FY2023	FY2019-2023 Total
Northfield	124,123	143,314	163,910	167,306	144,637	743,290
Bernardston	55,289	91,198	98,499	131,838	129,857	506,681
Erving	5,755		3,912	85,454	103,916	199,036
Gill	5,095	8,154	13,886	30,100	41,005	98,240
Brattleboro			4,151	15,034	1,651	20,836
Montague (Center + Villages)	597	-	-	3,349	14,124	18,070
Winchester	2,937	1,312	4,964		500	9,714
Orange	915	500	1,669	2,555	3,694	9,334
Greenfield	1,954	433	2,514	735	3,020	8,656
Mount Hermon	2,840	1,834	3,018			7,691
Warwick	2,097		1,603	2,603		6,303
Northampton			3,460			3,460
Shelburne					3,308	3,308
Ludlow			2,018			2,018
Boston					1,617	1,617
Shelburne Falls	646					646
Easthampton	319					319
Grand Total	**202,567**	**246,746**	**303,602**	**438,976**	**447,328**	**1,639,218**
Note: Revenue collected per Comstar data						

3.2.3 Revenue vs Non-Revenue Runs

While the data sets provided by dispatch records (Shelburne Control) and Comstar (insurance billed calls) are not able to be directly compared, it is possible to perform some comparison between the two in order to provide insight into EMS runs generating revenue versus those that do not. In theory, the difference between a fiscal year of total runs dispatched versus those that result in a billable event, yields the number of non-revenue generating runs. These non-revenue runs are incidents where there isn't patient contact (ex. cancelled in route, standby) or the run does not result in a patient transport. If there is a patient event, information will be sent to Comstar for insurance billing. It should, however, be noted that a portion of the non-revenue runs noted above were ALS intercepts directly billed by Northfield EMS to the towns (see Section 3.3). While the revenues received by the whole of the EMS operation are expected in some part to subsidize those non-revenue runs, it ultimately falls to the towns to subsidize any shortfall through assessments.

The table below shows the comparison between the number of runs dispatched and the Comstar (Insurance) billed calls:

Dispatched vs. Non-Insurance Billed Calls FY2019-FY2023

Town	Calls Dispatched	Insurance Billed Calls	Non-Insurance Billed Calls	% of Calls Non-Insurnace Billed	% of Total Calls Non-Insurance Billed
(blank)	15	-	15	100%	1%
Charlemont	1	-	1	100%	0%
Colrain	1	-	1	100%	0%
Conway	1	-	1	100%	0%
Guilford	1	-	1	100%	0%
Hinsdale	1	-	1	100%	0%
Montague (Center + Villages)	309	31	278	90%	23%
Greenfield	68	17	51	75%	4%
Winchester	33	13	20	61%	2%
Orange	46	19	27	59%	2%
Warwick	24	12	12	50%	1%
Northfield	1,185	788	397	34%	33%
Gill	186	124	62	33%	5%
Bernardston	926	637	289	31%	24%
Erving	275	210	65	24%	5%
Boston	2	2	-	0%	0%
Brattleboro	7	7	-	0%	0%
Easthampton	-	1	-	0%	0%
Ludlow	1	1	-	0%	0%
Mount Hermon		4	-	0%	0%
Northampton	1	1	-	0%	0%
Shelburne	1	1	-	0%	0%
Shelburne Falls	-	1	-	0%	0%
Grand Total	**3,084**	**1,869**	**1,221**	**40%**	**100%**

3.3 Other Revenues

In addition to insurance collections through Comstar, Northfield EMS receives revenues from direct invoicing. As discussed in Section 3.6, these charges and receivables are recorded as payments when received rather than by creating a receivable when invoiced, and are paid by municipalities, other EMS providers and individuals. The vast majority of these charges are for running ALS intercepts for other ambulance services that, for various reasons, are not able to respond with paramedic level care. Fees range from $250 to $350 for ALS intercepts and can be significant over the course of a year. In 2023, for example, total charges for ALS intercepts were $21,850, or just over 4% of total revenues from runs. The table below shows the ALS intercept revenue history.

ALS Intercepts Invoiced by Fiscal Year

Agency	FY2020	FY2021	FY2022	FY2023	Grand Total
American Medical Response	1,000	1,000	1,000	1,000	**4,000**
Charlemont Ambulance				350	**350**
Greenfield Fire Department	1,000	250	1,500	750	**3,500**
Medcare Emergency Health	900				**900**
Turners Falls Fire Department	3,000	5,000	14,750	18,250	**41,000**
Winchester NH EMS			900	1,500	**2,400**
Grand Total	**5,900**	**6,250**	**18,150**	**21,850**	**52,150**

Note that these are invoiced amounts. Actual collections lag and this is not accounted for in the Town's financial data (again, as discussed in Section 3.6). Uncollected amounts range annually from $1,250 to $3,050, although these are likely captured the following year.

Also note that Turners Falls has relied heavily on Northfield's ALS intercept response in the past two years. This presents two issues for further consideration on a broader regional basis. First, there may be opportunities to pursue formal service agreements with them and other communities for providing just ALS or ALS intercept response. Second, with the data now available, Northfield's per run charge may need to be evaluated to capture the full cost of runs and run-based charges may need to be adjusted.

3.4 Revenue & Expenditure Summary

Presented below is a five-year summary of expenditures, revenues and resulting surplus/deficit revenues. Note that it is presented with a focus on the operating budget, so the capital expenditure related to Ambulance 3 is excluded, and it doesn't contemplate expenditures and revenues included in the Ambulance Donation Fund. The Donation Fund does include some operating expenditures, and miscellaneous revenues as well, as well as the contributions from Bernardston for the ambulance replacement. The fund has operated with a surplus when considering only the operating side, and the budget for FY2024 is expected to result in an actual surplus due to the conservative nature of the Department's revenue projections and history of cost containment scaled to actual receipts.

