

Long-Range Fire Department MASTER PLAN



Whitefish Fire Department

November 2021



AP TRITON
VISION • INNOVATION • SOLUTIONS

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We also extend our appreciation to each of the firefighters, leaders, and support staff of Whitefish Fire Department, who daily serve the citizens and visitors throughout the area!

**Section I:
EVALUATION OF
CURRENT CONDITIONS**

OVERVIEW OF WHITEFISH FIRE DEPARTMENT

The City of Whitefish was founded in 1905 following the completion of the Great Northern Railroad. The logging industry and the railroad were the predominant industries through the 1940s. Following World War Two, the Whitefish Lake Ski Club, now known as the Whitefish Mountain Resort at Big Mountain, began drawing hundreds of skiing enthusiasts to the area. Today, the City of Whitefish is a gateway to Glacier National Park, Whitefish Lake, and a wide range of outdoor recreation.

The City of Whitefish and the surrounding areas have seen significant growth exceeding 20% over the past ten years. Current population is approximately 9,000 people with an additional 40,000 visitors each year. The region has a diverse topography and a constantly changing climate. The region is classified as a humid continental climate with an average snowfall of 65 inches and additional 20 inches of rain per year. A combination of climate, extraordinary recreational opportunities, and economic growth supports the community's future development.

The Whitefish Fire Department was created soon after the railroad development in 1907 and focused on the city limits, which is approximately 7 square miles. In 1989 the area surrounding the City of Whitefish created the Whitefish Fire Service Area (WFSA). WFSA contracts with the City to provide fire protection and the WFD provides emergency medical services through Flathead County EMS. Approximately 60% of the Department's service demand currently occurs within the city limits, with the remaining 40% occurring in the WFSA and remote areas.

The Whitefish Fire Department is a combination department providing an all-hazard response, including fire suppression, advanced emergency medical services, and specialty response. The Department is challenged with providing emergency response in a diverse environment, including five square miles of the Whitefish Lake, surrounding areas of national forest, and numerous portions of community development. Overall, the Department covers approximately 200 square miles. This analysis will focus on fire and emergency medical service demands within these areas.

Population & Demographics

It is essential for fire departments providing emergency medical services (EMS)—in both a medical first response (MFR) and patient transport capacity—to know and understand the population characteristics of its community and service area.

When researching population and demographic data for studies, statistics tend to vary among the various sources (e.g., United States Census Bureau, City of Whitefish MT, etc.). For this study, where applicable, Triton has utilized the statistical data described in Data USA.

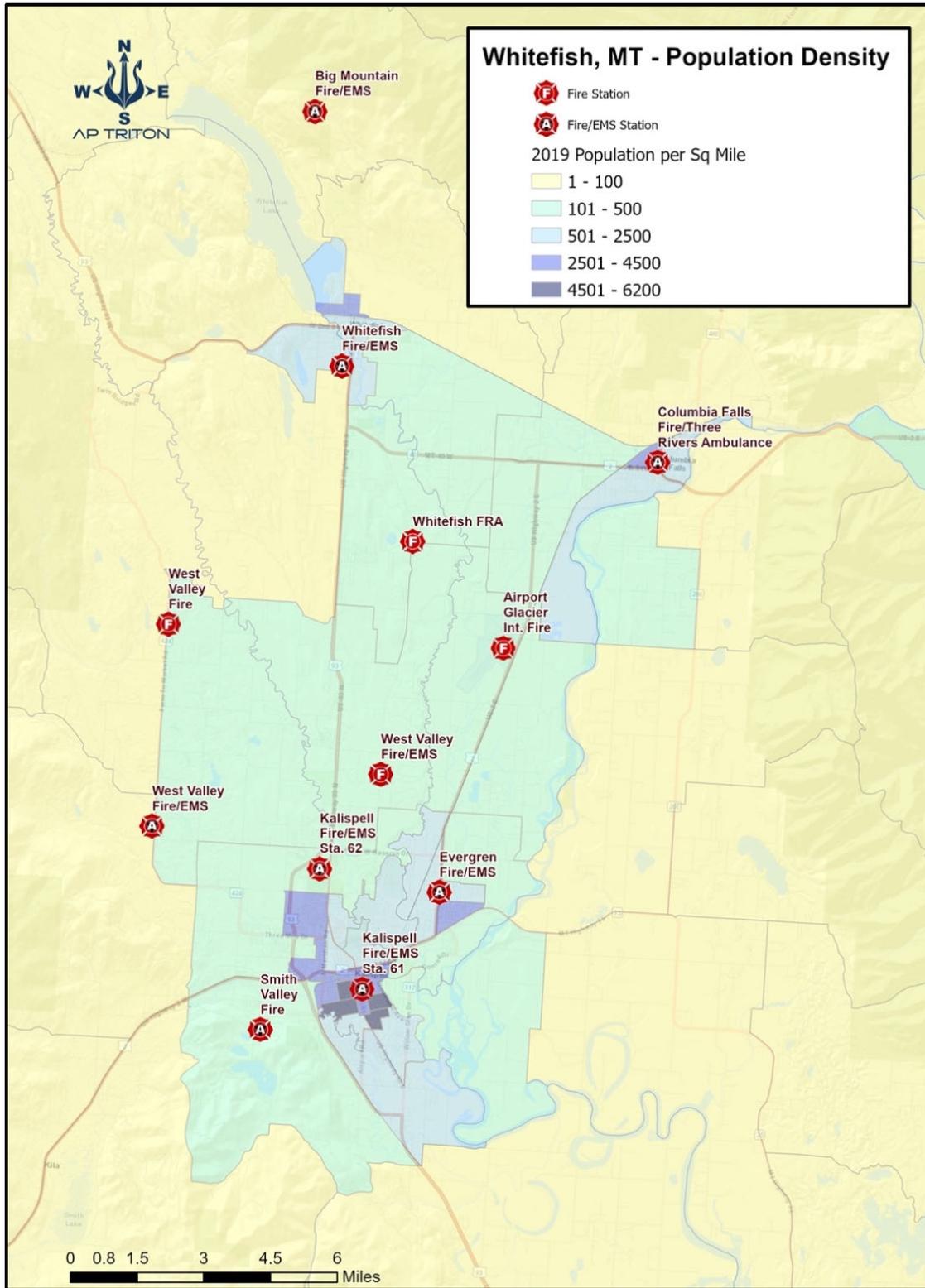
The combined area for the Department's response area estimated 2020 resident population was 13,922 persons, with a population density of 750 persons per square mile within the city limits and a population estimated to be 15,137 by 2030.

Population Characteristics

As of 2019, the median age in the City of Whitefish was nearly 42 years.¹ Over 23% of the population is comprised of persons aged 0–18 years, while approximately 17% represent persons aged 65 years and older. Males comprise nearly 51% of the population.

Caucasians comprise most of Whitefish's population at over 97%, followed by Latinos at almost 2%, Asians and Black or African Americans account for approximately 1% of the total population.²

Figure 1: Population Density of the City of Whitefish (2019)



The preceding figure illustrates the 2019 population density per square mile of the City of Whitefish. The results were based on the latest available U.S. Census Bureau geographical information systems (GIS) files. Although the City's population has changed in the preceding ten years, the image portrays those areas of the City with the highest population densities. This is particularly important since population and population characteristics are the primary drivers of the demand for EMS.

Housing & Income

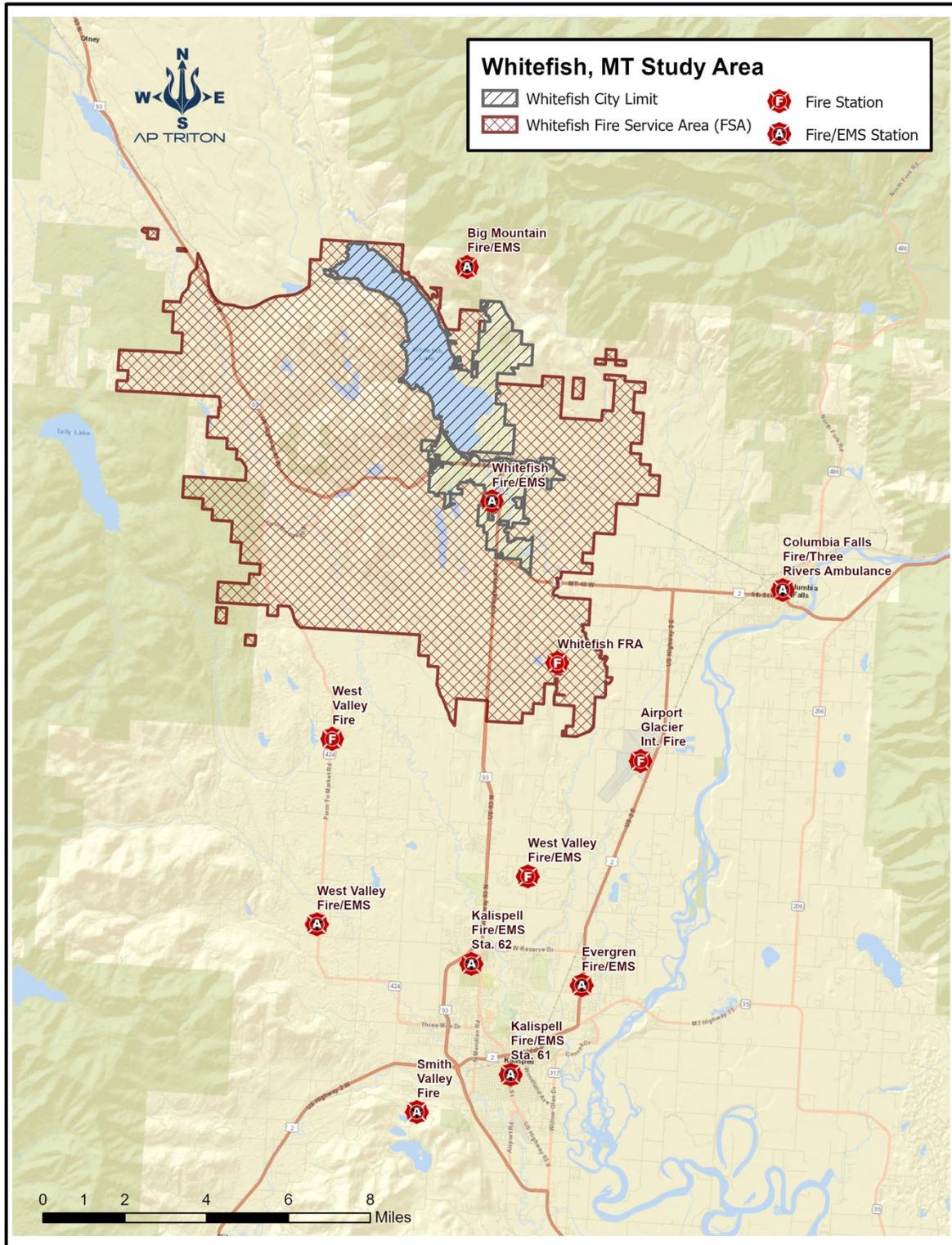
As of 2018, the City of Whitefish had a 61.5% homeownership rate, with a median household income of \$51,059; however, the most significant income bucket was income between \$100,000 and \$125,000. Approximately 7.6% of persons were living at the poverty level. For individuals between 18 and 65 years of age, 7.67% were without health insurance³.

General Operations

The Whitefish Fire Department deploys its apparatus and personnel from one fire station strategically located in the center of the City. The station houses two frontline engines, two frontline ambulances, a tender, and a brush apparatus.

The daily minimum staffing level is 4 personnel cross-staffing all apparatus. Station One also serves as the Department's headquarters. The following image illustrates the study area of this project.

Figure 2: Whitefish Fire Department Study Area



Fire Suppression & Special Operations

The Whitefish Fire Department (WFD) provides traditional structural fire and wildland fire suppression in addition to vehicle extrication and low- and moderate-risk technical rescue. This includes low-angle rope rescue, confined space (line-of-sight), open water and ice rescue shore-based), and minor building collapse. WFD utilizes a Type 1 Water Tender and other apparatus for its wildland responses.

The fire suppression program provides full-service fire suppression and emergency response to mitigate the impact of fires on life, the environment, and property. The Department also provides emergency medical services (EMS), technical rescue, hazardous materials, and wildland response.

Fire Prevention & Public Education

WFD conducts Community Risk Reduction (CRR) through code enforcement, permitting, inspections, and public education programs. In addition to the Assistant Chief, fire suppression personnel conduct annual inspections.

Dispatch Services

Dispatch Services are received from the Flathead 911 Emergency Communications Center (FECC) located in Kalispell. FECC is a combined 911 center that provides dispatch services for fire, EMS, law enforcement, animal wardens, Office of Emergency Services, Alert Medical Helicopter, and several search and rescue teams. Dispatch services are funded through a County wide levy.

FINANCIAL OVERVIEW OF THE CITY & FIRE DEPARTMENT

City of Whitefish

Whitefish was developed primarily as a railroad and logging city with the railroad continuing to be a large part of the community's economic base. The City, located in northwest Montana was platted and dedicated in June 1903 and timber, farming, ranching, and the railroad were the mainstay of the City's economy for the next 50 years. With the logging and railroading industries declining, the City began a transition and has evolved into a resort community. In recent years, tourism has risen to the top of the list of economic drivers. Whitefish has experienced steady growth over the past two decades, witnessing a 30% growth from 2000 to 2010 and another 40% increase between 2010 and 2020, with a population estimated at 8,915 per the U.S. Census Bureau⁴. The City is now the eleventh largest city in Montana.

The City contains approximately 11.7 square miles. Whitefish is one of the major recreation centers of western Montana, surrounded by Glacier National Park, Whitefish Lake, and the Whitefish Mountain Resort at Big Mountain. Whitefish is host to a significant number of events during the summer and winter and skiing has been enjoyed since 1947 at the Whitefish Mountain resort.

In 1989, the Whitefish Fire Service Area was created by the Flathead County Commissioners. With the creation of the approximately 86 square mile district, a fee was assessed against each residential structure to compensate the City of Whitefish Fire Department for providing the services.

Whitefish utilizes fund accounting methodology, typical of municipal government entities, to record its financial transactions. This methodology accounts for various government activities in different funds such as the General Fund, Resort Tax Fund, Tax Increment Fund, Fire and Ambulance Fund, Tax Increment Revenue Bond Debt, and other governmental funds. The combination of these funds creates Total Governmental Funds. Revenues received by these funds include property taxes, resort tax, franchise and utility fees, fines and forfeitures, charges for services, intergovernmental charges, investment earnings, and miscellaneous revenues. Property taxes and assessments are apportioned over five of the City's active funds.

Property taxes and assessments are its primary source of governmental fund and general fund revenues. The Resort Tax, a 3% “luxury sales tax” levied on lodging, retail bars, and restaurants, was originally authorized on November 7, 1995, with a 20-year term. In November 2004, the voters approved an extension of the tax until January 2025 and expanded the taxable items to include ski resort goods and services as well as defined luxury items. Voters restricted the use of the revenues to four specific items, bike paths and other park capital improvements, costs associated with administering the resort tax, property tax reduction for residents of the City, and provisions for repair and improvement to City infrastructure. Various fees for services, including ambulance billings of approximately \$1,563,000 annually account for the remaining \$2,775,000 of the \$25,500,000 of Governmental Fund revenue necessary to fund the City’s annual budget.

The following figure indicates the growth in Governmental Funds revenues and expenses between FY 2016 and FY 2020.

**Figure 3: City of Whitefish Governmental Funds Receipts, Expenditures,
and Changes in Funds Balances**

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Taxes & Assessments	12,455,263	11,397,602	14,334,332	16,006,473	16,392,514
Licenses & Permits	1,130,634	930,064	1,095,214	1,487,365	1,728,330
Intergovernmental	1,967,060	1,522,324	1,651,147	1,726,271	3,314,024
Charges for Services	2,798,661	2,487,454	2,751,199	3,168,301	2,777,519
Fines & Forfeitures	204,152	275,665	358,823	380,551	405,910
Miscellaneous	362,317	1,831,067	1,299,537	591,241	661,725
Investment Earnings	46,559	85,792	112,499	236,445	215,201
Total Recurring Revenues	18,964,646	18,529,968	21,602,751	23,596,647	25,495,223
General Government	559,620	468,819	757,295	832,813	871,937
Public Safety	5,775,146	6,008,427	6,226,537	6,754,475	7,665,332
Public Works	1,849,986	1,407,318	1,347,590	1,330,152	1,503,387
Social & Economic Services	1,500		3,000	1,500	1,500
Culture & Recreation	1,551,437	1,452,627	1,633,221	1,696,374	1,702,060
Housing & Community Development	1,110,005	1,148,372	1,307,635	1,501,692	1,485,696
Total Recurring Expenses	10,847,694	10,485,563	11,275,278	12,117,006	13,229,912
Net Income (Loss)	8,116,952	8,044,405	10,327,473	11,479,641	12,265,311
Loan Proceeds	10,030,453	779,000	175,000		
Disposition of Assets	21,267	27,823	49,735		515,057
Proceeds from Cash-in Lieu				137,051	77,994
Other Financing Revenue		70,993			
Transfers In	8,064,572	8,401,577	6,607,008	7,294,944	5,438,805
Non-Recurring Receipts	18,116,292	9,279,393	6,831,743	7,431,995	6,031,856
Debt Service – Principal	213,320	3,065,715	3,374,180	3,741,956	4,100,626
Debt Service – Interest	157,817	404,772	413,351	330,452	227,491
Miscellaneous	105,992	46,746	50,792	54,521	55,692
Capital Outlay	9,265,426	12,542,864	4,846,775	3,923,027	6,499,601
Transfers Out	8,810,412	8,980,818	7,448,496	8,147,368	6,272,984
Non-Recurring Expenditures	18,552,967	25,040,915	16,133,594	16,197,324	17,156,394
Net Increase (Decrease):	\$7,680,277	(\$7,717,117)	\$1,025,622	\$2,714,312	\$1,140,773
Beginning Fund Balances	11,856,402	19,491,435	11,774,318	12,798,741	15,513,053
Restatements	(45,244)	-	(1,199)		17,173
Ending Fund Balances	19,491,435	11,774,318	12,798,741	15,513,053	\$16,670,999

Whitefish Fire Department

The Whitefish Volunteer Fire Department was created in 1907 as an all-volunteer service delivery system. As homes were developed outside the city, the Whitefish Fire Service Area (WFSA) was created in 1989. This area contracts with the Department for emergency fire services. With the creation of the WFSA, and due to an increase in calls for service combined with a decrease in volunteers, the Department changed its deployment model from all volunteers to a combination of career and volunteer deployment model. In 2009, with the help of a SAFER grant, the Department was able to hire enough firefighters to provide the 24/7/365 coverage with five firefighters per shift which remains in place today.

The Department is an "all-hazard" emergency response system which includes Advanced Life Support (ALS) ambulance services, structural firefighting, hazardous materials response, wildland firefighting, and a multitude of rescue responses. In 2020, the Department responded to 1,695 calls for assistance with 1,160 being medically related. Responses are from the Central Station, Station 21. Due to the lack of any volunteer response to Station 22, it has fallen to a storage facility. The reserve apparatus is in service and available should anybody respond to this station. The station is owned by the WFSA however the apparatus belongs to and is maintained by the City.

Station 22 is a storage facility for reserve apparatus. The Department maintains three ambulances (with a new one on order), three Type 1 fire engines, a water tender, a Type 6 engine (with a remount on order), a Type 5 engine, medium rescue truck, two boats and a hovercraft for responses on the lake, a UTV, one utility truck which converts to a snowplow, and two staff vehicles.

The Fire Department is one of several departments of the City of Whitefish that is funded through property taxes assessed by the City. The City operates on a July 1 to June 30 fiscal year and utilizes fund accounting methodology to account for revenues and expenditures. This methodology recognizes all receipts as revenue and all expenditures as expenses, regardless of the typical accounting characterization. Thus, loan proceeds and the repayment thereof would be treated as revenues and expenses, respectively. For purposes of analysis and presentation of the finances of the Whitefish Fire Department, we classify revenues and expenses as either recurring or non-recurring. Recurring, as is easily interpreted, denotes items of revenues and expenses that are anticipated on an annual basis and usually quantifiable. Non-recurring items, conversely, are items of receipts and expenditures that may not occur annually or are not easily quantifiable, and may include debt proceeds, repayments, and capital expenditures.

WFD is staffed with a full-time fire chief and administrative assistant. The Operations staff includes a full-time Assistant Chief/Fire Marshal, three captain/paramedics, eleven firefighter/paramedics, and a firefighter/Advanced Emergency Medical Technician (AEMT). Additionally, the Department staffing model includes five volunteer firefighter/EMTs and six volunteer firefighter/paramedics, all of which are paid on a stipend per call basis. Recently the Department added two 40-hour firefighter/paramedics.

The Department operates through a Fire Protection and Rescue Division and an Emergency Medical Services (Ambulance) Division. Each division accounts for its operations separately and includes salaries and benefits, materials and services, administrative costs, debt service, and capital outlay.

The Operations Division salaries have increased an average of just over 30% between FY 16 and FY 20; however, the most significant increase came between FY 19 and FY 20 with a \$103,000 increase. The increase was due to backpay owed to union members after the contract was finally settled plus high overtime costs incurred due to WFD's response to California wildland fires.

Benefits increased by a similar amount of approximately 32%; however, in FY 16 and FY 20, significant contributions were made to the state pension system. Supplies and services includes office supplies and materials, operating supplies, utilities, professional services, repairs and maintenance, travel, training, insurance, and other services. This category has experienced increases and decreases between FY 16 and FY 20 based on needs of the Division. Significant expenditures in professional services occurred in FY 19 to pay for the McGrath Study and training services. Also included in this Division is an allocation of administrative costs. Debt service and capital outlays also are paid from the Division.

The Emergency Medical Services Division focuses on providing ALS ambulance services to the City of Whitefish, Whitefish Fire Service Area, and the Olney Fire District. EMS responses account for between 70 and 75% of total responses of the Fire Department. The EMS Division incurs expenses and expenditures similar to those of the Operations Division.

Career firefighters of the City participate in Firefighters' Unified Retirement System administered by the Montana Public Employees Retirement Administration (MPERA), a multi-employer, cost sharing defined benefit plan. The plan requires employees, based on their hire date and certain election, to contribute 10.7% of their gross wages which is matched by the City at a 14.360% rate. The State of Montana is required to contribute 32.6%. The City does not receive any funds only reported for external financial reporting purposes. The purpose is to provide a portion of the annual contribution amount, minimizing the net liability of the Department and the City.

The City allocates all of the voted 24-mill levy designated for the Fire Department plus a portion of the City's general fund each year. Additional recurring revenues are derived from Fire Prevention Program fees, Rural Fire Protection Assessments, and other miscellaneous revenues. The EMS Division receives a portion of Countywide Ambulance Assessment, Ambulance billings for services, and fees from the Rescue Service Program.

Non-recurring revenues include federal grants, proceeds from the federal CARES program to reimburse for the Department's costs in responding to COVID incidents, State of Montana grants for the Department's pension obligation, proceeds from debt issuance, sales of assets, and transfers from the General Fund.

The following figure shows the actual operating costs, revenues, and the impact on the Fire and Ambulance Fund Balance of the Operations Division and the EMS Division of the Fire Department from FY 16 through FY 20.

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Salaries	515,829	470,965	511,413	536,319	638,688
Benefits	296,470	177,072	193,357	214,944	635,692
Salaries & Benefits	812,299	648,036	704,770	751,263	1,274,379
Materials & Services	138,603	131,275	143,995	158,407	126,623
Administrative Cost Allocation	12,422	12,106	14,300	17,022	21,056
Total Recurring Expenses	963,324	791,417	863,065	926,692	1,422,058
Debt Service	84,601	133,911	139,755	141,603	139,979
Capital Outlay	236,831	—	30,469	—	13,165
Total Non-Recurring Expenditures	321,432	133,911	170,224	141,603	153,144
Total Operations Division	1,284,756	925,328	1,033,289	1,068,295	1,575,202
Salaries	854,936	831,744	885,298	820,116	902,581
Benefits	576,809	329,732	339,366	333,459	396,474
Salaries & Benefits	1,431,746	1,161,476	1,224,665	1,153,576	1,299,055
Materials & Services	192,526	211,373	220,319	224,994	213,580
Administrative Cost Allocation	21,088	20,999	24,254	26,340	33,003
Total Recurring Expenses	1,645,360	1,393,848	1,469,238	1,404,910	1,545,638
Debt Service	31,898	32,078	32,426	70,520	38,609
Capital Outlay	75,000	—	244,028	—	29,262
Total Non-Recurring Expenditures	106,898	32,078	276,454	70,520	67,871
Total EMS Division	1,752,258	1,425,926	1,745,692	1,475,430	1,613,509

Description	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020
Total Fire Department Expenditures	3,037,014	2,351,254	2,778,981	2,543,725	3,188,711
Real Property Taxes	509,879	524,474	592,193	600,447	617,362
Personal Property Taxes	2,768	2,866	3,428	3,281	3,391
Fire Prevention Program Fee	119,267	80,381	91,551	151,075	195,293
Burning Permit	150	155	200	100	100
Rural Fire Protection Assessments	253,700	280,317	285,603	290,995	296,495
Recurring Revenues – Operations -	885,764	888,193	972,975	1,045,898	1,112,641
Ambulance Services	1,050,930	1,341,532	1,450,074	1,641,620	1,483,499
Rescue Care Program	24,612	3,301	43,792	22,925	26,065
Portion of Countywide Ambulance Assessment	92,010	43,204	48,045	52,448	28,680
Less Adjustments and Write-offs	(562,840)	(712,950)	(749,169)	(1,014,749)	(858,711)
Recurring Revenues - EMS	604,712	675,087	792,742	702,244	679,533
Total Recurring Revenues	1,490,476	1,563,280	1,765,717	1,748,142	1,792,174
Federal Grants	—	—	—	—	890
CARES Act	—	—	—	—	360,960
State Contribution to Retirement	366,579	—	—	—	389,340
Other Miscellaneous	26,785	7,897	139,448	35,548	40,373
Proceeds from Loans	230,453	—	175,000	—	—
Sale of Assets	21,268	18,163	—	—	—
Non-Recurring Receipts	645,085	26,060	314,448	35,548	791,563
Transfers In from the General Fund	835,000	835,000	729,525	700,380	853,092
Total Receipts	2,970,561	2,424,340	2,809,690	2,484,070	3,436,829
Increase (Decrease) to Fund Balance	(66,453)	73,086	30,709	(59,655)	248,118
Beginning Fund Balance	423,876	357,423	430,509	461,218	401,563
Ending Fund Balance	357,423	430,509	461,218	401,563	649,681

As indicated in the previous figure, the City of Whitefish is subsidizing the fire and EMS operations at an amount of between \$700,000 and \$850,000 from the general fund. This is in addition to the voted 24-mil levy property tax revenues being allocated to the Department.

Whitefish Fire Ambulance Transport Fee Analysis

Overview

In reviewing the billing and collection data provided for Whitefish there are several items that we look at as indicators for assessing the economics of an EMS system. Among the first is a simple percentage of collections to billing. In the case of Whitefish, the collection percentage to total billing is roughly 41%. While the payer mix contributes to this overall collection rate, collection percentages that exceed 35% suggest the rates being charged are below what they should be. Often misunderstood, many believe that a higher percentage of collections is an indicator that the billing process is highly refined in collecting appropriate reimbursement.

Another perspective is the higher the collection percentage the better the payer mix is. In some cases, both may be true; however, experience has shown that these scenarios rarely pan out. Using this thought process, the greater the percentage of collections the more revenue can be obtained. A billing company could guarantee a 90%+ collection rate to charges by simply reducing charges to the State Medicaid BLS rate. Doing this would result in nearly 100% collections from Medicaid. Medicare would reimburse at nearly 100% as well as commercial insurance, and private pay would likely see greater than 90% collections as this rate would be less than \$300 per transport.

In the case of Whitefish, total charges would be less than \$275,000 with estimated collections along with co-pays of nearly \$265,000 resulting in a net collection percentage of 96%. While a 96% collection rate is obtained, there is a loss of just under \$300,000 from the current net collections of less than \$600,000.

With approximately 1,000 transports per year and commercial payers making up less than 20% of the payer mix, any additional revenue must come from less than 200 transports. This alone will make it extremely difficult to generate any significant level of cost recovery above what is currently being achieved by simply increasing the rates for service. Increasing rates by \$1,000 per transport would yield approximately \$160,000 after co-pays and deductibles. Unless significant changes in either transport volume or payer mix occur, it is likely that the Department will continue to see reimbursement well below a million dollars per year.

Ambulance Rate Analysis

When discussing rates and revenue, it is most important to establish the actual cost of the services first before attempting to discuss rates for services. Therefore, we need to take an approach that quantifies the actual cost of transport.

To do this, we must calculate the total cost of the ambulance services which includes direct costs, indirect/overhead costs, and ancillary costs for the transport services. In addition to these basic accounting costs, we can also include depreciation and capital replacement of vehicles, gurneys, monitors, etc. These costs should be separate from the cost of the first responder personnel who respond with the ambulance and crew. This approach establishes a cost for transport and a cost for the remaining crew and engine.

Once we have established the cost of transport, we can determine the rates to be charged to recover the total cost of transport services. In the case of Whitefish, ambulance staffing is accomplished via cross staffing the ambulance with the Engine crew. Using this scenario, the cost of the ambulance staffing is already fully encumbered as part of the daily staffing. Therefore, the rates should attempt to break out and recover the cost of the capital assets along with a capital replacement plan and the time spent by the ambulance crew in staffing for the ambulance response. Next, we should then use the same methodology to determine the cost of the engine crews that respond with the ambulance. This may seem like a duplication of costs; however, it is not. There are times when an engine may respond to an incident without cross staffing an ambulance. In these cases, it is also plausible that the engine may cancel the responding ambulance for a variety of reasons. When this occurs, it is prudent for the engine that assessed a patient who does not need transport to charge for those services in the form of a treat/non-transport fee. This fee should consider the full cost of the engine response. Most commercial insurance companies routinely pay these fees with little to no push back.

MANAGEMENT COMPONENTS

The organization was created in 1907 as the all-volunteer Whitefish Volunteer Fire Department. Over time, as the calls for service increased and the number of volunteers dwindled, the Fire Department changed from an all-volunteer department to a combination department.

In 1993, the City hired its first Fire Marshal. In late 1995, it hired its first career Fire Chief followed by two firefighters. The process slowly continued until 2009 when, with the help of a FEMA SAFER Grant, the City was able to hire enough firefighters to provide 24/7 coverage with five firefighters assigned per shift, a staffing level that remains today.⁵

Fire Department Leadership

Fire Department leadership consists of a full-time Fire Chief and a full-time Assistant Fire Chief. The Assistant Chief splits his time between Fire Marshal duties and Building Plan reviews, including building permits, and limited exposure to other Fire Department organizational issues.

The Fire Department has 17 union career firefighters and an average of five active volunteer firefighters. The volunteer response is not considered a dependable source of staffing or response personnel.

Three career firefighters are working 48/96-hour shifts and three shift captains manage the daily shift activities with a minimum of four firefighter-paramedics. All firefighters, except for one, are paramedics.

There are only three administrative staff for the Fire Department, including the Fire Chief, Assistant Chief, and the Administrative Assistant. The Assistant Chief/Fire Marshal's primary responsibility is plan review and building permits, limiting any operational support on significant events, including structure fires and other Department day-to-day operations.

The span of control of the Fire Chief is noted at two, but the actual span is five which includes the Assistant Chief, Administrative Assistant, three shift Captains, plus volunteers. The national standard for a span of control varies from three to seven.

This relationship places the Chief in a position of being the only one providing all the daily leadership to the Department and any other functions that would be situational. The literature indicates several factors determine the span of control, including the experience of the supervisor and those of the subordinate(s), the task(s) being performed, the proximity of those being supervised, and communications between the groups, among other factors.⁶ An example is a non-emergency operation covering a small area may allow a larger span of control (three to seven areas of activity) as compared to a high hazard operation (such as an oil spill) where the Chief or Incident Commander would manage a lesser number of assigned tasks and subordinates.

In a small department the size of WFD, the span of control may be reasonable but very limiting on the activities of the Chief and his essential functions. As the Department increases and more service is provided, there would be a corresponding increase in personnel to manage the increasing activities. For example, a training/EMS officer, shift battalion chiefs, and other mid-level officer staff members will be required to handle an expanding department and its day-to-day operations. This staffing model (or something similar) allows the Chief to work on the plans for the Department with the City administration and other surrounding jurisdictions.

Annexing other fire districts and agencies places an increasing urgency on the expansion of mid-level staffing due to the growing staff, additional stations, personnel, and the need to develop a mid-level management structure that includes a Training and EMS officer, and other mid-level managers for a developing organization.

The Fire Chief and City Manager work together on personnel matters, but the City Manager is responsible for the hiring and termination of the firefighters.

Protection Area

The City consists of seven square miles. In addition to covering the City, the Fire Department also protects the Whitefish Fire Service Area (WFSA), an unincorporated area of approximately 86 square miles and an additional area of about 140 square miles of remote area consisting of mostly forest, mountains, and lakes that are sparsely uninhabited area that USFS and DNRC generally manage. The area's population is 14,000 for all of the service areas, which increases in population size to approximately 30,000 during the summer and vacation months with an influx of visitors and vacation residents.

This is a relatively large area serviced by a single crew consisting of firefighter/paramedics from a single station. The Fire Department also responds to EMS calls for the Olney Fire District and their portion of the Flathead Fire Service Area (FFSA) which includes Highway 93 north to the County line.

Mutual aid from neighboring fire departments has proven unreliable as their response times are often lengthy. Due to volunteer recruitment and retention problems, there are times when some departments cannot muster a crew to respond to assist WFD. Many of the high-risk operations require proper staffing levels before commencing operations. On-duty staff is faced with making tough decisions between conducting unsafe/risky operations and waiting for adequate staffing.

The City plans to annex Big Mountain and would then be required to provide fire and EMS service to the area. The timeline for this annexation has not been set. Whitefish Fire Department already provides some assistance to this area with the assistance of Big Mountain Fire & Rescue.

The Department considers itself an all-hazards organization providing services ranging from EMS transport services with firefighter/paramedics and EMTs, structure fire and suppression services, building inspections and plans review, hazardous materials response, and limited special operations services ranging from water and ice rescue, collapse, and limited trench rescue services. Many of these services are provided with mutual aid responses from surrounding departments, BNSF, and the local Sheriff's Department. The current ISO rating is a 5 for the City and a 10 for the surrounding area due to the nature of the response area.

The City responds from its headquarters station, which is classified as a combination station. Although the Fire Department lists two stations, the second station, available for volunteer response, is used primarily for storage. There is another station lakeside, which is not staffed, that houses the hovercraft.

Vision, Core Values, & Mission Statements

Vision

The vision of the Whitefish Fire Department is to achieve a level of service that exceeds our community's expectations, guided by the principles of our core values.⁷

Core Values

The Core Values of the Whitefish Fire Department are:

- **TEAM:** We understand that it is only through the synergy of our team that we can meet our commitment to our community and each other.
- **PROFESSIONALISM:** We will demonstrate our commitment to our community and each other by maintaining a knowledgeable and skilled workforce that strives for perfection, never settling for "good enough."
- **INTEGRITY:** We understand that we are the guardians of the public's trust. We will do the right thing for the right reason.
- **COMPASSION:** We believe in and will advocate for the dignity of all people regardless of the time of day, nature of the call for service, or condition of the person. We will treat all people with patience, kindness, and understanding.
- **SERVICE:** Above all else, we understand we are here to meet the community's needs, guests, and visitors while being good stewards of our taxpayer's resources.
- **TRUST:** We trust one another to prepare for and act in such a way that provides for the safety, effectiveness, and reputation of our team, our community, and the fire service.

Mission Statement

It is the Mission of the Whitefish Fire Department to:

- Protect the lives and property of the people of the City of Whitefish, the surrounding Whitefish Fire Service Area, and those traveling through our community from fire, natural disaster, and hazardous materials.
- Save lives and improve life by providing emergency medical services as part of the Flathead County Emergency Medical Services (EMS) system.
- Rescue people from precarious situations.
- Prevent fires, injuries, and emergencies through education, prevention, and fire and life safety code programs.

- Provide a safe working environment for all our firefighters, which encourages excellence through the synergy of our team.
- Develop relationships with our mutual aid partners to provide timely and quality emergency services.

Policies & Standard Operating Guidelines

The Department has numerous standard administrative policies (SAPs) and standard operating guidelines (SOGs) that are in a constant state of review and updating. The Chief of the Department has the primary responsibility for this activity. Several of the Department policies are City policies that the Fire Department has adopted. Additionally, WFD EMS protocols are set by the Flathead County EMS office and the Medical Director.

A well-developed set of policies are imperative to the success of a department. They are the black and white rules of the organization and can be the basis of corrective actions or discipline. In addition to these policies is a Code of Conduct and Ethical Standard Code that guides employee actions on and off duty.

SOGs are considered guidelines generally used for the emergency operational aspects of the fire department to manage structure fires, rescues, medical responses, and the like. These SOGs allow for flexibility in a specific operation or task, unlike a black and white SAP which is relatively rigid and inflexible.

City Leadership

The leadership and management for the City of Whitefish consists of an elected mayor and an elected City Council with a City Manager. There are additional divisions in place to manage the various services provided by the City, which manage and operate the library, parks and recreation, and public works, to name a few. An organizational chart of the City is found at the City's website.⁸

Disaster Planning

The City of Whitefish has an Emergency Operation Plan which is combined with the Flathead County DES and the FEMA response plans. The City gathers an initial response, size up, and requests additional resources from these various disaster plans to successfully manage an event that overwhelms the limited Fire Department and City services.

Studies & Planning

McGrath completed a previous system evaluation study⁹ in 2019. The study recommendations were not implemented as much of the guidance presented in the 2019 Master Plan submission required money and increased personnel, either career or volunteer, the addition of new stations, and other factors within this master plan. The City did not adopt the plan, and to date, no action has originated from this study.

Department Communications

Communication is an essential tool in any fire department. With the advent of electronic communications in the form of email, teleconference services such as Zoom, and social media, it is always recommended that any organization conduct periodic and purpose-specific face-to-face meetings with officers and staff when possible.

Organizations like fire departments are considered para-military organizations with a distinct chain of command from the Chief; however, in this Department the chain of command is not always followed. Much of this failure is likely due to a direct chain of command from the shift captains to the Chief of the Department for all matters related to the Department. Many other departments have a mid-level officer between the shift staff and the Chief, usually a Captain or Battalion Chief who is assigned or promoted to the position. Some departments hire qualified individuals from outside the department to fill these essential management roles.

The Department has regularly scheduled monthly staff meetings with the officers, but due to work schedules, vacations, on-shift times, sick days, and other reasons, these monthly meetings are not held consistently. This is not unusual for departments of any size, but for smaller departments, these meetings are not always successful due to the factors noted above.

The Fire Department membership utilizes the City's email system, and all career members have a Department email account. The volunteers use their personal email accounts for communicating with the Department or the City.

At this time, there are no member newsletters, all-hands meetings, or membership forums. A Department website, which is quite informative, is a part of the City website framework.

The Chief maintains an open-door policy for members of the organization, which is essential for the transmission of information. It serves as a sounding board for grievances, and when properly utilized, will head off many internal and personnel problems before they become insurmountable.

Critical Issues

In the management of any organization, the Chief is the tip of the spear on many issues facing the fire services. In small to medium-size departments, and all too often, the Chief is the sole practitioner of all activity that occurs in the department from hiring, training, response, new program development, finances and funding, labor negotiating, problem solving, discipline, managing of all divisions, and all other aspects of a busy department. The Chief, along with City leadership, is the face of the City. With the potential growth and annexations to the City proper, the Fire Chief will be the heir apparent of all that is right or wrong with the department and its plans.

Whitefish Fire Department is considered a small and highly functional department faced with essential resource isolated entity issues. A small group of dedicated firefighter/paramedics provide an all-hazard response.

The Fire Chief has identified the following critical issues facing the Department, its services, and the large, surrounding response area.

