WHEATLAND COUNTY

FIRE MASTER PLAN – DRAFT

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Wheatland Fire Master Plan Report – June 2020 Draft

1.0   Executive Summary

Transitional Solutions Inc. (TSI) is pleased to present a Fire Master Plan for Wheatland County Fire & Emergency Services. We would like to sincerely thank Wheatland County and the Fire Services Staff who gave freely of their time and expertise during the ongoing consultation and research phases for this master plan. Our discussions with County and Fire Service Administration and staff were always candid, respectful and productive.

Wheatland County is a dynamic area and community of 8,788 residents living in diverse and beautiful landscapes. From the badlands in the northeast, the central golden fields near Standard, and the serene Bow River Valley near Carseland, Wheatland County is truly picturesque. With an economy based on agriculture, oil & gas and manufacturing, it provides great opportunities for business, employment and active living. Major transportation corridors including the Trans-Canada Highway, a number of other highways and several CN Rail lines, allow for the efficient movement of goods and services. A rich history throughout its various villages and hamlets, including many heritage century farms still operating today, points to the steadfastness and industrious nature of Wheatland County Residents.

The expectation of the Wheatland County Fire Rescue and Emergency Services Master Plan is that it will provide guidance and a template to move Wheatland County Fire & Emergency Services (WCFES) forward in achieving a world class rural fire service. Through the use of modern methods, policy development, sound business & financial practices and the cooperative implementation and service efforts from all parties, that goal is certainly achievable. The plan will include recommendations for immediate, short term, medium term and long-term strategic planning.

Looking at the current service from a critical lens, we have seen and through our engagement heard it described as a somewhat disjointed fire service that lacks cohesiveness. We heard about many fractured relationships, and some lack of trust between the Firefighters/District Chiefs and Administration/Council. Currently every Department or Association is a stand-alone entity doing its best to provide acceptable Fire Services and maintain public safety. Positively, in spite of administrative and organizational difficulties, WCFES continues to protect the public and provide fire and emergency services. Apparatus and infrastructure are more than adequate and staffing levels remain constant. The Departments and Associations should be proud of the service they provide to the community and be sincerely thanked for this commitment. Although, with the investments made, the desired value for service is currently not quite achieved.

Recent events have revealed a renewed effort to cooperate and rebuild critical relationships throughout the organization. With new leadership, confidence and expectations are high and a sense of great hope for the future of the service exits. Using a sound organization structure, keeping in mind delegation of duty, time management, span of control, and open communications, the Fire Service in Wheatland County has the ability to quickly transform into a superior rural fire service in Alberta. A senior leadership team from the senior ranks of the individual Fire Departments, Fire Associations, as well as the rank and file would enable an organized, inclusive and productive approach to the management of the fire service.

This Senior Leadership team will further allow for sound budgeting practices to ensure fiscal responsibility and sustainability. It will provide for constant evaluation of fire stations, dispatch and technical services, apparatus and equipment to ensure that future procurement of all capital items

compliments the fire service long term business plan. It will also provide vetted information and requests, created by consensus, to the Fire Board.

A shift in mindset by all parties will be required for the organization to move forward. It is time to think in the "Power of One". ONE fire service, ONE team, ONE GOAL. Nine rural community fire services working and collaborating together with effective leadership and management provided by the County. This will create unity of purpose while providing borderless response using an appropriate, effective response and service model to achieve consistent performance and desired results. Working together towards a common goal for the greater good of not only the fire service, but predominantly for the citizens they protect. It has been clearly stated by all parties that a regional model is not part of the strategic plan moving forward.

Without clear direction, guidelines or protocols the onerous task of providing fire and emergency services currently falls to a dedicated core of Volunteer Firefighters, who's preparation and best efforts get the job done. We also recognize a fire service full of potential, experience, expertise and the opportunity for significant improvement.