5-Year Revenue & Expenditure Summary

	FY2020	Actuals FY2021	FY2022	Actual Unaudited FY2023	Budget FY2024
Revenues					
Ambulance Revenues (runs)	240,312	319,002	440,235	501,106	505,809
Assessments					
Erving				15,000	15,000
Bernardston					12,500
Gill				-	15,000
Total Revenue from Assessments	-	-	-	15,000	42,500
Subtotal - User Charges	**240,312**	**319,002**	**440,235**	**516,106**	**548,309**
Other Departmental Revenue	-	3,024	91	375	13,000
Investment Income	724	1,501	-	6,093	1,000
Total Revenues	**241,036**	**323,527**	**440,326**	**522,573**	**562,309**
Expenditures					
Salaries/Wages	165,075	144,050	237,206	293,059	448,071
Expenses	67,542	72,851	145,677	110,194	124,300
Subtotal - Operating Expenditures	**232,616**	**216,900**	**382,883**	**403,253**	**572,371**
Capital Expenditures				252,451	-
Total Expenditures	**232,616**	**216,900**	**382,883**	**655,704**	**572,371**
Operatings Surplus/Deficit (excl. capital)	**8,420**	**106,627**	**57,443**	**119,320**	**(10,062)**

3.5 Assessments to Partner Towns

Northfield EMS has service agreements with the Towns of Bernardston, Erving, and Gill, providing full coverage within town limits to Bernardston and Gill, and within Erving from the west end of town to the end of Old State Road. The service areas are shown on the map in Section 2.5.

Currently, Bernardston is assessed $10,000 annually, with the amount unchanged for the past three years (FY2020-current). This amount was previously restricted to ambulance replacement and recorded in the Ambulance Donations Fund; this changed in the current fiscal year (FY2024) and is now recorded in the EMS Enterprise Fund. Erving is assessed $15,000 for the current fiscal year (FY2023). Northfield EMS recently executed an agreement with Gill to provide primary ambulance response. Beginning in FY2024, Bernardston will be invoiced $12,500, while Erving and Gill will each be invoiced $15,000.

Per discussions with Northfield staff, these assessments are not based on any data or objective criteria, and no formulas have been utilized in determining the amounts. They do not correlate to the actual runs dispatched, nor revenue received from insurance collections.

Assessments in other towns providing EMS services are varied, with most formulas using relatively simple distribution according to population or actual runs. The FRCOG 2019 report provided six different methodologies, essentially using population, total runs, and equalized valuations either as the full basis or in various weighted average formulas. Population-based assessments are generally accepted as fair "stand-by" rates in communities of similar housing density, commercial/industrial/residential distribution, and other demographic measures.

3.6 Financial Management

The Collins Team noted several areas of financial management that are opportunities for improvement as the Department moves forward and considers changes to optimize the administrative structure. As is very common with small-town public safety departments, the EMS Department has grown in relative administrative isolation from the overall Town organization and other departments. Financial management is relatively independent, and there were a number of areas where best practices for enterprise fund accounting and general local government financial management could be improved. General findings are discussed below.

Financial Management Software - The Town has invested in enterprise financial management software developed by Vadar, a Massachusetts-based company that provides software for dozens of Massachusetts municipalities, including many small towns. The EMS Department maintains a separate set of books using Excel, which includes expenditure monitoring, revenues and all non-Comstar billing. While the Chief is capable of producing financial data, the lack of integration into the Town's system results in several potential issues.

First, financial reporting is incomplete on the Town side; some receivables (discussed below) are not accurately recorded, and the complete revenue picture is not available from Vadar. Certain revenues are recorded on a cash basis when they are received by EMS rather than when they are earned, which is an important benefit of enterprise fund accounting, allowing a more complete financial picture. This also is contrary to the Town's adopted Financial Policies. Use of the billing/invoicing module in Vadar may also allow automatic recording of receivables.

Second, important financial data is not captured by the Town and may not be recoverable if compromised. The current process for day-to-day tracking detailed financial and payroll information relies on an Excel workbook stored on a local machine at EMS rather than a network server or cloud-based storage.

Finally, the lack of full integration with Vadar removes an important internal control for cash and receivables monitoring. Further, the lack of accounts receivable and control accounts and reconciliation by the Town Accountant is inconsistent with the Town's Financial Policies.

Invoicing/Collections for Non-Comstar Charges – As noted above, the Department's books record invoicing for and collection of charges to other municipalities for ALS intercepts and other non-contract fees. The Town's system records these as receipts when the EMS Department hands over a payment. As noted above, this results in inaccurate accounting for accounts receivable, and negates a very important internal control.

Revenue Accounts – The Town's financial management system records only a single line item for all charges for services. In reality, there are several distinct revenue types that should be recorded in the system to aid in future analysis, forecasting and decision-making. The state's Uniform Chart of Accounts, as well as the customization available in Vadar, would allow for account strings that can segregate Comstar (insurance) billing, assessments, charges to towns, and other useful categories for presenting a more complete revenue picture.

All of the observations and findings discussed above are general in nature, and it is recommended a more thorough review of the Department's compliance with the Town's Financial Policies and accounting practices be conducted as part of considering improvements to the Department's organizational structure. As noted throughout this report, it would be impractical to expect these issues to be fully resolved under the current Department management structure and would require additional resources.

4 Long-Term Fiscal Sustainability Recommendations

Sections 2 and 3 discussed the findings and observations for Northfield EMS relative to operations as well as financial management and administration. This section presents recommendations both general and specific, for the Town and its partners to consider as they look to move their Emergency Medical Services to the next level.