- STAFFING, more responders are needed, be they career, part-time, volunteer, or a proposed resident program.
- COVERAGE, we are not providing equitable station coverage resulting in many property-owners in both the City and WFSA paying high insurance cost and a slower response due to distance.
- FUNDING, Funding inequity across the entire WFD service area does not match the level of service provided. City taxpayers are subsidizing the WFSA.
- APPARATUS, we do not have an ongoing funding mechanism to replace our fleet as it ages let alone the funding to add additional resources like a needed ladder truck.
- Another critical issue is the WFSA's Board of Trustee's contemplation of creating their own volunteer fire department and severing their contract with the City. Both the City and the WFD desire to continue the relationship and have never suggested separation

PLANNING FOR FIRE PROTECTIONS & EMS

Planning Activities

Planning for the future is not a single source or single-person project. It must be created from a broad consensus of stakeholders from the community, surrounding communities, Fire Districts, Federal and State authorities, other fire agencies in the service area, and include the various divisions within the City, including the elected officials.

Without a broad consensus from the stakeholders, the effort to plan for the future of the Whitefish Fire Department will face challenges. The Whitefish Fire Department is an all-hazard organization that provides EMS services as its primary demand for service followed by fires and other emergencies, including water and ice rescues.

The large and remote fire service area outside the city limits has the potential for creating a massive multi-agency event that will quickly overwhelm the first, second, and even third level response, such as a wildland fire or a train disaster with hazardous materials spills.

Departments that do not preplan for these and other emergencies do not serve the public well. The result can cause death and injury to the public and first responders if entering into a situation they are ill-prepared for, lacking the proper training, equipment, an incident command system, or robust available outside resources.

As noted in its prior development history, the Department's calls for service increased and the number of volunteers dwindled. The Fire Department changed from an all-volunteer department to a combination department. In 1993, the City hired its first Fire Marshal, and in 1995, it hired its first career Fire Chief followed by hiring two firefighters.

The process slowly continued until in 2009 when, with the help of a FEMA Safer Grant, the City was able to hire enough firefighters to provide 24-7-365 coverage with five firefighters assigned per shift, a staffing level that remains today.

Development and growth continue unabated in the area, and the Fire Department must respond to that growth challenge with additional staffing, equipment, stations, training, command structure, and other essential elements.

The response area for EMS and Fire is extensive, covering approximately 200 square miles of urban to remote locations requiring additional resources for the small and inaccessible areas of the Flathead Fire Response area.

One cannot plan for EMS and fire services without a broad view of the City's and Department's issues. There are growth and annexation plans designed to increase the size of the City and potentially the services necessary to address the growth that will impact the Fire Department. A hazard and response analysis is required to understand future planning for this region. If a significant emergency or disaster situation occurs within the incorporated city or in the rural areas of Flathead County, an informed and coordinated response is mandated. Priorities for response to all hazards will be preserving life, protecting property, critical infrastructure, the environment, and incident stabilization.

Emergency Preparedness Planning—Short-Term & Long-Term

Overall planning for all-hazard events is an ongoing and never-ending project as new hazards are identified and old hazards are mitigated. Documents such as Emergency Operations Plans (EOPs) are essential to the Fire Department, City, County, and State emergency managers to provide pathways for those responders mitigating such events. Those plans also need approval at the state level for the legal authority to enact such responses and provide a path for financial remuneration for equipment and personnel costs.

Current plans affecting the City have been written by the Fire Chief and approved by the City. In coordination with the Emergency Management Division of the Flathead County Office of Emergency Services (OES), the City and Fire Department prepares for these ultimate all-hazard emergencies.

The Sheriff's Department is responsible for the planning, coordinating, and implementing of all emergency management and Homeland Security-related activities for Flathead County, Montana. Their other responsibilities include coordination of activities for the County's Emergency Operations Center (EOC). The EOC, when activated, is a central location where representatives of local government and private sector agencies convene during disaster situations to make decisions, set priorities, and coordinate resources for response and recovery.

Continuation of long- and short-term planning should involve the local development and initiation of response pattern run cards, mutual aid planning, and improvements in the Incident Management at the mutual aid response level. Tactical planning and training is a continuous work in progress, especially for the high hazard events such as chemical spills and responding to the high hazard areas such as nursing homes, schools, apartment buildings, and high occupancy structures such as the downtown shopping area and churches.

The county LEPC and OEM are currently working on a more usable emergency operations plan for the county. These groups should be part of the Fire Department and City's plans to produce a local area disaster response. Community resources from City leaders and business owners, along with diverse input from community stakeholders is essential. The initial twenty-thousand-foot view of emergency planning is accomplished by creating working committees to work out the details of the emerging response plans.

In 2014, the County updated the Pre-Disaster Mitigation Plan, which incorporates many of the elements necessary for a comprehensive emergency response involving many resources available at the city, county, state, and federal levels.¹⁰

STAFFING & PERSONNEL

Whitefish Fire Department (WFD) has a distinguished history dating back to early 1907. Its organizational success is based on a safe working environment, equitable treatment, the opportunity for input, and recognition of the workforce's commitment and sacrifice.

The size and structure of an organization's staffing are dependent upon the specific needs of the organization. Organizational priorities should correlate to the community. This section provides an overview of the WFD's staffing configuration, particularly in delivering emergency medical services.

Several national organizations recommend standards to address staffing issues. The *Occupational Health & Safety Administration (OSHA) Respiratory Protection Standard* and *National Fire Protection Association (NFPA) Standard 1710 (or 1720; whichever is applicable)* are frequently cited as authoritative documents. The *Center for Public Safety Excellence (CPSE)* publishes benchmarks on the number of personnel recommended on the emergency scene for various risk levels.

An organization must commit to consistency, fairness, safety, and growth opportunities. These values will be the foundation of the overall organizational culture. There are always challenges as organizations grow. Leadership and staff will face ambiguity, an environment of change, and the need for collaboration. Creating a positive culture is an opportunity to build a long-term sustainable organization.

One essential component of a healthy organization is balancing administration, support staff, and operational resources. This analysis will review the current ratio for each organization and provide recommendations for a combined staffing model. Staffing considerations could potentially result in improved service delivery. This process will evaluate various organizational charts and provide a framework for future organizational staffing.

WFD is an integrated all-hazard organization. An analysis of the Department's emergency response must start with an overview of the varying levels of administrative support. The following figure illustrates the various positions in uniformed/non-uniformed administrative and support functions.

Figure 4: Uniformed/Non-Uniformed Administrative & Support Staff

Position	Number
Fire Chief/Administrator/Director	1
Assistant Chief/Inspector/Plan Review	1
Administrative Assistant	1

Like many rural fire departments, the staff must serve in multiple roles. The Fire Chief provides all administrative support while serving as the political head of the Department. The Assistant Chief is assigned halftime to operational needs, and the other .5 FTE is allocated to prevention services. Due to the growth in the construction activities, the Assistant Chief primarily focuses on building plans review and other duties relating to prevention. The focus on community development has resulted in a lack of operational support and oversight. AP Triton identified a specific need for operational oversight in support of EMS and training programs. Future staffing needs to address the gap in leadership between the chief level and daily operational staff. AP Triton recommends adding staff allocation to prevention duties allowing the Assistant Chief to resume operational responsibilities or adding a level of leadership staff that would cover EMS and training requirements.

WFD receives administrative support from the City, including Human Resources (HR), Information Technology (IT), legal, finance, and the City Manager. Specific to the department functions, WFD has an 11% administrative support staffing to line operational staffing. The percentage indicates efficient use of staffing resources but also supports additional future staffing allocation. As a municipal fire department, an opportunity exists to reduce administrative and support staffing costs through cooperative agreements with neighboring agencies.

Operational Staffing & Distribution

Triton evaluated the type and number of staff positions assigned to operations. WFD is facing numerous challenges relating to the requirements for an effective response force (ERF), maintaining an adequate operational span of control, and providing service to a large geographic area. This section will give a summary of current operational staffing levels and recommendations for maintaining levels of service. The following section will focus on current emergency response staffing by position.

Figure 5: Emergency Response Career Staffing by Position

Position	Number
Captains	3
Firefighter/Paramedics	11
Firefighters/AEMTs	1
Other (40/week) Firefighter/Paramedics	2
Total:	17

Theoretical Calculation of Required Emergency Response Staffing

Triton calculated the theoretical number of employees required to meet the various average leave hours used by operations employees in 2020 and compared the results to the current number of operations employees assigned to 24-hour staffed units. Information provided by WFD showed that the average use of vacation was 193 hours per firefighter. The average use of sick time was 82 hours per firefighter, and there was an additional 102 hours per firefighter for other leave. Triton then multiplied the number of personnel needed to cover a single position 24 hours per day with the relief factor to determine the number of employees required to meet daily minimum staffing.

Figure 6: Theoretical Relief Factor Calculation (2020)

Relief Factor	WFD
Total Relief Factor	1.19

The total leave factors were multiplied by the number of personnel needed to cover one 24-hour position. The following figure compares the theoretical number of positions required with the current number of employees assigned to specific apparatus.

Figure 7: WFD Calculated Operational Staff Shortage/Overage (2020)

No. Positions Required 24/7	Total No. Operations Staff	Theoretical No. of Staff Required	Shortage or Overage
24/shift -5/ total	15	18	-3

WFD currently has two firefighters on long-term disability. They are expected to be offline for an extended period. WFD was authorized to add two full-time paramedic equivalent (FTEs) scheduled 40 hours per week to compensate for the staffing shortage. The new positions went online in August 2021. The additional positions support the previous figure showing an overall deficit of three firefighters. Following the new firefighters' completion of initial training and going online, AP Triton calculates the Department will have an overall shortage of one firefighter FTE. Based on current calculations, the additional two 40-hour FTEs should be moved to 53 hour shifts and then add one FTE resulting in one additional firefighter per shift.

The following figure shows three analyses of the current staffing deployment by WFD. The first is the actual daily scheduled staffing for the sample months of June/July 2020. Additionally, the chart shows the projected data following the addition of two new 40-hour firefighter positions. Finally, the figure shows the projected data if WFD is fully staffed following the return of the two firefighters on long-term disability (LTD).

Figure 8: Actual and Projected Staffing Deployment for WFD

Date	Scheduled to Cover all Leave	Vacation	Kelly	Sick/Vac	Filled Volunteer	Filled Overtime	Average Daily Staffing
Actual June–July 2021	5	.6	.2	.7	.1	.5	4.06
Projected until two Firefighters return from LTD	6	.7	.23	.8	.1	.3	4.7
Projected following WFD at Full Staffing	7	.8	.3	.9	.1	.1	5.2

As discussed in the service delivery section, WFD cannot meet the ERF with less than five firefighters cross staffing both an engine and an ambulance. AP Triton recommends a staffing model that has a mandatory five-person crew 24/7.

Paramedic Coverage & Configuration Both the City and the WFD desire to continue the relationship and have never suggested separation

WFD currently has an operations staff of 14 paramedics and one Advanced EMT-Basic. The 94% paramedic staffing in the Department supports flexibility for staffing and ensures 100% ALS coverage. However, the cost savings of a balanced crew may provide an opportunity to add overall staffing. AP Triton recommends, through attrition, a staffing model with two paramedics on duty per shift. The model would allow a single paramedic to provide ALS care for the first medical incident and the second paramedic would be available for concurrent events.

Incident analysis for 2020 showed that most high-priority EMS incidents had 2–3 paramedics per patient. Recent research indicates that multiple paramedics on single-patient incidents do not translate to improved care or outcome. A 2018 article in JEMS summarized some of the research associated with multiple paramedics on a single patient incident. The findings included:¹¹

- A lower number of paramedics per capita resulted in higher survival rates in cardiac arrest patients. The conclusion was related to the dilution of skills associated with limited call volume systems.
- Multiple paramedics on cardiac arrests did not increase survivability, return of spontaneous circulation (ROSC), or discharge compared to a single paramedic response.
- Multiple paramedics did not translate to higher success rates of pre-hospital advanced procedures. However, there did appear to be an increased time on scene of traumatic events associated with multiple versus single paramedics.

There is anecdotal research that supports multiple paramedics in high-volume systems due to the increased incidence of paramedic burn-out. Based on the information found in the Service Delivery Section, the WFD system has an average unit hour utilization (UHU) of 12%, which is well below the 20%-25% UHU recommended limits.¹²

Whitefish Fire Department Volunteer Staffing

Volunteerism has been the cornerstone of the WFD for close to 100 years. Over the past few years, many fire agencies have faced challenges with recruiting and retaining firefighters. An aging workforce and movement to career departments across the country have resulted in fewer candidates. Additionally, Whitefish has seen a transition from a blue-collar community to a retirement community with a huge tourist influx lessening the pool of potential volunteers. Additionally, the community is facing an affordable housing crisis limiting recruitment efforts. The following figure shows the national trend for the decline of volunteers and the increase in career firefighters.¹³

Figure 9: Number of U.S. Firefighters (1983–2017)

Year	Total	Career	Volunteer
1983	1,111,200	226,600	884,600
1990	1,025,650	253,000	772,650
2000	1,064,150	286,800	777,350
2010	1,103,300	335,150	768,150

The following figure shows the current volunteer firefighter staffing at the Whitefish Fire Department.

Figure 10: WFD Volunteer Firefighter Staffing Levels (2020)

Position	Number
Firefighter/EMTs	5
Firefighter/Paramedics	6

The state of Montana also limits the use of volunteer firefighters in municipalities greater than 10,000 residents. The City of Whitefish has approximately 8,915 residents restricting the future use of volunteers in the staffing model. Opportunities exist in programs that utilize volunteers to support, including rehab, on significant events and logistics.

Hiring & Retention

Based on WFD's future staffing needs, the organization will require a hiring process over the next few years. The following section will evaluate the necessary hiring, testing, and safety components.

Based on a reputation for excellent service, an overwhelming desire to live in the Whitefish area, and competitive pay, the WFD has benefited from an excellent hiring and retention program. The majority of the new career recruits have come from the volunteer core.

Recruiting volunteer firefighters is a problematic national issue, and WFD is no exception. Some of the reasons range from lack of qualified individuals to the community demographics of age, work status (whole or part-time), the number of retirees, and transient population making recruitment difficult. Some departments have a full-time position for the recruitment of volunteer firefighters.

Training is also an issue due to the number of requirements necessary to become a qualified firefighter. Many volunteers, especially with jobs and families, have difficulty balancing these activities. The Department is discussing several methods of training to include an internal self-paced with a task book to track those lessons coupled with skill and assessment training.

There is also the availability to send recruits and existing volunteers to the State's Academy, but time continues to be an issue. Another concept is to run an internal academy. These academies are an "all hands" effort. The Department has only scratched the surface on this issue.

Sufficient and quality training is a difficult objective to achieve. The Department would benefit from use of a full-time Training position that can coordinate EMS and Fire Training and quite possibly coordinate the volunteer firefighter program.

The following figure shows the current hiring process components.

Figure 11: WFD Hiring Process Components

Hiring Process Components	Whitefish
Recruitment Program	Yes
Qualifications check	Yes
Reference check	Yes
Background check	Limited
Physical standards established	Internal
Knowledge testing	No
Interview	Yes
Medical exam required	Yes
Psychological exam required	No

The capacity of an organization to improve staffing diversity is essential to success. Flathead County has limited ethnic diversity but has a 50/50 breakdown of men and women. WFD staffing does appear to be consistent with the minority demographics in the area. The following figure shows an overall population breakdown.

Figure 12: Flathead County Race & Ethnicity Percentage¹⁴

Race & Ethnicity	% of Population
White Non-Hispanic	93%
Black/African American	.4%
Asian	.7%
Native American	2%
Multi-Racial and Other	3.9%

Based on the above finding, future hiring processes should focus on recruiting women and minorities commensurate with the community's demographics. With plans to implement a resident program Whitefish would recruit from outside the area and could focus on diversity not seen locally.

Safety Compliance

The fire service functions within an inherently hazardous environment. The organization needs to take all reasonable precautions to limit exposure and provide consistent medical monitoring. Wellness programs include education on healthy lifestyles, mental health support, illness and injury prevention, and most recently, an emphasis on cancer prevention.

Over the past 15 years, evidence supports that firefighters have a "14% increase in cancer-related deaths as compared to the general public."¹⁵ National statistics for fire incidents show that 34% of industry fires produce environments with cancer-causing chemicals. According to information from Data USA, employment in the City of Whitefish and surrounding area includes:

- 4%—Transportation and Warehouse
- 5%—Building and Grounds
- 4%—Manufacturing
- 4% —Production occupations
- 3%- Maintenance and Repair

WFD excelled in its efforts to develop a cancer prevention program which includes:

- Issuing each career firefighter two sets of bunker gear
- Gross decontamination in the station
- Extractor for cleaning bunker gear

One recommendation for improvement would be to develop policies and procedures specific to utilizing the above processes and create a policy limiting cross-contamination of equipment and uniforms in the station's living quarters.

The following figure summarizes the services provided concerning health and fitness.

Figure 13: Health, Safety, & Counseling Services

Services	WFD
Medical standards	Yes
Medical exam frequency	Annual
Safety Committee	No
Critical Incident Debriefing	Yes
Employee assistance program	Yes

Pre-Employment & Duty Physical Fitness Program

There have been extensive studies relating to firefighter fatalities over the past 20 years. The leading cause of death for on-duty firefighters is cardiac arrest resulting from coronary artery disease.¹⁶ There is not any direct correlation of coronary artery disease due to working in the fire service; however, coronary artery disease is exacerbated by the hazardous environmental conditions often faced in performing duties. Compared to other emergency response entities, firefighters are almost three times more at risk of a coronary event while on duty:

- 45%—duty-related firefighter deaths
- 15%—duty-related law enforcement deaths
- 11%—duty-related EMS deaths

CAPITAL FACILITIES, APPARATUS, & EQUIPMENT

Three basic resources are required to successfully carry out the mission of a fire department:

- Trained firefighters and staff
- Apparatus and equipment
- Fire stations

No matter how competent or numerous the firefighters, if appropriate capital equipment is not available for use by responders, it would be impossible for Whitefish Fire Department to deliver services effectively. The most essential capital assets for use in emergency operations are facilities and apparatus (response vehicles). Of course, a fire department's financing ability will determine the level of capital equipment it can acquire and make available for use by emergency personnel. This section of the report is an assessment of the respective capital facilities, vehicles, and apparatus of WFD.

Fire Stations & Facilities

Fire stations play an integral role in the delivery of emergency services for several reasons. To a large degree, a station's location will dictate response times to emergencies. A poorly located station can mean the difference between confining a fire to a single room and losing the structure. Fire stations also need to be designed to adequately house equipment and apparatus, as well as meet the needs of the organization and its personnel, including administrative support staff where applicable. It is important to research needs based on service demand, response times, types of emergencies, and projected growth before making a station placement commitment.

Consideration should be given to a fire station's ability to support the Department's mission as it exists today and into the future. The activities that take place within a fire station should be closely examined to ensure the structure is adequate in both size and function. Examples of these functions may include the following:

- Residential living space and sleeping quarters for on-duty personnel (all genders)
- Kitchen facilities, appliances, and storage
- The housing and cleaning of apparatus and equipment, including decontamination and disposal of biohazards
- Bathrooms and showers (all genders)
- Administrative and management offices, computer stations, and office facilities

- Training, classroom, and library areas
- Firefighter fitness area
- Public meeting space

In gathering information from Whitefish Fire Department, Triton requested that they rate the facility based on the criteria in the following figure.

Figure 14: Criteria Utilized to Determine Fire Station Condition

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

Whitefish Fire Department deploys its apparatus and personnel primarily from a single fire station, although it maintains other facilities. The following figures describe the basic features of WFD's facilities.

Figure 15: WFD Station 21 (Headquarters)

Address/Physical Location:		275 Flathead Ave, Whitefish, MT 59937					
		General Description:					
		Lacks storage space. Double-deep bays.					
Structure							
Date of Original Construction		2010					
Seismic Protection		No					
Auxiliary Power		Yes					
General Condition		Good					
Number of Apparatus Bays		Drive-through bays	5	Back-in Bays	0		
ADA Compliant		Yes					
Total Square Footage		Unknown					
Facilities Available							
Sleeping Quarters		9	Bedrooms	9	Beds	0	Dorm Beds
Maximum Staffing Capability		9					
Exercise/Workout Facilities		Yes					
Kitchen Facilities		Yes					
Individual Lockers Assigned		Yes					
Bathroom/Shower Facilities		Yes					
Training/Meeting Rooms		Minimal space; cannot accommodate all staff					
Washer/Dryer		Yes					
Safety & Security							
Station Sprinklered		Yes					
Smoke Detection		Yes					
Decontamination/Bio. Disposal		Yes					
Security System		No					
Apparatus Exhaust System		Yes					

Figure 16: WFD Station 22 (WFSA)

Address/Physical Location:		1345 Hodgson Rd, Whitefish, MT 59937				
	General Description:					
	This station is owned by the Whitefish Fire Service Area (WFSA) but is utilized by WFD. Volunteers no longer respond to this station. It is primarily a storage facility for reserve apparatus.					
Structure						
Date of Original Construction	1995					
Seismic Protection	No					
Auxiliary Power	No					
General Condition	Fair					
Number of Apparatus Bays	Drive-through Bays	3	Back-in Bays	1		
ADA Compliant	No					
Total Square Footage	3,600					
Facilities Available						
Sleeping Quarters	0	Bedrooms	0	Beds	0	Dorm Beds
Maximum Staffing Capability	None					
Exercise/Workout Facilities	No					
Kitchen Facilities	Sink and microwave only					
Individual Lockers Assigned	No					
Bathroom/Shower Facilities	One					
Training/Meeting Rooms	Small meeting room					
Washer/Dryer	No					
Safety & Security						
Station Sprinklered	No					
Smoke Detection	No					
Decontamination/Bio. Disposal	No					
Security System	No					
Apparatus Exhaust System	Poorly installed					

In addition to its two fire stations, WFD has access to a training tower and burn room owned and maintained by WFSA. WFD has budgeted for a portion of a repair to the burn room.

Another small building houses the Department's hovercraft and is referred to as the "Hovercraft Barn."

Apparatus & Vehicles

Clearly, apparatus must be sufficiently reliable to transport firefighters and equipment rapidly and safely to an incident scene. Such vehicles must be properly equipped and function appropriately to ensure that the delivery of emergency services is not compromised.

As a part of this study, Triton requested that the fire department provide a complete inventory of its fleet (suppression apparatus, command and support vehicles, specialty units, etc.). For each vehicle listed, WFD was asked to rate its condition utilizing the criteria described in the next figure.

Figure 17: Criteria Used to Determine Apparatus & Vehicle Condition

Components	Points Assignment Criteria	
Age:	One point for every year of chronological age, based on the date the unit was originally placed into service.	
Miles/Hours:	One point for every 10,000 miles or 1,000 hours	
Service:	1, 3, or 5 points are assigned based on service-type received (e.g., a pumper would be given a 5 since it is classified as severe duty).	
Condition:	This category considers body condition, rust interior condition, accident history, anticipated repairs, etc. The better the condition, the lower the assignment of points.	
Reliability:	Points are assigned as 1, 3, or 5, depending on the frequency a vehicle is in for repair (e.g., a 5 would be assigned to a vehicle in the shop 2 or more times per month on average, while a 1 would be assigned if in the shop on average once every 3 months or less.	
Point Ranges	Condition Rating	Condition Description
Under 18 points	Condition I	Excellent
18–22 points	Condition II	Good
23–27 points	Condition III	Fair (consider replacement)
28 points or higher	Condition IV	Poor (immediate replacement)

WFD maintains one Type 1 engine and one Type 3 engine and a rescue with an auxiliary pump and the capacity to carry 300 gallons of water. The Department does not have any suppression apparatus in reserve. The following figure lists Whitefish Fire Department current frontline fleet inventory.

Figure 18: WFD Frontline Fleet Inventory (2021)

Unit	Type	Manufacturer	Year	Condition	Features
Engines & Tender					
Engine 231	Type 1	Rosenbauer	2014	Good	1500 gpm/750 gal.
Engine 232	Type 1	Spartan	1997	Fair	1500 gpm/1500 gal.
Tender 291	Tender	Rosenbauer	2015	Excellent	750 gpm/3000 gal.
Wildland					
Brush 281	Type 6	Chevy 3500	1998	Poor	80 gpm/225 gal.
Brush 282	Type 5	Ford F-450	2009	Good	150 gpm/400 gal.
Medics & Rescue					
Medic 221	Type 1	Braun NW	2018	Excellent	
Medic 222	Type 1	Braun NW	2013	Good	
Rescue 251	Medium	Spartan	1997	Poor	
Specialty Apparatus & Watercraft					
Utility 261	Utility	Dodge	2004	Poor	
UTV 277	UTV	Polaris	2010	Good	6x6
HC 271	Specialty	Neoteric	2006	Fair	Hovercraft
RB 272	Boat	Achilles	1990	Poor	Rescue boat
Fire Boat	Boat	Land. Craft	2003	Fair	
Command Vehicles					
Car 201	Command	Dodge Ram	2018	Excellent	Assigned to Chief
Car 202	Command	Ford Explorer	2002	Poor	Assigned to AC

As shown in the preceding figure, WFD's frontline engines are considered in either "fair" or "excellent" condition, with Engine 232 being 24 years old. The current brush trucks are relatively new although one is in "poor" condition at 23 years of age. A third brush unit is being remounted on a new 2022 Dodge chassis.

The two frontline medic units are in relatively good shape, and WFD has a 2022 medic unit with a Dodge chassis currently on order. The Department maintains a 1995 Type 1 Spartan engine (Engine 233) and a 2009 Horton ambulance (Medic 223) in reserve. Both units are considered to be in “poor” condition.

Apparatus Maintenance & Replacement Planning

No piece of mechanical equipment or vehicle can be expected to last indefinitely. As apparatus age, repairs tend to become more frequent and more complex. Parts may become more difficult to obtain, and downtime for repair and maintenance increases. Given that fire protection, EMS, and other emergencies prove critical to a community, downtime is one of the most frequently identified reasons for apparatus replacement.

Because of the expense of fire apparatus, most communities develop replacement plans. To enable such planning, fire departments often turn to the accepted practice of establishing a life cycle for apparatus that results in an anticipated replacement date for each vehicle. The reality is that it may be best to establish a life cycle for planning purposes, such as the development of replacement funding for various types of apparatus yet apply a different method (such as a maintenance and performance review) for determining the actual replacement date, thereby achieving greater cost-effectiveness when possible.

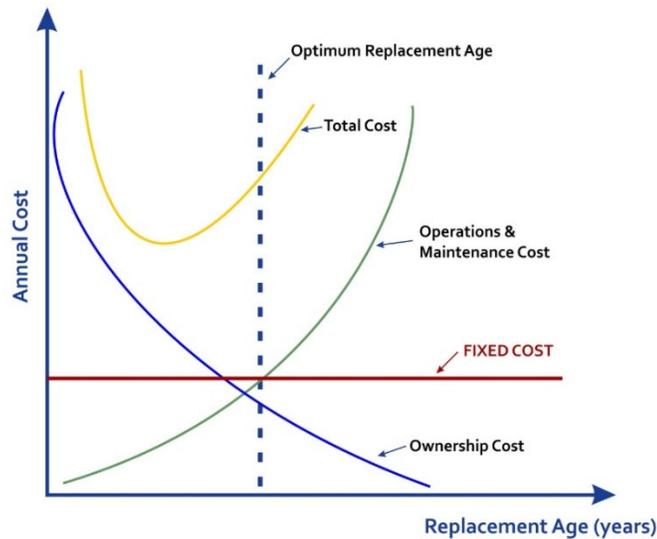
Economic Theory of Apparatus Replacement

A conceptual model utilized by some fire departments is the *Economic Theory of Vehicle Replacement*. The theory states that, as a vehicle ages, the costs of capital diminish, and its operating costs increase. The combination of these two costs produces a total cost curve. The model suggests that the optimal time to replace any apparatus is when the operating costs begin to exceed the capital costs. This optimal time may not be a fixed point, but rather a range of time.

Shortening the replacement cycle to this window allows an apparatus to be replaced at optimal savings to the fire department. If an agency does not routinely replace equipment in a timely manner, the overall reduction in replacement spending can quickly increase maintenance and repair expenditures. Fire officials, who assume that deferring replacement purchases is a good tactic for balancing the budget, need to understand two possible outcomes that may occur because of that decision:

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

The next figure is a graphic representation of the *Economic Theory of Vehicle Replacement*.

Figure 19: Economic Theory of Vehicle Replacement

Regardless of its net effect on current apparatus costs, the deferral of replacement purchases unquestionably increases future replacement spending needs and may impact operational capabilities and safe and efficient use of the apparatus.

Future Apparatus Serviceability

An important consideration for fire departments is the cost associated with the future replacement of major equipment. Apparatus service-lives can be readily predicted based on factors including vehicle type, call volume, age, and maintenance considerations.

NFPA 1901: Standard for Automotive Fire Apparatus recommends that fire apparatus 15 years of age or older be placed into reserve status, and that apparatus 25 years or older be replaced. This is a general guideline, and the standard recommends using the following objective criteria in evaluating fire apparatus lifespan:

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

It is important to note that age is not the only factor for evaluating serviceability and replacement. Vehicle mileage and pump hours on engines must also be considered. A two-year-old engine with 250,000 miles may need replacement sooner than a 10-year-old one with 2,500 miles. The following bullets show the unfunded replacement plan for WFD apparatus.

- ENGINES rotate 1st due, 2nd due, reserve
0-8, 9-16, 17-24 years old
- AMBULANCES rotate 1st due, 2nd due, reserve
0-4, 5-8, 9-12 years old
- COMMAND / UTILITY-PLOW rotate Chief, Asst, Utility
0-5, 6-10. 11-15 years old
- BRUSH TRUCKS Tupe5 & 6
Both 0-20 years old, replace one every 10-years
- TENDER
0-20 years old
- RESCUE
0-20 years old

Capital Medical & Other Equipment

As found in most communities, EMS calls represent the highest demand for emergency services for Whitefish Fire Department. For fire departments providing advanced life support, one of the highest capital medical expenses are the costs of its cardiac monitor/defibrillators. WFD does not utilize automated external defibrillators.

The next figure is an inventory of the five cardiac monitor/defibrillators currently maintained by Whitefish Fire Department as of 2021.

Figure 20: Combined Inventories of Cardiac Monitor/Defibrillators (2021)

Device Brand & Model	Year	Qty.
Physio-Control Lifepak® 15	2020	2
Physio-Control Lifepak® 12	2015	3

WFD plans to replace two of the Lifepak® 12s with Lifepak® 15s for a total of five devices. In addition to cardiac monitors, The Department owns three Stryker LUCAS® Chest Compression Systems. This device automatically delivers high-performance continuous chest compressions rather than relying on EMS personnel to perform CPR.

Other Equipment

Powered ambulance cots and their respective systems are another expense typical of fire-based EMS transport providers and represent a substantial capital expense. The Department utilizes three Stryker powered ambulance cots and the associated hardware, along with three Stair Chairs. Three McGrath digital laryngoscopes represent another capital medical expense.

WFD maintains an assortment of rescue and extrication tools and equipment, water rescue equipment, and a confined space communications system.

Maintenance and Records Management

Maintenance of apparatus and equipment is outsourced to a variety of companies to ensure readiness and compliance. For example, the Self-Contained Breathing Apparatus (SCBA) is tested by MES¹⁷ and hose testing is conducted by FireCatt.¹⁸ RES performs engine pump testing and testing for the quality of the breathing air used in the SCBA tanks is performed by LN Curtis & Sons and Trace Analytics LLC. RES keeps records of pump testing and vehicle maintenance, and gas monitoring equipment is calibrated and maintained by the firefighters while on shift.

There are limited SOGs for the maintenance and repair of small and large equipment. Equipment readiness is imperative to a successful outcome to fire or rescue events. In addition to the need to review of the SOGs and policies, WFD should consider the hiring of a qualified mechanic that is certified to work on fire apparatus.

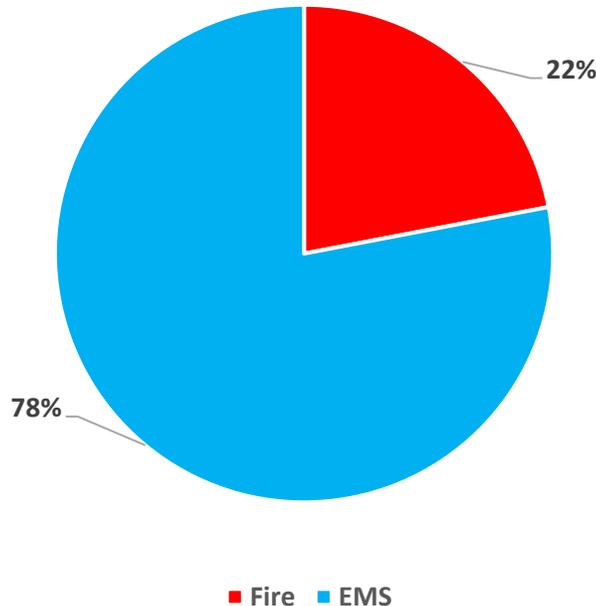
Replacement and acquisition of new fire apparatus are critical to ensuring that an adequate fire response can protect the citizens in Whitefish's response area. This includes a robust replacement program for fire engines and paramedic units, water rescue capable boats, and additional acquisition of a ladder truck to accommodate the midrise structures in Whitefish and surrounding areas. An upgrade and new fire apparatus may positively affect the City's ISO rating, benefitting the citizen taxpayer.

EMERGENCY MEDICAL TRANSPORT & SYSTEM OVERSIGHT

The Emergency Medical Services section provides a summary of the Department's services relating to pre-hospital medical care. AP Triton used focused interviews combined with information from the Department to develop a perspective of current and future EMS needs throughout the study area. The purpose of this section is to evaluate the current level of pre-hospital care and future needs based on projected call volume and available resources. AP Triton will identify challenges relating to the EMS program and make recommendations with projected outcomes.

For more than 40 years, the fire service has provided emergency medical services. Pre-hospital medical care is provided by 90% of the 31,000 fire departments in the United States. Residential and commercial structure fires have decreased by 52% in the United States since 1980. EMS service demand, on the other hand, has been steadily increasing across the country. The following graph is based on data from the report's Service Delivery section.

Figure 21: WFD Percentage of Fire & EMS Calls (2020)



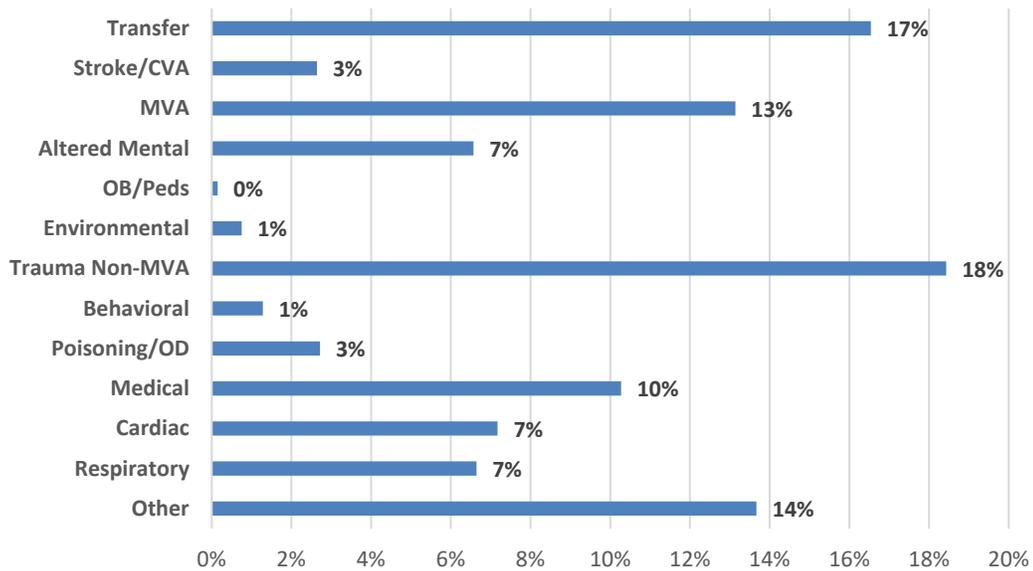
Data from the organization is consistent with national trends where the majority of emergency responses are EMS-related. The overall breakdown was 78% EMS compared to 22% fire for service demand.

EMS Service Demand

The Whitefish Fire Service Area does not contract ambulance service as the Fire Department provides those essential services. EMS services are provided to areas outside the City limits through a separate contract between the City of Whitefish and Flathead County EMS. This area is larger than the City of Whitefish, and includes the Whitefish Fire Service Area, Olney Fire District, and portions of the Flathead Fire Service Area.

A combined total for EMS service calls within the study area was approximately 1,324 incidents for 2020. The following figure shows a breakdown of the medical emergency incidents based on the available data.

Figure 22: WFD EMS Service Demand (2020)



The criticality shown in the above figure supports the necessity of ALS response. As previously discussed in the staffing section, there should be a consideration for adding a basic life support (BLS) component to the system. Many of the above 17% of transfers may be adequately cared for by a BLS crew, increasing the availability of paramedics for higher acuity incidents. Falls and non-motor vehicle traumatic events should also be evaluated for BLS transport to hospitals in the City of Kalispell. Transfer volume may dramatically change in 2022 if Logan Health starts providing their own interfacility transfers or contracting with other ambulance providers.

The EMS System

Prehospital emergency medical services in the City of Whitefish are provided by the Whitefish Fire Department, utilizing two front-line ambulances for transporting patients to the hospital as needed. Additionally, depending on daily staffing, WFD provides ALS from each engine. Flathead County dispatches WFD. WFD receives EMS mutual aid from surrounding areas, including Big Mountain Fire/EMS, Three Rivers Ambulance, Evergreen Fire/EMS, and Kalispell Fire/EMS. The following graphic shows the EMS mutual aid resources for the area.

Figure 23: Whitefish Fire Department EMS Mutual Aid Resources

Department Name	Station #	City	Level	Staff
Big Mountain	201	Whitefish	ALS	2 per shift
Three Rivers QRU		Columbia Falls	ALS	2 per shift
Evergreen Fire	81	Kalispell	ALS	Paid Part-Time
Kalispell Fire	62	Kalispell	ALS	7 per Shift
West Valley Fire & EMS	101	Kalispell	BLS	Volunteer

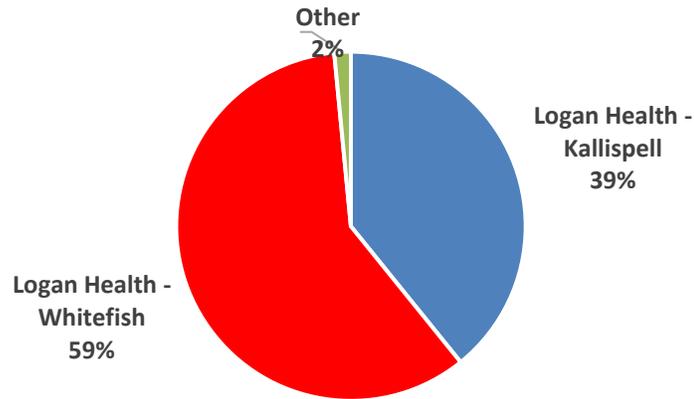
Air Medical Services

Emergency scene response and transport by helicopter is available from Alert Flights.

Hospitals & Tertiary Care Facilities

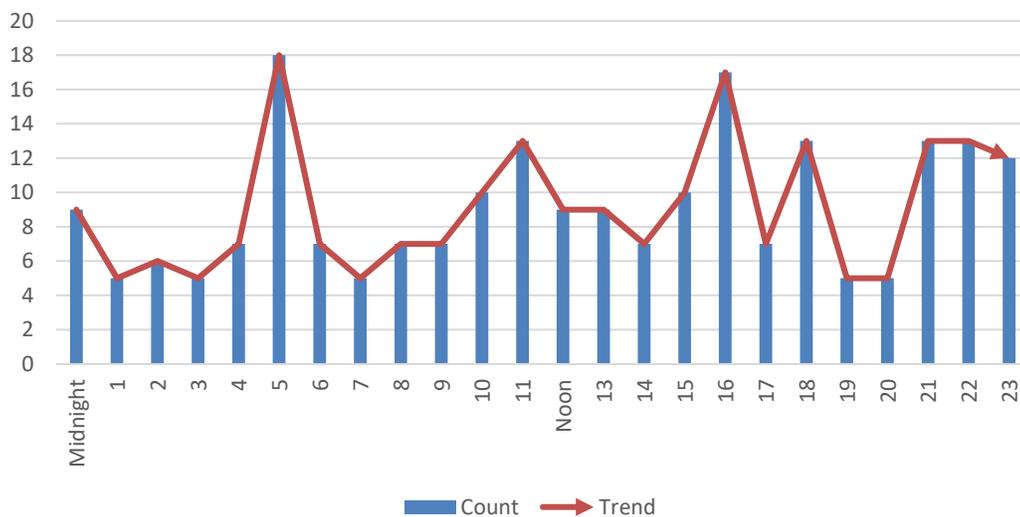
Most patients from the Whitefish area are transported to North Valley Hospital (Logan Health Whitefish) and Logan Health Kalispell. The Kalispell facility is a Level II Trauma, Cardiac, and Stroke Center. The following figure shows the percentage of transports to each facility.