A new commitment from Council, Fire Services Administration, Fire Departments and Fire Associations to build relationships based on mutual cooperation and trust is necessary. All parties should be involved in the governance and operations in the path forward, so that insecurity, vulnerability and the thought of losing control are alleviated. We are all in this together, and together positive change will occur.

Resulting from our interviews, information gathering, and research, we have created numerous recommendations forming this Fire Master Plan. These are presented herein with an implementation schedule that prioritizes the major components to form a solid foundation for WCFES Administration, its Districts and staff to build a pro-active, efficient and sustainable fire service for the protection of life and property of the citizens in Wheatland County.

2.0   Acronyms

AED	Automated External Defibrillator
AFCA	Alberta Fire Chiefs Association
AFRRCS	The Alberta First Responders Radio Communications System
AHJ	Authority Having Jurisdiction
AHS	Alberta Health Services
ATV	All Terrain Engine
CAD	Computer Aided Dispatch
CAO	Chief Administrative Officer
CIS	Critical Incident Stress
CISM	Critical Incident Stress Management
CPR	Cardiopulmonary Resuscitation
EMA	Emergency Management Association
EMS	Emergency Medical Services
ERF	Effective Response Force
FCSS	Family and Community Support Services
GIS	Geographic Information System
HFPA	Hussar Fire Protection Association
HVAC	Heating, Ventilation, and Air Conditioning
IAFC	International Association of Fire Chiefs
ICS	Incident Command System
JPRs	Job Performance Requirements
KPI	Key Performance Indicators
LOS	Level of Service
LUCAS	Lund University Cardiopulmonary Assist System
MFR	Medical First Response
MDT	Mobile Data Terminal
MVC	Motor Vehicle Collision
NFPA	National Fire Protection Association
NIST	National Institute of Standards and Technology
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
PTSD	Post-traumatic Stress Disorder
QMP	Quality Management Plan
RCMP	Royal Canadian Mounted Police
RECEOVS	Rescue, Exposures, Confinement, Extinguishment, Overhaul, Ventilation, Salvage

REVAS	Rescue, Evacuation, Ventilation, Attack, Salvage
RMS	Records Management System
SCBA	Self Contained Breathing Apparatus
SLICERS	Size-up, Locate the fire, Identify and control the fire patch, Cool the space from the safest location, Extinguish the fire, Rescue, Salvage
SOG	Standard Operating Guidelines
SOP	Standard Operating Procedures
TIC	Thermal Imaging Cameras
TSI	Transitional Solutions Inc.
UL	Underwriters Laboratories
UTV	Utility Terrain Vehicle
WADEMSA	Wheatland and District Emergency Medical Services Association
WC	Wheatland County
WCB	Workers' Compensation Board
WCFES	Wheatland County Fire and Emergency Services

3.0   Fire Master Plan Outlook

3.1   Overview

The Master plan is a long-range plan that has many important stages for the implementation to be a success. The plan has been developed with short, medium and long term goals that will help enable Wheatland to enhance their service capabilities for the community.

There are "Key Recommendations" that are mentioned throughout the plan and are highlighted in bold blue text. These recommendations should take priority as they will establish the foundation for the remainder of the plan and future success of the Wheatland County Fire Service.

Short term recommendations and strategies will provide the foundation for the plan to evolve over time. As short term elements have been met these will foster the development of the medium and long term areas below.

3.2   Initial and High Priority

Category	Recommendation	Time	Reference
Risk Profile	• Initial response to all events be evaluated to ensure the proper amount of resources, capabilities and staff are dispatched and respond	0-6 months	4.5
Governance & Structure	• Establish an organization structure for the service that includes, Manager of Emergency & Fire Services and Operational Fire manager	Immediate	5.7
	• Establish a Fire Management Committee comprised of the Manager of Emergency Services, the Regional Deputy Fire Chief and all District Chiefs to create a fire service management plan	0-12 months	
	• Establish Capital Committee with representation from all fire districts	0-12 months	
	• Establish a Training Committee to create a comprehensive training plan	0-12 months	
	• Establish an Operational Incident Response Committee	0-12 months	
	• Work with OHS to establish a Health and Safety Committee	0-12 months	
LOS & Operational Standards	• WCFES Administration work together with all Fire Departments to develop and implement response model protocols	0-6 months	6.4
	• Revise Bylaw 2019-06 (Schedule 'D' Level of Service) to reflect the minimum number of responders/staff needed for each specific type of response	0-6 months	