4.1 Financial Management & Administration

Throughout both preceding sections, several findings and observations were discussed that present opportunities for the Department to continue the professionalization and service level increases it has achieved over the past thirteen years since moving from simply a local first responder agency to a well-regarded paramedic level ALS service providing primary service to four municipalities. While the need for a facility is still a critical need, this report considers that secondary to the need to fully develop the organizational and staffing capacity appropriate for an agency of its size and scale and implement the financial foundation necessary to support it.

As noted repeatedly, with the expansion of the service area and given the various administrative deficiencies noted earlier in the report, additional administrative and managerial support is needed to ensure Northfield both continues to receive the current level of service and is able to fully perform to the terms of the agreements to which it is now obligated. The sections that follow discuss in greater detail some of the specific financial management and administrative tasks that are recommended, and below appear some of the other general needs that should be addressed.

- Section 2.9 notes opportunities for expanded use of technology that can allow for more efficient and effective operations; there is a need to research and evaluate these opportunities, as well as advocate for their implementation at the local, regional, and state level.
- Section 2.7 discuss the need to update the Service Zone Plan for both Northfield and the partner towns for which they are now the primary provider.
- Section 2.9 notes the opportunity to formally and more strategically integrate the Medical Quality Assurance Plan/Continuous Quality Improvement program into long-term planning and training.
- Section 3.3 notes other revenue sources that may present opportunities for formal service agreements; the Department needs to continually monitor changes in these trends and identify where the service can pursue additional agreements and revenue sources, including adjusting fees based on more comprehensive cost tracking.

Again, these needs cannot be met under the current management structure. There are numerous ways the Town could approach how they should be addressed, including using outside consultants, increasing or creating additional stipends for volunteers, or pairing the existing need for regular full-time paramedic positions with management duties, but they all require additional resources. How to move this forward should be discussed by the Selectboard, Town Administrator, EMS Chief, and the partner towns. To recognize this need, the model assessment presented in Section 4.4 includes funding for "Administration/Management" generically.

4.1.1 Financial Management Best Practices Implementation

There are a number of opportunities discussed in Section 3 which, if implemented, would better position the Department for more accurate accounting, which would improve reporting and forecasting ability and allow for better long-term planning and decision-making. These include:

- Integration of the EMS Department into the Town's enterprise financial management software. This is discussed in Section 3.6. This would include utilization of any available modules for invoicing and collections for non-Comstar charges.
- Expansion of the current chart of accounts, to include:
- Separate accounts for Comstar revenues, assessments, direct municipal invoices and other distinct revenue types.
- Additional accounts as appropriate for current indirect costs that should be moved into the enterprise fund, including pension and separate accounts for health and property/vehicle insurance premiums, as well as a new expenditure or transfer account for payment of indirect costs incurred from General Fund departments.
- Further evaluate the indirect costs identified in Section 4.1.3 to ensure they are as accurate and fair as possible.
- Further analyze total cost per run to ensure that current charges for ALS intercepts are capturing true costs and continue to monitor trends in responses to neighboring communities to ensure revenue opportunities are optimized. See Section 3.3.

4.1.2 Capital Stabilization Fund

As discussed in 3.1.2, the Department has not adequately planned for replacement of capital equipment and vehicles. In addition to developing a long-term replacement plan (see proposed plan in Section 4.3), the Department needs a methodology to set aside funds in a stable and planned way to avoid volatility in assessments in the future. In addition to creating the fund, the Town needs to develop (and incorporate into the existing Financial Policies) the following policies governing its application and use:

- An initial transfer from both retained earnings and the Ambulance Donation Fund to provide start-up capital and reduce future assessments;
- Target annual transfer of retained earnings following year end;
- Strategy to transfer donations to this fund, including creating specific revenue accounts with the Donations Fund to identify gifts and donations restricted to capital investment; and
- Policy related to the use of debt as a strategic financing tool for major acquisitions, including using the State House Note Program.

A projection of this fund is presented along with the proposed Capital Improvement Plan in Section 4.3.1.

4.1.3 Indirect Cost Recovery

As introduced in Section 3.1.1, indirect cost recovery is an important consideration with enterprise fund activity and should be included in order to determine the total cost of services and resulting rates, fees or assessments. There are a number of ways in which indirect costs can be derived. In some cases, staff can estimate the time spent supporting a department with a reasonable level of accuracy. Where estimates are not available, it makes sense to use the enterprise fund's costs (or revenues) relative to those of the overall town, or other proportions or ratios.

Certain indirect costs can be estimated with more precision using applicable rates or directly identifiable costs, such as with insurance premiums, unemployment insurance, workers compensation, Medicare contributions, health insurance and retirement contributions. To avoid double counting, these costs are backed out from the total expenditures mentioned above to arrive at a net budget and allocated separately. As the Town's education budgets are not administered by the Town, those amounts are excluded from the net budget as well.

The table below shows the estimated indirect costs that should be considered part of the EMS Enterprise Fund's operating budget. In practice, these costs would either be expensed or transferred from the fund and recorded in the Town's General Fund as revenue. The allocations shown below are based on the FY2024 budget and should be recalculated annually to determine the most appropriate amount. Additionally, rates should also be reviewed and adjusted as needed, including having staff monitor time spent on certain activities or otherwise more closely examining cost drivers. In the case of retirement contributions and OPEB, the Town should consider having future actuarial valuations provide a unit-level analysis to more precisely estimate contributions required by eligible EMS employees.