Figure 24: WFD EMS Transport Destination Percentage (2020)



The 41% transport out of the City of Whitefish contributes to the incident concurrency. Another challenge identified during this analysis is the high number of interfacility transfers provided by WFD. Previous statistics show that interfacility transfers account for 17% of the total service demand. The high volume of transfers contributes to the limited effective response force (ERF). As previously discussed, it is unclear the overall impact of potential transfers being provided by Logan Health. The following figure shows the time of day for providing transfers from the two primary facilities.

Figure 25: Interfacility Transfers by Time of Day (2020)



The previous figure shows the potential benefits of a peak demand ambulance in the early morning and late afternoon.

Medical Community Demographics

Regional Medical Necessity Analysis

The following chart shows the leading causes of death in Montana compared to the national ranking. Flathead County is consistent compared to state statistics. This information helps identify and compare the medical service demand in WFD’s response area.

Figure 26: Leading Causes of Death in Montana (2017)

Condition	Deaths	Rate	State Rank	U.S. Rate
1. Heart Disease	2,164	155.0	29th	165.0
2. Cancer	2,145	152.6	30th (tie)	152.5
3. Chronic Lower Respiratory Disease	752	53.5	10th	40.9
4. Accidents	579	50.2	31st	49.4
5. Stroke	487	35.6	34th	37.6
6. Suicide	311	28.9	1st	14.0
7. Diabetes	292	21.6	23rd	21.5
8. Alzheimer’s Disease	285	20.9	44th	31.0
9. Chronic Liver Disease/Cirrhosis	195	16.1	3rd	10.9
10. Flu/Pneumonia	185	13.3	33rd (tie)	14.3

Montana is ranked as the highest state for suicide and one of the highest states for alcohol-related deaths. Training emphasis should be placed on EMS responses for these types of medical events.

Regional Medical Health Insurance Analysis

The demography of a community significantly impacts the demand for emergency medical services. Income, poverty, health status, population ages, and health insurance can drive service demand. Available transport revenue is also affected by demographics. Approximately 38% of the City of Whitefish has private health insurance. Additionally, 7% of the population has Medicaid, 51% is on Medicare, and 4% is private/self-pay.

Medical Control & Oversight

Emergency medical services rarely constitute definitive care. The continuum of care starting in the pre-hospital setting and ending in the appropriate medical facility is critical to positive patient outcomes.

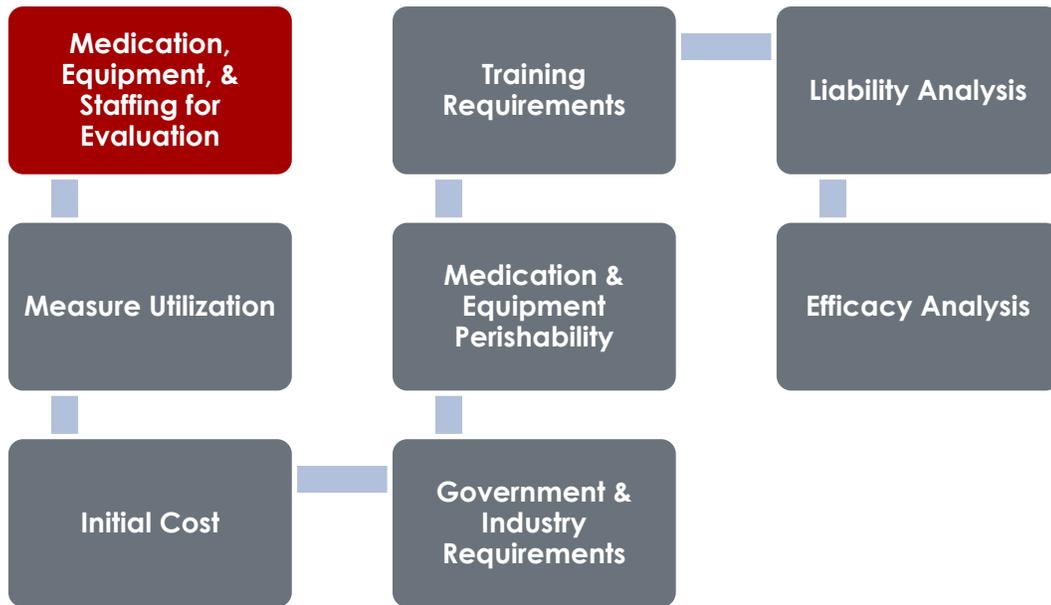
The paramedics operate on this protocol-based system with very little intervention from the Medical Program Director. The protocols will guide the paramedic treatment for a patient with an extreme medical emergency, such as a stroke or evolving myocardial infarction, and directs the paramedics to call the receiving hospital for additional direction not covered by those protocols. ¹⁹ Traumatic calls requiring the intervention of a Level I or Level II hospital may incorporate a helicopter or fixed-wing aircraft for transportation to those trauma level hospitals.

Oversight is primarily complaint/adverse outcome driven. An opportunity for improvement relates to medications administered and procedures performed by WFD. The provision of emergency medical services is a balance of fiscal responsibility and providing necessary levels of service. Whitefish Fire Department should perform a cost benefit analysis on all staffing, equipment, and supplies not mandated by the government or industry standards.

The process should include six steps. The first is to identify the overall cost. The second is a statistical review determining the utilization. Whitefish Fire Department covers a large geographical area resulting in prolonged response and/or transport times. Resources required in a rural setting are not always consistent with an urban environment. The next component is to review the perishability of a specific resource. Medications provided by a paramedic have specific expiration dates, which may result in significant costs when unused. Technical equipment such as cardiac monitors also has perishability due to the improvements in technology or reliability.

The training required for initial utilization and continued competency translates to the overall cost of a resource. The level of liability should be considered relating to a specific piece of equipment, medication administered, or services provided. Finally, a statistical analysis needs to be performed to determine the overall efficacy of the evaluated resource.

Figure 27: Staffing/Equipment/Medication Cost Benefit Analysis Process



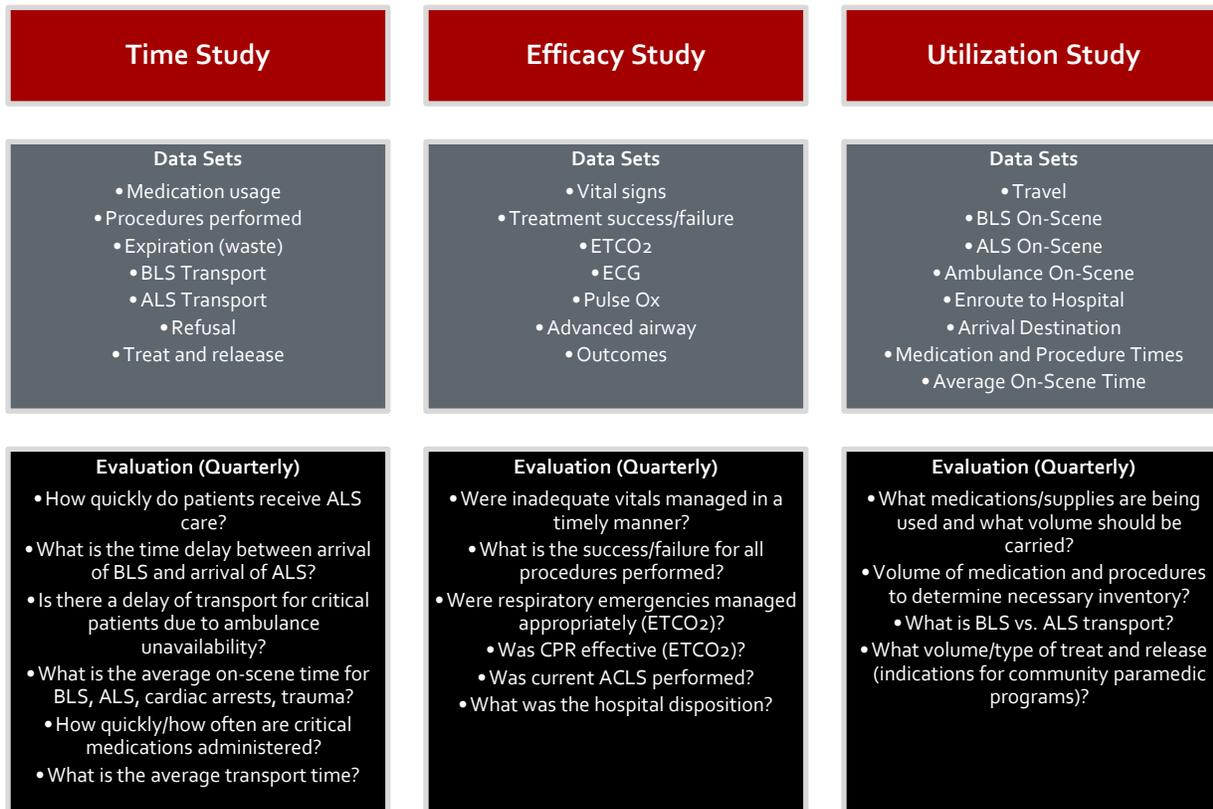
The above analysis must involve the medical director, WFD leadership, and hospital emergency department staff. The results will help identify the specific levels of service and the purchase and utilization of resources on specific response apparatus.

Quality Management

As previously discussed, WFD responds to a high percentage of EMS requests for service. Considering the potential for increased pre-hospital services, WFD has a limited quality management program. AP Triton recommends emphasis should be placed on gathering appropriate patient care documentation. A challenge currently facing many EMS agencies is the lack of objective data to support high-quality care. As previously discussed, there is a necessity for evidence-based data that can provide objective information regarding the level of care provided.

Additionally, the data may support program expansion and budgetary increases. This evaluation process indicated an opportunity exists for improvement regarding data collection and analysis. Currently, WFD is using ImageTrend® for patient care reporting. ImageTrend will export data to an Excel format if properly documented, and the data can be easily interrogated to provide various evaluations. The following figure shows a minimal data set and potential evaluation criteria that would be beneficial in making objective decisions.

Figure 28: Data Set & Quality Assurance Criteria



Logistical Support

A routine utilization study would help identify opportunities for improved inventory control. WFD does not currently utilize an electronic system for logistical support. The current system requires manual data entry. Due to the size of the organization, AP Triton recommends implementing a partially automated inventory control system. Various systems have proven to be cost-effective in the long run, especially in reducing expiration waste and lost supplies. An efficient inventory control system can become cost-effective, channeling funding to other aspects of the program, including an EMS coordinator position. The systems can provide current inventories that assist crews in familiarizing themselves with the location of equipment and supplies. These systems include bar code scanning, QR readers, and radio frequency ID (RFID).

SERVICE DELIVERY & PERFORMANCE

An indicator of success is the balance of resources to the utilization of services. The City of Whitefish must balance fiscal responsibility with performance expectations for the delivery of emergency services. The following section is a statistical analysis evaluating the fire and EMS service delivery provided by the Whitefish Fire Department. During the site visit on June 21, 2021, WFD validated the following statistical information and determined that the information was accurate.

Incident Data Issues

The service demand figures were acquired primarily from two or three sources: fire department internal records management systems (RMS), CAD records, and/or call volumes as reported on the AP Triton survey tables. The primary data was limited to three years and specific elements, including turn out time, were unavailable. Additionally, the current CAD system did not capture seconds, which decreased the overall accuracy of this analysis. AP Triton recommends that the WFD work with the Flathead County Dispatch to resolve the problems by capturing all necessary response data. The ability to gather accurate data is critical to the determination of service delivery performance. Based on the information available, sufficient data existed to evaluate the efficacy and efficiency of both aspects of emergency service delivery.

Service Demand

The following figures show the workload over the past three years. Like most fire departments, emergency medical response constitutes most of the call volume. From a combined perspective, fire responses have gone up about 2% from 2017 to 2019. There was a slight decrease in call volume in 2020, consistent with the COVID-19 pandemic. For this valuation, 2020 is considered an outlier. It is unclear how the COVID-19 pandemic will affect overall service demand, but early data indicates an increase in tourism for 2021, translating to a higher demand for emergency services.

The National Fire Incident Reporting System (NFIRS) breaks responses into nine categories. The following categories will be evaluated.

Figure 29: NFIRS Codes & Descriptions

NFIRS Code	Description
100	Fire
300	Emergency Medical Services
400	Hazardous Conditions
500	Service Calls
600	Good Intent
700	False Alarm
Other	Overpressure/Weather/Special Incident

The following graphic shows the breakdown of incident types for 2017–2020.

Figure 30: Incident Breakdown (2017-2020)

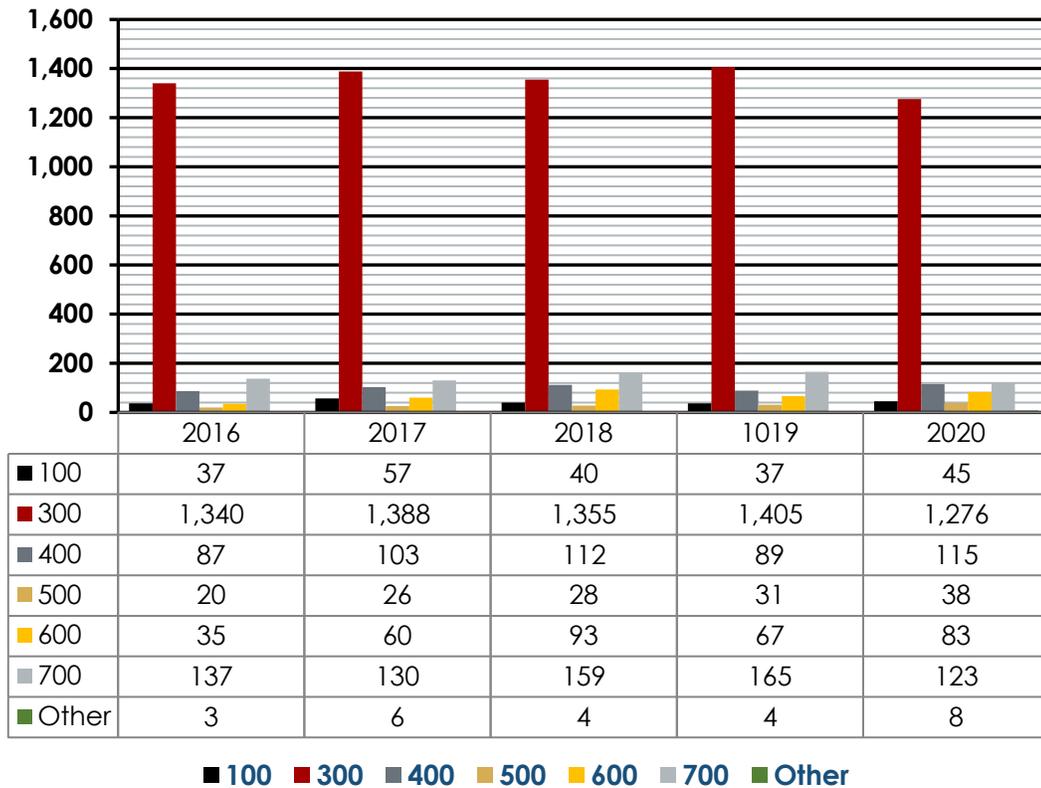
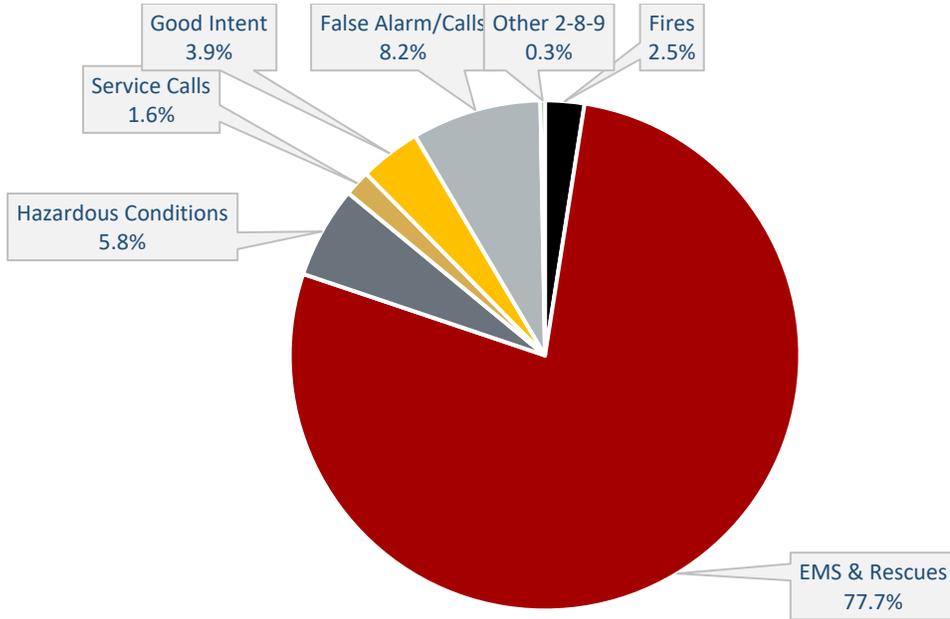


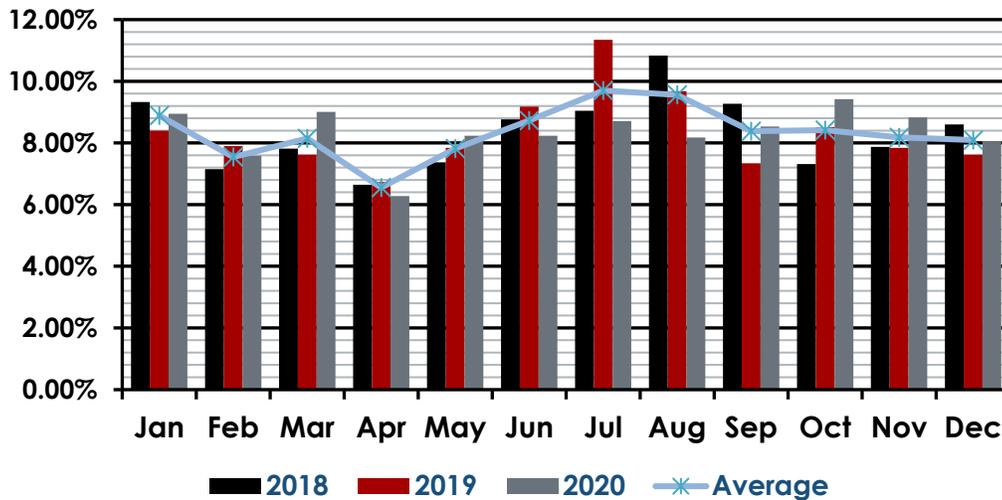
Figure 31: Incident Breakdown by Percentage (2018-2020)



Temporal Variation

A temporal analysis of incidents reveals when the most significant service demand occurs. The following figures show how activity and demand changes based on various time measurements. The analysis was calculated with 2018- 2020 data provided by WFD. The results are based on the total number of incidents.

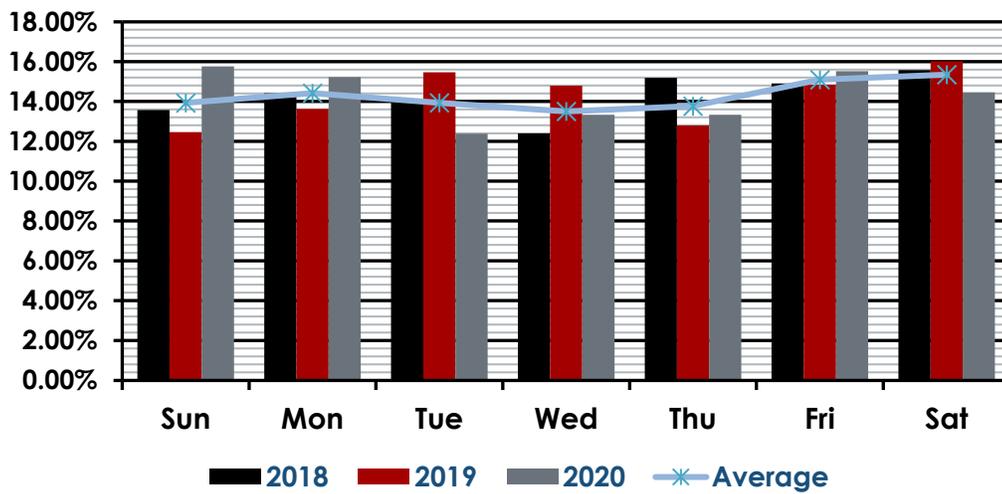
Figure 32: Service Demand by Month (2018-2020)



Except for July and August, call volume remains consistent throughout the year. The lowest call volume is in April, and peak demands of 9.7% are seen in July. There may be an opportunity for seasonal up-staffing during the summer, particularly for interfacility transfers.

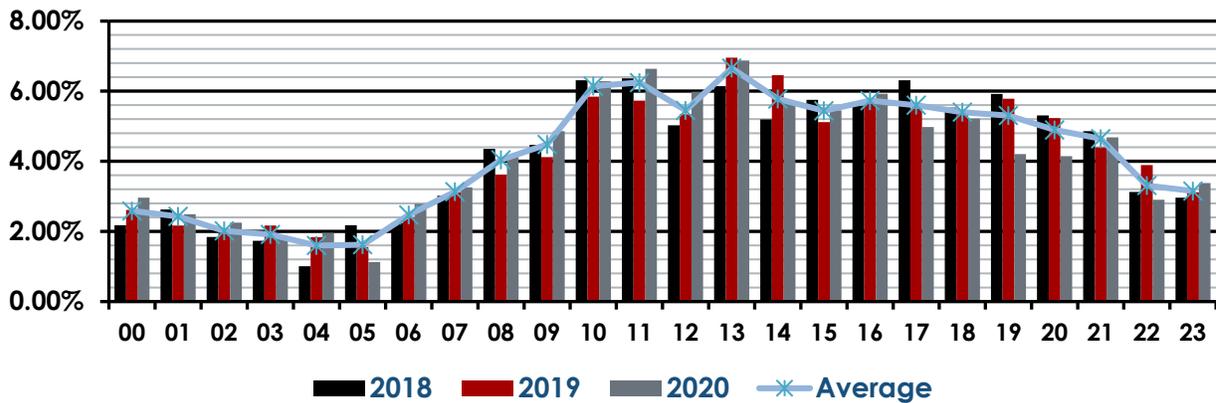
The following figure shows the call volume throughout the week. The Department has a very consistent service demand with a slight decrease in the middle of the week. This pattern limits the ability to schedule training and other required duties anytime during the week.

Figure 33: Service Demand by Day of the Week (2018-2020)



The following graphic illustrates the service demand by hour of the day. The pattern shows a specific increase in service demand during the three years in the middle of the day with peak periods around 1:00 pm.

Figure 34: Service Demand by Hour of the Day (2018-2020)



Focusing on future service demand, particularly EMS, the following chart captures the busiest consecutive periods. The information can be used to identify periods for increased staffing or placing additional ambulances in service. There appears to be an opportunity for peak demand ambulances during the summer months between 10:00 am and 8:00 pm.

Figure 35: Busiest Consecutive Service Delivery Periods

Periods	8 Hour	10 Hour	12 Hour
Hours	10:00–18:00	10:00–20:00	10:00–22:00
Percent of Total:	47%	58%	67%

Spatial Analysis

In addition to the temporal analysis, AP Triton examined the geographic distribution of service demand, evaluation of resource distribution, measurement of Insurance Services Office (ISO) response capabilities, and population distribution throughout the jurisdiction.

Geographic Service Demand

The density of incidents is depicted in the following figure. The various colors correspond to the differing number of incidents per square mile. The relationship between station locations and the higher intensity of service demand is visible on this map. Both fire and EMS incidents are included in the “hot spot” analysis.

Figure 36: Service Demand Incident Density (2018–2020)

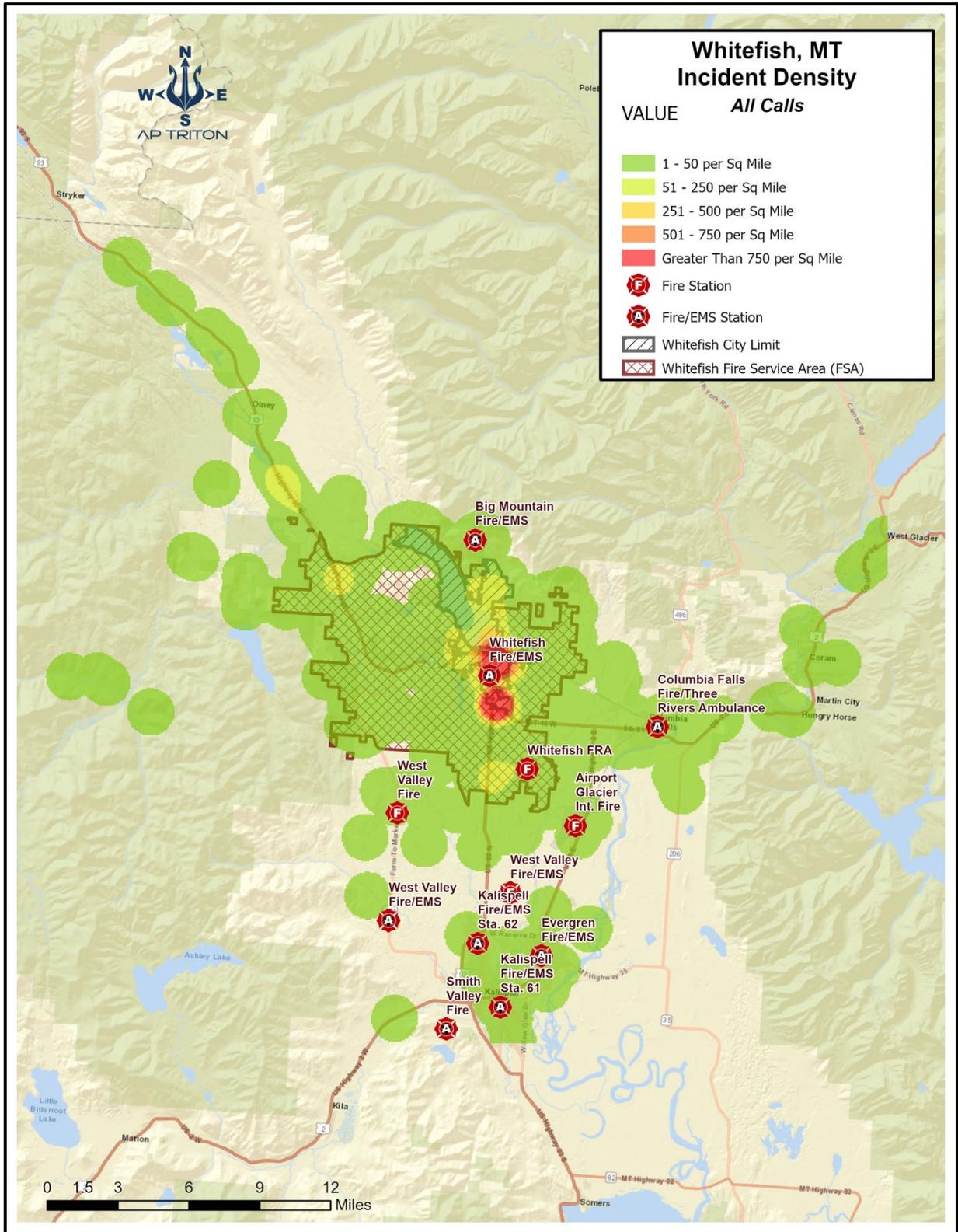
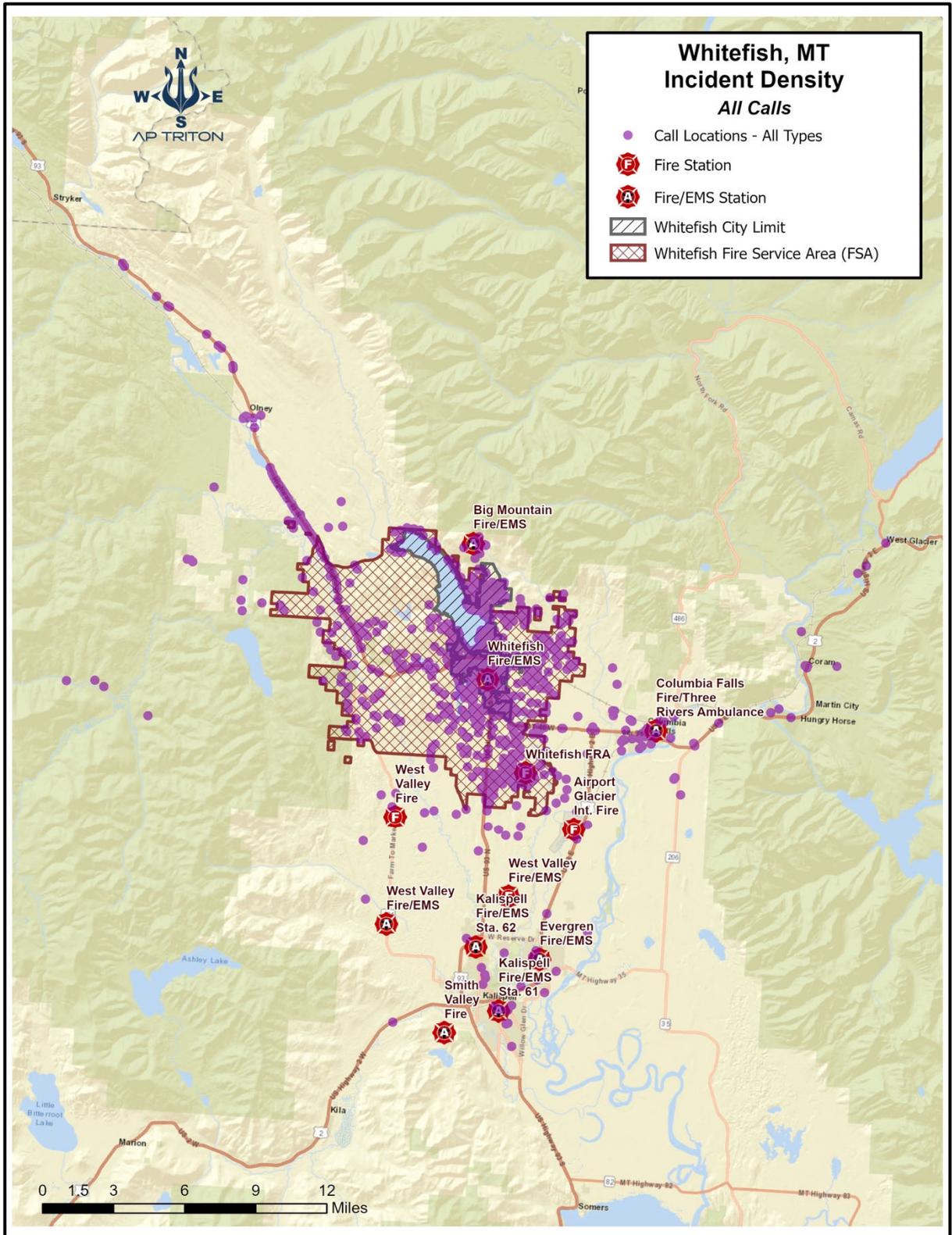


Figure 37: Service Demand Incident Location (2018–2020)



Service demand is distributed widely throughout the response area, with a higher incident density located in the City of Whitefish and the east side of the WFSA. As can be expected, areas of high incident density are typically linked to areas of higher population counts. The following figure breaks down the total call density and shows the specific distribution of EMS incidents.

Figure 38: EMS Incident Density (2018–2020)

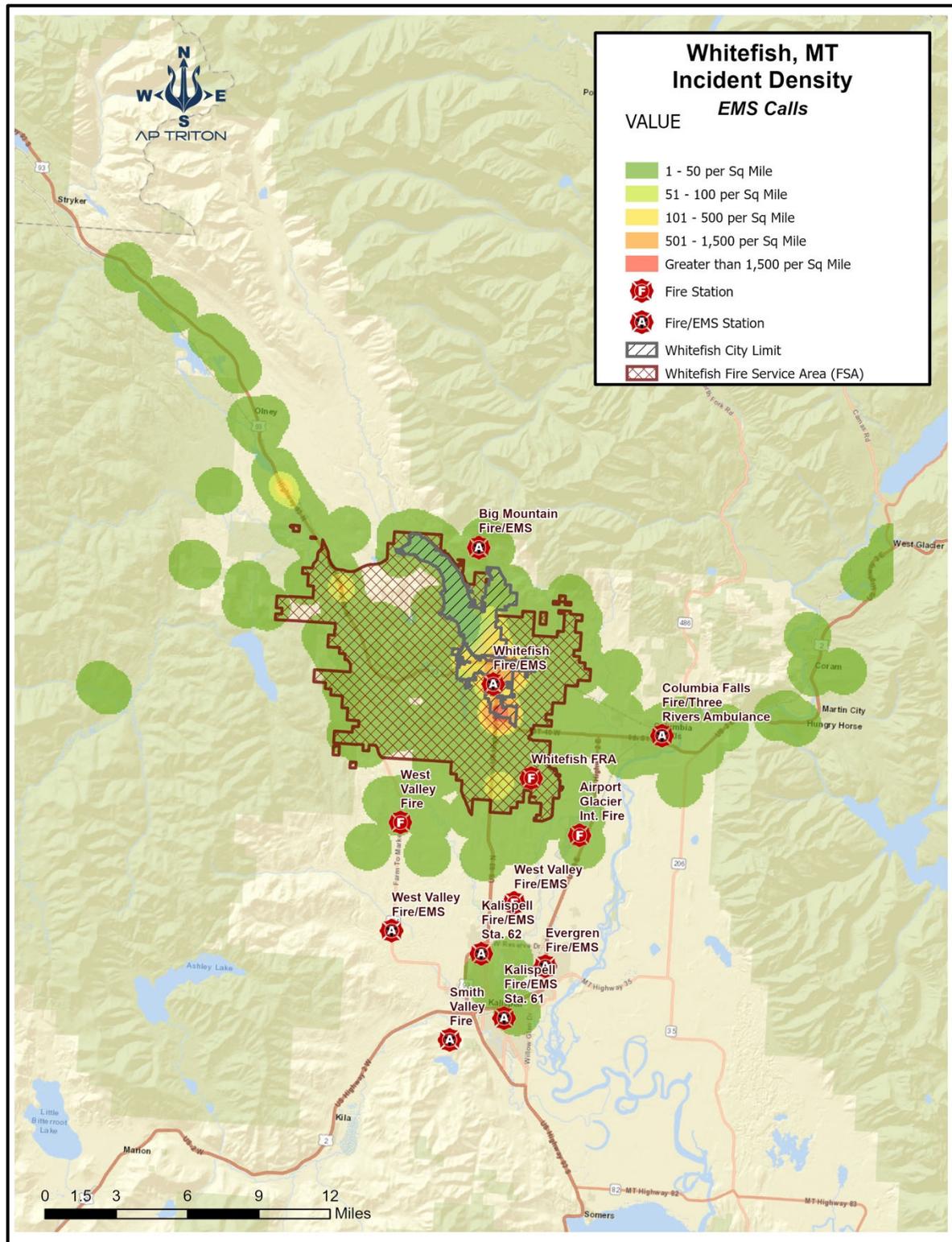
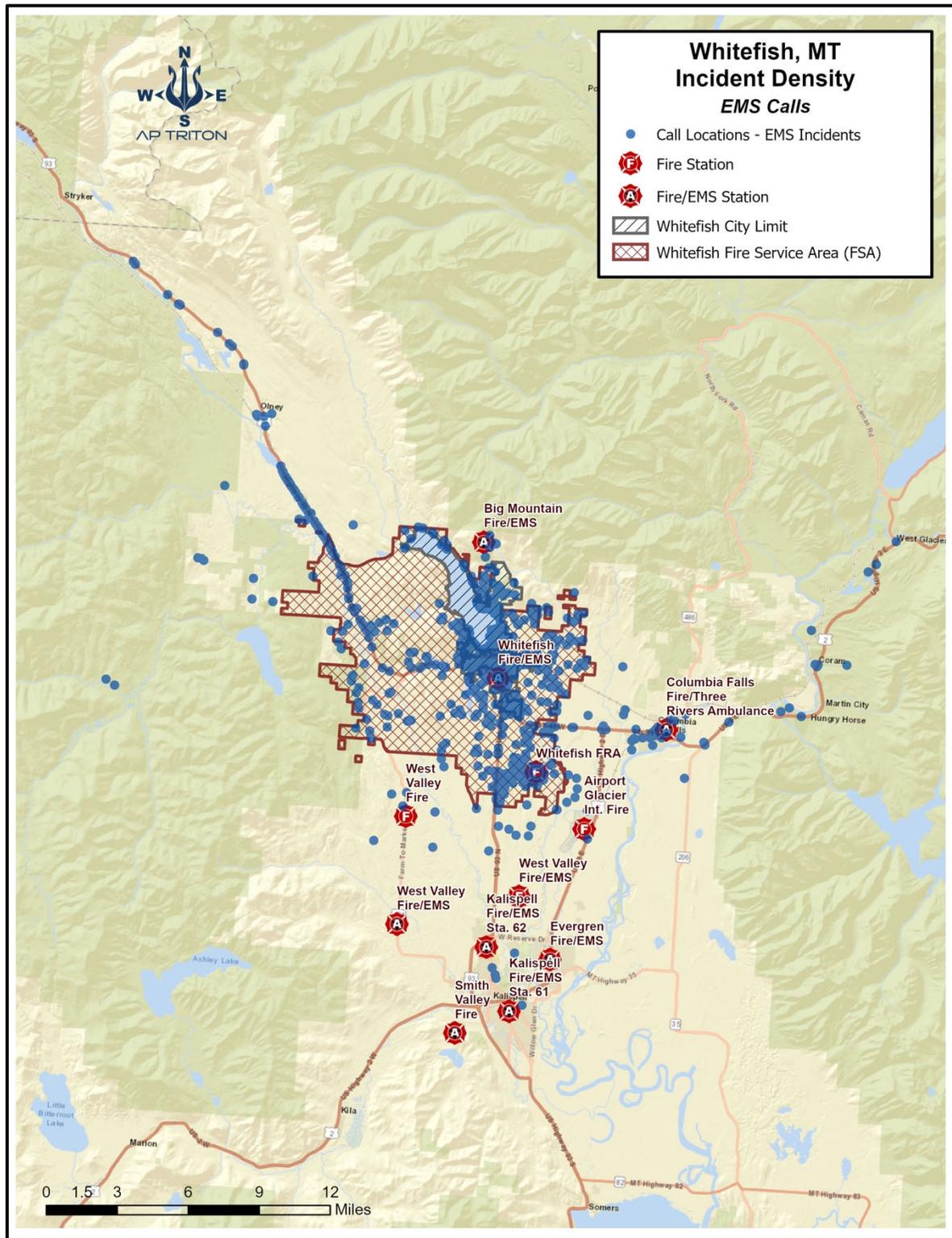


Figure 39: EMS Incident Location (2018–2020)



The incidents shown in the above graphic equate to 910 transports in 2020. The following figure showed the EMS incident disposition in 2020.

Figure 40: WFD EMS Incident Disposition (2020)

Incident Type	EMS Incidents	Percentage
Assist, Agency	11	0.8%
Assist, Public	62	4.7%
Canceled (Before Arrival at Scene)	58	4.4%
Canceled on Scene (No Patient Contact)	64	4.9%
Pt Dead at Scene-No Resuscitation Attempt (w/o Trans)	18	1.4%
Pt Dead at Scene-Resuscitation Attempted (w/o Trans)	1	0.1%
Pt Eval, No Treatment/Transport Required	90	6.8%
Pt Refused Evaluation/Care (w/o Trans)	52	4.0%
Pt Treated, Released (AMA)	20	1.5%
Pt Treated, Released (per protocol)	17	1.3%
Pt Treated, Transferred Care to Another EMS Unit	7	0.5%
Pt Treated, Transported	910	69.2%
Pt Treated, Transported by Law Enforcement	1	0.1%
Pt Treated, Transported by Private Vehicle	1	0.1%
Standby-Support Provided	3	0.2%

The above figure shows 14.3% of EMS incidents required evaluation and/or on-scene treatment without transport. The high percentage supports reconsideration of billing for first responder services. The following image shows the annual count of EMS incidents in each section of the response area.