Incident Management	• Provide leadership, safety and command training to all staff expected to be in an Incident Command role • Investigate a strategic planned approach to migrate to the AFRRCS radio system over a number of years	0-12 Months Decision in 6 months	7.4

Incident Response	• Develop a clear response model for all calls that involve multiple Wheatland County stations including:
	   o Number and types of apparatus and resources required for each type of incident to get desired and appropriate apparatus to scenes
	   o Standard procedures, policies and guidelines for shared responses
		0-6 months
		
		0-12 months
			8.3

Fire Stations, Apparatus & Equipment	• WCFES and the Fire Associations of Rockyford and Rosebud, as well as the Carseland Fire District, review the capital cost and replacement strategies for their Water Tenders	0-6 months	9.3
Training Programs	• A training program be formalized through a joint training committee	0-12 months	10.3

3.3   Short Term – The First 12 months

Category	Recommendation	Time	Reference
Risk Profile	• Clearly identify Fire Prevention as a major portfolio	12 months	4.5
Governance & Structure	• Assess the organizational structure for effectiveness after one year of service • Reaffirm the mixed model and establish which services will be delivered using a contract model and which will be directly delivered by the County • If the Fire Board outlined in Fire Services Bylaw 2019-34 is established, that it be modified to include equal representation from the region • Wheatland county revise the bylaws and other fire department documentation to create consistent terminology to refer to the Fire Service managers and leaders within Wheatland County	12 months 0-12 months 0-12 months 0-12 months	5.7
LOS & Operational Standards	• Each department and association review their service contracts and adjust the LOS if needed	6-12 months	6.4

Incident Response	• Wheatland County continue to use automatic aid and work collaboratively amongst fire stations to create an operational model	0-12 months	8.3
Fire Station, Apparatus & Equipment	• Provide internet access for reporting and training purposes • Consider redeployment of the Tender from Cluny to Rosebud or Hussar • WCFES work closely with the Associations to determine the specific roles the rescues will be utilised for and ensure they are integrated into the response model • Contemplate changing the name of apparatus known as the "Bush Buggy", to a more descriptive term	12 months 12 months 12 months 12 months	9.3
Training Programs	• Training be regularly documented to maintain accurate training records • Consider bringing in external trainers to support high-need training areas • Occasionally deploy training officers or firefighters with subject matter expertise from each district throughout the region to share skills and knowledge with all stations	12 months 12 months - ongoing 12 months - ongoing	10.3
Recruitment & Retention	• Establish a sub-committee on recruitment and retention with representatives from all municipalities • Work with the Training Committee to plan for a joint recruit training program between all stations in the area to onboard new recruit firefighters	12 months 12 months	11.3

3.4 Medium Term - 1 to 3 years

Category	Recommendation	Time	Reference
Governance & Structure	• Create a public engagement process • Establishment and funding of a capital replacement plan for all fire apparatus and equipment	1-3 years 12-24 months	
LOS & Operational Standards	• Establishing service levels for specialized types of incidents, even if this involves industry partners or mutual aid • Create consistency in types of medical incidents Wheatland County stations respond to in support of the level of service • Establish a base level of medical skill/training (First aid, CPR with AED) for all firefighters and if	12-24 months 12-24 months 12-24 months	6.4