Indirect Cost Detail				
Department/Cost	FY2024 Budget	Allocation Rate	Amount	Allocation Method
Selectboard (adjusted budget)	81,285	5.77%	4,690	Hours estimate of time spent (10 hours per month)
Town Administrator	120,170	5.77%	6,934	Hours estimate of time spent (10 hours per month)
Town Accountant	79,064	13.10%	10,357	EMS Operating Budget as % of total Town net budget
Treasurer	47,240	4.50%	2,126	EMS Revenues as % of Total Revenues (GF + EFs)
Tax Collector	44,240	4.50%	1,991	EMS Revenues as % of Total Revenues (GF + EFs)
Legal	40,000	0.50%	200	0.05% of legal budget per TA estimate
Retirement (applicable wages)	101,712	7.20%	7,323	Per actuarial valuation and consultation with FRRS.
Injured on Duty Coverage	n/a	n/a	n/a	Moved to EMS Budget FY2024
Medicare	32,000	15.80%	5,056	EMS wages as % of total Town wages
Property & Liability Insurance	n/a	n/a	-	Moved to EMS Budget FY2024
OPEB Liability	n/a	n/a	2,932	Provided by Town's actuary
Total Overhead and Indirect Costs			**41,609**	

4.2 Staffing & Personnel

As discussed in Section 2.2, the Town's current overreliance on volunteer/call members, increasing need for coverage, difficulties recruiting new members, and need to transition existing positions to regular employees will require additional funding to position the Department for long-term sustainability. Below are the minimum amounts required to maintain current coverage.

- Conversion of one existing member position to regular full-time; this is budget neutral as it assumes the existing individual in this role continues to decline health insurance. This could change in the future.
- Addition of one regular full-time position; wage estimate includes the difference in current hourly rate of $26.40 to Grade 9, Step 1 rate of $27.98 per hour.
- Health insurance maximum amount that could be elected.
- Pension costs; note that it is also recommended in Section 4.1.3 that further actuarial analysis be completed to better estimate pension costs. As contribution rates lag onset of salary burden by a few years, these costs should be conservatively estimated to ensure they are captured.
- Assumes that this position would cover the 8am to midnight in-station shift.

Additional Staffing/Personnel Cost Increase For Add'l FT	
Description	**Cost (FY24)**
Wages	3,286.00
Health Insurance	24,852
Pension Costs	3,844
Total	**31,982**

Also note that this does not include any change to the Department's administrative/management function, as that is discussed in Section 4.1.1.

4.3 Capital Investment Planning

As discussed in Section 3.1.2, there is a clear need to maintain a Capital Improvement Plan (CIP) to plan for the inevitable replacement of equipment. This benefits all partner towns by allowing for proper fiscal planning and, when coupled with a capital investment strategy that builds level annual contributions into the assessment structure, allows for a much more predictable budget process, and eliminates the need for Town Meeting approval in each town for equipment acquisition; only Northfield would have to vote, and in those votes, the funds would already be in place.

4.3.1 Capital Improvement Plan

The following assumptions are included in the CIP:

Ambulances - NFPA recommends ambulances be replaced every 5-7 years generally. While utilization in a rural environment is typically less intense, operating in the New England environment is particularly harsh due to snow and salt exposure, while the topography, elevations and road conditions in Northfield typically result in a higher level of wear and tear on vehicles. Further, the potential for major repairs should be expected when vehicles in this service category reach 100,000 miles, and this is an upper limit mileage for either higher residual resale/trade-in value, donation to another agency in need, or acceptable condition for Department use as a reserve vehicle. Note, as discussed in Section 2.1 that the status of A1 is undetermined, so it is assumed a third ambulance will stay in reserve and not be replaced. This requires further discussion with partner towns and the CIP should be revised accordingly.

Total fleet mileage has increased, on average, 26% annually over the past five years, reaching 21,138 in 2022. The model assumes that two ambulances will be in service, with a third in reserve status, and each primary vehicle will travel a maximum of 12,500 per year (45% of total fleet miles each) and reserve will travel an annual maximum of 2,800 (10% of total fleet miles). Note that the projection model forecasts a continued increase in mileage through 2026 as calls are projected to increase, but mileage will level off after that. The capital plan for Northfield EMS considers a 10-year replacement cycle based on current utilization and mileage trends. The table below shows historical and projected mileage for each vehicle and overall fleet.

Current Fleet Mileage History and Projection

Year	Reserve (A1 as of 2023) Miles/Year	Front line #1 (A2 as of 2023) A2 Annual Miles	Front line #1 (A2 as of 2023) Odometer Jan. 1	Front Line #2 (A3 as of 2023) A3 Annual Miles	Front Line #2 (A3 as of 2023) Odometer Jan. 1	Fleet Total	Increase over prior year
2018	1,831	5,747	5,361			*	*
2019	2,253	8,874	11,108			11,127	*
2020	1,027	10,578	19,982			11,605	4%
2021	1,886	14,730	30,560			16,616	43%
2022	4,165	16,973	45,290			21,138	27%
2023	2,248	10,115	62,263	10,115	-	*22,477*	*6%*
2024	2,414	10,861	72,378	10,861	10,115	*24,136*	*7%*
2025	2,579	11,607	83,239	11,607	20,976	*25,794*	*7%*
2026	2,745	12,354	**94,846**	12,354	32,583	*27,452*	*6%*
2027	2,800	**12,500**	107,200	**12,500**	44,937	**27,800**	*1%*
2028	2,800	**12,500**	119,700	**12,500**	57,437	**27,800**	*0%*
2029	2,800	**12,500**	132,200	**12,500**	69,937	**27,800**	*0%*
2030	2,800	**12,500**	144,700	**12,500**	82,437	**27,800**	*0%*
2031	2,800	**12,500**	157,200	**12,500**	**94,937**	**27,800**	*0%*
2032	2,800	**12,500**	169,700	**12,500**	107,437	**27,800**	*0%*

Equipment – As noted in Section 2.1, Northfield EMS's capital equipment inventory include power cots, cardiac monitors, and CPR devices, with one of each per ambulance. At present, there are no plans to acquire a third set of these assets for Ambulance 1, nor is there a plan to expand when Ambulance 2 cycles out. Lifespans vary according to manufacturer estimates and the American Medical Association's published guidelines from 5-8 years. Given the low intensity of use and availability of parts and service to maintain this equipment, the capital plan presented in this report estimates a service life of 10 years. Radios (both mobiles and portables) are estimated at 8-10 years, so 10 years was used in Northfield's CIP.