Figure 41: EMS Incidents by Service Area (2020)

Location	2020
Whitefish City Limits	77%
Whitefish Fire Response Area	23%

The previous data support the current location of EMS units within the City limits. The following graphic shows fire incident density.

Figure 42: Fire Incident Density (2018–2020)

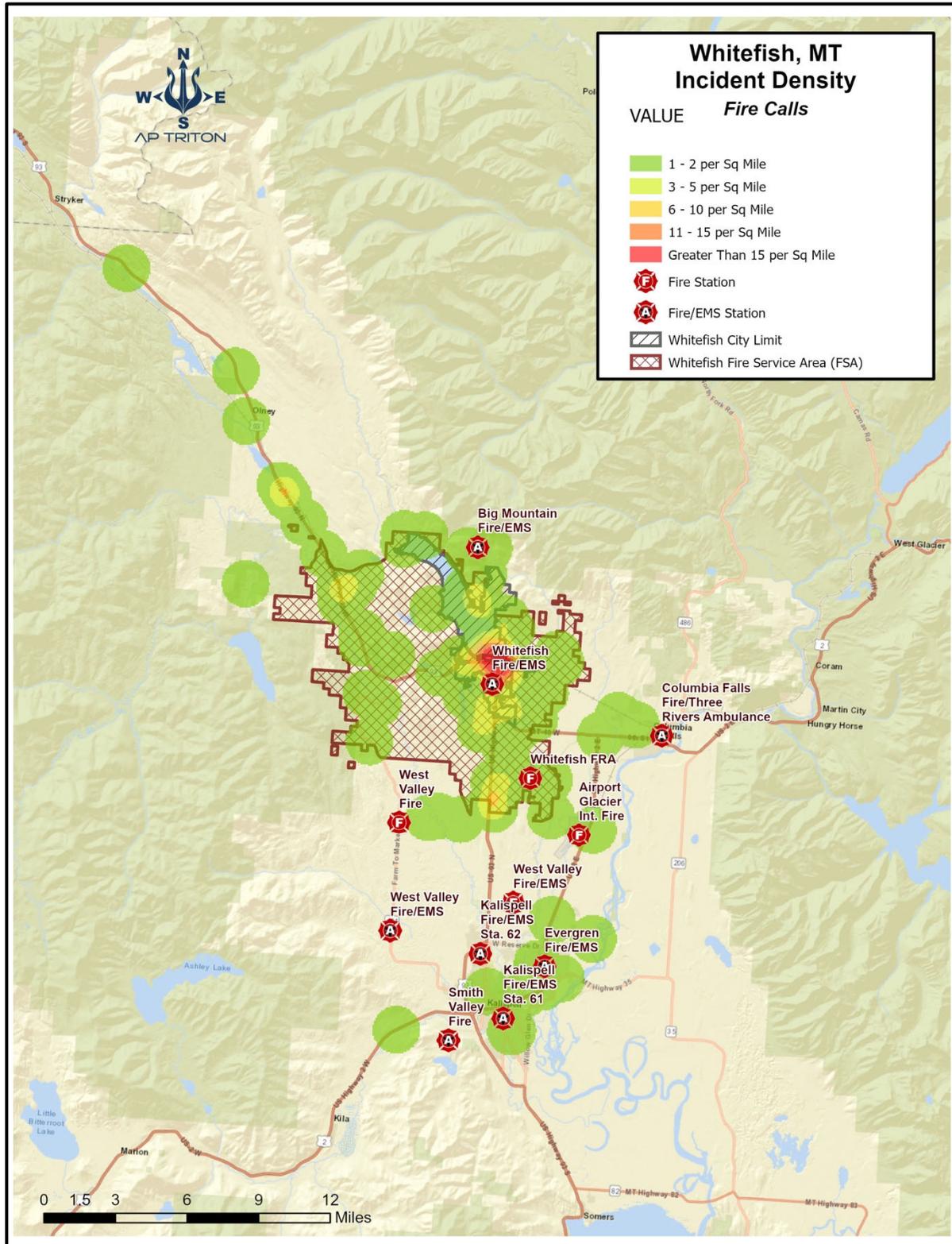
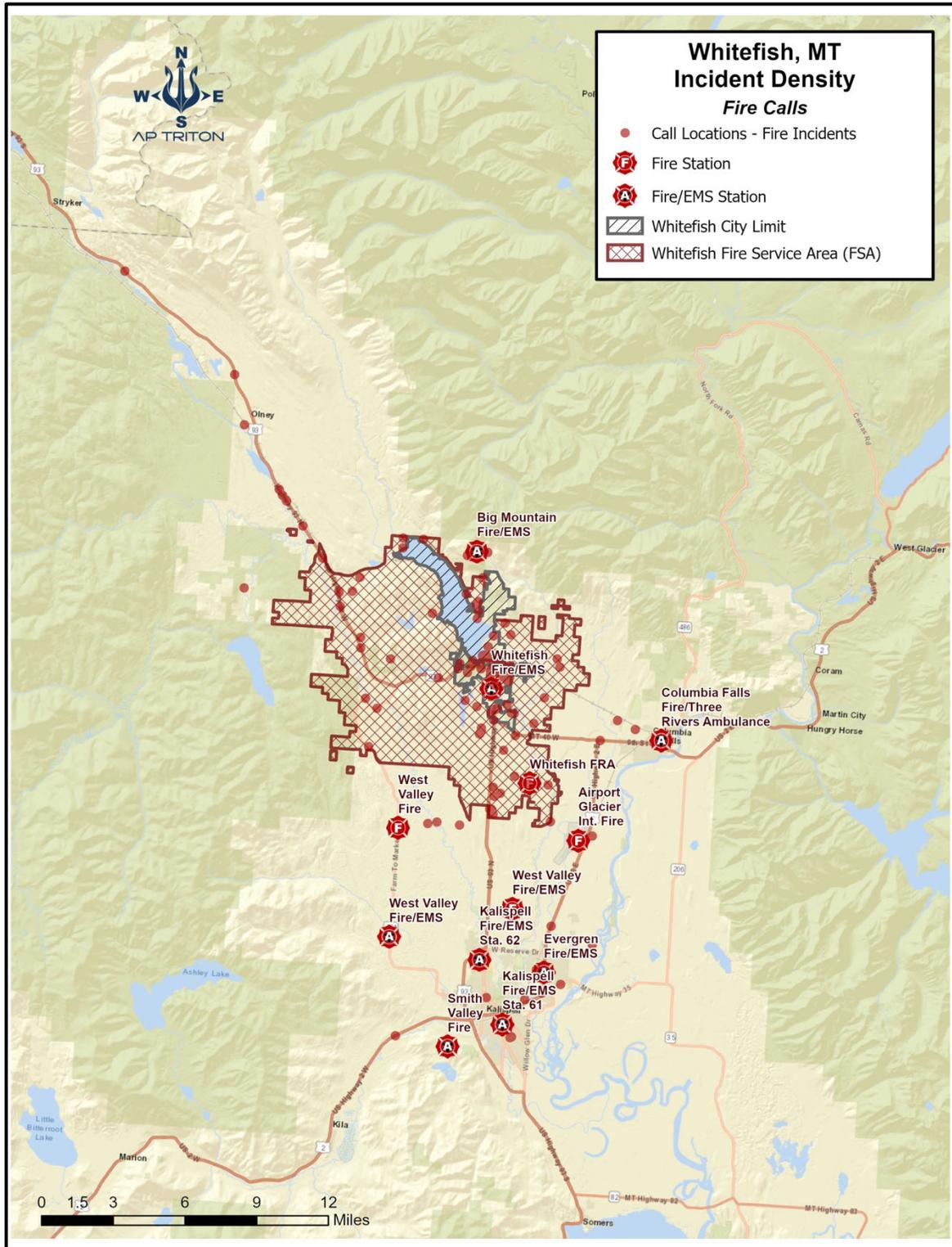


Figure 43: Fire Incident Location (2018–2020)



The next figure shows the annual count of fire incidents in each section of the response area.

Figure 44: Fire Incidents by Service Area (2020)

Location	2020
Whitefish City Limits	39%
Whitefish Fire Response Area	61%

Distribution Analysis

There are two methods of analyzing the distribution of fire department resources within a jurisdiction. The first method is by the Insurance Services Office (ISO) criteria. This is based on the requirements to meet the Fire Suppression Rating Schedule (FSRS). NFPA uses the second method in their standards and the Center for Public Safety Excellence (CPSE) in their accreditation Fire and Emergency Services Self-Assessment Manual (FESSAM) and the Community Risk Assessment: Standards of Cover (CRA-SOC). It defines the response time performance that is desired and then measures it against that standard. GIS analysis can determine the effectiveness of station locations for the travel time component of the response time standard.

ISO Criteria

The ISO is a national insurance industry organization that evaluates fire protection for communities across the country. ISO assesses all areas of fire protection as broken down into four major categories, including emergency communications, fire department, water supply, and community risk reduction. Following an on-site evaluation, an ISO rating, or specifically, a Public Protection Classification (PPC®) number, is assigned to the community ranging from 1 (best protection) to 10 (no protection). The PPC® score is developed using the Fire Suppression Rating Schedule (FSRS), which outlines sub-categories of each of the four major categories, detailing the specific requirements for each evaluation area. WFD currently has an ISO rating of 5/10, demonstrating an excellent capacity for fire suppression within the city limits of Whitefish.

A community's ISO rating is an essential factor when considering fire station and apparatus distribution and deployment due to its effect on the cost of fire insurance for the residents and business owners. The ability of a fire department to arrive on the scene of an incident equipped with personnel, equipment, and water sufficient to mitigate a fire effectively is a critical factor for an ISO evaluation. For a structure to be eligible to receive a PPC rating better than 10, the structure must be within five road miles from a fire station. Typically, areas outside of five road miles are a class 10 unless the fire department can demonstrate sufficient fire flow is available. Then some credit is given for the water supply. In addition, to receive maximum credit for the station and apparatus distribution, ISO evaluates the percentage of the community (contiguously built upon area) that is within specific distances of both engine/pumper companies (1.5 miles) and aerial/ladder apparatus (2.5 miles).

In addition, ISO evaluates a community's availability of sufficient water supply, critical for extinguishing fires. One of the areas assessed regarding the water supply is the geographical locations and distribution of fire hydrants. Based on ISO scoring, structures that sit outside a 1,000-foot radius of a fire hydrant are subject to separate ratings. That rating is dependent on the fire department demonstrating alternate water sources and the ability to use them. Suppose a fire department can demonstrate that sufficient fire flow can be maintained at a minimum rate of 250 gallons per minute for 2 hours at a given location. This can be accomplished in several ways, such as a dry hydrant, a storage tank, tanker/tender shuttle operations, capability for long large diameter hose lays, or drafting operations. Regardless of the system or systems utilized, sufficient fire flow must be demonstrated. WFD has demonstrated the ability to meet water supply within five road miles of their stations. Vast areas north and west of the City need 30,000-gallon cisterns at any new station built in non-hydrated areas.

The following two figures illustrate the ISO 1.5-mile travel capability, ISO engine capability, and ISO aerial capabilities.

Figure 45: ISO 1.5-mile Engine Travel Capabilities

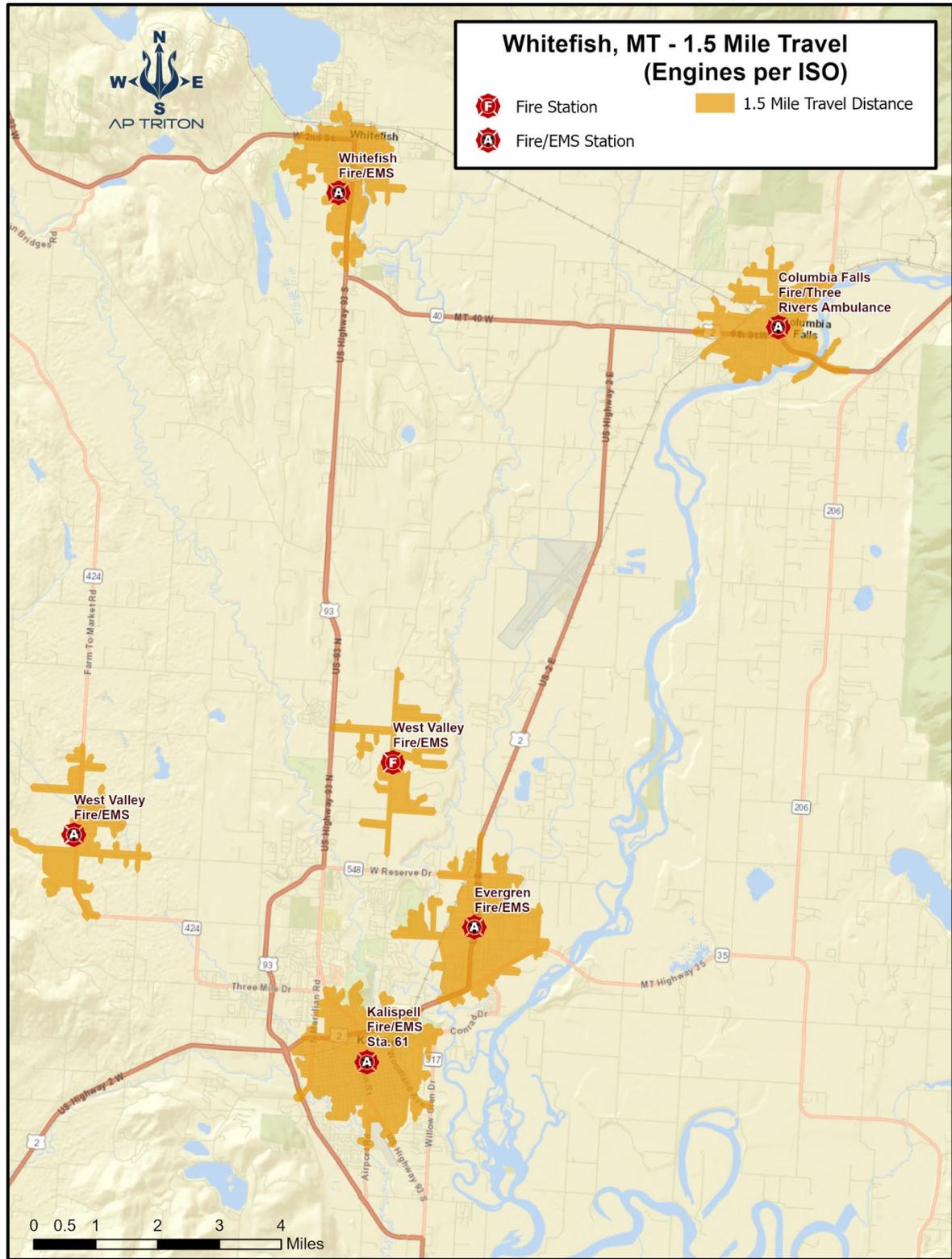
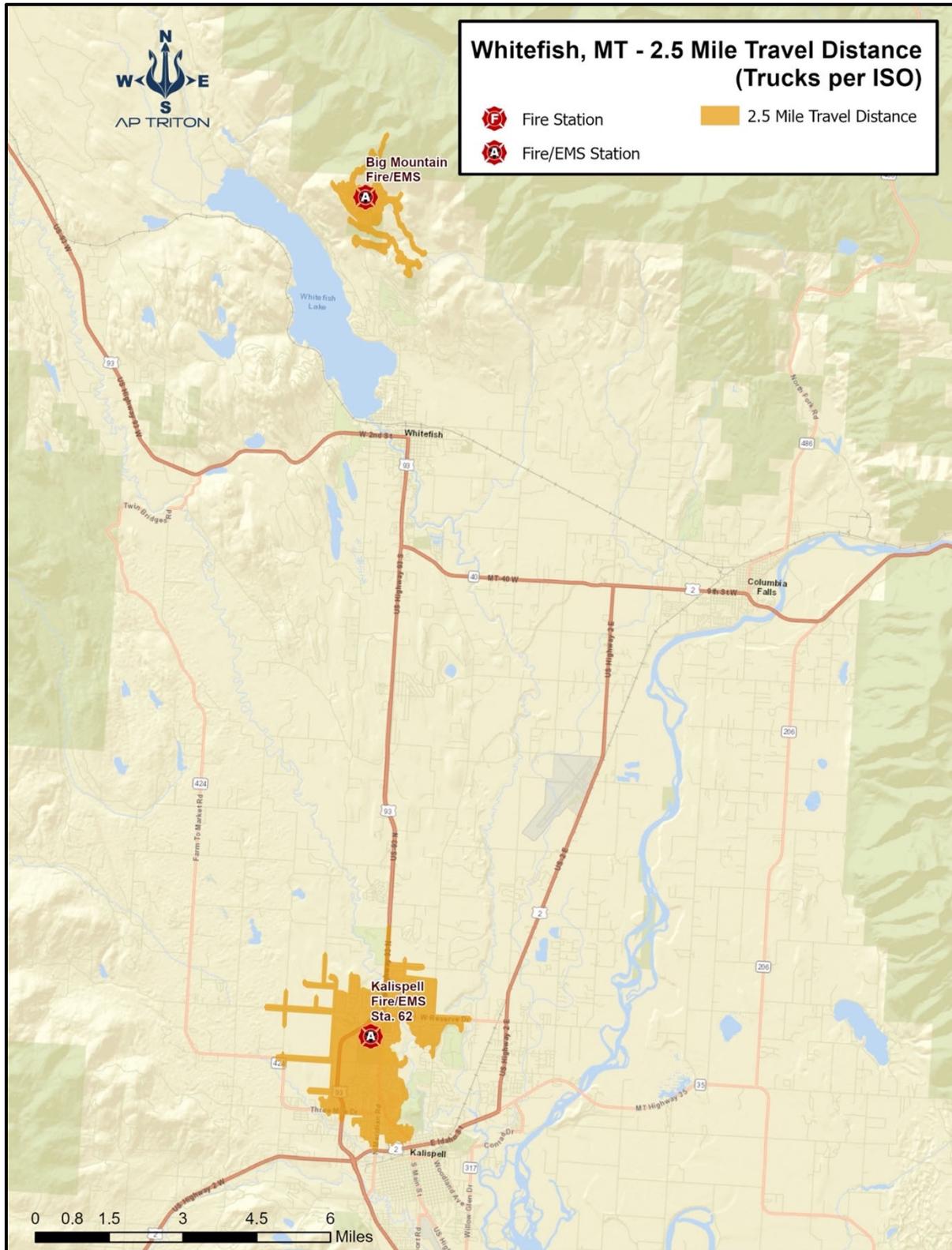


Figure 46: ISO 2.5-mile Truck Travel Capabilities



The previous maps show the limited coverage areas within 1.5 to 8 miles. The Whitefish Fire Department response is consistent with the rural and frontier geography. An opportunity for improvement relates to the response of an aerial apparatus. The addition of a 75'-100' truck would produce several improvements in service delivery. The first is a predicted decrease in ISO ratings within 2.5 miles of the WFD station. The second relates to an increase in commercial building construction. Limited land availability will require the construction of buildings over two stories limiting access with ground ladders. The third benefit relates to the capacity of an aerial apparatus to deliver an elevated water master stream. Most elevated master streams can flow up to 1,000 gallons per minute. In the event of a large structure fire, the master stream would be critical in preventing the spread of the fire, creating an interface fire into surrounding wildland areas. Depending on construction growth, AP Triton recommends the long-term goal of acquiring an aerial apparatus.

Travel Time Analysis

The second standard for resource distribution is using travel time criteria. The following figure presents a travel time model from the current station locations over the existing road network. Travel time is calculated using the posted speed limit and adjusted for negotiating turns, intersections, and one-way streets.

NFPA Standards 1710 and 1720 recommend the travel times for different response zones based on population density. NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations and Special Operations to the Public by Career Fire Departments assumes an entirely urban environment and specifies the travel time of 240 seconds or 4 minutes.

Under NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical, and Special Operations to the Public by Volunteer Fire Departments, there are different response time criteria for the diverse population densities. This standard defines the response time of which travel time is a part.

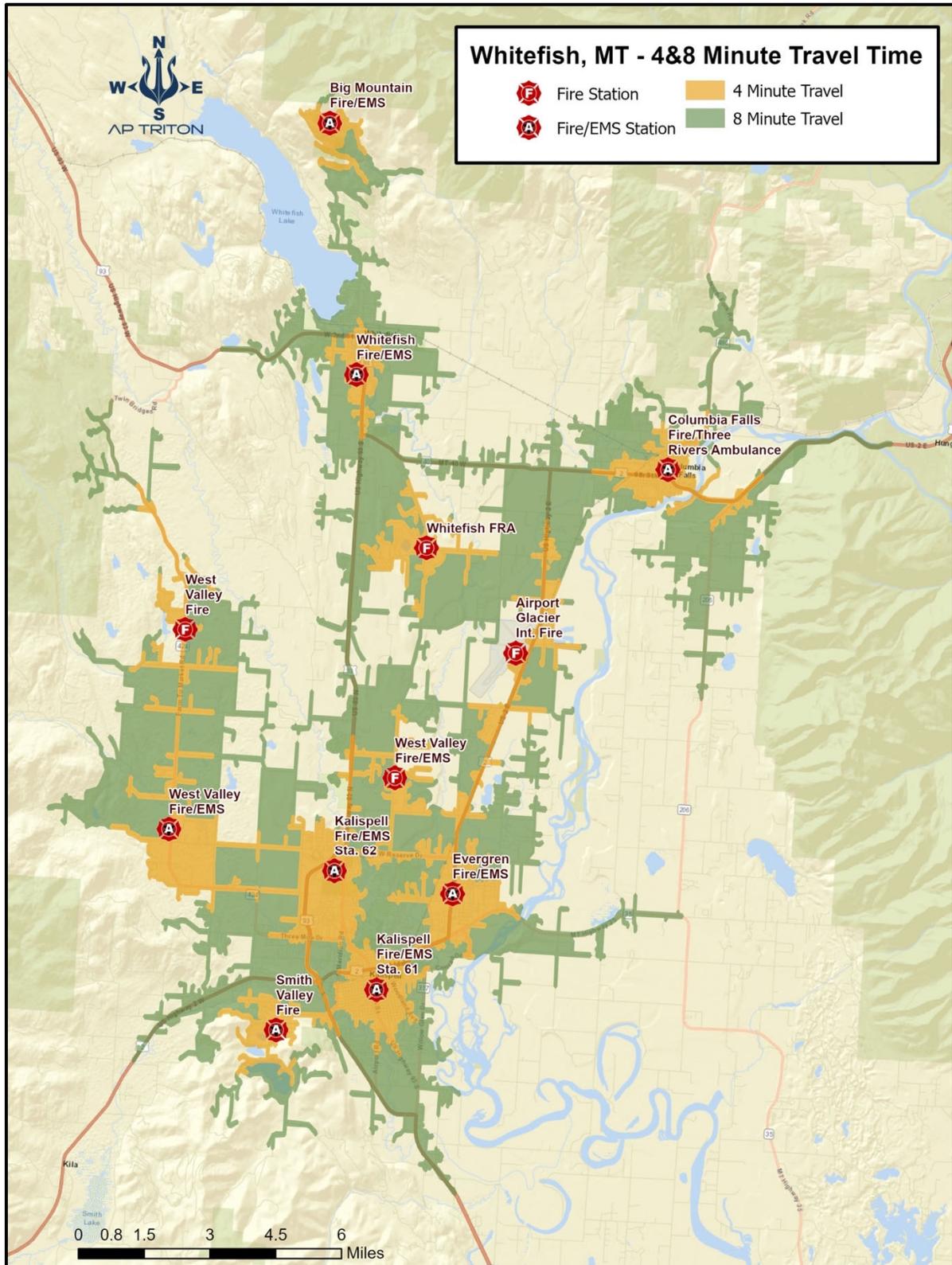
Most departments, even fully career departments that serve rural areas, find it unreasonable to adopt the NFPA 1710 travel time throughout their jurisdiction. Instead, many will adopt the 4-minute travel time in response zones with urban and suburban population densities and the NFPA 1720 response time for rural areas.

Figure 47: NFPA 1720 Response Time Recommendations

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

Both standards recommend call processing time as one minute and turn out time for staffed stations as one minute for EMS calls and 80 seconds for fire or special operations calls. Call processing time is not reflected in the NFPA 1720 response time so deducting only the turn out time (1:20) from a 14-minute response time is 12 minutes and 40 seconds (12:40). AP Triton has used a 12-minute travel time in the GIS analysis of the rural areas and a four-minute travel time to urban areas. An eight-minute response is also shown with the four-minute travel time for comparison.

Figure 48: Travel Time Analysis 4 & 8 minutes



The previous map shows most of the city limits of Whitefish are covered by a 4-minute or 8-minute travel time. This confirms the appropriate location of the WFD station but may indicate that more stations may be necessary to provide 4- minute or 8-minute travel time in other response areas. The map also shows the potential coverage from the WFSA station south of the City. Currently, the station is not staffed and does not provide additional response coverage.

Effective Response Force

Accepted firefighting procedures call for the arrival of the entire initial assignment (sufficient apparatus and personnel to effectively deal with an emergency based on its level of risk) within a reasonable amount of time.²⁰ This is to ensure that enough people and equipment arrive soon enough to safely control a fire or mitigate any emergency before substantial damage or injury.

NFPA 1710 allows 8 minutes to assemble the needed firefighting assignment on the scene to affect effective firefighting. The necessary staffing on the scene is recommended to be 15 firefighters for a moderate hazard fire in the urban environment. Moderate hazard is described as a 2,000 square foot, two-story single-family residential dwelling without a basement and no exposures. Larger structures or commercial occupancy may well require additional personnel. NFPA 1710 standards may be considered within the City limits, but NFPA 1720 standards should be considered outside the area.

The following figure shows the mutual aid resources contributing to an effective response force.

Figure 50: Whitefish Fire Mutual Aid Resources

Department	Station #	City	Engine& Aerials	Staff	MA
Alert Air Medical		Kalispell			MA
Big Mountain	201	Whitefish	1 Structure 1 Truck 1 Brush 1 Ambulance	2 per shift	MA
Columbia Falls	41 & 42	Columbia Falls	2 Engines 1 Brush 1 Quint Truck	26 volunteers	MA
Three Rivers QRU		Columbia Falls	2 Ambulances	2 per shift	MA
Evergreen Fire	81	Kalispell	2 Engines 1 Quint Truck 2 Brush 1 Tender	Part-time	MA
Kalispell Fire	61 & 62	Kalispell	2 Engines 2 Ambulances 1 Ladder Truck	7 per Shift	MA
Olney Fire	211	Olney	1 Engine 1 Brush	Volunteer	MA
West Valley Fire & EMS	101 & 102	Kalispell	2 Engines 1 Interface Engine 1 Truck 3 Ambulances 3 Wildland Engines 1 Light Rescue	Volunteer	MA

There are resources available from other areas for events in the rural or remote locations from USDA Forest Services, Montana Department of Natural Resources and Conservation (DNRC), ²¹ Burlington Northern Santa Fe (BNSF), and the National Guard for significant events and natural disasters.

Reliability Study

This section provides an overview of unit utilization. Three types of analyses are shown in this section. The first is unit utilization based on call volume, the second analyzes concurrent requests for services, and the third examines unit hour utilization.

Unit Workload Analysis

Units that are very busy or are already out when a second call occurs can result in increased response times from remote units. The following graphic shows the number of calls for each fire apparatus in 2018–2020.

Figure 51: Fire Apparatus Utilization WFD Total Calls (2018–2020)

Unit	2018	2019	2020	Overall
E231	821	843	816	2,480
E232	3	2	4	9
M221	1,468	1,473	1,318	4,259
M222	100	86	86	272

Based on the information provided in the capital equipment section, Medic 221 is in excellent condition, and Medic 222 is in good condition. Currently, Medic 221 is utilized on 94% of the calls. From a fleet management perspective, AP triton recommends a balanced utilization of the two ambulances to prolong the use of capital assets.

Concurrent Incidents

Another way to examine resource reliability is to examine the number of times multiple incidents happen within the same time frame. The following figures show the number of times that one or more units are assigned to incidents. The data supports that in 2020 there were many occurrences where more than one incident was occurring concurrently.

This trend can impact the Department's ERF on structure fires. The following figure shows the number and percentage of concurrent calls for WFD.

Figure 52: Response Unit Concurrency Percentages (2018–2020)

Incidents in Progress	2018	2019	2020
Single Incident	83.53%	84.59%	82.58%
Two Incidents	15.35%	13.85%	14.63%
Three Incidents	1.06%	1.39%	1.60%
Four Incidents or More	0.06%	0.17%	1.18%

Based on the above information, WFD has a 17% concurrency of two or more incidents. The Department currently staffs 4 firefighters per shift, cross staffing an engine and an ambulance. When an EMS incident occurs, which accounts for 78% of call volume, two of the crew are assigned to the ambulance and unavailable for approximately one hour. During this period, the ERF is two or fewer firefighters, which constitutes an inability to fight a structure fire or provide any form of safe rescue. During the 17% of concurrent calls, the City of Whitefish is without fire and EMS response and must rely on mutual aid from other jurisdictions. Potential solutions for this issue are addressed in the staffing section.

Unit Hour Utilization

The following process for evaluating apparatus response determines the overall amount of time an apparatus is assigned to a specific incident. This is a measurement from the initial dispatch time until the unit is available for another incident.

Unit hour utilization (UHU) is but one measure indicating workload. It is calculated by dividing the total time a unit is committed to all incidents divided by the total time in a year. Expressed as a percentage, it describes the amount of time a unit is not available for a response since it is already committed to an incident. The larger the percentage, the greater a unit’s utilization and the less available for assignment to an incident.

The following figure illustrates the UHU for WFD units in 2018-2020, expressed as a percentage of the total hours in the year. The number of responses and average time committed to incidents is displayed as well.

Figure 53: Fire Apparatus Unit Hour Utilization (2018–2020)

Unit	2018	2019	2020	Overall
E231	5.58%	5.87%	6.40%	5.95%
E232	0.04%	0.03%	0.12%	0.06%
M221	12.85%	12.30%	10.85%	12.00%
M222	0.84%	0.78%	0.66%	0.76%

Most fire departments follow NFPA standards and accreditation standards focusing on the 90th percentile for performance. An organization that meets at the 90th percentile for response performance means that nine times out of ten, a community member will receive an emergency response within the established performance benchmarks. The standards are discussed in detail later in this section. As previously discussed, WFD cross staffs an engine and medic with a 4-person crew. The ambulance's UHU is 12%, which does not meet the standard for having response capability at the 90th percentile. Based on WFD's call concurrency and UHU, there appears to be an opportunity to improve response capability.

Response Performance

Perhaps the most publicly visible component of an emergency services delivery system is that of response performance. Policymakers and citizens want to know how quickly they can expect to receive emergency services. AP Triton recommends that the City adopt the following national standards or develop specific response performance benchmarks based on local environments. Setting response standards based on averages is generally a poor indicator of performance. Most organizations measure performance on the 90th percentile for comparison with the NFPA standards. For policymakers and citizens to make informed decisions concerning response performance, jurisdictions must record and report the various components of the jurisdiction's current performance.

In analyzing response performance, AP Triton generates percentile measurements of response time performance. The use of percentile measurements using the components of response time follows the recommendations of industry best practices. The best practices are derived by the Center for Public Safety Excellence (CPSE), Standard of Cover document, and the National Fire Protection Association (NFPA) 1710/(NFPA) 1720: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*.

The "average" measure is a commonly used descriptive statistic called the mean of a data set. The most important reason for not using the average for performance standards is that it may not accurately reflect the performance for the entire data set and may be skewed by outliers, especially in small data sets. One extremely good or bad value can skew the average for the whole data set.

The "median" measure is another acceptable method of analyzing performance. This method identifies the value in the middle of a data set and thus tends not to be as strongly influenced by data outliers.

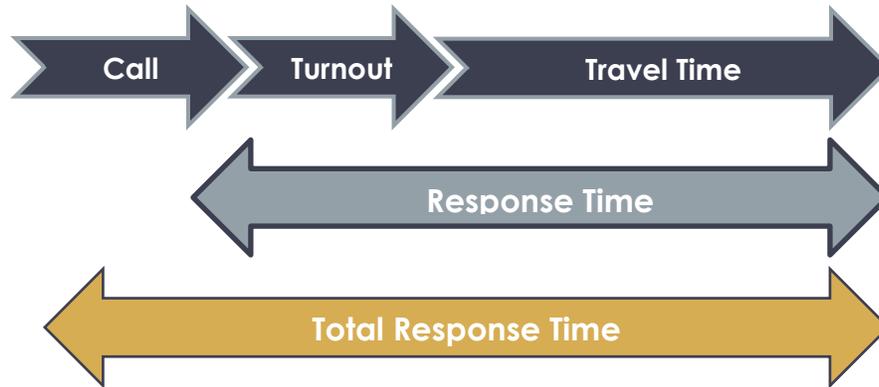
Percentile measurements are a better measure of performance because they show that most of the data set has achieved a particular level of performance. The 90th percentile means that 10% of the values are more significant than the value stated, and all other data are at or below this level. This can be compared to the desired performance objective to determine the degree of success in achieving the goal.

As this report progresses through the performance analysis, it is essential to remember that each response performance component is not cumulative. Each is analyzed as an individual component, and the point at which the fractile percentile is calculated exists in a set of data unto itself.

The response time continuum—the time between when the caller dials 911 and when assistance arrives—is comprised of several components:

- **Alarm Processing Time:** The time interval from receiving the alarm at the primary PSAP until the beginning of the transmittal of the response information via voice or electronic means to emergency response facilities or the emergency response units (ERUs) in the field.
- **Turn out Time:** The time interval that begins when the emergency response facilities and ERUs notification process starts by either an audible alarm or visual annunciation or both and ends at the beginning point of travel time.
- **Travel Time:** The time interval begins when a unit is enroute to the emergency incident and ends when the unit arrives at the scene.
- **Response Time:** A combination of turn out time and travel time. This is the most commonly utilized measure of fire department response performance.
- **Total Response Time:** The NFPA 1710/NFPA 1720 definition of Total Response Time is the time interval from receiving the alarm at the dispatch center to when the first emergency response unit initiates or intervenes to control the incident. For this report, Total Response Time will be defined as receipt of the alarm at the dispatch center until the arrival of the first fire department unit.

Figure 54: Response Time Continuum



Due to the limited data provided by the Flathead County CAD system, this analysis is limited to the total response time within the city limits and the response in the rural areas. The definitions for each population category follow the Center for Public Safety Excellence (CPSE) standards for density: Urban (>2,000 persons per square mile), Suburban (> 1,000 persons per square mile), and Rural (<1,000 persons per square mile).

The following two graphics showed the total response time for City and rural incidents. As previously stated, the results have a potential error of plus or minus 59 seconds due to incomplete data.

Figure 55: Total Response Time to City Incidents (2018–2020)

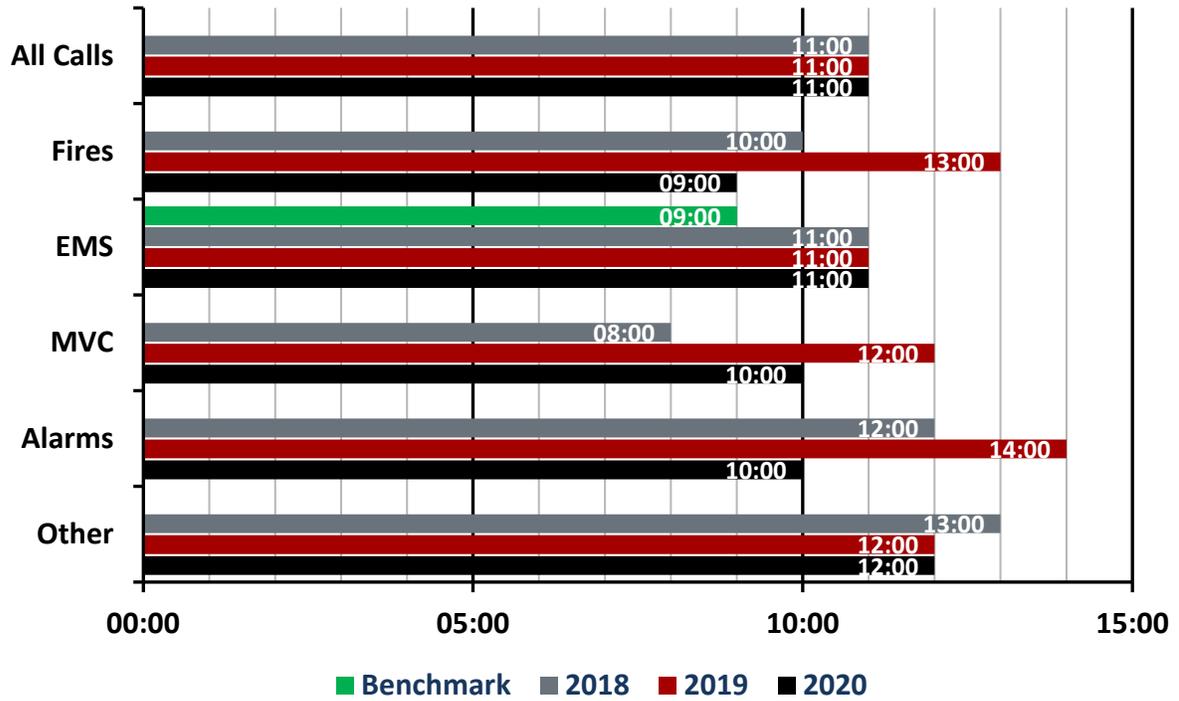
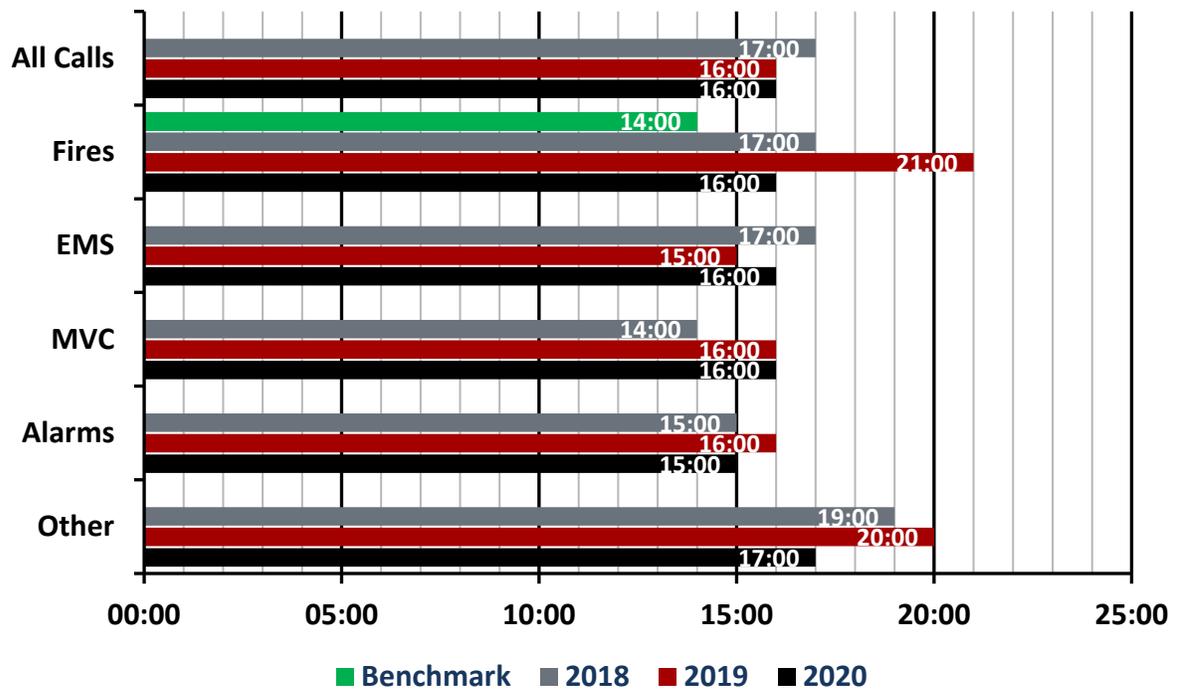


Figure 56: Total Response Time to Rural Incidents (2018–2020)



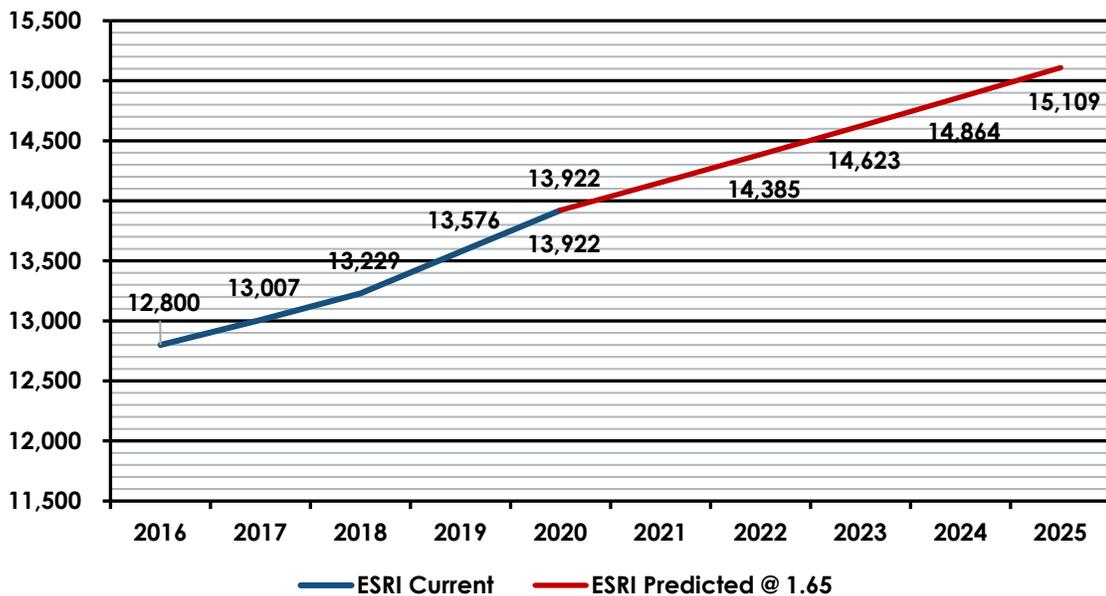
Based on available data, the Whitefish Fire Department is slower by 1 to 4 minutes for total response time in the City of Whitefish and rural response areas, as defined by NFPA 1720. This analysis determined the necessity for WFD to work with the county dispatch center to gather accurate data. Alarm processing times and turn out times were unavailable. Additionally, timestamps need to include seconds for accurate performance measurement. Another factor causing delayed response results is limited duty crews requiring cross staffing the engine, ambulance, and special team response with the same crew.