	the opportunity exists, support some members in getting further education		
	• Ensure the use of a records management system (such as FirePro) is linked to WADEMSA's CAD information to enhance, capture and customise reporting of statistics, define KPIs, and monitor trends in dispatch, response, and operations	12-36 months	
	• Provide support to all stations regarding the importance, expectations, and procedures required for successful reporting	12-36 months	
Incident Management	• Establish a plan or protocol to address on scene radio communications during large scale events	24 months	7.4
	• When decision on radio system is reached start migration to a new system, or upgrades to the current system	2-3 years	
	• Develop a post incident review process and SOP	12-24 months	
Incident Response	• Review all mutual aid agreements	2-3 years	8.3
	• Consider using auto-aid partners to fill critical positions in the incident command system	12-18 months	
	• Adjust response protocols to increase use of auto-aid from other Wheatland County fire stations rather than relying on mutual aid from Strathmore Fire Department	12-18 months	
	• Negotiate a new service agreement between Wheatland County and the Town of Strathmore	12-24 months	
Fire Stations, Apparatus & Equipment	• The Capital Committee assess urgent and long term needs and enhancements of infrastructure including fire stations and procurement of apparatus	24 months	9.3
	• WCFES Administration consult with local expertise within the Associations and Departments and form a committee to standardise new purchase specifications for each class of apparatus	12-24 months	
	• Future purchases of Engines and Tenders should have a minimum crew capacity of four	12 months - ongoing	
	• Develop a policy to plan for the retirement, refurbishment and replacement of fire apparatus	12-18 months	
Training Programs	• Identify opportunities for cross-training between stations for special training events	12-24 months	10.3
	• Foster a formal mentorship processes for firefighters and officers	12-24 months	
	• Initiate discussions to explore the long-term potential establishment of a practical fire training site within the County	2-3 years	

Recruitment & Retention	• Support Recruitment and Retention through various initiatives	12-24 months	11.3
	• Review the pay strategies for all associations and stations and consider implementing and supporting a consistent approach	12-24 months	
	• Establish extra duty pay scale for fire department members who take on extra efforts for the service	12-24 months	
Fire Safety	• Provide information regarding mental health and wellness awareness and associated support services as part of initial recruit training and future officer development program	1-2 years	12.2
	• Establish and mandate summer and winter, on scene, gross and personal decontamination procedures to be addressed in an SOP	1-2 years	
	• Adopt the "Clean Cab Initiative" to avoid cross contamination of fireground contaminants into the fire apparatus	1-2 years	

3.5   Long Term/Ongoing - 3 -10 years

Category	Recommendation	Time	Reference
Risk Profile	• Create a pre-incident plan procedure	3-5 years	4.5
Incident Response	• Consider a long-term strategy to merge the Wheatland West Station with the City of Strathmore Fire Department	3-5 years	8.3

Fire Stations, Apparatus & Equipment	• Improvements to fire stations including installation of:
	   o Showers for personal decontamination
	   o Laundry facilities for decontamination
	   o Industrial wash stations for cleaning of equipment and PPE
		3-5 years	9.3

	• Consider long term improvements and renovations including:
	   o Installing vehicle exhaust extraction systems
	   o Separate HVAC systems for apparatus, PPE, office, and meeting space
	   o Renovations or additions to add separately ventilated turnout gear room
	   o Additions or renovations to include a workstation and space for equipment maintenance and storage
		5-10 years	

	• Cluny Fire Hall #1 be marked for replacement	5- 10 years	

	• Consideration of a long term strategy to merge Gleichen and Cluny Fire Districts and stations	5-10 year	
Training Programs	• Consider implementing a formal online training program and video conferencing for joint training opportunities	3-5 years	10.3

4.0   Risk Profile

4.1   Overview

A Risk Profile provides the justification for all aspects of Fire service including service levels, management, operations, station location, apparatus, equipment, recruitment, training and response. It also promotes officer development, teamwork and trust between Fire Administration, staff and community.

Risks, hazards, threats, and *vulnerability* are terms that are often confused with each other. A clear understanding of each of these principles is necessary to apply assessment criteria to an occupancy or region.