Northfield EMS Capital Improvement Plan

Asset	2024	2025	2026	2027	2028	2029	2030	2031	2032
Ambulance 1 (2007)	-	-	-	-	-	-	-	-	-
Ambulance 2 (2017)	-	-	355,136	-	-	-	-	-	-
Ambulance 3 (2023)	-	-	-	-	-	-	-	411,700	-
Cardiac Monitor A2	-	-	40,818	-	-	-	-	-	-
Cardiac Monitor A3	-	-	-	-	-	-	45,941	-	-
Power Cot A2	-	-	-	-	-	-	-	28,612	-
Power Cot A3	-	-	-	25,421	-	-	-	-	-
CPR Device A2	-	-	-	-	-	-	-	19,921	-
CPR Device A3	-	-	-	17,699	-	-	-	-	-
Radios - Portables	-	-	-	-	-	-	12,053	-	-
Radios - Mobile	-	-	-	-	-	-	12,791	-	-
Pagers	-	-	-	-	-	-	-	-	32,619
Total - CIP	**-**	**-**	**395,954**	**43,121**	**-**	**-**	**70,784**	**460,233**	**32,619**
Total - Equipment only	**-**	**-**	**40,818**	**43,121**	**-**	**-**	**70,784**	**48,533**	**32,619**

4.3.2 Capital Investment Strategy

As noted in Section 4.3, a dedicated fund should be established to receive capital contributions from the assessments, retained earnings and donations. The table that follows presents a model Capital Investment strategy that includes:

- An initial start-up contribution from retained earnings ($20,000) and the Ambulance Donation Fund (20,000).
- Total capital assessments from each of the four towns are $10,000 annually, including $5,000 equipment and $35,000 vehicle components. Annual inflation is included at 3% to match the cost escalation in the CIP.
- Five-year notes issued for ambulance replacements, with debt paid from the fund. Interest was modeled at 3% with semi-annual payments. These notes have historically been lower, but the estimate is conservative. This also assumes the full amount is borrowed, so increased retained earnings may be able to offset and reduce the debt burden.
- Equipment is pay-as-you-go.
- The CIP is projected at 8 years, and the fund balance reaches a deficit in fiscal year 2031. It is expected that annual re-evaluations of the CIP and retained earnings contributions will avoid this, as the model is intended to be conservative. Assessments can be adjusted annually to adjust for any excess retained earnings that are dedicated to capital asset replacement.

Capital Investment Strategy

Description	2024	2025	2026	2027	2028	2029	2030	2031	2032
Debt Service									
Ambulance 2	-	-	77,018	77,018	77,018	77,018	77,018	-	-
Ambulance 3	-	-	-	-	-	-	-	89,285	89,285
Total Debt Service	**-**	**-**	**77,018**	**77,018**	**77,018**	**77,018**	**77,018**	**89,285**	**89,285**
Equip. Assessment Required	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334
Vehicle Assessment Req.	35,000	36,050	37,132	38,245	39,393	40,575	41,792	43,046	44,337
Total Capital Assessment	**40,000**	**41,200**	**42,436**	**43,709**	**45,020**	**46,371**	**47,762**	**49,195**	**50,671**
EMS Capital Equipment Replacement Fund									
Beginning Balance	-	80,000	221,200	165,800	109,371	97,373	86,726	6,686	(61,936)
Transfer - EMS Donations Account	20,000								
Transfer - EF Retained Earnings	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Assessment Revenues	40,000	41,200	42,436	43,709	45,020	46,371	47,762	49,195	50,671
Available Funds	**80,000**	**141,200**	**283,636**	**229,509**	**174,391**	**163,744**	**154,489**	**75,881**	**8,735**
Expenses									
Equipment (pay-go)	-	-	40,818	43,121	-	-	70,784	48,533	32,619
Debt Service	-	-	77,018	77,018	77,018	77,018	77,018	89,285	89,285
Total Expenses	**-**	**-**	**117,836**	**120,139**	**77,018**	**77,018**	**147,802**	**137,818**	**121,904**
Ending Fund Balance	80,000	221,200	165,800	109,371	97,373	86,726	6,686	(61,936)	(113,170)

4.3.3 Facility Needs

Section 2.3 details the challenges the Town has faced in its efforts to present alternatives for facilities to house Northfield's public safety departments. Based on discussion with the project team and Town officials, this report does not include a recommendation on how best to approach facilities. There are numerous organizational concerns around shared versus stand-alone facilities, as well as the potential for changes down the road to the Department's organizational structure. Given the significant cost of any of the alternatives presented and impacts on assessments, it is recommended that this be a larger discussion with all stakeholders after the recommendations in this report are considered and resolved. This will allow for a firm foundation upon which to make decisions about a future facility.

4.4 Assessments to Partner Towns

As noted earlier in this report, the current assessment structure is neither based on the true cost of providing the service sustainably, nor has it been tied to any objective and data-driven criteria. Previous sections outline the true cost of this service based on the Center's review; this section presents options for distributing that cost to the partner towns in a fair and equitable manner.

In considering the potential impacts of assessments for each community, it is important to also understand the regional context and avoid the potential for making inaccurate comparisons. The majority of EMS operations in the northern and western parts of the state exist in varied scales and scopes, with the financial and administrative structures equally varied. There is little standardization in how assessments are determined, and unless the comparisons consider the same factors (capital planning, indirects, etc.) and those factors are applied consistently, it is near impossible to make an apples-to-apples comparison on cost.