Projected Population Growth & Future Service Demand

Population Growth Projections

According to the U.S. Census Bureau, the City of Whitefish and service response area around the city had a population of 13,576 in 2019. Over the past five years, population growth has been approximately 3.3% per year. The overall effects of the COVID-19 pandemic in 2020 on future population growth remain to be fully understood at this time. For this analysis, projections are based on historical data and the use of Esri projection software²². The following figure shows the projected growth based on historical data over the next five years.

Figure 57: City of Whitefish Population Projections (2020–2025)



Based on the above analysis, the WFD response area will see a population increase of 8% over the next five years. This is a conservative estimate and, as previously mentioned, does not account for future trends relating to COVID-19.

Service Demand Projections

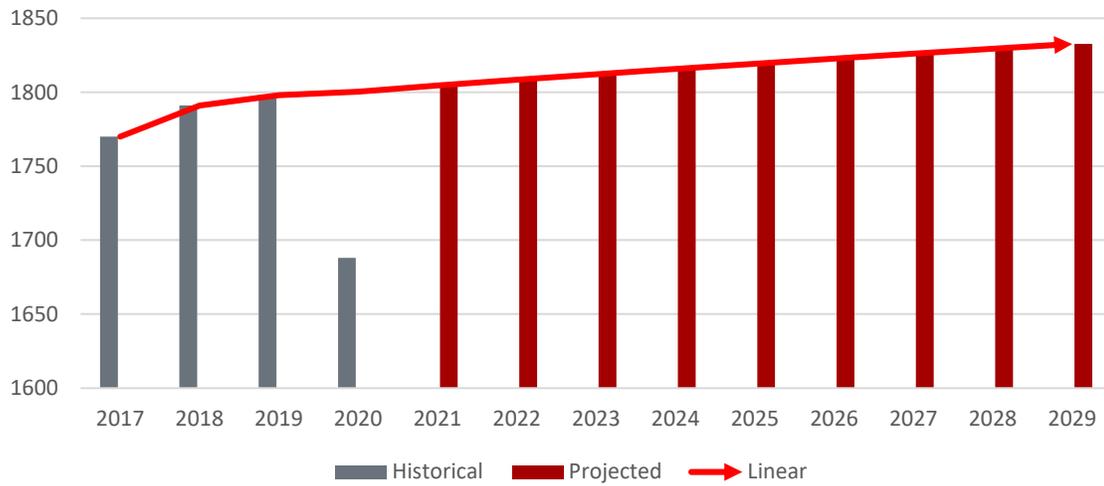
To forecast the future service demand, AP Triton used the population projections within the City and WFSA. The population tends to be a relatively good indicator of service demand, and the current service demand per 1,000 persons can provide a standard for service demand at future dates. The assumption is made that the demographics of the future will be similar to today's demographics. The current service demand per 1,000 population is determined by taking the annual number of responses and dividing it by the population number in thousands.

The following service demand projections are based on the estimated 13,922 population.

Figure 58: Projected Service Demand (2030)

NFIRS Incident Type	2018	2019	2020	Calls/1,000 Population	Projected Calls 2030
1-Fire	40	37	45	3.2	49
2-Rupture, Explosion, Overheat	1	0	0	0	1
3-EMS	1,355	1,405	1,276	91.1	1,471
4-Hazardous Condition	112	89	115	8.2	110
5-Service Call	28	31	38	2.7	49
6-Good Intent Call	93	67	83	5.9	64
7-False Alarm	159	165	123	8.8	89
8-Severe Weather, Disasters	1	3	8	0.57	16
9-Special Incident-Other	2	1	0	0	8
Totals:	1,789	1,797	1,688	120.47	1,849

Figure 59: Projected Service Demand (2021–2030)



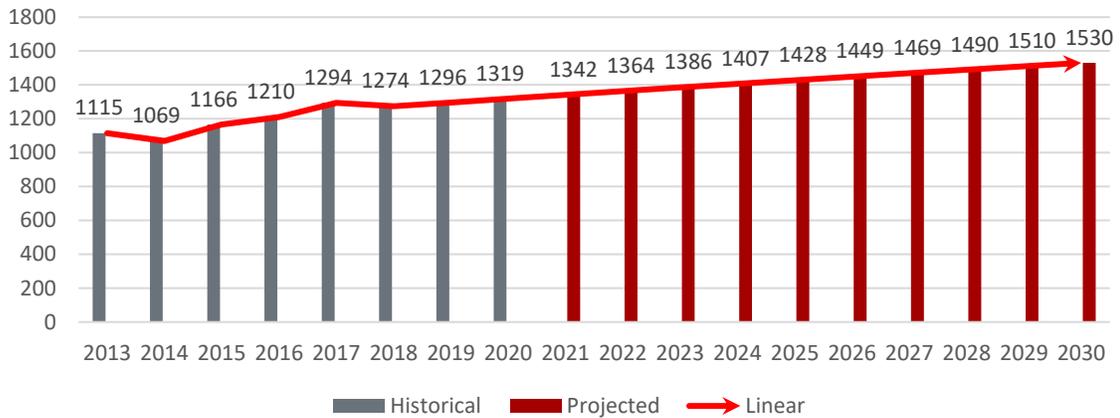
Consistent with population growth, WFD has a projected service demand increase of 3% over the next ten years. The most significant increase in service demand is EMS, with a projected growth of 4% over the next ten years.

Impact of Aging Population on EMS Service Demand

The existing population will likely continue to age in place. The increasing number of the elderly population will increase the demand for emergency medical services as the elderly population is a disproportionately greater consumer of these services. National medical industry studies suggest that patients over 65 are three times more likely to access local emergency services than other age groups.

The following figure shows the historical growth in population for this age group and the projected growth over eight to ten years.

Figure 60: City of Whitefish Aging Population Projection (65 & Over)



The current population for persons 65 and older living in the City of Whitefish, according to the 2019 estimate, was 1,342 or 15% of the population.²³ Assuming the current 65 and older years of age demographic stays in the area, this group will increase 14% by 2030.

It is reasonable to assume that the demand for emergency medical services in this age group will increase proportionally to the increase in the demographic size. This means that WFD will experience a rise in EMS in ten years due to the more significant percentage of utilization by the elderly category. Since the service demand data for EMS calls is not stratified by age, it is difficult to predict the exact impact on calls. It is also impossible to know whether people of age will remain in the City or move to other areas. Conversely, it may be that the individuals moving into the area are disproportionately in the “over 65” demographics.

In addition to standard emergency medical services, there will be an increased need for non-emergent medical services. It may be prudent to develop a community paramedicine program or a mobile intensive healthcare program through a cooperative venture between the hospitals and WFD.

TRAINING & CONTINUING MEDICAL EDUCATION

Training is the foundation of all aspects of emergency services. An individual's ability to effectively utilize resources and equipment is dependent on the level of training an organization has provided. The following section provides an overview of the current training program's equipment, facilities, execution, and efficacy.

Training Staff

Training is a significant component of an efficient and capable department. At this time, there is no training officer for the Fire Department's Fire and EMS programs. This training position can ensure the firefighter/paramedics are well trained through a single source, in-house coordinator.

General Training Competencies

The following figure summarizes the general training topics and certification levels provided by WFD. The Department has limited Training SOGs with hour requirements to obtain and maintain various certification levels.

Figure 61: General Training Competencies by WFD

Training Competencies	WFD
Incident Command System	NIMS ICS
Accountability Procedures	No
Training SOGs	Limited
Recruit Academy	Partial
Special Rescue Training	Yes
HazMat Certifications	Limited
Vehicle Extrication Training	Basic
Driving Program	No
Wildland Certifications	FFT2
Communications & Dispatch	N/A
EMS Operations	Yes

WFD has demonstrated the capacity to manage critical incidents with limited resources. The Department maintains general competencies, however additional focus is necessary. The crews follow standard NIMS incident command requirements. Based on internal interviews, additional training and resources are required. As previously discussed in the staffing section, there is a gap in operational incident command between the chief position and the line captains.

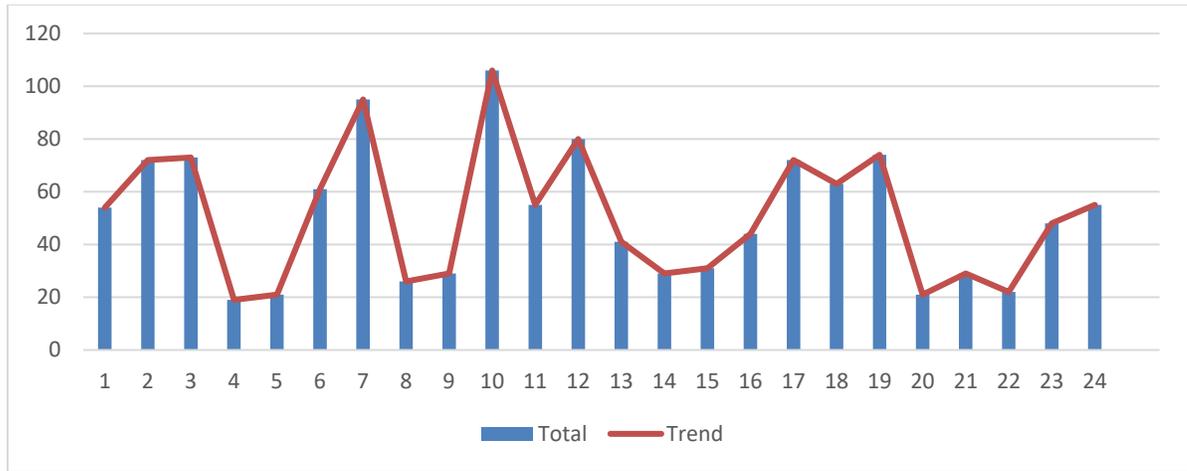
AP Triton recommends establishing a regional incident command system that includes an incident Battalion Chief and designated safety officer for all major incidents. WFD needs command staff on the fire ground that is not currently available. This may require the addition of shift Battalion Chiefs or upgrading the existing Captains to mid-level administrators and the promotion of existing firefighters to shift Lieutenant positions. On significant multijurisdictional events inside the City proper or in the Whitefish Fire Department response area, these command positions lend value to a safe and efficient operation. These positions must be considered essential, especially when the City is planning expansion.

AP Triton recommends increasing the general requirements for each firefighter relating to hazardous material incident response. There is a high risk for hazmat incidents due to the rail transportation of commodities through the area. The Department should consider specific certifications for response to railcar incidents.

Another topic that will require focused evaluation is the training requirements for individual firefighters. The training requirements are defined but appear to lack a consistency between shifts. AP Triton recommends a Training Officer position be created as funding becomes available.

The following figures show a breakdown of the total number of training hours each firefighter received in July 2020–June 2021.

Figure 62: Individual Training Analysis



WFD demonstrated limited consistency in training hours that individuals received in 2020-2021. The data supports developing a program with training topics and hours required per individual firefighter. It is understood that roles such as Company Officer require specific training, but there is a need to establish minimal annual training requirements.

Training Topics Discussion

The following figure summarizes the general training topics and emphasis WFD had for each discipline in July 2020–June 2021. The analysis is based on the data provided but may not be an accurate representation due to incomplete training records.

Figure 63: WFD Training Emphasis (July 2020-June 2021)

Incident Type	Training	Incident
Fire	24%	3%
EMS	16%	68%
Hazmat	2%	3%
Rescue	5%	0%
Wildland	2%	0%
Other	50%	25%

The previous figure shows an opportunity for improvement relating to the Department's annual training program. Based on the above information, additional training hours are recommended for the low-incident high-risk events, including Hazmat and wildland incidents. Of importance to note, 68% of all incidents are related to EMS; however, only 16% of training is allocated to patient care. WFD has a progressive advanced life support response program. Based on the limited call volume, an increase in EMS training hours is warranted.

EMS Training Program

The Department's hiring practice is to hire personnel with those essential skills and certifications. This analysis identified an opportunity for improvement relating to clinical resources. In 2020, the Department treated and transported 910 patients. The limited patient volume translated to an average of 61 patients per paramedic/firefighter. Four advanced airway procedures (intubations/supraglottic) were performed during the same period, correlating to 3 cardiac arrests. The dilution of skills, impacting overall patient outcomes, is discussed in the staffing section of this report. AP Triton recommends establishing a cooperative agreement with Logan Health Kalispell so paramedics can support skill competency.

Training Methodologies & Delivery

AP Triton recommends that WFD consider a balanced EMS/Fire training program which includes focused training, required re-certification training, immersion training, and repetitive training.

Figure 64: Balanced Training Program



Immersion Training

A common challenge for any training program is the development of training that translates to improved efficacy. Current research supports the effectiveness of immersion training that creates the illusion of an actual event. Individuals face evolutions with a high level of realism resulting in a metaphorical immunization to some of the event's stress and challenges. An example would be an active shooter exercise that involves volunteer victims wearing "cut suits," which allows a paramedic to perform advanced procedures while law enforcement stabilizes the scene²⁴. There are difficulties associated with these types of events. They tend to be labor extensive and can be cost prohibitive due to the overtime required. A solution to the problem is to create immersion training on a smaller scale and design the training to be mobile.

Training Repetition

Another perspective relates to the success found over the past ten years in King County, Washington. Efficacy has been shown based on the use of repetitive skills training for mastery of specific skills. King County has demonstrated one of the highest advanced airway successes in the country based on redundant skills training²⁵. Numerous organizations have pursued and purchased high-fidelity simulators for enhanced EMS training. The simulators provide excellent real-time feedback during a training scenario.

The devices cost between \$60,000–\$110,000, and limitations include extensive maintenance needs and a lack of mobility. They have proven effective in a hospital setting or training facility where the end-users are in one location.

A more cost-effective and proficient solution is the use of mid-fidelity manikins. For the same amount of funding, multiple manikins can be purchased and then deployed throughout the organization. This option can provide training without significant drive times to central training facilities and allows paramedics to have repetitive skill practice sessions. This concept may become more relevant if there is an annex of Big Mountain or a regional training center with Kalispell. Another benefit of mid-fidelity training manikins is the opportunity to develop proper sequencing. Identifying the order of critical interventions is critical to the success of patient outcomes.

The previous concepts also apply to fireground training and the need for repetitive evolutions. By de-centralizing fire or special team training, individuals can perform multiple evolutions and develop proper sequencing for critical tasks and objectives.

Focused Training

Another component of a balanced training program includes focused training. An organization's training schedule should consist of a percentage of training reflecting retrospective statistical data from actual incidents. The Department should look for areas of improvement relating to actual emergency responses. The preceding "Balanced Training Program" figure shows the Department lacks a balance between actual incident volume and training topic percentage. This gap is often attributed to the necessity to maintain regional and State certification requirements. Also, organizations must allocate a disproportionate amount of training to high-risk/low incidence to maintain fire-ground safety. AP Triton recognizes these limitations, but there should be a focus on training relating to service demand when possible.

A good example is the region's specific training relating to the current COVID-19 pandemic. Responders were required to learn enhanced body substance isolation, triage protocols, and critical interventions specific to the pandemic. Another example is based on current incident data showing an increase in mental health-related responses. Data shows that incident call volume relating to altered mental status emergencies is approximately 7%. The training program should look for opportunities for additional levels of patient care or service.

Recertification Training

Regional and State requirements for certifications are generally not an option for non-compliance. When an opportunity exists, organizations should perform a cost/benefit analysis on the various optional certifications.

Training Delivery & Scheduling

The following figure summarizes the training methodologies utilized by WFD. As discussed earlier, there appears to be an opportunity for improvement by focusing on better training documentation.

Figure 65: Methodologies Utilized in Training

Training Methodologies	WFD
Manipulative skills & tasks	Minimal
Fire training hours requirements	Yes
EMS training hours requirements	Yes
Annual training hours tracked	In Development
Use of lesson plans	Limited
Night drills	Limited
Multi-agency drills	Limited
Disaster drills	Limited
Pre-fire planning included	Yes

The Whitefish Fire Department has seen limited turnover over the past year, supporting a level of experience necessary to provide service. The staffing challenges in the future will require a formalized and consistent training program. AP Triton recommends developing a formal training program with the addition of specific training operation guidelines, lesson plans, and detailed attendance documentation for each firefighter.

Training Facilities & Resources

In today's fire service, multiple resources are necessary to arm the trainer with the tools needed to provide realistic, practical, and verifiable training. The well-known and well-respected research consultant, Gordan Graham, described the necessity to focus on "high risk/low frequency" events²⁶. This concept is evident in the amount of training for structure fires required compared to actual call volume. An organization must have adequate training facilities to prepare for the infrequency and inherent danger of structure fires. Following is a summary of the current training resources and facilities utilized by WFD.

Figure 66: Training Facilities & Resources

Facilities & Resources	WFD
Adequate training ground space	Yes
Training building/tower	3-Story
Burn room at the training building	Yes
Live fire props	Yes
Driver's course/rodeo	No
SCBA obstacle course	Yes
Adequate classroom facility	Small
Computers & simulations	Yes
EMS equipment assigned to training	Minimal

WFD has adequate training resources, but future growth will require additional capacity. To promote fiscal responsibility and efficiency, AP Triton recommends the regionalization of training resources. Combining training programs will not only improve the cost-effectiveness of the program but will promote interagency cooperation.

LIFE SAFETY SERVICES

Community Risk Reduction

Each of the following is part of an overall Community Risk Reduction (CRR) program that can be defined as "The identification and prioritization of risks followed by the integrated application of resources to improve public safety and reduce increasing call volumes."²⁷ The goal is to incorporate emergency operations with prevention efforts at the fire station level. The station-level approach is preferred because risks vary from one station to another and even within a station's district. Simply put, CRR is examining problems and developing prevention or mitigation strategies to reduce hazards within the City as well as the FSA.

Data collected for this master plan, plus continued analysis in the future, provides an opportunity to determine if specific hazards are increasing or decreasing based on incident response. Risks may change as new development or demographic changes occurs in Whitefish and the service area, which will in turn impact service delivery.

WFD currently has programs that include risk reduction, it is not a comprehensive or coordinated effort. When developing strategies, they should include the use of the Five Es.

- Education—Will education help the public—who, where, when?
- Engineering—What engineering or technology is available to help?
- Enforcement—Is additional or more substantial enforcement needed?
- Economic Incentives—Could incentives increase compliance?
- Emergency Response—Would changes in response make a difference (personnel, training, etc.)?

The concept of using the Five Es is to identify a strategy or, in many cases, multiple strategies to prevent or mitigate the risk from reoccurring.

When developing a CRR plan, WFD must determine what strategies have already been implemented in the community to prevent duplication. Outside resources may be available through partnerships with many community organizations such as law enforcement, nonprofits, health departments, EMS, religious, and local businesses. These groups may offer a different perspective, and provide needed staff, additional funding, and resources if there are limitations within the Fire Department.

Preparing a CRR plan should align with the Department's mission and strategic plan. Creating a plan at the station level allows personnel to engage the community they serve. It empowers staff to interact, learn more about their community, and take ownership of the program. Station personnel will begin to understand the importance of collecting accurate data to support their pre-planning, developing strategies using partnerships, gaining their input, soliciting feedback from the community, and ultimately deciding what risk to prioritize.

The below figure is one basic methodology offered by Vision 20/20 to identify and analyze risks within a community. Vision 20/20 includes a coalition of national organizations and experts that exemplify how collaboration, communication, and commitment to data-based solutions can save lives and properties.

Figure 67: The Community Risk Assessment Process²⁸



Code Enforcement & Permitting

A primary component of any risk reduction program is to provide a comprehensive fire and life safety inspection and permitting process. The goal is to prevent or mitigate fire or injury before it occurs. Presently the Assistant Fire Chief/ Fire Marshal attempts to review all new construction during the permitting process and the on-duty crews attempt to complete the ongoing life safety inspections. Staffing limitations hinders the completion of these inspections. Enforcement appears to be a challenge.

Fire & Life-Safety Inspections

Although there is no mandated inspection schedule for commercial occupancies in Montana, businesses and higher-risk occupancies should receive periodic inspections. WFD policies call for businesses to be inspected once every five years and schools, liquor licensed properties, assisted living facilities, short-term rentals and day cares every year.

The International Building Code (IBC) has created a listing of occupancy groups to define the type of use in a building. These groups can be broken into risk categories to assist an organization in determining what facilities to complete fire and life safety inspections.

The City of Whitefish has adopted the current edition of the International Fire Code. Investigation Bureau of the Montana Department of Justice does not have a consistent fire and life safety inspection program. Inspections of commercial occupancies are conducted by the Assistant Chief/Fire Marshal and shift personnel but not on a regular schedule. Shift personnel have only received minimal training and are not authorized to enforce the fire code; thus, all violations must be reported to the Assistant Chief/Fire Marshal for enforcement.

When inspections are conducted by shift personnel, they are documented on a form and placed in a folder maintained by the Department's Administrative Assistant. No software is used to track inspections or violations.

It is recommended that WFD develop an inspection process that ensures all commercial properties are inspected on a periodic schedule based on the figure below. Personnel should receive training on the fire code and the Department should consider certifying additional shift personnel to enforce the fire code. All inspections should be entered into a records management system (RMS). The RMS will allow WFD to track the number and types of inspections and violations for monthly and yearly reports. It will also enable the Department to determine if the same kinds of violations are reoccurring and develop educational programs to reduce the frequency of common violations.

Figure 68: IBC Occupancy Classifications

Risk	IBC Group	Examples
High	A-1, A-2	Nightclubs, restaurants, theater, airport/cruise ship terminals
	A-3, A-4, A-5	Arenas, museums, religious
	H-1, H-2, H-3, H-4, H-5	Hazardous materials sites (Tier-II)
	B	All government & public buildings, other office buildings over two stories
	E	Schools, daycare centers
	I-1, I-2, I-3, I-4	Hospitals assisted living centers, correctional
	M	Strip centers, closed-air shopping malls, big box stores
	R-1, R-3	Hotels, motels, dormitories, apartments, board & care facilities
	Special Risk	Railroads, interstate highways, airports
	(Target hazard)	Any building with life safety risk beyond reach of preconnected hose lines > 200 feet
Moderate	B	Outpatient clinics, general business, offices < 3 stories
	F-1	Fabrication or manufacturing of combustible materials
	M	Mercantile, free-standing
	I-2, R-4	Foster group homes, assisted living homes
	S-1	Storage of combustible materials, car repair facilities, hangars
Low	F-2	Fabrication or manufacturing of non-combustible materials
	R-1, R-2	1- and 2-family dwellings, foster homes
	S-2	Storage of combustible materials
	U	Barns, silos, other unclassified buildings

Permitting

WFD is a part of the plan review, inspections, and testing process for all new commercial construction. Permitting for all new construction is administered through the City of Whitefish Department of Planning and Building. WFD receives a portion of the fees collected by the City. The fees include reviews of systems such as fire sprinklers and alarms. If a building does not have any fire protection permitting requirement, they are charged the same permit fees as those with the systems.

Building Plan Review

The ability to review construction plans for new buildings or renovations allows the fire department to understand how any changes will affect the organization or the public during an emergency.

Plans reviews should begin when the initial concept is presented for permitting. The site plan should include fire apparatus access, fire department connection location if a sprinkler system is present, size and height of the building, hydrants, or other features that will impact emergency responders. The initial review will allow the fire department to provide suggestions and enforce existing requirements before permitting.

The review of construction plans allows fire service representatives an opportunity to ensure code compliance for exiting, fire sprinkler and alarm systems, emergency lighting, or other processes. In addition, a permitting system allows the organization to require changes to plans if they do not meet code requirements before construction begins. Proper permit applications and processes are necessary to assist the contractor when submitting plans for review and ultimate approval.

WFD conducts plans reviews for new construction which includes site plans and architectural drawings. Plans are approved before construction release in conjunction with the Whitefish Planning and Building Department. WFD may review plans in the fire service area when the Whitefish Service Area Board (WSAB) provides those documents. The WSAB receives these documents from the Flathead Planning Department for all new subdivisions and commercial development outside the city limits.

The City utilizes Blue Print software for permitting all new development or renovations and for plan review.

Fees

As discussed in a previous section, collecting all development permit fees occurs through the Department of Planning and Building. A spreadsheet formula determines the funding for planning and zoning, building permits, plan reviews, and WFD. This fee also includes all inspections needed during the construction process before issuing a certificate of occupancy.

Montana adopted the 2012 International Fire Code (IFC) in 2013 and exempted portions, including Section 105 – Permits. The City of Whitefish subsequently updated its ordinance in February 2015 to legally enforce the updated state version of the IFC. Montana Administrative Rule 23.12.601 provides information on adopting the 2012 IFC and states that *"This rule establishes a minimum fire protection code to be used in conjunction with the building code. Nothing in this rule prohibits any local government unit from adopting those portions of the IFC that are not adopted by the FPIS or standards which are more restrictive than the IFC."* This exception allows local governing boards to adopt any section of the IFC deleted by the rule, which would enable the City to adopt this section by ordinance.

It is recommended that the City investigate the adoption of Section 105 and develop a fee schedule as a revenue source to increase the frequency of periodic fire and life safety inspections of commercial properties based on the risks in the previous figure. The additional revenue collected by issuing annual operational permits such as storage of flammable and combustible liquids, hazardous materials, repair garages, and place of assembly would assist in paying for either a part- or full-time inspector. This fee would only apply to commercial businesses open to the public.

A separate permitting process is recommended in conjunction with the Planning & Building Department's existing method for all fire protection systems. A separate permit for these systems would provide a more equitable process and only charge for buildings required to have these built-in features. The fee would cover all plan reviews and inspections necessary to ensure compliance provided at no cost under the current permitting process.

Fire & Life-Safety Education Programs

Prevention or mitigation of unintentional injuries or fires is a critical function of a fire department. Educational programs provide the best opportunity to reduce fires and injuries in the community.

A fire and life-safety program to reduce risks requires a coordinated approach and should include other partner organizations in the community that may provide the same or similar services. These partnerships allow WFD to become a community partner and build relationships to reduce risks. In addition, developing fire and life-safety programs requires a continual review of incident data to determine the types and frequency of responses.

WFD provides tours of its station year-round and conducts visits to local schools during the fall. School visits include demonstrations and safety messages for the students. Firefighters also assist with fire drills. Each year, WFD schedules an open house for the public. This event allows the Department to partner with other agencies in the community, such as Two Bear Air, ALERT Helicopter, and local law enforcement.

There is an effort to begin an educational program for the older adult population that focuses on free fire alarms and carbon monoxide detectors. As a person ages, their ability to hear decreases; thus, there may be a need to include alarms designed for those with hearing disabilities.

To meet the needs of the City and service area, there is a need to increase local efforts to improve public education in the community. It is recommended that WFD consider hiring a community risk reduction coordinator to manage and organize the Department's mitigation and prevention efforts. This employee would allow WFD to develop programs that address the highest risks, such as the wildland-urban interface and the growing older adult population.

Fire Investigations

Documenting the types of fire ignition is required by the National Fire Incident Reporting System (NFIRS) for all fires and is necessary for fire investigations. The types of ignition classifications are intentional, unintentional failure of equipment, an act of nature, under investigation, or undetermined.

Determining the origin and cause of fire allows WFD to develop prevention programs that reduce future incidents. Any program designed will use data to review the cause of the fire and show trends of potential problems within the community. Collecting data such as name, age, and gender may identify a specific person or group to target prevention programs such as a juvenile fire setter.

WFD provides fire investigation services with shift personnel or the Assistant Chief. All fires of a criminal nature require assistance from law enforcement from either the City or Flathead County Sheriff's Office. Fire investigation starts with the on-duty shift captain supported by the Fire Marshal and Chief. Flathead County has an investigation team that can be called, as does the State's Fire Marshal Office. Based on information gathered, additional resources and training are required for fire investigations conducted by WFD.

Pre-Incident Planning

The primary reason for completing a pre-incident plan is to identify any hazards in a building or location that may create hazardous situations for responders. Familiarization with the property or building is vital for the first responder. Site visits can provide information such as building construction, built-in fire protection systems, hazardous processes or storage, apparatus access and placement, utility locations, and floor plans.

Strategy and tactics can be developed based on potential problems during an event. Other items to consider may include the closest water sources and mutual or automatic aid resources.

The ability to retrieve up-to-date pre-incident plans during an event is necessary. Access to this information is essential to assist on-scene responders when making decisions during the incident. The Department's Administrative Assistant has started scheduling site visits for the on-duty crews and working on preplans in conjunction with inspections. This information is being added to the CAD data for retrieval while enroute to an incident.

Data Collection & Analysis

A records management system (RMS) is essential for any organization. It should track the daily operations of a fire or EMS agency and provide the ability to collect data for analysis. In addition, RMS is an essential component for life-safety systems. It provides a central location for data storage, such as information collected during an inspection (building or property), plan reviews, fire investigations, and public contact information.

Guidelines are necessary to ensure data collection is consistent throughout the organization. Without entering data correctly, it will become challenging to depend on its accuracy during the decision-making process.

WFD uses ImageTrend RMS to track their fire and EMS incidents but needs to develop a policy or guideline to ensure proper documentation occurs for all data entry. WFD uses New World Fire for pre-incident planning information uploaded for viewing on the Department's mobile data computers (MDT). Access to this information allows responders to review the data while on the scene to develop appropriate strategies and tactics.

HAZMAT RESPONSE

As noted previously, the City of Whitefish Fire Department is a combination fire department, combining both volunteer and career firefighters to provide all-hazard emergency responses to the City of Whitefish and the Whitefish Fire Service Area.

The "All-Hazard" emergency response includes ALS ambulance services with transport to a local area hospital, structural firefighting, hazardous materials response, wildland firefighting, and a variety of rescue functions to include vehicle extrication, water rescue, ice rescue, and low angle rope rescue.

Daily firefighter staffing of WFD is four firefighters, which is minimum staffing per shift, and those firefighters work a 48/96 shift from a single staffed station. The number of volunteer firefighters varies; however, an average of five volunteer firefighters respond constantly for assistance as needed.

There is minimal physical equipment for much of the special response, including hazardous materials, confined space, and other calls for service other than fire or EMS response. There is planning at all levels to incorporate equipment and training for the firefighter. The current operational plan is to have the Department respond to incidents, then call for mutual aid as the situation demands.

The greater area is generally resource-poor; however, several neighboring agencies with combined staffing and resources could constitute an adequate response to most calls for services.

Special responses such as hazardous materials, wildland fires, specific rescues, and similar calls for service require the larger and regional resource pool to mitigate the emergency adequately.

Hazardous Materials Response

Hazardous materials events provide little warning before they occur and may create an event the local jurisdiction cannot mitigate or control by itself. Understanding where and how an event can happen is part of a pre-planning process necessary to protect those near a potential incident location and the emergency responders.

Responses to buildings or locations in the Whitefish Fire Department (WFD) response areas that store or produce hazardous materials may require specific protective clothing to control or mitigate an incident. Identification of these locations and potential evacuation zones will assist an agency during an event to keep firefighters and the public safe.

Locations that have hazardous materials on-site during the year exceeding the limits established by the Environmental Protection Agency are required to file Tier II reports. These reports are provided to local jurisdictions, local emergency planning committees, and Montana's State Emergency Response Commission (SERC) as required by the Emergency Planning and Community Right-to-Know Act of 1986, also known as SARA Title III. Thresholds exceeding the following quantities require submission:

- Ten thousand pounds for hazardous chemicals
- Lesser than 500 pounds or the threshold planning quantity for extremely hazardous chemicals

Several daily freight and cargo trains arrive at the marshaling yard in Whitefish, and the railroad right of way parallels much of Whitefish Lake, a major recreation area in Flathead County. There is an estimated 20–30 freight trains and two Amtrak trains daily through Whitefish.

The primary risk in Whitefish is the BNSF rail line and switchyard located north of downtown and south of Lake Whitefish. The types of cargo on the trains include coal, Bakken crude oil, volatile gasses, produce, and new vehicles. The U.S. Department of Transportation requires BNSF to report to the Montana SERC the estimated amount and frequency of any train hauling 1,000,000 gallons of Bakken crude. This information is forwarded to the local county emergency management office for regional distribution.

BNSF operates the rail line that passes through Whitefish. Amtrak operates the Empire Builder passenger train daily to Seattle and Portland to the west and Chicago to the east.

The rail line creates risks for WFD because of the type of commodities transported daily through the district. Since 1990, there have been 16 accidents involving trains along the main rail line or the switchyard. Eight of the accidents were derailments.

Hazardous materials can be found in almost every community, home, school, and business. In addition to the hazardous materials shipped daily within the WFD response area by rail, there is also risk of those transported by cars, trucks, and pipelines.²⁹

Most hazardous materials incidents are minor and, with proper care, handled by the Fire Department with appropriate local assistance. CO alarms, wires down, gas leaks, and small fuel spills are typical examples.

For more significant hazmat incidents in Montana, the local government has the primary responsibility to mitigate a hazardous materials emergency. In Whitefish, that responsibility falls to the Fire Department. As the Local Emergency Response Agency (LERA), if the incident is beyond the capabilities of WFD, WFD is responsible for the establishment of Incident Command, securing the scene and establishing protective measures, notifying the State of Montana's DES Duty Officer Interface with one of the State's Regional Hazmat Teams, Establishing decontamination for any victims or the entry teams (DECON), and providing an ALS ambulance on scene.

The apparatus, equipment, and PPE needed for a hazmat response are as varied as the material(s) encountered. Product identification is key to establishing proper safety zones and selecting appropriate PPE.

The State's hazmat plan can be found at: [State-HazMat-Plan.pdf \(readygallatin.com\)](#)

Hazardous Materials Training

Although the fire departments have been assigned primary responsibility for hazardous materials control, all departments with a first responder type mission must train their personnel to recognize and take first-step protection measures for hazardous materials. Each fire department is responsible for knowledge of hazardous materials and appropriate response to hazardous incidents within its area of responsibility. WFD should have their personnel trained to at least meet NFPA 1072 and 29 CFR 1910.120.

Response

Hazardous material incidents require the establishment of incident command by the first arriving response entity. If a non-fire agency is the first to arrive on-scene, the highest-ranking officer from that agency will initiate command, which will be expanded to an appropriate level once command is transferred. The county, city, or district fire chief in which the incident occurs, or their authorized representative, shall assume command upon arrival. Protection considerations will include the protection of life, property, and the environment. At the request of the Incident Commander.

Operational Scenario—Resources

Mutual aid resources may be requested through Dispatch. The Incident Commander (IC) may request assistance from the Kalispell Regional Hazmat Team through Flathead County Dispatch. The Kalispell Regional team will provide assistance based upon the need of the IC and may include telephone support and/or a two-person reconnaissance team. All emergency response agencies will support the fire department in controlling hazardous material incidents. Each department will retain its autonomy. An additional and essential response will originate from BNSF out of Shelby, MT, in addition to a foam trailer.

The Office of Emergency Services (OES) shall be notified of all potential and actual hazardous materials incidents. Information from the scene will be provided to OES by the Incident Commander or designee. OES is responsible for contacting the Montana DES Duty Officer and completing an initial incident report, and any subsequent situation reports.

Pursuant to SARA Title III, responsible parties in a hazardous materials incident have a legal responsibility to notify the Local Emergency Planning Committee and the State Emergency Response Commission when a hazardous substance is released that exceeds the reportable quantity.

This requirement will be considered met when the responsible party notifies 911 with the appropriate information. The responsible party also has a legal responsibility to notify the National Response Center of the release. This requirement can only be met by the responsible party making this call. The responsible party will bear the entire cost of response and clean-up of all hazardous materials or potentially hazardous materials incidents.

The Incident Commander will relinquish responsibility for cleanup operations to the owner/shipper representatives or state or federal response teams as appropriate. Overall responsibility for the protection of the public remains with the local government.

Additional Resources for Hazardous Materials incidents

The U.S. Department of Transportation Emergency Response Guide Book (ERG) or other nationally accepted guidance shall be utilized to determine what distance, exposure time, and protective clothing should be used, keeping in mind that this guide is intended for use during the initial response (30 minutes) or until more concise information is available.

Kalispell Fire Department provides one of the State's Regional Hazmat Teams, and resources are available from the National Guard's 83rd Civil Support Team out of Helena, Montana. BNSF also has hazmat responders plus contracts with local agencies, which WFD can call upon for assistance.

Operational Plans—Emergency Response Framework

Flathead County has emergency operations plans for Hazards Material response in the County, supporting those departments responding to an incident in their area.

Under Emergency Response Framework (ESF10) – Concept of Operations 30 includes the appropriate response and recovery actions to prepare for, prevent, minimize, or mitigate a threat to public health, welfare, or the environment caused by actual or potential oil and hazardous materials incidents. Hazardous materials include chemical, biological, radiological, nuclear, or explosive substances (CBRNE), whether accidentally or intentionally released.

Appropriate response and recovery actions can include detecting, identifying, containing, clean up, or disposing of released oil and hazardous materials. Specific activities may consist of stabilizing the release through the use of berms, dikes, or impoundments; capping of contaminated soils or sludge; use of chemicals and other materials to contain or retard the spread of the release or to decontaminate or mitigate its effects; drainage controls; fences, warning signs, or additional security or site-control precautions; removal of highly contaminated soils from drainage areas; removal of drums, barrels, tanks, or other bulk containers that contain oil or hazardous materials; and other measures as deemed necessary.

Minor hazardous material incidents occur frequently and are routinely handled by the local fire department or the Authority Having Jurisdiction (AHJ). For more significant incidents or those involving extremely hazardous materials, the Kalispell Regional Response team should be requested. Field operations shall be conducted in accordance with the Hazards Material annex. The Incident Commander shall make all tactical field decisions.

In the Emergency Operations Center (EOC), command will assist with identifying and requesting resources required for field operations, provide status reports and documents costs related to response, as well as coordinate with the Unified/Incident Command, all hazardous substance response-specific efforts and provide information to the EOC for coordination of all other municipal efforts.