4.4.1 Assessment Basis

The table below provides a summary, based on the FY2024 budget, of the total cost of providing EMS services at the level necessary to ensure service levels are maintained and future capital needs are addressed sustainably. These costs are discussed in detail in the preceding sections, but to recap, the total cost includes indirect costs, funds to set aside for future capital asset replacement, and additional staffing/management fundings. These are presented as Total EMS Costs below. Forecasted revenues, which include the assessments to the partner towns, are adjusted to exclude these contributions to derive Total Revenue from Operations. The difference between these two amounts is the projected FY2024 deficit, which is the amount that should be subsidized by the partner towns, which is $181,154.

Assessment Basis - FY2024 Budget

Budget	FY2024
Direct Costs	572,371
Indirect Costs	41,609
Capital Costs	40,000
Additional Staffing Costs	
Administration/Management	30,000
Shift Coverage	31,982
Total EMS Costs	**715,962**
Estimated Revenue	562,309
Less Assessments	
Bernardston	(12,500)
Erving	(15,000)
Gill	(15,000)
Total Revenue from Operations	534,809
Surplus/(Deficit) - Subsidy Required	**(181,154)**

This deficit can be allocated among the partner towns in a number of different ways, several of which are presented below. Note that Net Impact is also presented, which is the difference between the current assessment amount and that resulting from each allocation option, or in the case of Northfield, the net difference between the assessment to the taxpayers (via the General Fund) and the offsetting transfer/revenue received from recognizing the indirect costs the General Fund departments provide.

4.4.2 Population-Based Assessment

Allocating costs by population is a common method of distributing costs for many municipal services, especially in cases where strong and distinct geographic or demographic differences don't have disparate impacts on service demand. This allocation is typically called a standby rate, as it doesn't change based on utilization, and assumes that the same risk of needing the service is present and consistent across the service area. Thus, the assessment is structured to ensure services are available on the likelihood of each resident needing it.

Population-Based (Standby) Assessment

Town	2020 Census	As % of Total
Northfield	2,866	39%
Bernardston	2,102	29%
Erving*	833	11%
Gill	1,551	21%
Total Population	**7,352**	**100%**

Assessment	Total	Current Assessment**	Net Impact
Northfield	70,623	41,609	29,014
Bernardston	51,797	12,500	39,297
Erving*	20,514	15,000	5,514
Gill	38,219	15,000	23,219
Total	**181,154**	**84,109**	**97,044**

**Estimated at 50% of total population*

***Northfield current represents transfer to GF for indirect charges*

4.4.3 Utilization-Based Assessment

A utilization-based assessment is effectively a fee for service basis assessment. The table below presents an assessment model using the proportional runs to distribute costs. While such a model has the potential to accurately reflect the impact of demand on costs, in the case of Northfield EMS, it would be difficult to implement without several years of run statistics. Ideally, run data over a three-year rolling average would be used to distribute costs. Since both Erving and Gill do not have a full three years with Northfield EMS as primary provider, using runs alone may not be fully representative. Further, as service quality increases over a territory, services may be requested more, or as first responder status changes with other agencies (Police and Fire), EMS dispatches may increase or decrease as EMS may be dispatched more or less often as a precautionary measure. Therefore, utilization-based assessments are volatile until all conditions across all service areas have been consistent for multiple years.

Utilization-Based Assessment

Town	FY2023 Runs	As % of Total
Northfield	296	40%
Bernardston	238	32%
Erving	132	18%
Gill	73	10%
Total Runs	**739**	**100%**

Assessment	Total	Current Assessment**	Net Impact
Northfield	72,559	41,609	30,950
Bernardston	58,342	12,500	45,842
Erving*	32,358	15,000	17,358
Gill	17,895	15,000	2,895
Total	**181,154**	**84,109**	**97,044**

Note: Recommend a rolling average of prior three years be used in the future.
**Estimated at 50% of total population*
***Northfield current represents transfer to GF for indirect charges*

4.4.4 Standby/Utilization Based Assessment

Another alternative is to use a weighted average of population and runs. The table below shows a 75%/25% average of population and runs, which helps to blend the need for standby capacity to respond with actual demands on service. As noted above, this relies on run data which does not reflect multiple years of consistent primary ambulance service, so would require adjustment annually. From a purely objective perspective, this type of formula (with enough years of data) is very equitable and reflective of service provision.

Standby/Utilization Basis - 75% Population/25% Runs Weighted Average

Town	Assessment Rate	Assessment Amount	Current Assessment**	Net Impact
Northfield	39%	71,107	41,609	29,498
Bernardston	29%	53,433	12,500	40,933
Erving*	13%	23,475	15,000	8,475
Gill	18%	33,138	15,000	18,138
Total	**100%**	**181,154**	**84,109**	**97,044**

Note: Recommend a rolling average of prior three years be used in the future.
**Estimated at 50% of total population*
***Northfield current represents transfer to GF for indirect charges*

4.4.5 Standby/Utilization/EQV Based Assessment

Another option is to use Equalized Valuation (EQV) as a weighting factor, along with population and run ratios. This method is consistent with a number of state assessment formulas currently used in distributing state aid and determining regional assessments for other services and distributions/allocations. EQV is calculated across the service area, and each town is apportioned according to its respective share of the total. This method balances standby requirements, actual demands on service, and relative ability to pay. A scenario assuming a 50%/25%/25% weighted average is shown below.

50% Population/25% Runs/25% EQV Weighted Average

Town	Assessment Rate	Assessment Amount	Current Assessment**	Net Impact
Northfield	37.0%	66,951	41,609	25,341
Bernardston	25.9%	46,862	12,500	34,362
Erving*	21.9%	39,708	15,000	24,708
Gill	15.3%	27,633	15,000	12,633
	100%	**181,154**	**84,109**	**97,044**

Note: Recommend a rolling average of prior three years be used in the future.
**Estimated at 50% of total population*
***Northfield current represents transfer to GF for indirect charges*

4.5 Administration and Organizational Structure

As Northfield opens discussions about the future of the service with the partner towns, consideration should be given to evaluating other potential operating structures to see if there is any significant advantage to changing. Operating a regional service as a municipal department in an Open Town Meeting form of government does present some challenges in terms of funding and governance. Since this report is intended to provide information to jump start a more robust discussion with all stakeholders at the table, it does not make a recommendation and only provides a high-level summary of potential advantages and disadvantages.

It should also be noted that some of the other models present some ideas that could be adapted or considered for the current structure, such as the use of subscription fees to residents to avoid balance billing or having an advisory body with representation from each town.

It is also critical to understand that the financial and administrative management recommendations resulting from this study are largely independent from any decisions on how the department expands or changes its operating structure moving forward. In fact, all recommendations make the organization better positioned to consider any future changes as their implementation would strengthen the fiscal and management foundation and facilitate any future transition.

4.5.1 Existing Regional Models

Hilltown Community Ambulance Association, based in Huntington, provides services to the Towns of Blandford, Chester, Huntington, Montgomery, Russell, and Worthington. Hilltown is a 501(c)(3) non-profit corporation. Data provided shows that they were dispatched for 795 calls in 2022, with ALS service responding 68% of the time. In addition to accepting donations, Hilltown assesses each municipality per capita, and an assessment for capital expenditures. Residents may also pay a subscription fee, which waives a balance bill being sent.

The Highland Ambulance EMS, Inc., located in Goshen, MA provides services for the Towns of Ashfield, Chesterfield, Cummington, Goshen, Plainfield, and Williamsburg. Additionally, they provide ALS intercept services for the neighboring towns of Buckland, Conway, Northampton, Windsor, Worthington, and others. Like Hilltown, Highland is a 501(c)(3) entity. BLS service is provided for non-emergency transport within their primary service communities. They charge each municipality per capita, and an annual assessment for capital expenditures.

South County EMS, located in Deerfield, MA provides primary ALS services to Deerfield, Whately, and Sunderland, MA. Their primary service area covers 70 sq. miles (compared to the 80.8 sq. miles covered by Northfield EMS). Additionally, they provide non-emergency services as well. South County is a municipally based regional service provider but has a unique organizational structure. Technically, South County EMS is a department of the Town of Deerfield, with the Town acting as the Host Municipality under an Intermunicipal Service Agreement. Staff are Deerfield employees, and the enterprise fund is part of Deerfield's financial system. The IMA provides for a Board of Oversight, to which the Chief reports and which provides daily oversight. Ultimately, the Town of Deerfield has final authority over appropriations and staffing issues, but the Board in practice manages the department. Each municipality includes payment within their municipal budgeting process. South County is also notable in that services are provided predominantly by full-time employees and supplemented by call/volunteer members as needed.

There are also numerous municipal departments providing contract services for both BLS, ALS and ALS intercept to neighboring municipalities. This is especially common in smaller towns, and financial support varies. As noted earlier, in many of the municipalities sampled, financial management and administrative issues exist similar to those noted for Northfield EMS in this report, so it is difficult to make valid and accurate comparisons as there is a likelihood that many also do not present a full financial picture and thus rates may not adequately capture and plan for fiscal sustainability in the long term.

4.5.2 Municipal Department

The most common model for EMS is as a municipal department, and, in New England states, it is often separated from Fire departments. In smaller towns, coverage is largely still call/volunteer, and in some cases, EMS and/or Fire is also to some degree hybridized with a non-profit organization. This is typically a legacy situation, where volunteers and community members developed EMS independently and management and financial support is "blurry" between the town and the entity. A true municipal model ideally is fully governed by the Town and accounted for using an enterprise fund with or without municipal subsidy.

If a municipal department is operating in a regional capacity, it is recommended that this be accomplished by executing a detailed Intermunicipal Agreement that allows partner communities to share an oversight or advisory role, as found with the South County EMS example above.

Advantages and disadvantages are discussed below.

Advantages:

- Simplicity; no additional governance structure needed. Executive management and accountability ultimately rests in an elected body.
- Allows for future integration with the Fire Department, should there be found advantages in that route.
- Allows the department to leverage financial and administrative resources in the town, such as access to IT/software support, human resources, facilities maintenance, and general management.
- Provides revenue to town to help offset costs incurred and often this additional revenue allows for the Town to strengthen its own financial team, in some cases partially funding a partial FTE to allow the town to hire a full-time professional for various support positions.
- Assessments to partner towns can be structured as a "take it or leave it" fee, provided the assessment is properly developed to capture long-term capital planning, staffing and indirect cost recovery. Appropriation votes would not be a line item for partner towns.
- An advisory board or committee can be established to provide a voice for all partner communities, but authority and structure would have to be further evaluated to determine exact roles and responsibilities.

Challenges:

- Continues to rely on Town Meeting for funding for the entire agency and capital investments, as well as hiring. This can be mitigated to some degree with an active communications strategy and shared advisory structure.
- Little ability for partner towns to participate; even under an IMA with such provisions, final authority for hiring, firing, policy, etc. still rests with single executive body.
- Requires intermunicipal agreements that must consider impact of long-term debt or capital investment; this may be politically sensitive with some towns.

4.5.3 Non-profit Incorporated Department

Departments in many rural towns are incorporated as 501(c)(3) entities. In many cases, this began out of necessity for community members to provide the service when the town was unable or unwilling to start the service on its own, or other advantages to this structure were found. There were often benefits for fundraising and a level of community pride as it was truly owned by volunteers and community. Over time, many of these systems have hybridized with Town operations, with many shared services moving back and forth through the financial books and organizational charts of each.