Organizations using ESF #10 to assess the situation to include: the nature, amount, and location of actual or potential releases of hazardous materials; pathways to human and environmental exposure; probable direction and time of travel of the materials; potential impact on human health, welfare, safety, and the environment; types, availability, and location of response resources, technical support, and cleanup services; and priorities for protecting human health, welfare, and the environment

ESF #10 provides the framework for coordination with appropriate local, state, and federal agencies to ensure the proper disposal of wastes associated with hazardous materials incidents; and assist in monitoring or reducing the spill site and long-term monitoring.³¹

The Comprehensive Emergency Management Plan (Flathead County) tracks abatement and other disposable material shipments to appropriate disposal facilities. If a hazardous material incident involves an intentional action, this ESF provides assistance, investigative support, and intelligence analysis in coordination with law enforcement.

WILDLAND RESPONSE

Wildland Urban Interface

Whitefish and surrounding response areas are in the WUI (Wildland Urban Interface), with homes built within the trees, on steep terrain, and/or hilltops to obtain a desirable view. Other individuals in the City believe they're not in the WUI but are within a potential ember shower creating a possible fire area within the urban area.

All the Whitefish Fire response area homes are prone to wildland fires, especially on hot, dry, windy days. The area faces two fire seasons. The first is the pre-green up stage when the snow has melted, but the grasses and other low to the ground vegetation remain dry and become fuel. The second typical wildfire season comes after a hot, dry summer which is becoming more frequent.

While most wildland fires are human caused, a small percentage are unavoidable, usually caused by lightning strikes. Human-caused wildfires are generally easily accessible once discovered, while fires caused by lightning can be in remote areas and go undetected until they become established fires.

The Whitefish Fire Department provides "Initial Attack" and "Structure Protection" wildland firefighting within its response area, working with Montana DNRC and the U.S. Forest Service. The goal is to extinguish a fire before it grows beyond the resources at WFD's disposal. The career staff and most of the WFD volunteers hold National Wildfire Coordinating Group (NWCG) certifications as wildland firefighters. Many have advanced certifications.

The Department has two brush trucks, and the engines are equipped for wildland operations. A replacement schedule for the brush trucks has been submitted and is in the discussion and planning stages.

The Incident Commander is responsible for the management of the incident. Incident command for wildfires shall be the first responding emergency responder, who will then relinquish command to the first, highest-ranking fire officer to arrive on the scene. The Whitefish Fire Chief or commanding officer will form unified command with the appropriate state or federal agency, DNRC, and/or U.S. Forest Service.

Incidents involving state and/or federal land are managed to utilize unified command and/or an incident management team based on the situation's complexity. Helitac and vertical firefighting operations are also available to suppress wildland fires.³²

Flathead County has no firefighting resources and relies on the closest fire department which provides initial attack. WFD is dispatched along with either the DNRC or U.S. Forest Service. Within the Fire Service Area, Flathead County is responsible for structure protection and 100 feet surrounding structures. State and federal agencies are responsible for all other suppression efforts in the Fire Service Area. The state/federal agency may hire local fire resources to assist with an extended attack. For additional information, see the Flathead County Community Wildfire Protection Plan (CWPP) 2021.³³

The majority of Flathead County is under state and federal wildland fire protection. Dispatching for wildland fires under the jurisdiction of state/federal agencies is coordinated through Kalispell Interagency Dispatch Center (KIDC). KIDC will coordinate with the Flathead Emergency Communications Center (FECC 911) when local resources are required for structure protection or mutual aid response. Those fires that fall outside KIDC responsibility will be coordinated by FECC 911.³⁴

Protection considerations will include the protection of life, property, and the environment. Mutual aid resources may be requested through 911 Dispatch and/or the Kalispell Interagency Dispatch Center (KIDC) as appropriate. At the local government's request, wildfires deemed to be Type III incidents may be managed by the DNRC or U.S. Forest Service Management Team since the Northwest MT Team is no longer in existence

Members of the Fire Department emergency response personnel will take immediate action to gather damage assessment information to determine the severity and extent of actual and/or potential damages. Information obtained will be used to implement and prioritize response actions: fire suppression/mitigation activities, access control and re-entry of impacted areas, debris clearance, utility restoration, and lifeline repairs, and the inspection, condemnation, and demolition of buildings/structures. Wildland Fires are a multijurisdictional event in Flathead County.

Wildland Coordinator Position

A wildland coordinator would be an important position for the City and the Fire Department to consider. The response area is in an Urban/Wildland Interface area and necessitates coordinating Fire Department and City resources with surrounding jurisdictions to include U.S. Forest Service and other forest service agencies to benefit the City and Fire Department on wildland issues. Additionally, a wildland coordinator would provide improved interface with the Whitefish Fire Service Area and increase mitigation efforts throughout the area.

TECHNICAL RESCUE

Search & Rescue

Search and Rescue activities include, but are not limited to, locating and extricating victims trapped in collapsed structures, high angle rescue, water rescue, mountain rescue, avalanches, and emergency incidents that involve finding missing persons, recovery of individuals involved in accidents, locating downed aircraft, extrication if necessary, and treating any victims upon their rescue.³⁵

While the Sheriff's Office is the primary response agency for most search and rescue activities the Whitefish Fire Department is often the initial response agency and establishes incident command until command is transferred to the appropriate agency.

The Flathead County Emergency Operation Center, EOC, may be activated to help manage incidents upon request. The EOC will request appropriate state and federal resources. Assisting resources will fall under the Incident Commander.

As needed the Incident Commander working through the Flathead County EOC may activate and coordinate with the following Emergency Support Function:

- ESF-3 (Public Works and Engineering) provides heavy equipment support and structural shoring to SAR operations for the teams' safety.
- ESF-8 (Health and Medical Services) provides coordination of emergency medical assistance and victim transport.
- ESF-1 (Transportation) provides transport of personnel or victims.
- ESF-2 (Communication) ensures availability of communications support.
- ESF-7 (Logistics) ensures the availability of needed resources.
- ESF 8 – Search and Rescue
- Comprehensive Emergency Management Plan Flathead County

Mountain Rescue

For incidents involving mountain rescue, the Sheriff's Office will page the Mountain Rescue Team or Nordic Ski Patrol, and resources will be allocated depending on area, conditions, and terrain. The emergency responder on scene on the scene will assume the role of Incident Commander until the Sheriff or his/her designee arrives. The Whitefish Fire Department's primary role if dispatched is to provide EMS support to the incident

Water Rescue

The Sheriff's office has the responsibility for water rescue, the Whitefish Fire Department is trained and equipped to handle open water and ice rescue and is dispatched within their response area. Upon arrival the first emergency responder on scene establishes command until transferred to the appropriate agency.

WFD has a fire boat that is docked at the Lodge during the summer months on Whitefish Lake plus a hovercraft stationed near City Beach for winter ice / water rescue. The WFD also has an out of service trailered rescue boat that would be used on the river or other lakes and ponds in the response area.

Ground Rescue

The Sheriff is responsible for ground rescue the WFD is dispatched to assist within their response area. The first arriving emergency responder will establish command until transferred to the appropriate agency. The WFD primary responsibility will be to provide EMS.

Aerial Rescue

The Sheriff has access to a private rescue helicopter, Two Bear Air, that can affect an aerial search and a vertical lift of patient if ground evacuation is not appropriate. Two Bear Air will bring a patient to a transfer location for the WFD ambulance or Logan Health's Alert helicopter to transport the patient to a hospital.

Transportation Events & Acts of Terrorism

Certain disaster and/or emergency events, such as transportation emergencies involving railways, trucks, and airplanes, as well as acts of terrorism, would quickly deplete local resources and capabilities. These events will bring in federal agencies such as the National Transportation Safety Board, the Federal Aviation Administration, the Department of Homeland Security, or the military. The first arriving emergency responder shall establish command until transferred to the appropriate agency.

All costs and expenses associated with any multijurisdictional response and recovery activities will be documented and accounted for by the individual agencies involved and provided to the EOC when activated.³⁶

Confined Space Rescue

Confined space is defined as a limited or restricted means of entry or exit to include tanks, vessels, silos, storage bins, equipment vaults, tunnels, and other assorted similar spaces. The WFD is trained and equipped for some confined space rescues (not silos) however limited resources would require mutual aid from Kalispell FD, the only other confined space trained fire department in Flathead County.

As with all emergency responses the first arriving emergency responder will establish command until transferred to the appropriate agency. Initial actions include an incident size up, establishing a safe work area, and requesting appropriate additional resources.

Occupational Safety and Health Administration (OSHA) is the authority on many industrial safety practices, mainly affecting the private sector of any state. State-approved plans involve public safety agencies such as fire departments. It is suitable for fire departments to identify and adhere to OSHA standards for confined space rescues.³⁷Montana's private sector workers are protected under federal OSHA jurisdiction. Government workers in Montana are protected by a State Plan.

The WFD lacks equipment and training to provide a few other technical rescue activities such as Collapse Rescue or Trench Rescue. In these events the WFD will establish command, maintain scene safety until appropriate resources arrive or they're able to transfer command to an appropriate agency

Section II: COMMUNITY RISK ANALYSIS

COMMUNITY RISK ASSESSMENT

The risks in a community will often dictate the type of service delivery provided by a fire department. A risk assessment is necessary to determine what hazards may affect the community. Risks may include either natural or human-caused events. Natural hazards may consist of wildfires, flooding, earthquakes, or winter storms, while human-caused events include accidental home fires or technological hazards such as a hazardous materials incident.

Risks affecting a community depend on many factors, such as how fast an area is growing, the type of development, density, population, and other demographics. These factors will, in many situations, determine how an organization delivers its services to control, prevent, or mitigate an incident.

- The physical characteristics of the area and the resultant natural hazards are risk factors. WFD is in Flathead County, and the community is at risk of wildland fires, extreme winter weather, and the rural area creates challenges to access remote areas.
- Land use and zoning can also affect risk. Risk can be characterized as low (e.g., agricultural or low-density housing); moderate (e.g., small commercial and office); or high (e.g., large commercial, industrial, wildland exposures, and high-density residential).

Population & Density

The population of the WFD response area has increased more than 16% since 2010 and is estimated at 12,192, according to the 2019 America Community Survey. The population in the City of Whitefish increased by 21.4%, from 6,352 to 7,714 in 2019.

Figure 69: Whitefish Fire District Population Growth

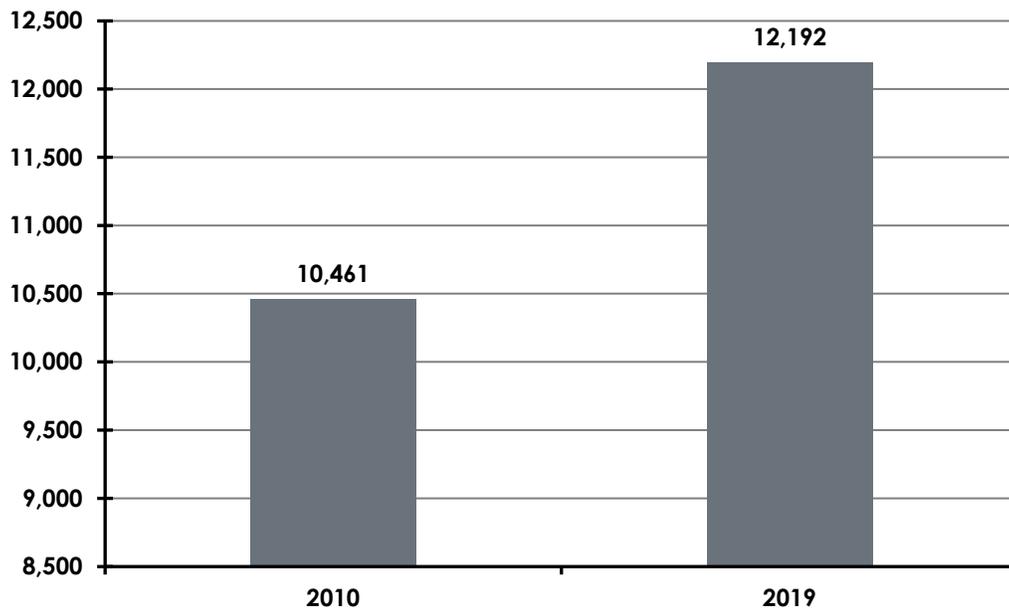
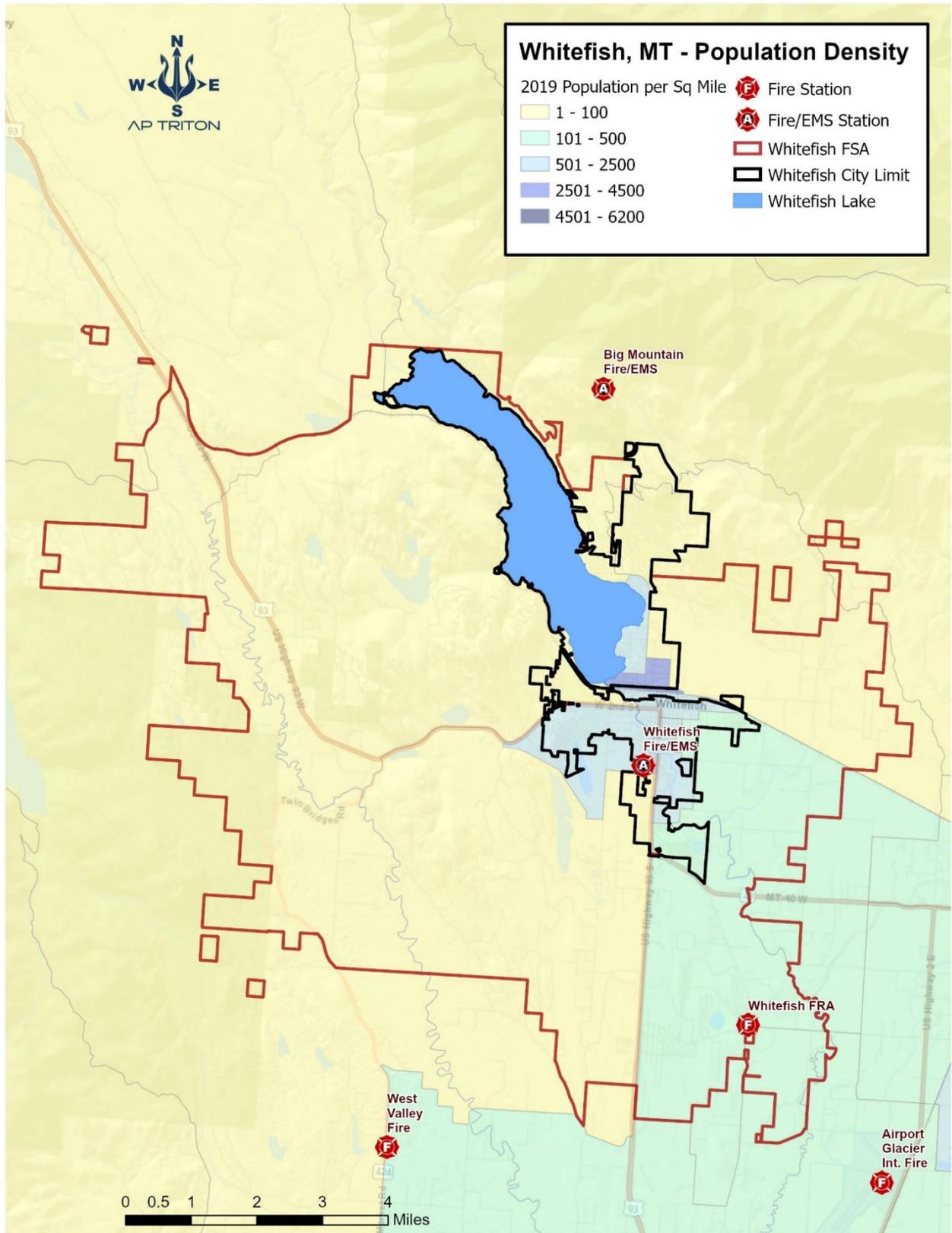


Figure 70: Population Density



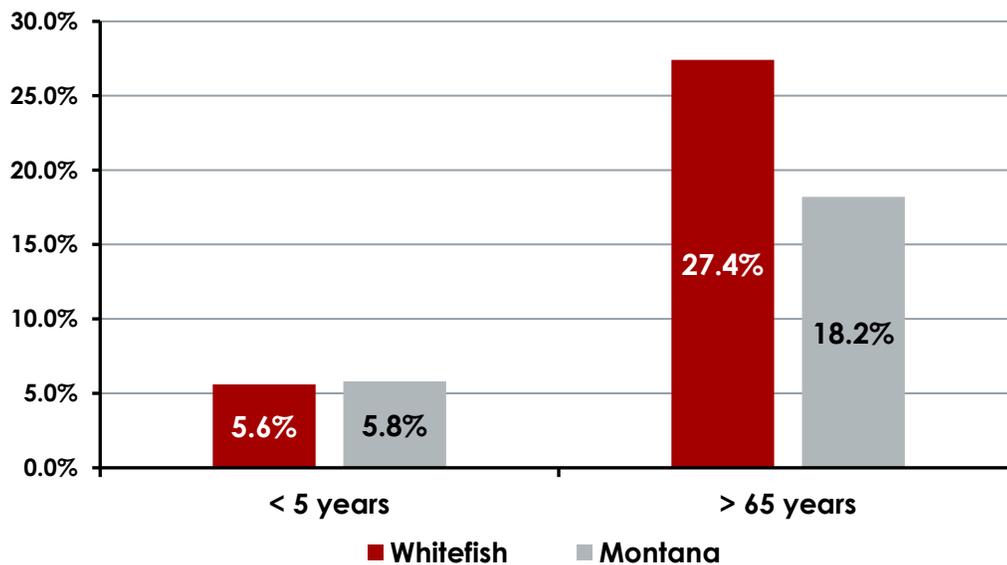
At-Risk Populations

Age

The age of a population may directly relate to increased medical responses, specifically for older adults. In the WFD response area, the percentage of children less than five years of age is 5.6%, slightly less than the state at 5.8%. This age group may need assistance if required to evacuate a building during a fire.

The percentage of people older than 65 is 27.4%, considerably higher than Montana at 18.2%, and is reflected in the number of EMS incidents for this age group. As people age, their mobility decreases and places them at a higher risk during a fire. As age increases, this group is more likely to fall and need assistance from WFD.

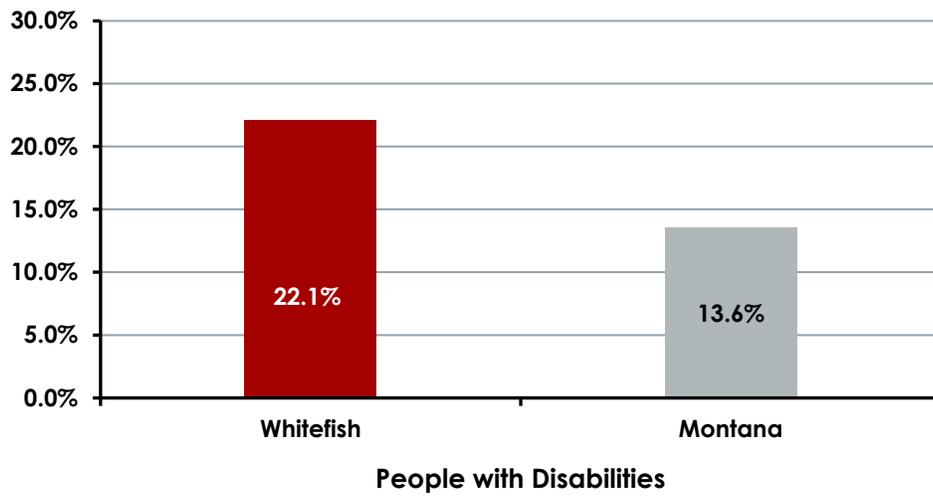
Figure 71: Whitefish Response Area Population by Age Risk



Disabilities

People with disabilities present challenges for WFD since they may not be able to self-evacuate a building or their home during a fire. Higher medical services may be required depending upon their disability as the population ages. The percentage of households with a disability is 22.1% and may correlate to the higher number of older adults in the community. In Montana, the percentage is 13.6%.

Figure 72: Whitefish Response Area Percentage of Households with a Disability



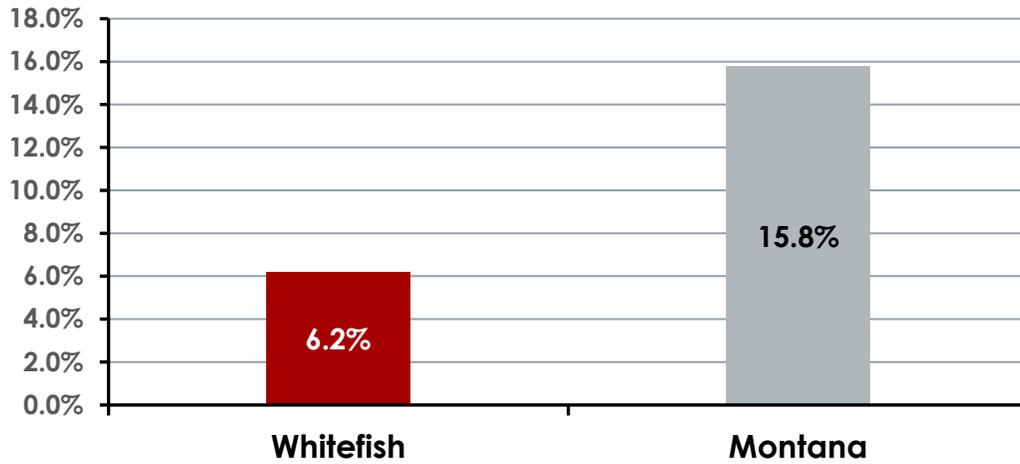
Language Barriers

Language barriers may create problems when the person does not understand English. Although the percentage of people that use a language other than English is extremely low, WFD should be aware that visitors to the area may not speak English.

Poverty and Income

The lack of high incomes has an increased risk for fires and medical illnesses on the population because of their age, inability to receive adequate medical services because of no health insurance, and the condition of their housing. People living below the poverty level are considered at the highest risks when combined with other factors such as education levels, disabilities, or the inability to work. Approximately 6.2% of the Whitefish population have low incomes and live in poverty compared to 15.8% for the state. The average income in Whitefish is \$65,182 and is higher than the State's average at \$54,970.³⁸

Figure 73: City of Whitefish Average Low-Income (2020)



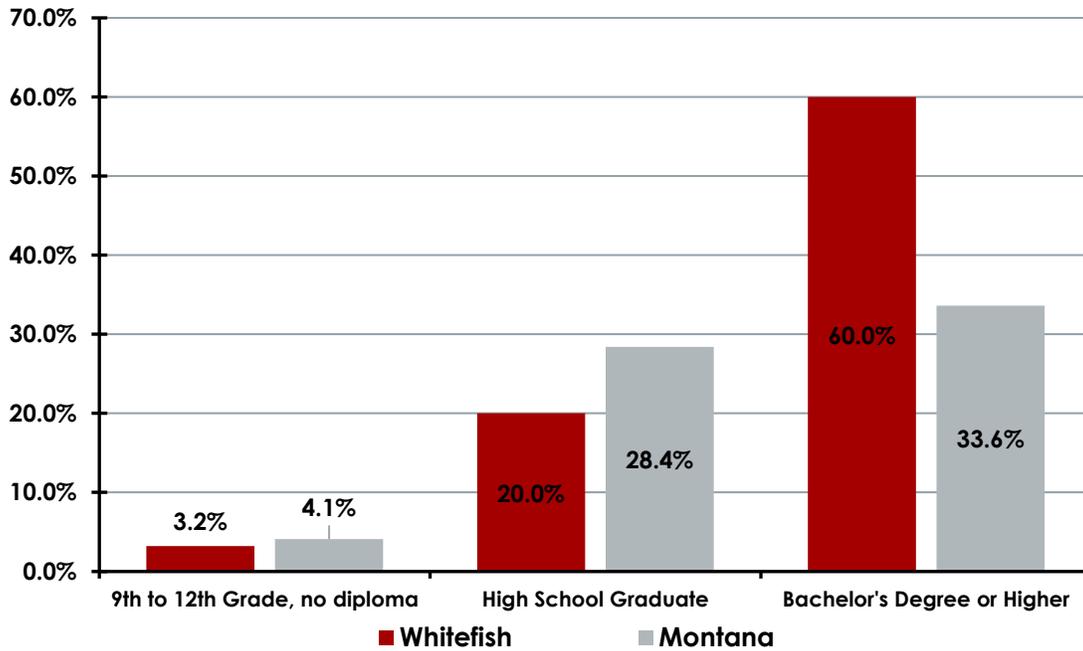
Additional Demographics

Educational Levels

Although educational attainment is not one of the at-risk populations, it is another group considered when developing risk reduction programs. In many cases, those with lower education levels also fall into categories, such as lower incomes and no health insurance.

The population over 25 with at least a 9th to 12th grade education but no diploma is 3.2%, slightly lower than the State at 4.1%. The number of people with at least a high school diploma is 20.0%, compared to Montana at 28.4%. The percentage of people with a bachelor's degree or higher is 60.0%, much higher than the state average of 33.6%.³⁹

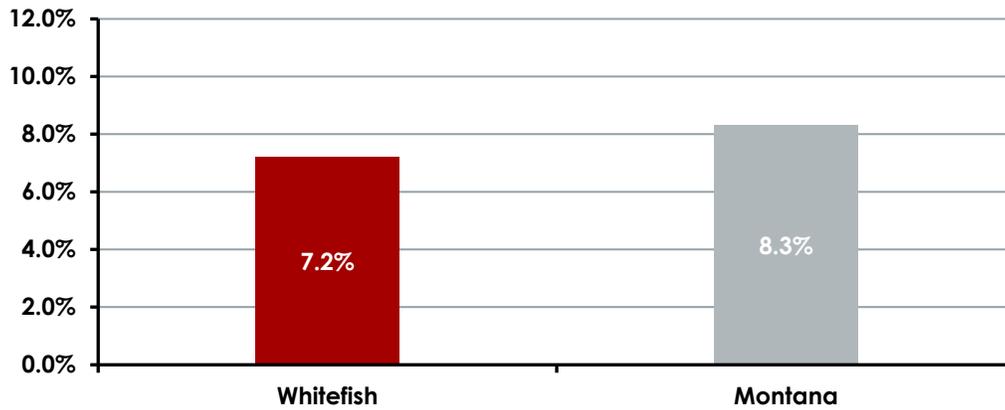
Figure 74: Educational Levels for Individuals Over 25



Health Insurance

This group is likely to require additional emergency medical assistance because they did not seek treatment for chronic illnesses. The lack of health insurance affects lower-income populations since they cannot or have difficulty paying for medical visits. The percentage of people without health insurance in the Whitefish response area is 7.2%, which is slightly less than the State at 8.3%. This percentage is for the permanent population and does not include commuters who work in the district.

Figure 75: Population without Health Insurance



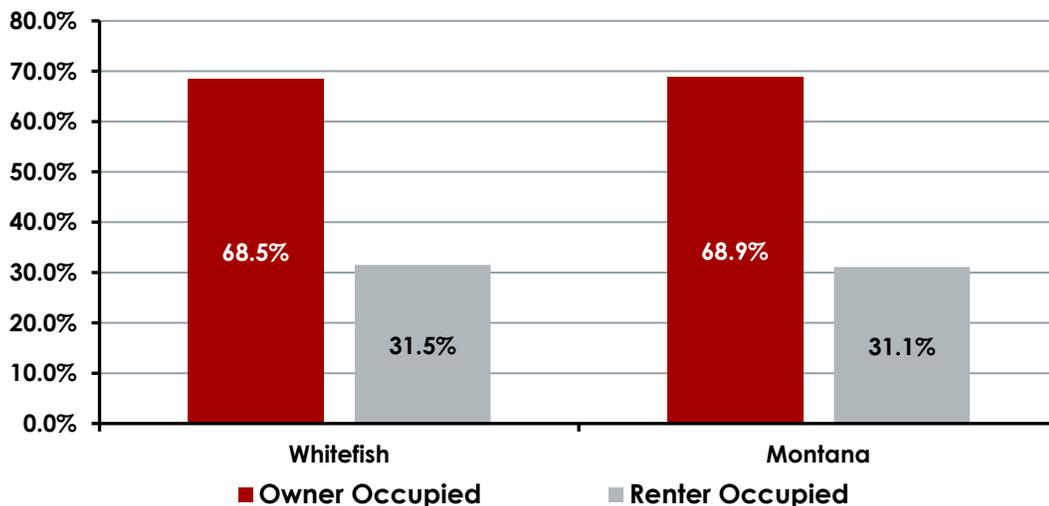
Housing Characteristics

The types of housing will vary in a community and can provide insight into ownership, the age of the home, and the number of units in the building. Vacant structures are a risk the fire department and community if the building is not secured to prevent entry. If the building is not maintained, the structural integrity can degrade and present problems during a fire. Vandalism may create additional problems not only for the fire department but for law enforcement.

Housing Ownership

The ability to own and maintain a home in many circumstances is related to income level. For example, homeownership in the Whitefish response area is 68.5% and is slightly less than the State at 68.9%.⁴⁰ There is a trend where homes are becoming short-term rentals and creating a lack of workforce housing.

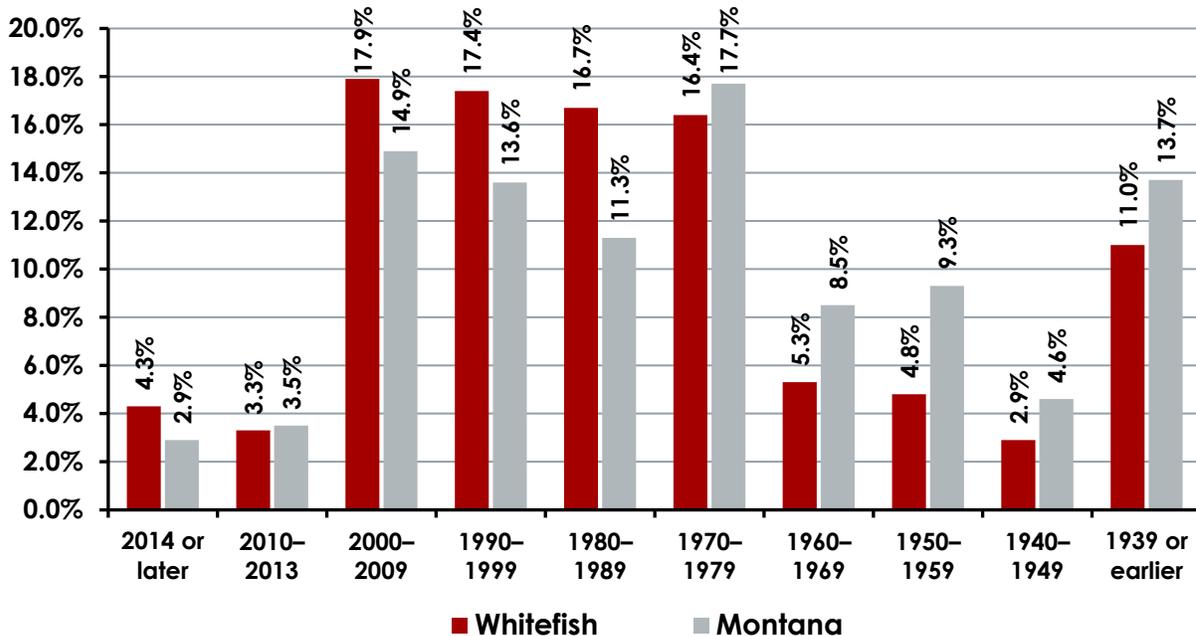
Figure 76: Owner & Rental-Occupied Housing



Age of Housing

Since 1970, 76% of the housing in the Whitefish response area is considered new, which is higher than the State at 63.9%. City Code requires smoke alarms within city limits based on the age of the house. Code requirements in the service area are different and may need additional emphasis regarding smoke alarms.

Figure 77: City of Whitefish Housing Age by Percentage



Environmental Hazards

Weather Conditions

Temperature

Weather conditions in Whitefish and the surrounding mountains can impact not only the Fire Department but the community. Extreme temperatures may affect response personnel during extended events and require additional staffing during an incident. During the summer months, heat waves may occur and cause incident personnel to need on-scene rehabilitation to prevent heat exhaustion. During the winter, they will need to avoid frostbite situations.

Because the community is aging, there may be a need to assist older adults when high temperatures occur since many homes may not have air conditioning.

Figure 78: Average Daily High Temperature 2011–20

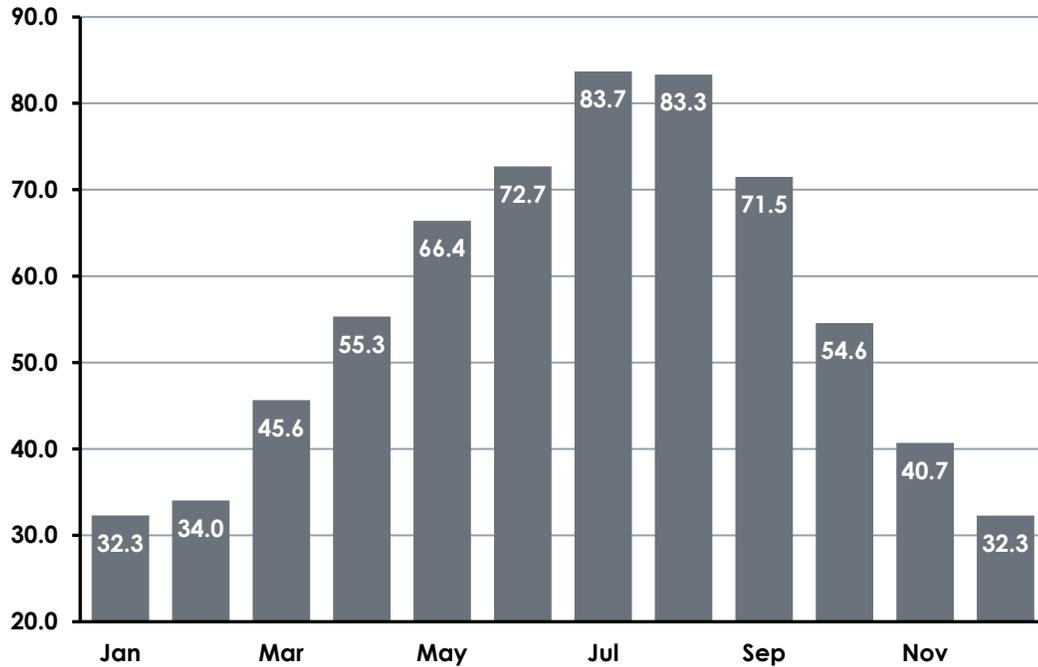
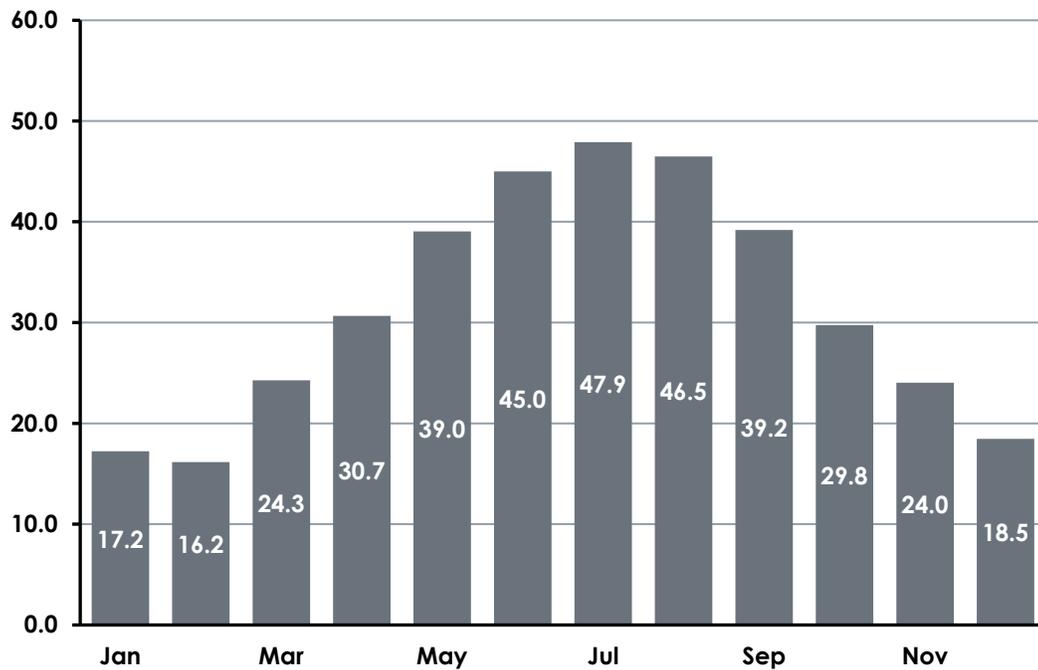


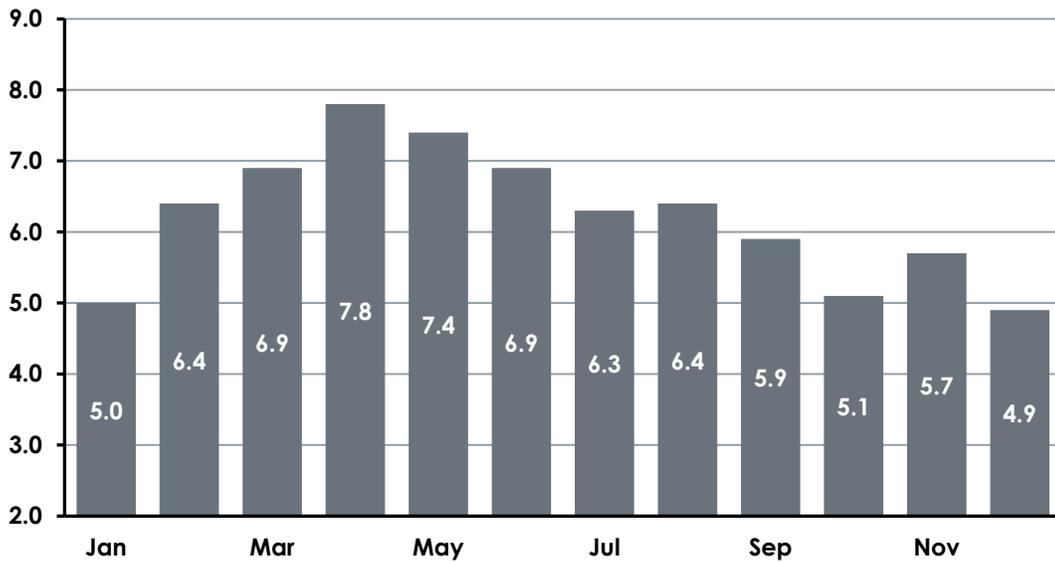
Figure 79: Average Daily Low Temperature 2011–20



Winds

Wind speed and direction will influence how WFD manages incidents such as a wildfire or hazardous materials incidents. Data from Kalispell Airport shows the prevailing winds are from the south or south-southeast or north-northeast and are affected by the mountain ranges and Whitefish's location in the valley.⁴¹ The highest average winds occur during April.

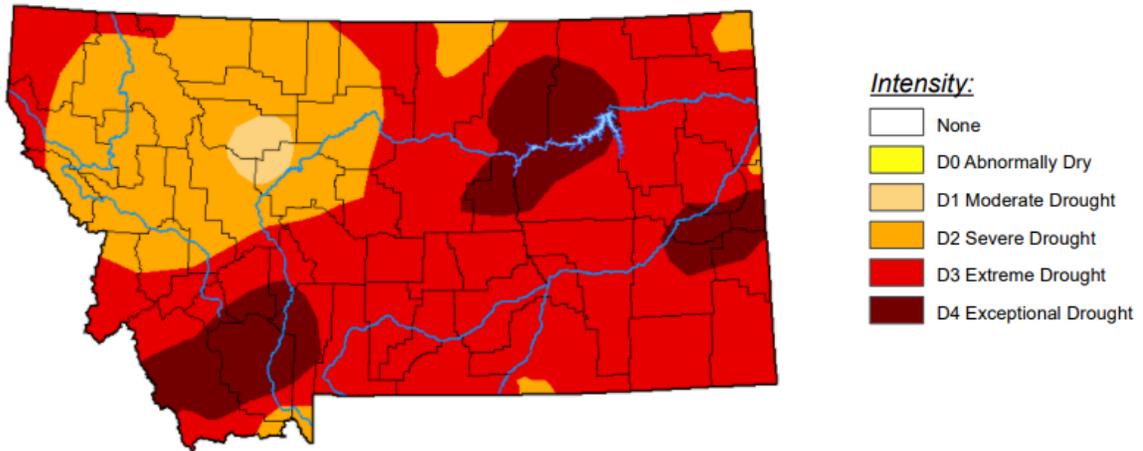
Figure 80: Average Monthly Winds Speeds



Drought

Drought is an extended length of time without rain or other forms of precipitation. Without sufficient rainfall, it becomes difficult to grow crops or replenish water supplies. Droughts occur over a long period and may become persistent. In Whitefish, WUI becomes a primary concern during a drought. The current drought conditions in Whitefish are considered moderate. The cold temperatures in the winter may keep the ground frozen if the spring melt occurs quickly and does not allow the trees to absorb the water, thus potentially increasing the wildfire threat.