Advantages:

- Equitable distribution of governance amongst partner towns.
- Minimizes interaction with Town Meeting and solely relies on an up/down vote of assessment.
- Leverages community pride and sense of independence.

Challenges:

- Still relies on Town Meeting for appropriations (and any transfer of existing assets) when needed; potential for imbalances should assessments not be approved by affirmative vote.
- Unclear in some cases ownership of assets; wages may be subjected to regional pension or state health requirements, etc.
- Participation in regional public retirement and insurance programs may still require municipal sponsorship.
- No taxing authority; however, does allow for subscription fee structures for businesses and residents.
- Would make any future integration of EMS and Fire extremely difficult if not already consolidated.
- Lack of administrative oversight for what essentially is a municipal service. No accountability of any elected body providing oversight.

4.5.4 District

An independent district for Emergency Medical Services is currently not enabled in Massachusetts General Law (M.G.L.). However, Fire Districts, with the ability to levy assessments, are enabled and may offer EMS services under their umbrella. There are currently only a few fire districts in the state. Given the history and tradition of many rural Fire and EMS departments, achieving the necessary consolidation and collaboration to allow such a district to be formed and function consistently across multiple towns, this is not a realistic option in the near term. Discussion of the district model is solely presented as an opportunity to further explore and potentially engage the region's legislative delegation to determine if there is an opportunity to consider legislation to grant Emergency Medical Services district powers.

Advantages:

- Ability to levy and collect fees to provide for ongoing operations.
- Equitable distribution of governance amongst partner towns.

Challenges:

- Must be EMS provided by Fire Department; highly unlikely to see these consolidations happen. Would basically require regional and consolidated Fire/EMS across all towns in district.
- Would require either a town fiduciary or independent and self-contained administrative functions, either of which could result in higher costs.

The Collins Center is currently evaluating the use of Joint Powers Agreements, which are authorized under M.G.L. and structured similarly to the District model, to determine whether such a mechanism provides any benefits to consider. This report will be updated to include any relevant findings.

5 Next Steps

Northfield EMS has an impressive functional organization and operates at a relatively high level compared to many of its similarly sized regional peers and considering the resource limitations it faces. With the continued expansion in service territory and formal agreements that were necessary to provide the majority of the revenues needed to provide ALS-level care to Northfield and its partners, the department now needs to implement the financial and administrative structure required for organizational

sustainability. This will include 1) transitioning to a predominantly full-time staff supplemented with call/volunteer; 2) implementing financial management best practices to include long-term capital planning; 3) developing the management structure to optimize continuous improvement and continuity; and 4) creating an assessment model that ensures fiscal stability and sustainability in the long-term.

This report presents findings and recommendations for each of the tasks noted above. However, there are still a number of unresolved issues that need to be further discussed with the Town's partners. This includes the critical need for EMS facilities, which is part of the larger issue of public safety facilities in general for Northfield and likely the partner towns. Also, target levels of service and coverage desired by the towns should be determined, which not only impacts the facility question but also the need to retain the third ambulance in service.

All of these issues impact the capital needs long-term, and thus the assessments, and ultimately may also result in the desire to change the underlying organizational status. Notwithstanding the need to implement the recommendations (all or in part) in this report in any scenario, this larger discussion needs to include all stakeholders. This leads to a final recommendation to establish an advisory body or task force with representation from Northfield, Bernardston, Erving, and Gill to take the discussion forward. This body should be tasked with the ongoing implementation of these improvements as well as the longer-term discussion over what overall organizational structure is most appropriate.

This report was presented in draft form along with a summary presentation to the Town of Northfield's Select Board for their review and comment. Based on this presentation and subsequent discussion The Board approved moving forward with the recommendation to create a multi-town Task Force with members appointed from each town and EMS staff to work with the Collins Center to develop the framework for an IMA and determine the necessary actions and associated costs to fully implement regional EMS. The Task Force would present their recommendation to the Selectboards of each town with the intention of applying for an implementation grant under the FY2024 E&R program, which is anticipated to open in January 2024. Based on the study results, it is expected the grant funding will be necessary to offset certain capital and operational costs as well as costs associated with development and legal review of the IMA.

Task Force Charge: Given the tight timeline to apply for the E&R grant, the Collins Center recommends that the Task Force's efforts be segmented into two phases.

- Phase 1 would focus on the partner communities agreeing on the desired level of service, and determining the baseline staffing, initial capital investment, and organizational structure necessary to achieve that level. While the specific details will be fleshed out by the participants, key considerations include how best to achieve the necessary level of full-time, in-station staffing and how to optimize the department's organizational structure, as well as whether/how to elevate Ambulance 1 to ALS-level first-run capability. Since these factors most directly impact start-up costs for which the grant will be necessary, Phase 1 needs to be completed by the end of the calendar year.

- Phase 2 would focus on full development of the IMA, to include performance standards, cost sharing structure, and role of a joint permanent advisory/oversight body moving forward. This phase would also include working with Town Counsel and insurance carriers for each party. The Task Force should target substantial completion of this phase in time for consideration at Annual Town Meeting in each town.

The Task Force would ultimately present recommendations to the Northfield Select Board, as host community under the IMA, as well as the Boards of each town. Based on advice from Northfield's Town Counsel, the Task Force would be subject to the Open Meeting Law.

The Collins Center recommends that the Select Boards of each town appoint two members, including one member of each Board or their designee, and one staff member, with that member being the Town official responsible for managing EMS services (either the Fire Chief of Town Administrator, or in the case of Northfield, the EMS Chief). The project manager for the Collins Center will also participate in an advisory role and will work with the Task Force to manage the agenda and workplan. As host community, Northfield will be responsible for posting notices, agendas, and minutes.