Figure 81: Drought Conditions (August 24, 2021)

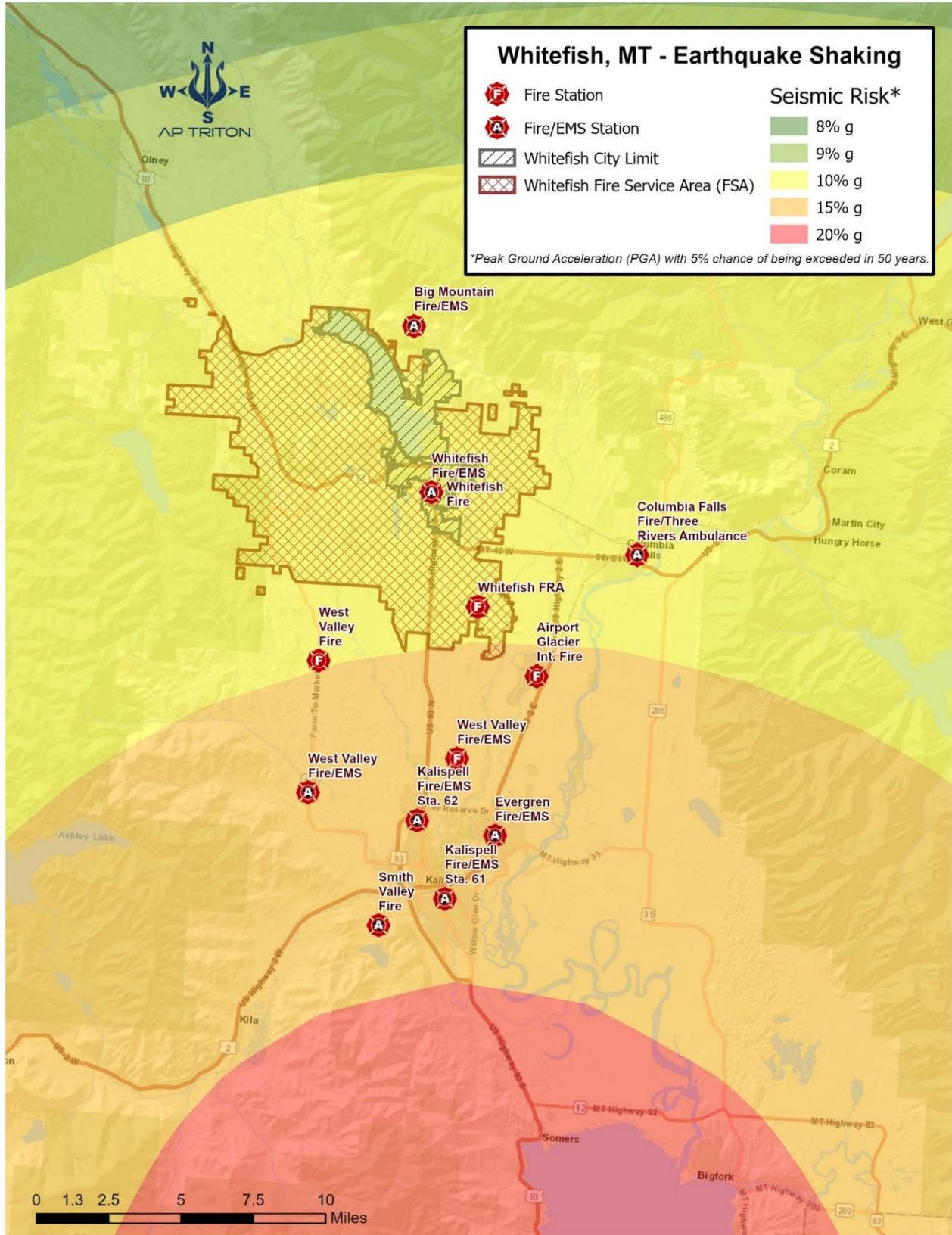


Earthquakes

According to the Flathead County Pre-Disaster Mitigation Plan (FCPMP), the risk of an earthquake occurring in Flathead County is considered moderate. The primary areas of concern are south and east of Whitefish. The Mission faults are south of Kalispell and run in a north-south direction. The Swan fault, located east of Columbia Falls, follows the Swan Range, and detailed studies have not been completed to determine its threat.

The FCPMP provides information about the location of recent earthquakes which occurred south of Kalispell. The United States Geological Survey from 2002 indicates most of Flathead County has a 10% chance of exceeding peak ground acceleration of 10–25% of gravity within 50 years. This means that residents may have objects fall from a shelf or walls and cause significant structural damage to buildings.

Figure 82: Earthquake Shaking Intensity



Wildland Fires

The threat of wildland fire in WFD varies from urban, suburban, and rural areas. As the district becomes a more sprawling community with single-family homes spaced among narrow and winding mountain roads, the threat of wildfires increases.

Implementing proactive mitigation efforts can reduce the risk of a fire damaging or destroying a building in an urban interface. This defensible space surrounding the property focuses on vegetated or landscaped areas and how to harden the home or building. Removing fuels such as dead trees, plants, grasses, or weeds is a first step for the property owner. The National Fire Protection Association (NFPA) provides information on developing defensible spaces by breaking the property into three zones.⁴²

Immediate zone—This area is between 0'–5' from the furthest extent of the building that is considered noncombustible.

- Clean the roofs and gutters of leaves and pine needles.
- Replace missing or loose shingles to prevent ember penetration.
- Install metal mesh screens around any exterior vents to reduce embers passing through the opening.
- Remove combustible materials away from the exterior walls or items stored under decks or porches.

Intermediate zone—This area is from 5'–30' away from the furthest exterior portion of the building.

- Clear vegetation around propane tanks and create fuel breaks using driveways, paths, etc.
- Keep grasses cut to no more than 4" in height.
- Prune trees within 6'–10' from the ground.
- Space trees so the crowns are separated to prevent a spreading fire.
- Keep trees at least 10' away from a building.
- Maintain shrubs and trees in small clusters on the property.

Extended zone—The area is between 30'–100' from the building.

- Remove dense accumulations of dead vegetative material.
- Cut back any small trees growing in developed areas to reduce fuels.
- Remove vegetative material away from storage sheds or other small buildings.

This guidance reduces the impact on a property during a wildfire. Programs have been developed from grant funding to assist homeowners in removing vegetative materials and establishing chipping programs. These programs also reduce risks to firefighters when they respond to a wildfire. Overgrown vegetation can prevent emergency responders from gaining access to the property, thus increasing their risks during the incident.

A leading cause of fire occurs when embers from an advancing wildfire ignite the building even if the surrounding area has taken steps to reduce vegetation around the structure. Hardening the home offers an additional level of protection during a fire. This process reviews how the types of materials used during construction or when renovating reduces the risk of damage during a wildfire.

Ready, Set, Go! is another program developed through the International Association of Fire Chiefs and the U.S. Forest Service to engage residents in WUI risk reduction. The program works in conjunction with *Firewise USA*® from the NFPA.

The Community Wildfire Protection Plan (CWPP) for Flathead County was updated in 2021 and divided the County into six areas based on where wildfires occurred over the last 50 years. Four of these areas are within the WFD response area.

Area 1

This area is considered the Valley Floor and has locations where residential subdivisions are in the urban interface. This area has other types of development such as commercial, farm, and ranch lands. Critical infrastructure includes schools, hospitals, a rail line, water and sewer treatment facilities, and airports. This area typically has the most fires, but they consume the least number of fuels because of the availability of local fire services to respond quickly. Although the risk is lower, fires can move quickly and burn homes or businesses during an extended period of dry weather.

Area 2

This location includes areas within the western side of the WFSA, primarily following U.S Highway 93 along the east to the Lincoln County line to the west. The area has brush and grasses with some timber in the lower area, while the upper elevations are mainly forests. Private lot sizes range from 5–10 acres. Most of the large fires have been stand replacement which kills most of the trees during the event. During the 1990s, the removal of timber provided fire breaks to reduce the fuels while the many roads improved accessibility. Prevailing winds in the summer are from the southwest.

Area 3

This area is north of Whitefish and follows U.S. Highway 93 on the west. At the same time, the eastern boundary includes Big Mountain and follows a northwest direction along the Whitefish Divide to Lincoln County. This is a heavy forest area with subdivisions along Whitefish Lake. The infrastructure consists of the BNSF east/west mainline, U.S. Highway 93 and Montana Highway 2 business corridors, communication towers, and Whitefish Mountain Resort. The primary risk in this area is the lack of access when leaving during a wildfire event. A fire starting along U. S. Highway 93 may move quickly in this area, especially if prevailing southwest winds drive it. The terrain may cause additional problems if it is moving uphill and increases the speed of the fire.

Area 4

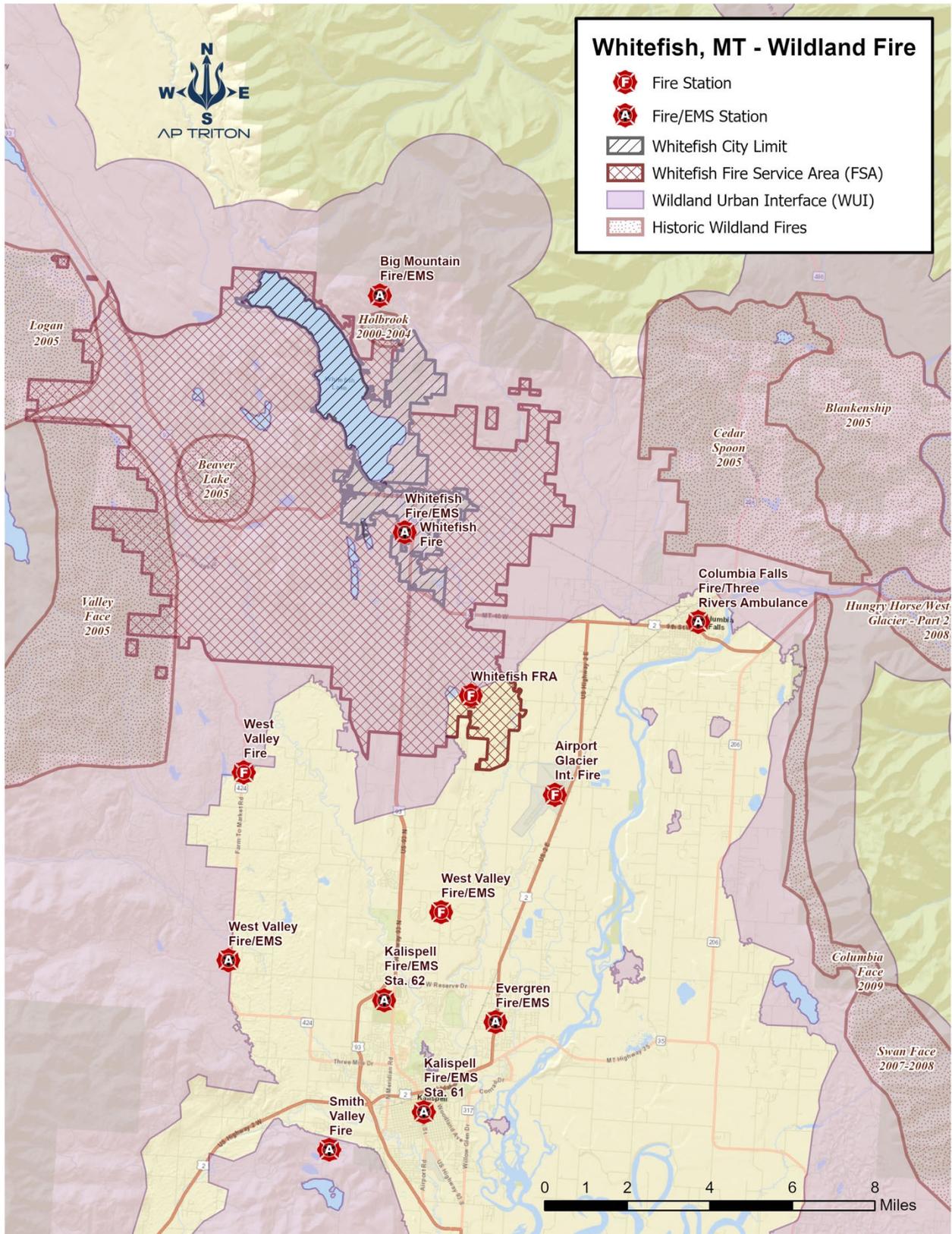
Only the southern section of this area is in the WFD response area. The area includes commercial businesses, residential homes, and farmland. BNSF east/west rail line, Bonneville Power distribution lines, and emergency communication sites are critical infrastructures in this area. This area has had the most fires in the County, but all occurred along the eastern divide and Glacier National Park and not in the WFD response area.

The CWPP provides focus projects in each of the areas to reduce the WUI risk. It is recommended that WFD use the CWPP as a guide to expand its mitigation efforts in the response area. WFD should develop a sustained process of rating properties in the urban interface. This scoring notifies the property owner if the department cannot reach their home because of access issues and provides information to mitigate the threat. Creating a structured WUI plan provides WFD an opportunity to increase community engagement to reduce risks, specifically in the designated areas in the CWPP where a wildfire is considered the primary hazard. Partnerships already established include the Flathead Fire Safe Council.

The Chief and Assistant Chief have received training on conducting wildland fire risk assessments for a home in the wildland urban interface (WUI). They participate in meetings with the Flathead Fire Safety Council. WFD firefighters are qualified to meet National Wildfire Coordinating Groups standards, and they coordinate with local state and federal agencies. WFD conducts site visits to assess a property for prevention and mitigation strategies for homeowners living in the WUI.

WFD should research other departments emphasizing WUI mitigation and prevention efforts to reduce community risks, such as Montecito, California. Montecito Fire Protection District employs two wildland fire specialists who coordinate the district's mitigation and prevention programs. Although the risks in Montecito may be different, the programs they offer may offer guidance to WFD for developing its community preparedness plan. The following figure shows the areas with a risk of wildland urban interface fires and actual fires that have occurred.

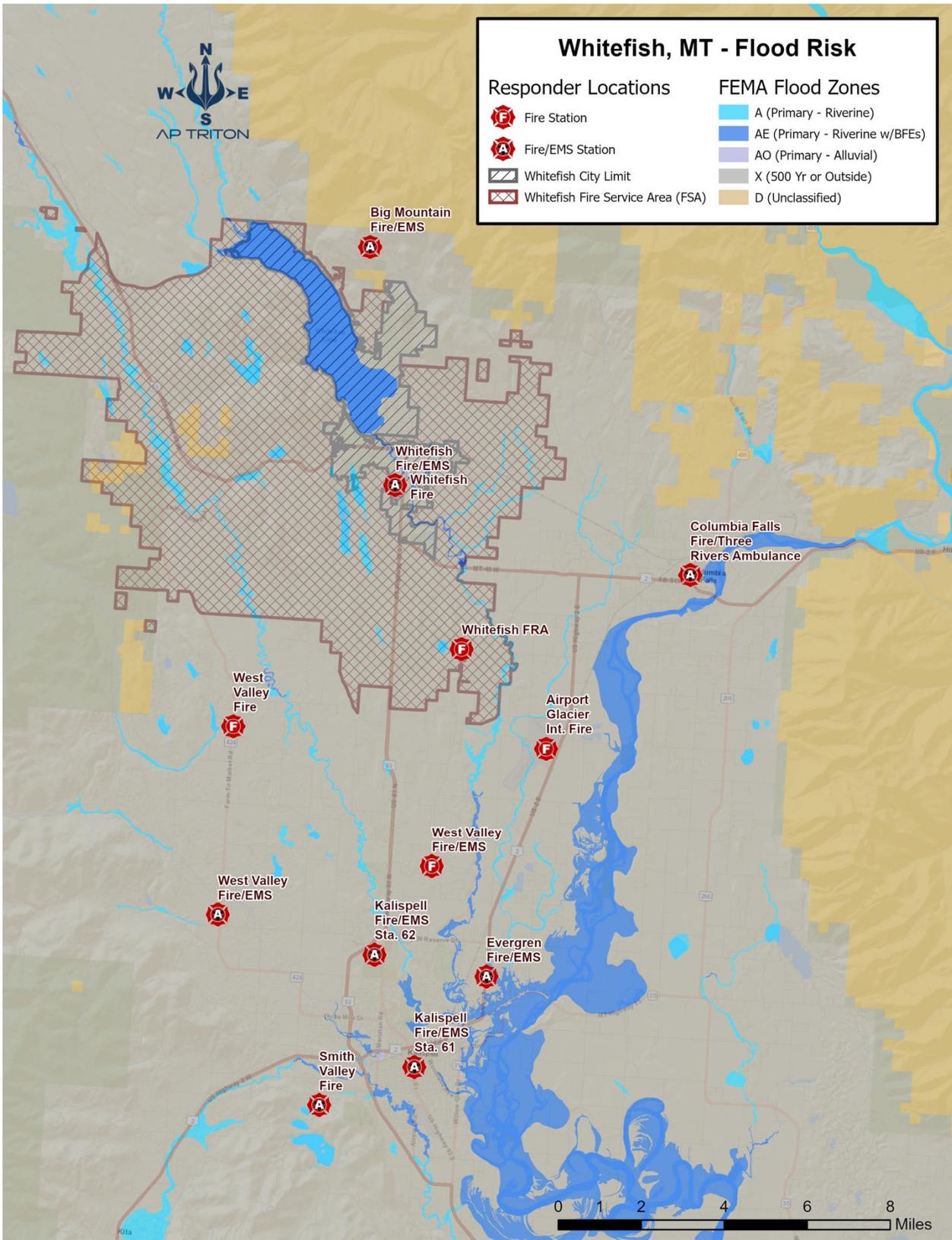
Figure 83: Whitefish Wildfire



Flooding

All Federal Emergency Management Agency Flood Map areas are primarily along the Whitefish River and Cow Creek. These areas are in Regulatory Floodway Zone AE, which is defined as "... subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods" and considered a higher risk. Flooding in Whitefish is minimal but can occur during heavy rainfalls. Another area on the north side of Whitefish Lake and flooding could impact the Delray Road Bridge, thus delaying a response.

Figure 84: Flood Risk



Critical Infrastructure

Highways

The primary highways providing access to and from Whitefish are U.S. Highway 93 and Montana 40. The City has many streets on a grid system with other winding roads with limited access, such as cul-de-sacs. Roads in the WFSA are paved or gravel surfaces and may not be maintained during the winter months. Snowfall will affect response when travel distances are long and require slow speeds due to weather conditions.

Figure 85: 2020 Average Annual Daily Traffic Counts⁴³

Location	Average Annual Daily Traffic Count	
	Vehicles	Trucks
U.S. 93 between Monegan and 19 th St.	24,476	670
U.S. 93 between 3 rd and 4 th	12,411	670
Baker Ave between RR tracks & Edgewood Pl.	14,651	395
U.S. 93 between Lion Mtn Rd and Fairway Dr.	7,705	567
E 2 nd St between Somers and Columbia Ave.	3,618	N/A

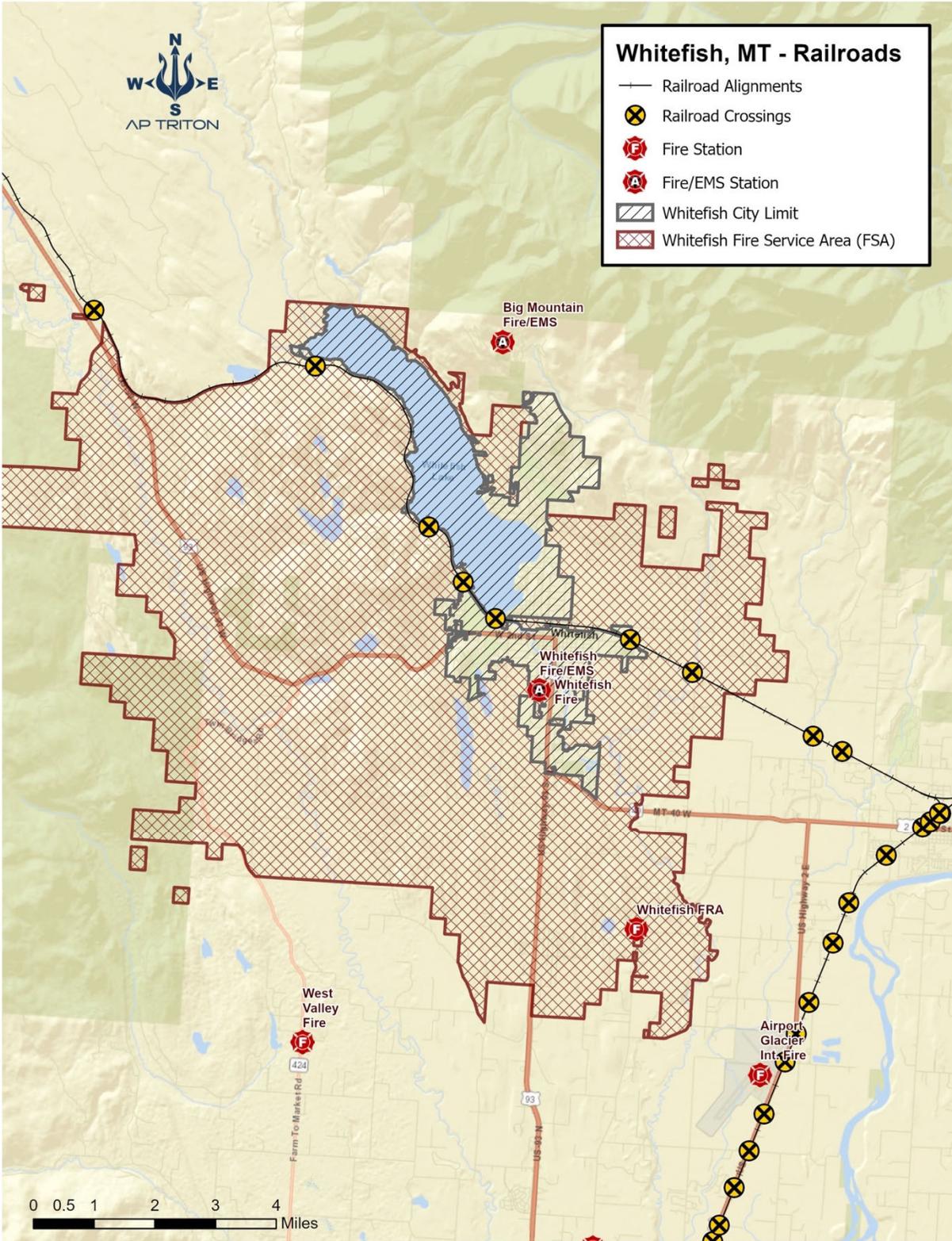
Rail

BNSF operates the rail line that passes through Whitefish. Amtrak operates the Empire Builder passenger train daily to Seattle and Portland to the west and Chicago to the east.

There are numerous rail crossings in the district, but the Federal Railroad Administration data only identified four accidents at the crossings since 1990. The most recent incident occurred in 2018, involving a BNSF snowplow and a pickup truck at the Birch Point Drive crossing with no injuries.

The rail line creates risks for WFD because of the type of commodities transported daily through the district. BNSF operates approximately 20-30 freight trains daily through Whitefish. Since 1990, there have been 16 accidents involving trains along the main rail line or the switchyard. Eight of the accidents were derailments.⁴⁴

Figure 86: Railroads and Crossings



Energy

The ability to provide sustained energy, such as electrical, natural gas, or propane, is necessary for many in the communities. Services for communications to traffic signals to normal operations all require energy. Energy sources range from electricity generation, transmission systems, fuel distribution, storage tanks, and natural gas pipeline.

Electricity

Flathead Electric Cooperative (FEC) provides electrical power for Whitefish and Flathead County. Most of the electrical power for FEC is from hydropower (80%) that feeds more than 4,500 miles of overhead and underground powerlines⁴⁵. Several high voltage transmission power lines travel through the district. FEC maintains lines that travel along Whitefish Stage Road, U.S. Highway 93, Voerman Road, Wisconsin Avenue, and East Lake Shore Drive. These lines are 69 kV. Bonneville Power Administration operates 115 kV lines that transverse the district's south end and turn northwest along U.S. Highway 93. Lincoln Electric Cooperative provides service to the remainder of the district.

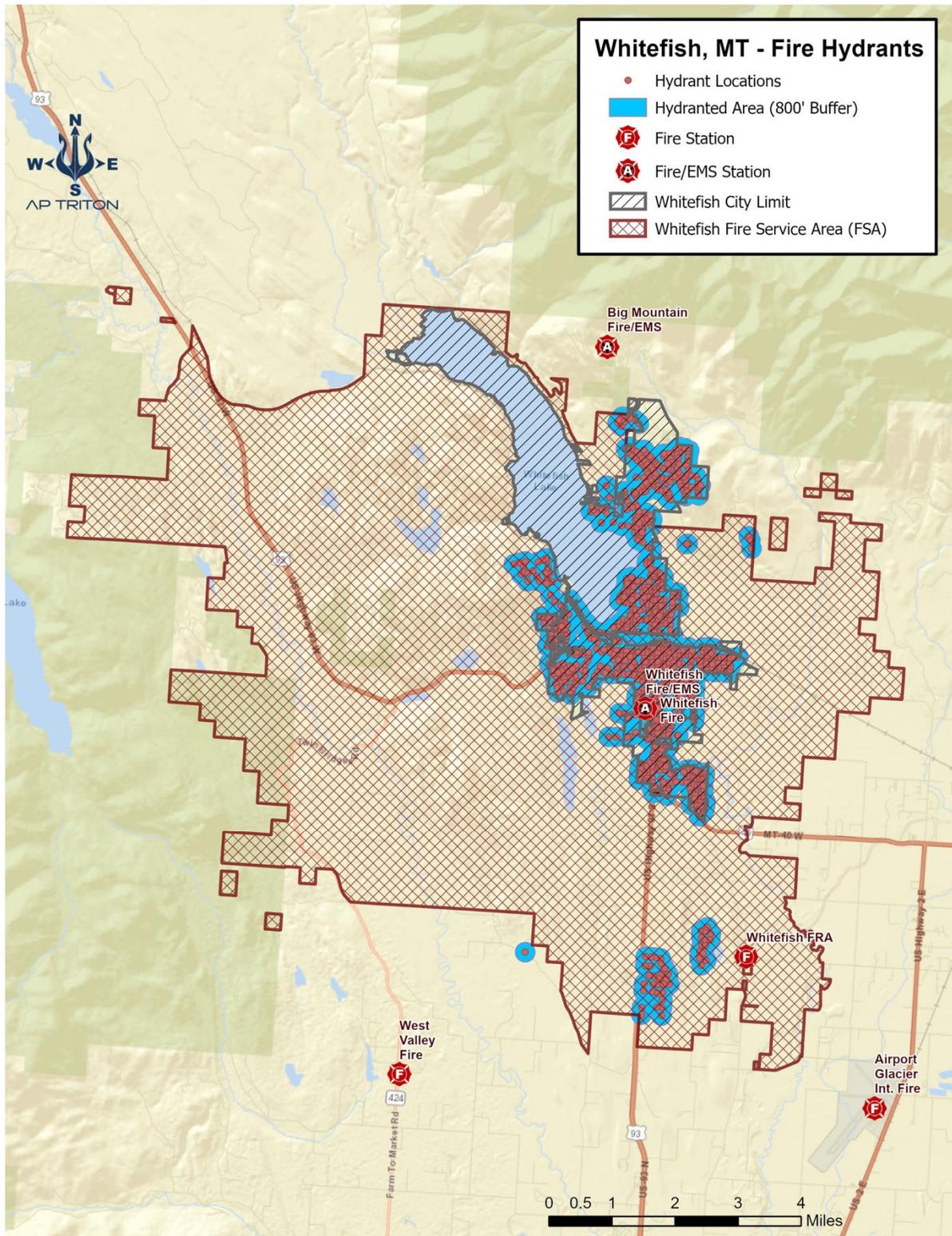
Natural Gas

NorthWestern Energy provides natural gas to Whitefish and Flathead County. A natural gas transmission line enters Whitefish from the east and runs along the BNSF rail line. A natural gas leak can occur when the line is cut during construction and will create a hazardous condition for the public and emergency responders. Additional natural gas lines are being built in the district to provide service in the community.

Water

The City of Whitefish operates its water system that provides potable drinking water for the public and for use by WFD. A water plant expansion is underway to increase the daily capacity by six million gallons per day (MGD) and five MGD if one filter is out of service. There are three elevated storages for the system, and 78 miles of water mains are maintained. 872 hydrants are inspected by WFD and maintained by the public works department.

Figure 87: Hydrant Locations



Communications

Communication is vital to the community and includes cellular phones, Voice over Internet Protocol (VoIP) telephone systems, wireless data access, or transmission lines from the local telephone company. Each of these systems allows the public to notify emergency services of an incident. When these essential communication systems fail, it impacts the community when an emergency occurs. In addition, Internet services are necessary for the public, commercial establishments, and emergency services to conduct business daily.

WFD is dispatched by the Flathead 911 Emergency Communications Center (FECC) located in Kalispell. FECC is a combined 911 center that provides dispatch services for fire, EMS, law enforcement, animal wardens, Office of Emergency Services, Alert Medical Helicopter, and several search and rescue teams. Flathead County, the Cities of Kalispell, Whitefish, Columbia Falls, and unincorporated areas fund the 911 Center through a county-wide assessment and telephone surcharges.

The terrain in Flathead County creates problems for responders when radio communications are not received by on-scene personnel or by the 911 Center. When responders cannot communicate with the 911 Center, utilizing a tactical channel is necessary for fireground communications. The lack of cellular telephone and radio service is prevalent in the northwest areas of the district, and WFD should consider other forms of communications such as a satellite telephone.

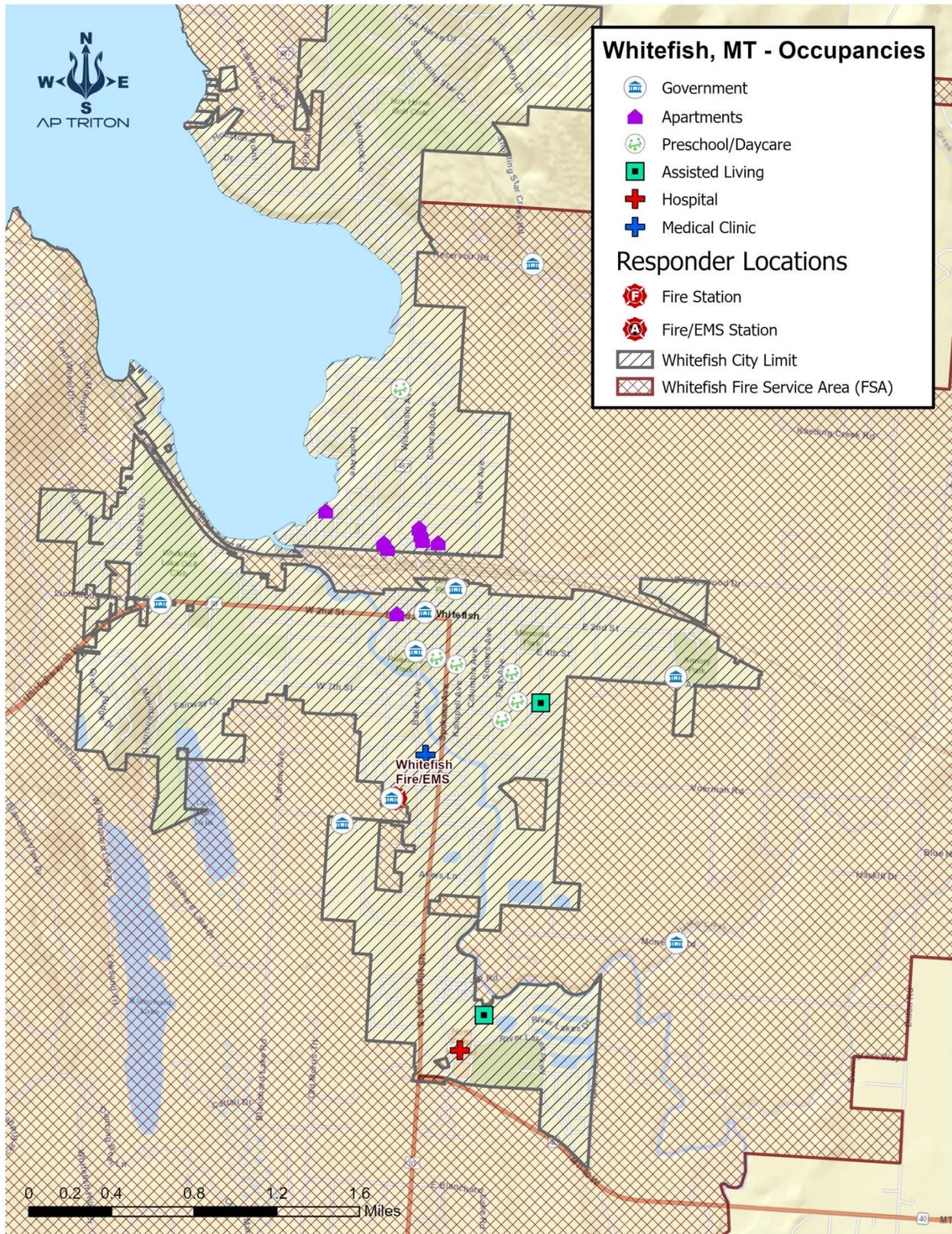
Governmental Facilities

Buildings that provide services for the public from local or other governmental units are considered essential facilities and should receive special attention. These facilities allow the public to receive community services, and fire department personnel should be familiar with the properties during an emergency.

Occupancies

Each of the following occupancy types provides an overview of Whitefish's commercial properties that may require mutual or automatic aid during a major incident. Each should receive a pre-incident plan.

Figure 88: Occupancy Types



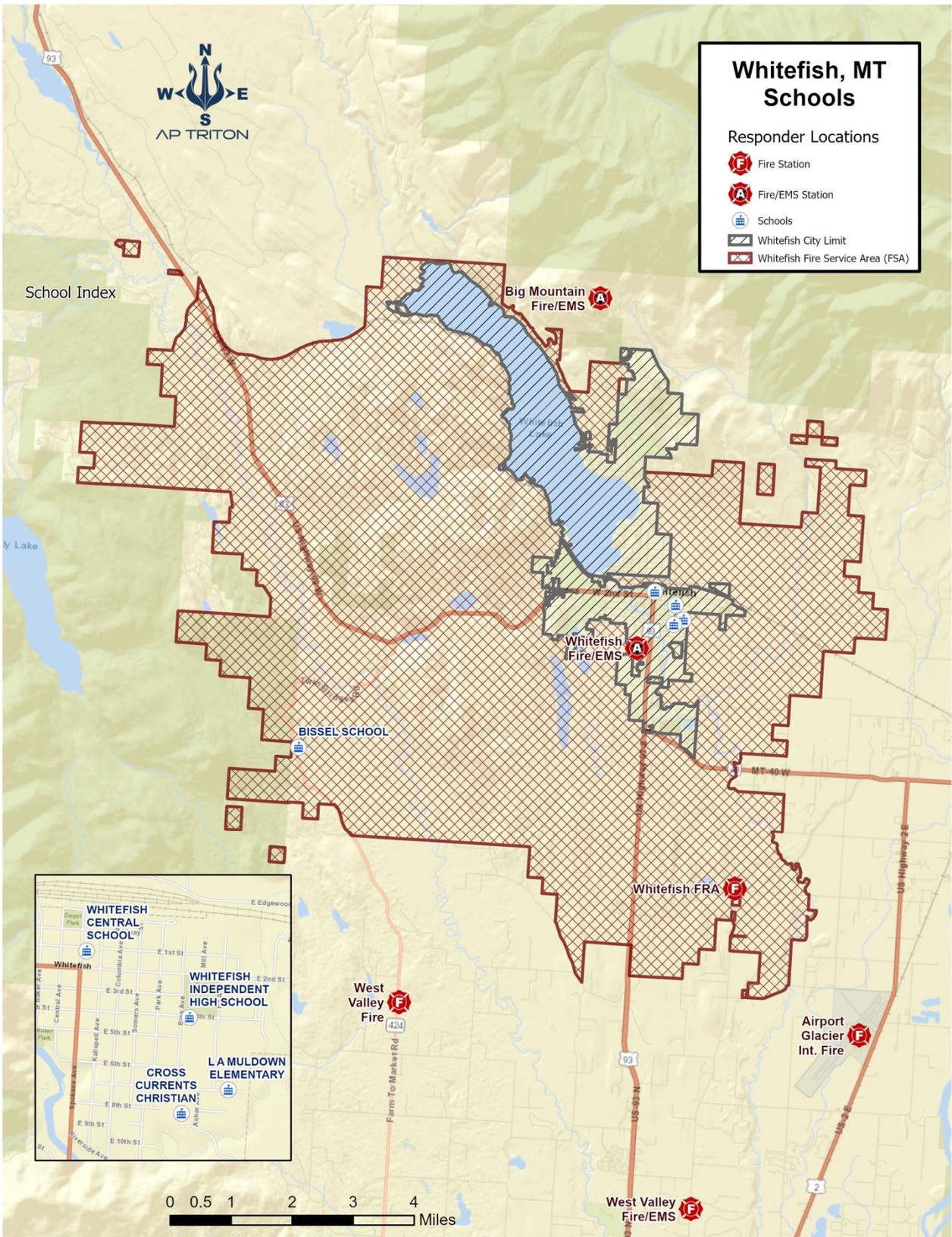
Educational & Childcare Facilities

Public and private schools and childcare facilities present additional risks in Whitefish, such as mass casualty incidents, and are considered target hazards. Many of these occupancies are within ½ mile of the BNSF rail line and can present evacuation concerns during a hazardous materials release. The Whitefish School District #44 has more than 1,500 students in four schools – Christian Academy, Whitefish Elementary, Middle, and High School. The district also provides a non-traditional school for grades 10-12.

Childcare facilities for infants, pre-school, and after school care for children create specific concerns because of their age. For example, very young children need additional assistance from childcare workers to evacuate a building during an emergency. An evacuation may require the employees to carry the infants.

WFD currently assists childcare facilities and schools when developing their emergency operations plans.

Figure 89: Whitefish Schools



Assembly

Public assembly occupancies are at a higher risk because of the number of people allowed in a single location, such as a place of worship, entertainment, or eating establishment. Outdoor special events may include large sporting venues or outside festivals such as street fairs.

These occupancies or outdoor venues may require many responders during an incident if a fire or active shooter incident occurs. Significant outdoor events require a public safety plan to include emergency vehicle access and egress, fire protection, emergency medical services, public assembly areas, directing of vehicular traffic and attendees, vendor and food concessions, need for law enforcement, fire, or EMS personnel, and weather monitoring.

Hospitals and Medical Facilities

Hospitals and medical facilities provide medical care in the community function to assist those who are sick or seeking medical attention. Hospitals are at a higher risk because of the inability of patients to self-evacuate the facility. These locations require additional fire and life-safety requirements to ensure more protection for the occupants. Other protection includes fire alarms to notify the occupants of an emergency and fire sprinkler systems to control or extinguish a fire.

The Logan Health Whitefish is a 25-bed facility that offers numerous services, such as a step-down unit for intermediate care levels, obstetrics, behavioral health, outpatient services, and a 24-hour emergency room.

Nursing & Assisted Living Facilities

As people age, the need for additional care may require them to seek a facility to meet their needs. Depending on their mobility or cognitive conditions, they may need more assistance when evacuating the building. Staff should have developed plans for removing the occupants or patients during an emergency. Much like a hospital, these locations require additional fire protection systems to protect the occupants. Special locking arrangements are allowed for areas where patients with dementia or Alzheimer's are living to prevent them from leaving the facility.

Whitefish Care and Rehab and The Springs at Whitefish provide assisted living and memory care at their facilities and impact WFD ambulance service due to the high number of responses.

Multi-Family Housing

Although multi-family housing has fewer fires caused by electrical or heating malfunctions, the risk of cooking fires is twice the rate of other types of building fires.⁴⁶ Updated building and fire codes now require these buildings to have a residential fire sprinkler system installed and interconnected smoke alarms in all bedrooms, hallways, and floors. These fire protection systems are designed to provide enough time for the occupants to evacuate the building.

The attics in many residential fire sprinkler installations are unprotected and can create problems when a fire reaches this location. Fires can spread from exterior areas, such as when landscaping materials ignite and travel to the roof or attic.

Buildings Three of More Stories

Structures that are three or more stories in height typically require an aerial apparatus with an elevated master stream. A ladder truck may be necessary to access the upper floors or roofs of higher buildings since most ground ladders cannot reach these heights. The Insurance Service Office (ISO) rating includes the availability of a ladder truck within 2.5 miles of all buildings.

During the most recent ISO inspection, WFD only received 0.55 credits out of 4.0. Ladders available from surrounding departments are not within the 2.5 miles to receive credit. Although the current building height is only three stories, WFD should consider adding an apparatus with an elevated master stream when personnel cannot direct water above a fire. Currently, only ground-mounted master streams are available for fireground operations. WFD only has 35-foot ground ladders available on apparatus that cannot reach the roofs of buildings because of minimal setbacks between properties or landscaping that prevent proper ladder placement. Many peaked roofs are longer than the roof ladders used by WFD, which present a safety concern for firefighters during fireground operations.

Large Square Footage Buildings

Large buildings, such as warehouses, strip malls, and large "box" stores, need more significant volumes of water for firefighting and require more firefighters to advance hose lines long distances into the building. An incident at one of these locations will overwhelm WFD and require outside assistance.

Economic Impact

Communities began creating local fire departments when there was a need to improve fire protection as the area grew or because of a significant fire. As a fire department grows, funding increases to meet community expectations as service demand rises.

Although the role of fire insurance is to provide a system to hedge against a substantial loss to property and contents, the fire department's primary function is to prevent or mitigate a fire from occurring. The economic impact of a fire department can be difficult to quantify. Still, studies have shown how saving a significant building or employer from a fire maintains the property and sales tax revenues and keeps people employed.

The Phoenix, Arizona Fire Department (PFD) conducted a study to determine the effectiveness of its department and how it affects the local economy. PFD partnered with their local union and Arizona State University's W.P. Carey School of Business to review a fast-moving fire at a manufacturing facility. The study found that 203 jobs would have been lost, actual gross state product would be reduced by \$20 million, and real disposable personal income would be reduced by \$9 million. The business continued to operate because of a quick response and a well-trained fire department, thus not impacting continued tax revenues.⁴⁷

An additional study in Canada in 2015 reviewed commercial buildings. The study evaluated 110 incident responses to commercial properties and established the economic value of \$1.55 billion and 23,903 jobs saved.⁴⁸ The study recognized that all buildings would not be a total loss but may impact the community for some time before returning to full operation.

The City of Whitefish could experience a similar loss in revenue from a fire that would impact the downtown area or large employer. An analysis of even numbers in the 200 block of Central Avenue provided the following information.⁴⁹ The amount of resort tax collected for this block was approximately \$96,600. This revenue provides funding for capital street and park projects, property tax relief, and a conservation easement for the City's watershed.

Figure 90: Whitefish Property Collections

Building Taxable Values	Whitefish City	Whitefish Permissible Medical Levy	WFD	Resort Tax	Total Taxes*
\$129,123	\$12,016	\$2,588	\$3,099	-\$3,803	\$13,898

*This does not include taxes for Education & Flathead County or other fees charged by Whitefish.

Other large value properties would significantly impact the community because of property, sales, resort taxes not collected, and higher unemployment from job loss. Businesses that provide food for restaurants and other logistical needs for daily operations would see a loss, thus impacting their sales. Others affected would include taxes for education (local and state schools) and Flathead County.

To quote Benjamin Franklin, "An ounce of prevention is worth a pound of cure." The goal of WFD and the City is to prevent or mitigate a fire that would impact the community from occurring. This report will outline areas for improvement to make the Whitefish response area safer through prevention and emergency response.

Section III: FUTURE DELIVERY SYSTEM MODELS

RESPONSE STANDARDS & TARGETS

Performance Benchmarks

WFD is currently developing performance benchmarks for service delivery. AP Triton recommends the development and adoption of formal performance standards. The following sections are based on best practices and can be used as examples for the development of fire, EMS/Rescue, and hazmat performance benchmarks.

WFD currently employs 19 career firefighters including the Chief and Assistant Chief, supported by 9 volunteer firefighters, which classifies the WFD as a mostly-career combination fire department with 67% career. The classification categories are defined as:

- Career FD - 85% or more of the membership is career.
- Combination FD - Membership is a mix with less than 85% either career or volunteer.
- Volunteer FD - 85% or more of the membership is volunteer.

Once the City of Whitefish becomes a Montana Class 1 City (population over 10,000), they will no longer be able to supplement their career staff with volunteers. The 2019 census puts Whitefish's population at 8,295. As a tourist destination town with numerous second homes, the WFD is already serving a population over 10,000 and will more than likely become a Class 1 City at the next census. For this benchmark discussion, there are two industry consensus standards:

- NFPA 1710, Standard for Career Fire Departments.
- NFPA 1720, Standard for Volunteer Fire Departments.

We recommend using NFPA 1710 for responses within the City and using NFPA 1720 for responses outside the City. NFPA 1720 divides their benchmarks based on population density and travel distances more representative of the areas surrounding the City.

The WFD response area surrounding the City includes differing demographic areas. The NFPA 1720 standard uses the following definitions to describe each of the demographic areas.

- URBAN - More than 1,000 people per square mile
- SUBURBAN - Between 500 and 1,000 people per square mile
- RURAL - Less than 500 people per square mile
- REMOTE - Travel distance from the fire station is more than 8 miles

Until additional satellite fire stations are added and staffed, performance metrics will be near impossible to meet from a single fire station in the City.

Fire Suppression Benchmarks

FIRST ARRIVING FIRE UNIT – ALL FIRE RELATED INCIDENTS

For 90% of all low, moderate, high, and extreme risk fire-related incidents, the total response time for the arrival of the first due unit, staffed with a minimum of one officer and two firefighters shall be:

- URBAN Area - Arrival within 6 minutes, 20 seconds (6:20)
- SUBURBAN Area - Arrival within 7 minutes, 20 seconds (7:20)
- RURAL Area - Arrival within 7 minutes, 20 seconds (7:20)
- REMOTE Area - 1 minute, 30 seconds (1:30) turn out time plus travel time

Upon arrival the first in unit shall:

- Establish command
- Declare incident priorities
- Safely commence lifesaving / property conservation interventions
- Request additional needed resources
- Provide for responder and civilian safety

Within 5 minutes of arrival has established a water supply capable of delivering 250 gpm continually for 2 hours. Additional effective response forces (ERF) for LOW-RISK FIRE incidents include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 3 additional firefighters arriving within 8 minutes, 20 seconds (8:20)
- SUBURBAN Area - 3 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
- RURAL Area - 3 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
- REMOTE Area - 3 additional firefighters based on travel time

Additional effective response forces (EFR) for MODERATE / HIGH-RISK FIRE incidents include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 14 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
- SUBURBAN Area - 14 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
- RURAL Area - 14 additional firefighters arriving within 12 minutes, 20 seconds (12:20)

- REMOTE Area - 14 additional firefighters based on travel time

ERF staffing shall consist of Whitefish firefighters, career and volunteer, plus automatic and mutual aid firefighters working under the command of the Whitefish Incident Commander. The Whitefish Incident Commander is authorized to request additional resources to enhance safety and control of the incident.

Unlike many urban areas, Whitefish's immediate neighboring automatic and mutual aid partners (Olney FD, West Valley FD, and Columbia Falls FD) are volunteer fire departments with a delayed response time as they do not have staffed stations and have longer response distances. Whitefish Incident Commanders must adjust their tactics based on the on-scene resources.

EMS/Rescue Benchmarks

FIRST ARRIVING UNIT for EMS/Rescue Incidents

For 90% of all low, moderate, high, and extreme risk EMS/Rescue related incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters at least one of which is certified at Paramedic level. This first arriving unit shall be equipped with Advanced Life Support (ALS) equipment that would allow for advanced patient care prior to the arrival of a transport-capable unit - either an ambulance or medical helicopter.

- URBAN Area - Arrival within 6 minutes (6:00)
- SUBURBAN Area - Arrival within 7 minutes (7:00)
- RURAL Area - Arrival within 7 minutes (7:00)
- REMOTE Area - 1 minute, 30 seconds (1:30) turn out time plus travel time

EMS is the emergency response, care, and transport of a patient. RESCUE is the freeing or movement of a patient to a safe area. This may be carrying a person down the stairs or extricating them from a motor vehicle accident, etc.

Upon arrival the first in unit shall:

- Establish command
- Conduct an incident size up
- Conduct patient assessment
- Request any additional or specialized resources
- Rescue patient to a safe location
- Provide for responder and civilian safety
- Assist with packaging and transfer of the patient to a transport unit

For most labor-intensive EMS/Rescue incidents, the WFD will staff the Command and Rescue portions and implement the County's multi-causality incident (MCI) plan for transfer of patients to the area hospitals.

Additional effective response forces (ERF) for MODERATE RISK EMS/Rescue incidents include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 3 additional firefighters arriving within 8 minutes (8:00)
- SUBURBAN Area - 3 additional firefighters arriving within 10 minutes (10:00)
- RURAL Area - 3 additional firefighters arriving within 10 minutes (10:00)
- REMOTE Area - 3 additional firefighters based on travel time

Additional effective response forces (ERF) for HIGH-RISK EMS/Rescue incidents include the addition to the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 10 additional firefighters arriving within 10 minutes (10:00)
- SUBURBAN Area - 10 additional firefighters arriving within 12 minutes (12:00)
- RURAL Area - 10 additional firefighters arriving within 12 minutes (12:00)
- REMOTE Area - 10 additional firefighters based on travel time

Additional effective response forces (ERF) for EXTREME RISK EMS/Rescue incidents include the addition to the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 13 additional firefighters arriving within 12 minutes (12:00)
- SUBURBAN Area - 13 additional firefighters arriving within 14 minutes (14:00)
- RURAL Area - 13 additional firefighters arriving within 14 minutes (14:00)
- REMOTE Area - 13 additional firefighters based on travel time

Most of the fire departments within Flathead County are All-Hazard Response Agencies so labor-intensive Rescue Operations may pull manpower from the transporting ambulance resources or vice versa. Specialized Rescue training and certification is limited throughout the County Fire Departments. Whitefish does provide:

- Vehicle Extrication
- Low Angle Rope Rescue
- Water Rescue
- Ice Rescue
- Confined Space Rescue

Due to training and equipment shortages Whitefish FD does NOT provide:

- Swift Water Rescue
- High Angle Rope Rescue
- Collapse Rescue

Whitefish hopes to add Trench Rescue to their capabilities.

Hazardous Materials Benchmarks

First arriving unit to a HAZMAT Incidents: For 90% of all low, moderate, high, and extreme risk HAZMAT-related incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters all trained to the Hazardous Materials Operations Level shall be:

- URBAN Area - Arrival within 6 minutes, 20 seconds (6:20)
- SUBURBAN Area - Arrival within 7 minutes, 20 seconds (7:20)
- RURAL Area - Arrival within 7 minutes, 20 seconds (7:20)
- REMOTE Area - 1 minute, 30 seconds (1:30) turn out time plus travel time

Upon arrival the first in unit shall:

- Establish command
- Conduct an incident size up, set incident priorities
- Secure the scene and establish initial Hot, Warm, and Cold Zones
- Notify Flathead County OES and Montana DES's Duty Officer
- Request any additional and specialized resources
- Provide for responder and civilian safety
- Work in a defensive manner to minimize the threat to life, property, and environmental damage
- Assist specialized teams with decontamination

Additional effective response forces (ERF) – MODERATE RISK HAZMAT INCIDENTS include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 4 additional firefighters arriving within 6 minutes, 20 seconds (6:20)
- SUBURBAN Area - 4 additional firefighters arriving within 7 minutes, 20 seconds (7:20)
- RURAL Area - 4 additional firefighters arriving within 7 minutes, 20 seconds (7:20)
- REMOTE Area - 4 additional firefighters based on travel time

Additional effective response forces (ERF) – HIGH RISK HAZMAT incidents include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 9 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
- SUBURBAN Area - 9 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
- RURAL Area - 9 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
- REMOTE Area - 9 additional firefighters based on travel time

Additional effective response forces (ERF) – EXTREME RISK HAZMAT incidents include the initial arriving unit consisting of one officer and two firefighters (ERF of 3). The additional ERF response 90% of the time shall be:

- URBAN Area - 17 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
- SUBURBAN Area - 17 additional firefighters arriving within 14 minutes, 20 seconds (14:20)
- RURAL Area - 17 additional firefighters arriving within 14 minutes, 20 seconds (14:20)
- REMOTE Area - 17 additional firefighters based on travel time

Public Assist & Service Call (Other) Benchmarks

For 90% of all public assist and service incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters, shall be:

- URBAN Area - Arrival within 6 minutes, 20 seconds (6:20)
- SUBURBAN Area - Arrival within 7 minutes, 20 seconds (7:20)
- RURAL Area - Arrival within 7 minutes, 20 seconds (7:20)
- REMOTE Area - 1 minute, 30 seconds (1:30) turn out time plus travel time

Upon arrival the first in unit shall:

- Establish command
- Conduct an incident size up, set incident priorities
- Initiate mitigation efforts
- Provide for responder and civilian safety

WHITEFISH FIRE DEPARTMENT RECOMMENDATIONS

General

Recommendation 1: Plan and execute a strategic planning process following the completion of the Master Plan.

- Description: For an Organization Master Plan to provide tangible guidance and results, a strategic planning process is required. A strategic plan prioritizes goals and objectives, establishes timelines, and assigns responsibility.
- Estimated Financial Cost/Saving: If the organization has the ability to complete the project internally, the costs are all in staff time. If outside consultant assistance is required, the process would cost approximately \$21,000.

Recommendation 2: Develop an internal/external communication process and policy.

- Description: There appears to be an opportunity to improve communication between administration, line personnel, the City of Whitefish, and the Whitefish Fire Service Area.
- Estimated Financial Cost/Saving: Minimal cost.

Recommendation 3: Review and consolidate current mission, vision, and value statements reflecting the overall goals and purpose of the organization.

- Description: The current mission statement is comprehensive but needs to be condensed into a single sentence or phrase. The mission, vision, and value statements are generally reviewed during the strategic planning process.
- Estimated Financial Cost/Saving: Minimal cost.

Recommendation 4: Implement a process for the periodic review of standard operating guidelines (SOGs).

- Description: Develop and implement a process for the annual review of SOGs and communicate updates to all staff.
- Estimated Financial Cost/Saving: Minimal cost.

Staffing & Other Personnel Issues

Recommendation 1: AP Triton recommends adding staff to the Prevention Division for building plan reviews and inspections.

- Description: Based on the above recommendation Assistant Chief could focus on operational responsibilities, including EMS and training requirements.
- Estimated Financial Cost/Saving: The recommended position should be, at a minimum, a full-time employee to replace the part-time (.25 FTE) position currently budgeted.

Fire Inspector – Full Time	
Salary (\$21,476 x 4)	\$85,904
Social Security/Medicare (7.65%)	\$6,572
Workers Compensation	\$5,800
Medical Insurance	\$21,148
Pension	\$12,336
Other	\$1,048
Total	\$132,808
Less Amount Previously Budgeted for .25 FTE	\$33,834
Increase in Costs:	\$98,974

- As an alternative and upon further evaluation and workload assessment, the City and Department should explore combining this position with a current position within the building department.

Recommendation 2: Ensure that a minimum of five firefighters are on duty 24/7 for ERF coverage during EMS-related incidents.

- Description: When an EMS incident occurs, which accounts for 78% of call volume, two of the crew were assigned to the ambulance and unavailable for approximately one hour. During this period, the effective response force is two or fewer firefighters, which constitutes an inability to fight a structure fire or provide any form of safe rescue.
- Estimated Financial Cost/Saving: The staffing model should be increased by one full-time firefighter/EMT. This would result in an additional three positions, one per shift. (The data provided by staff did not include the cost of medical insurance for firefighters.)

Description	
Firefighter/Paramedic	
Salary	\$59,503
Social Security/Medicare (7.65%)	\$4,518
Workers Compensation	\$6,023
Medical Insurance	\$26,879
Pension	\$4,060
Other	\$273
Total for Each Position	\$96,846
Number of Shifts	3
Increase in Costs:	\$290,538

Recommendation 3: AP Triton recommends a staffing model with two paramedics on duty per shift.

- Description: The cost savings of a balanced crew may provide an opportunity to add overall staffing.
- Estimated Financial Cost/Saving: The following figure compares the cost of a firefighter/paramedic against a firefighter/EMT using starting compensation and benefit amounts.

Description	
Firefighter/Paramedic	
Salary	\$63,239
Social Security/Medicare (7.65%)	\$4,838
Workers Compensation	\$6,450
Medical Insurance	\$26,879
Pension	\$4,348
Other	\$533
Total for Each Position	\$106,287
Firefighter/EMT	
Salary	\$59,053
Social Security/Medicare (7.65%)	\$4,518
Workers Compensation	\$6,023
Medical Insurance	\$26,879
Pension	\$4,060
Other	\$273
Total for Each Position	\$96,846
Cost Increase per position	\$9,441

Recommendation 4: Develop policies and procedures specific to limiting cross-contamination of equipment and uniforms in the station's living quarters.

- Description: The organization needs to take all reasonable precautions to limit exposure and provide consistent medical monitoring.
- Estimated Financial Cost/Saving: The costs associated with developing the policies and procedures to limit exposure depend on internal staff's ability to establish the policies or whether it would be necessary to acquire the policy from a third party on a fee basis. Costs of providing consistent medical monitoring will depend on negotiations with either a local hospital or other medical providers.

Recommendation 5: Future hiring processes should focus on recruiting women and minorities commensurate with the community's demographics.

- Description: Supporting diversity consistent with the community demographics enhances overall emergency response.
- Estimated Financial Cost/Saving: Costs associated with this recommendation would include developing a strategy to reach the targeted candidate pools, preparing the job posting notices, reviewing the post notice language by the City's Attorney, any advertising deemed necessary to get the message out to the target candidates.

Recommendation 6: Develop a comprehensive program to support the mental health of first responders.

- Description: The fire service has realized that mental health services are necessary for all personnel due to the traumatic effects of emergency response. The program should go beyond the standard employee assistance program and be a part of a comprehensive health care program.
- Estimated Financial Cost/Saving: To be determined based on current health care plans provided by the City.

Capital Facilities, Apparatus, & Equipment**Recommendation 1: Develop SOGs for the maintenance and repair of small and large equipment.**

- Description: Equipment readiness is imperative to a successful outcome to fire or rescue events. Coupled with the review of the SOGs and Department policies should be the hiring or retention of a qualified mechanic that is certified to work on fire apparatus. An alternative to a different position would be training to an EVT certification level, a current City mechanic providing services on non-emergency vehicles, and an incentive or certification stipend.
- Estimated Financial Cost/Saving: To be determined

Recommendation 2: AP Triton recommends the long-term goal of acquiring an aerial apparatus.

- Description: The ability of a fire department to arrive on the scene of an incident equipped with personnel, equipment, and water sufficient to mitigate a fire effectively is a critical factor for an ISO evaluation.
- Estimated Financial Cost/Saving: The cost of an aerial apparatus depends on the length of the aerial device and the various options included. Evaluation of recent acquisitions by other departments indicates this cost could be between \$875,000 and \$1,300,000 or more. The acquisition could utilize a capital lease or tax-exempt financing with payments spread over ten years or cash payment.

Recommendation 3: Perform a station location study to determine future needs for service demand.

- Description: A station location study evaluates future service delivery growth and determines when additional stations and staffing will be required. The City should consider the recommendations found in the CMU study relating to ISO requirements.
- Estimated Financial Cost/Saving: \$25,000 -\$30,000

Recommendation 4: WFD should consider hiring a qualified mechanic who is certified to work on fire apparatus.

- Due to limited access to qualified emergency vehicle mechanics, an internal position would provide more efficiency and decreased technical repairs and maintenance costs.
- Estimated Financial Cost/Saving: To be determined

Emergency Medical Transport & System Oversight**Recommendation 1: Develop a comprehensive medical quality assurance program.**

- Description: A comprehensive quality improvement program requires evaluating performance, efficacy, and utilization to determine the highest level of care.
- Estimated Financial Cost/Saving: Minimal cost.

Recommendation 2: Increase interaction and involvement with the medical director for Flathead County.

- Description: Oversight is primarily complaint/adverse outcome-driven. A more proactive approach can support the future challenges of EMS.
- Estimated Financial Cost/Saving: Potential cost increase would be dependent on the current agreement with the medical director.

Recommendation 3: Perform a cost-benefit analysis on all staffing, equipment, and supplies not mandated by the government or industry standards.

- Description: An opportunity for improvement relates to medications administered and procedures performed by WFD.
- Estimated Financial Cost/Saving: The cost of a third-party consultant to perform a study to evaluate the opportunities to increase efficiency within the Fire and EMS Divisions is estimated to be between \$10,000 and \$15,000.

Recommendation 4: AP Triton recommends implementing a partially automated inventory control system.

- Description: Various systems have proven cost-effective in the long run, especially in reducing expiration waste and lost supplies.
- Estimated Financial Cost/Saving: The cost of implementing an automated inventory control system will be dependent on the software selected and the number of units required to be inventoried. Such programs may be acquired for between \$2,500 and \$10,000, dependent on quantities of inventory items and levels of sophistication needed.

Recommendation 5: Consider a Mobile Integrated Healthcare-Community Paramedicine program.

- Description: Triton believes that some form of MIH-CP program could benefit both the community and WFD in the future.
- Estimated Financial Cost/Saving: The cost to develop a Mobile Integrated Healthcare/Community Paramedicine program has numerous elements to be considered. Will the program require additional medical director oversight and, if so, the cost of the increase in services? Can the program be implemented with the current staffing level and, if not, what level of certifications will be required? Will the program require an additional vehicle and, if so, what type? How many hours a week will the program operate? Is there a funding source from which to recover the costs of the program?

Finance and Ambulance Transport Fees**Recommendation 1: The City should establish objectives for cost recovery of EMS services.**

- Description: These objectives include
 - Offsetting staffing costs
 - Replacing capital assets
 - Increasing service levels
 - Additional services such as MIH/CP programs
- Estimated Financial Cost/Saving: The cost of this recommendation is internal staff time to develop these objectives.

Recommendation 2: The City should conduct a complete cost study for both the engine companies and the ambulances.

- Description: Determine all transport components to establish the total cost of service services for EMS activities.
- Estimated Financial Cost/Saving: A third-party study to evaluate the costs of providing EMS transport and fire first responder services and make recommendations to increase revenues for the organization could be performed for \$15,000 - \$25,000.

Recommendation 3: The City should establish rates based on the objectives set for EMS cost recovery.

- Description: Rates should be based on the overall cost of providing ambulance transport.
- Estimated Financial Cost/Saving: The establishment of cost recovery rates could be included as an outcome in the Study discussed in Recommendation 2.

Recommendation 4: Consider implementing a first responder fee for engine company response to EMS.

- Description: Capturing first responder EMS revenue associated with a high tourism population would offset service costs.
- Estimated Financial Cost/Saving: The establishment of a fire first responder fee could be included as a requested outcome of the Recommendation 2 study.

Recommendation 5: Implement a treat and non-transport fee for patients that did not require transport.

- Description: Capturing EMS revenue associated with treat and non-transport of patients. High tourism population is a major contributor and a non-transport fee would offset service costs.
- Estimated Financial Cost/Saving: The development of a user fee for this type of service would be the cost to draft the legislation, review the document by the City's attorney and

Recommendation 6: Implement rates for services that meet the objectives and fall within a 28% - 35% collection rate

- Description: By setting the above objectives, the Department can take full advantage of the various subsidy and reimbursement programs.
- Estimated Financial Cost/Saving: This recommendation could also be provided through the study noted in recommendation 2.

Recommendation 7: Continue with the membership program

- Description: The program supports the local population while maintaining appropriate rates for services.
- Estimated Financial Cost/Saving: The Rescue Care program should be evaluated annually to ensure annual fees match increases in costs. The cost to perform that evaluation would be the cost of staff time.

Service Delivery & Performance

Recommendation 1: AP Triton recommends that the City adopt standards or develop specific response performance benchmarks based on local environments.

- Description: The most publicly visible component of an emergency services delivery system is that of response performance.
- Estimated Financial Cost/Saving: The cost of this recommendation will be staff time to evaluate national performance standards, determine recommendations for performance standards for the City of Whitefish, and develop and make a presentation to City management to identify the performance benchmarks that are currently being achieved and seek authorization to adopt the recommended benchmarks for improved service delivery.

Training & Continuing Medical Education

Recommendation 1: AP Triton recommends establishing a regional incident command system with an incident battalion chief and designated safety officer for all major incidents.

- Description: Communication between all regional departments is critical for incident safety.
- Estimated Financial Cost/Saving: The cost of implementing this recommendation will be staff time to develop the plan with neighboring agencies.

Recommendation 2: AP Triton recommends increasing the general requirements for each firefighter relating to hazardous material incident response.

- Description: There is a high risk for hazmat incidents due to the rail transportation of commodities through the area. The Department should consider specific certifications for response to railcar incidents.
- Estimated Financial Cost/Saving: The cost of implementing this recommendation would be to provide a training class compliant with NFPA 1072, Hazardous Materials Technician.

Recommendation 3: AP Triton recommends a Training Officer position be created as funding becomes available.

- Description: The training requirements are defined but appear to lack adequate coordination/constituency between shifts. A training officer position should be implemented with an officer with significant experience.
-
- Estimated Financial Cost/Saving: A training officer position should be implemented with an officer with significant experience.

Description	
Captain – Mid-Range	
Salary	\$63,000
Social Security/Medicare (7.65%)	\$4,820
Workers Compensation	\$6,500
Medical Insurance	\$26,879
Pension	\$3,800
Other	\$700
Total	\$105,699

Recommendation 4: AP Triton recommends establishing a cooperative agreement with Logan Health Kalispell so paramedics can support skill competency.

- Description: The limited patient volume translated to an average of 61 patients per paramedic/firefighter
- Estimated Financial Cost/Saving: The cost to implement this recommendation is staff time to negotiate the agreement with the Hospital and the City's attorney to review the document.

Recommendation 5: Develop focused training relating to service demand when possible, in conjunction with certification requirements.

- Description: The Department should look for areas of improvement relating to actual emergency responses.
- Estimated Financial Cost/Saving: The cost to implement this program would be internal staff costs.

Recommendation 6: AP Triton recommends developing a formal training program with the addition of specific training operation guidelines, lesson plans, and detailed attendance documentation for each firefighter.

- Description: The staffing challenges in the future will require a formalized and consistent training program.
- Estimated Financial Cost/Saving: The cost to implement this program would be internal staff costs.

Recommendation 7: AP Triton recommends the regionalization of training resources.

- Description: Combining training programs will improve the program's cost-effectiveness and promote interagency cooperation.
- Estimated Financial Cost/Saving: The cost to implement this program would be staff time to develop and implement the program with neighboring agencies.

Life Safety Services

Recommendation 1: Develop an overall Community Risk Reduction program

- Description: WFD provides public education services in the community but needs to develop a comprehensive plan that looks at all risks. Hiring a community risk reduction coordinator would allow WFD to improve public relations and manage efforts in the city and WFA.
- Estimated Financial Cost/Saving: Initial cost would include salary and benefits, an administrative office, and a vehicle. It is anticipated this position would be similar to that of an inspector with commensurate pay and benefits.

Description	
Community Risk Reduction Manager	
Salary (\$21,476 x 4)	\$85,904
Social Security/Medicare (7.65%)	\$6,572
Workers Compensation	\$5,800
Medical Insurance	\$21,148
Pension	\$12,336
Other	\$1,048
Total	\$132,808
Less Amount Previously Budgeted for .25 FTE	\$33,834
Salary & Benefits (Recurring):	\$98,974
Staff Vehicle (Pick-up) (Capital)	\$45,000
Total Position Costs	\$143,974

Recommendation 2: Develop a periodic fire and life safety inspection program

- Description: Additional staff to develop and implement a periodic inspection schedule for all commercial businesses can reduce community risks.
- Estimated Financial Cost/Saving: Implementing a schedule to complete fire and life safety inspections will include the cost of a part- or full-time employee is unknown, but revenue from a revised fee schedule can offset the cost. See Staffing and Personnel Recommendation 1.

Recommendation 3: Adopt Section 105 of the Montana Fire Prevention Code and review the existing fee schedule.

- Description: Adopting Section 105 of the Montana Fire Prevention Code (MFPC) and reviewing current permitting fees through the Planning and Building Department allows the City to increase revenue.
- Estimated Financial Cost/Saving: The collection of additional revenue is unknown without further analysis but restructuring the existing fee schedule to include permits allowed by Section 105 of the MFPC is expected to increase revenues.

Recommendation 4: Consider implementing company inspections program.

- Description: Fire and life safety inspections are an essential program offered by WFD, and instituting company inspections allows shift personnel to assist in fire code enforcement to reduce risks.
- Estimated Financial Cost/Saving: Costs include personnel attending Montana fire inspector certification classes.

Recommendation 5: Develop a records management system policy or guideline for data entry.

- Description: Developing a policy or guideline for WFD's record management system can provide consistent data entry and ensure its accuracy for analysis.
- Estimated Financial Cost/Saving: Minimal costs

HazMat Response**Recommendation 1: Improve current hazardous materials response**

- Description: Although the Whitefish has remote areas, the risk of a hazardous materials incident is high because of the BNSF rail line that passes through the District. The current level of service provided by WFD is at the operational level only, and a significant incident requires outside assistance. Surface transportation may occur on streets and highways in the response area. Both types of incidents may require extensive evacuations depending on the type of product released.
- Estimated Financial Cost/Saving: Improving service includes additional training and equipment to control or mitigate a hazardous materials incident. The savings from providing a higher level of response may allow businesses to reopen sooner if an event occurs and affects local establishments.

Wildland Response**Recommendation X: AP Triton recommends establishing and filling a full-time Wildland Coordinator position.**

- Description: Much of the response area is in an Urban/Wildland Interface area. A Wildland Coordinator would coordinate Fire Department and City resources with surrounding jurisdictions. Additionally, the position would provide an improved interface with the Whitefish Fire Service Area and increase mitigation efforts throughout the area.
- Estimated Financial Cost/Saving: It is recommended that this position not be an entry-level Captain position rather an individual with a significant amount of experience.

Description	
Captain – Mid-Range	
Salary	\$63,000
Social Security/Medicare (7.65%)	\$4,820
Workers Compensation	\$6,500
Medical Insurance	\$26,879
Pension	\$3,800
Other	\$700
Total	\$105,699

Recommendation 2: Enhance Wildland Urban Interface mitigation and prevention programs

- Description: Reducing the threat of wildland fires and increasing educational programs provides an enhanced level of safety for the community. Expanding existing community interaction will improve public relations and reduce the threat of a wildland fire destroying buildings in the urban interface
- Estimated Financial Cost/Saving: The cost to enhance WUI mitigation and prevention can be combined with the recommendation to hire a Community Risk Reduction Coordinator.

Community Risk Assessment

Recommendation 1: Enhance Wildland Urban Interface mitigation and prevention programs

- Description: Reducing the threat of wildland fires and increasing educational programs provides an enhanced level of safety for the community. Expanding existing community interaction will improve public relations and reduce the threat of a wildland fire destroying buildings in the urban interface
- Estimated Financial Cost/Saving: The cost to enhance WUI mitigation and prevention can be combined with the recommendation to hire a Community Risk Reduction Coordinator.

Recommendation 2: Improve communication in remote areas of the district

- Description: The lack of adequate radio and cellular telephone coverage in remote areas of the district creates safety concerns doing an incident. Other forms of communication such as satellite telephones can improve
- Estimated Financial Cost/Saving: The cost for satellite telephone service varies based on the type of plan. An unlimited plan may cost \$1,000 annually. There is an additional cost to purchase a telephone that ranges from \$400 to \$1,000.

Dispatch & Emergency Communications

Recommendation 1: AP Triton recommends that Flathead County Dispatch upgrade the CAD system to capture all response metrics.

- Description: The limited data provided by the Flathead County CAD system does not provide adequate information to measure processing time, turn-out time, and total response time. The system currently does not capture seconds, thus conveying inaccurate metrics.
- Estimated Financial Cost/Saving: A CAD system must accurately capture response time data and other data being used to benchmark performance. CAD systems vary significantly. A study should be conducted to identify the features deemed mandatory for a new system. Once identified, a request for proposal should be issued.

Section IV: APPENDICES

APPENDIX A: SAMPLE PERFORMANCE BENCHMARK RESOLUTION

RESOLUTION NO. __

Series of 2021

RESOLUTION ADOPTING WHITEFISH FIRE DEPARTMENT POLICY ON RESPONSE PERFORMANCE OBJECTIVES

WHEREAS, Whitefish Fire Department, herein referred to as "WFD," provides fire and non-fire related emergency response to the City of Whitefish and outlying boundaries through contract and mutual aid agreements; and

WHEREAS, industry standards based on NFPA 1710/1720 *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments* provide achievable standards for response to Fire, EMS, Hazard Materials, and other types of emergency incidents; and

WHEREAS, the City of Whitefish provides an effective emergency response force that must provide reasonable total response times to properly mitigate emergency incidents, and;

WHEREAS, adopting formal performance standards for Whitefish Fire Department is essential to current and future service demand; and

WHEREAS, low level, moderate level, high level, and extreme risk level are defined as a risk category measurement where threats are measured considering probability of occurrence, and hazard, danger or loss is measured in consequence; and

WHEREAS, Whitefish's location in the Rocky Mountains results in numerous days per year in which roadways are impacted by snow and ice; and

WHEREAS, the following formal standard response performance benchmarks are herein established as core goals for the Whitefish Fire Department for response within the boundaries of the City of Whitefish

Fire Suppression Benchmarks

1. For 90% of all low, moderate, high, and extreme risk fire-related incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters,
 - a. Urban - Arrival within 6 minutes, 20 seconds (6:20).
 - b. Suburban - Arrival within 7 minutes, 20 seconds (7:20).
 - c. Rural - Arrival within 7 minutes, 20 seconds (7:20).
 - d. Remote- 1 minute, 30 seconds (1:30) turn out time plus travel time.

- e. The first-due arriving unit shall carry a minimum of 500 gallons of water and be capable of producing 1,500 gallons per minute (GPM) pumping capacity.
 - f. The first-due unit shall establish command, declare scene priorities, establish an uninterrupted water supply, perform lifesaving and property-saving interventions, and provide scene safety and accountability for the WFD members and citizenry.
2. For 90% of Low-Risk fires, the minimum effective response force (ERF) staffing shall be
 - a. URBAN Area- 3 additional firefighters arriving within 8 minutes, 20 seconds (8:20)
 - b. SUBURBAN Area- 3 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
 - c. RURAL Area- 3 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
 - d. REMOTE Area- 3 additional firefighters based on travel time
 3. For 80% of Moderate/High-Risk fires, the minimum effective response force staffing shall be
 - a. URBAN Area- 14 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
 - b. SUBURBAN Area- 14 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
 - c. RURAL Area- 14 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
 - d. REMOTE Area- 14 additional firefighters based on travel time

EMS/Rescue Benchmarks

1. For 90% of all low, moderate, high, and extreme risk EMS/Rescue related incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters of which at least one is certified at Paramedic level. This first arriving unit shall be equipped with Advanced Life Support (ALS) equipment that would allow for advanced patient care prior to the arrival of a transport-capable unit; either an ambulance or medical helicopter.
 - a. URBAN Area- Arrival within 6 minutes (6:00)
 - b. SUBURBAN Area- Arrival within 7 minutes (7:00)
 - c. RURAL Area- Arrival within 7 minutes (7:00)
 - d. REMOTE Area- 1 minute, 30 seconds (1:30) turn out time plus travel time
2. For 90% of Moderate-Risk medical and rescue incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 3 additional firefighters arriving within 8 minutes (8:00)
 - b. SUBURBAN Area- 3 additional firefighters arriving within 10 minutes (10:00)
 - c. RURAL Area- 3 additional firefighters arriving within 10 minutes (10:00)

- d. REMOTE Area- 3 additional firefighters based on travel time
- 3. For 90% of High-Risk medical and rescue incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 10 additional firefighters arriving within 10 minutes (10:00)
 - b. SUBURBAN Area- 10 additional firefighters arriving within 12 minutes (12:00)
 - c. RURAL Area- 10 additional firefighters arriving within 12 minutes (12:00)
 - d. REMOTE Area- 10 additional firefighters based on travel time
- 4. For 80% of Extreme-Risk medical and rescue incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 13 additional firefighters arriving within 12 minutes (12:00)
 - b. SUBURBAN Area- 13 additional firefighters arriving within 14 minutes (14:00)
 - c. RURAL Area- 13 additional firefighters arriving within 14 minutes (14:00)
 - d. REMOTE Area- 13 additional firefighters based on travel time

Hazardous Materials Benchmarks

- 1. For 90% of all low, moderate, high, and extreme risk hazardous materials-related incidents, the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters, shall be
 - a. URBAN Area- Arrival within 6 minutes, 20 seconds (6:20)
 - b. SUBURBAN Area- Arrival within 7 minutes, 20 seconds (7:20)
 - c. RURAL Area- Arrival within 7 minutes, 20 seconds (7:20)
 - d. REMOTE Area- 1 minute, 30 seconds (1:30) turn out time plus travel time
- 2. For 90% of Moderate-Risk hazardous materials incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 4 additional firefighters arriving within 6 minutes, 20 seconds (6:20)
 - b. SUBURBAN Area- 4 additional firefighters arriving within 7 minutes, 20 seconds (7:20)
 - c. RURAL Area- 4 additional firefighters arriving within 7 minutes, 20 seconds (7:20)
 - d. REMOTE Area- 4 additional firefighters based on travel time
- 3. For 90% of High-Risk hazardous materials incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 9 additional firefighters arriving within 10 minutes, 20 seconds (10:20)
 - b. SUBURBAN Area- 9 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
 - c. RURAL Area- 9 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
 - d. REMOTE Area- 9 additional firefighters based on travel time

4. For 80% of Extreme-Risk hazardous materials incidents, the minimum effective response force staffing shall be
 - a. URBAN Area- 17 additional firefighters arriving within 12 minutes, 20 seconds (12:20)
 - b. SUBURBAN Area- 17 additional firefighters arriving within 14 minutes, 20 seconds (14:20)
 - c. RURAL Area- 17 additional firefighters arriving within 14 minutes, 20 seconds (14:20)
 - d. REMOTE Area- 17 additional firefighters based on travel time

Public Assist and Service Call (Other) Benchmarks

1. For 90% of all public assist and service incidents the total response time for the arrival of the first-due unit, staffed with a minimum of one officer and two firefighters, shall be
 - a. URBAN Area- Arrival within 6 minutes, 20 seconds (6:20)
 - b. SUBURBAN Area- Arrival within 7 minutes, 20 seconds (7:20)
 - c. RURAL Area- Arrival within 7 minutes, 20 seconds (7:20)
 - d. REMOTE Area- 1 minute, 30 seconds (1:30) turn out time plus travel time

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE CITY OF WHITEFISH, MONTANA THAT:

Section 1. The findings, conclusions, and statements of fact contained in the preamble are hereby adopted, ratified, and incorporated herein.

Section 2. It is the policy of the City of Whitefish to establish and maintain internal controls and procedures to ensure that applicable standards are adopted in full or part and followed with regard to the good order of the fire department. It is further the policy of the City of Whitefish to receive benchmark performance versus actual performance comparisons annually from Whitefish Fire Department to ensure efforts are made to meet these industry-established standards.

Section 3. This Resolution shall take effect and be in force from and after its adoption.

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