Risk is the potential for loss, damage or destruction within the County that we are trying to protect, as a result of a threat exploiting a vulnerability. It is the intersection of assets, threats, and vulnerabilities.

Hazard is an agent (natural or human induced) which has the potential to cause harm to vulnerable targets.

Vulnerability is considered as weaknesses or gaps in our fire protection that can be exploited by threats to compromise our communities and public safety.

Threats are anything that can exploit a vulnerability, intentionally or accidentally, and cause harm, damage, or destroy an asset. Threats could be actual, conceptual, or inherent. A threat is what we're trying to protect against.

4.2   Hazard Assessment

The purpose of a hazard assessment is to identify potential risks and hazards within the County, and to identify appropriate safety measures to be used to mitigate the identified hazards. All hazards both man-made and natural must be considered and planned for the protection of the community. Within the community, public safety is highly dependent on accurate hazard and risk assessment to determine the required level and scope of emergency services.

In 2018 Wheatland County had a recent hazard and risk assessment as part of a delivery from the recently acquired Wheatland Regional Emergency Management Plan. This plan identified a proactive approach to the reviews of risk, and it is recommended to continue with this approach.

A Hot Zone map, created by Wheatland Fire Rescue Services can be viewed in Appendix G, was reviewed by TSI. This map identifies 80 sites that pose a high risk to public health and safety, critical infrastructure, local economy and natural environment. There is a high concentration of oil and gas operation throughout Wheatland County. Nearly 50% of identified sites involve oil & gas operations, either gas plants or compressor stations. These occurrences generally pose a low risk, however, the high number of sites within the county requires a vigilant approach to preparation and planning to properly and safely manage an occurrence.

Figure 1 Risks & Hazards of Wheatland County Hot Zones	
High risk sites identified on Hot Zones Map (values at risk):	**Hazards which can impact values at risk:**
• Oil & Gas: compressor stations, gas plants, pipelines & well sites • Critical Utilities and Infrastructure: hospitals, schools, electricity, water, sewage, roadways, • Agriculture: including elevators, seed cleaning plants and fertilizer plants • Manufacturing • Recreational: campgrounds, golf courses • Hutterite Colonies • Administration: Wheatland County • Administration & Public Works • Railway	• Severe weather: damaging winds, tornado, ice storms • Train derailment • Wildland fires • Explosions • Overland flooding/torrential/prolonged rains • Infectious disease outbreak/pandemic • Violent acts/terrorism/cyber attack Civil unrest & disorder

Positively, Wheatland County Fire & Emergency Services has created some relationships within the Carseland Fire District, Wheatland County industrial partners and with some of the Hutterite Colonies. Relationship development along with the hazard review is an encouraging start to a recommendation regarding pre-incident planning as initial response actions and capabilities are critical to successfully managing such an occurrence.

4.3 Risk and Vulnerability Assessment

A risk and vulnerability assessment identifies and gives Fire Services the ability to recognize threats or hazards and the probability or potential that these factors will exploit a vulnerability, or gap, in your protection and result in a threat, event, exposure, disaster or some form of loss. Generally, a matrix is used to determine the probability and potential consequences of the hazard.

Regular reviews of risk and vulnerability within the County, including target hazards should take place annually or, by some manageable schedule, as assigned by those organizations assigned through governance (EMA), bylaw, or as delegated by Fire Services Administration.

Wheatland County is no less vulnerable to risks and hazards than other communities. The only avenue to address each type of risk or hazard that can occur, or has occurred within the County is to anticipate, and prepare for such an event. An example would be overland flooding or grass fires in the spring. These events are anticipated and can be mitigated before they happen or may be planned for in order that resources are in place should an immediate response be required. A seasonal approach to natural hazards is a strategy commonly used by fire services. The challenge is to expand the scope to include all types of risks and hazards. To assist with risk and vulnerability, it is important that Wheatland County Emergency Fire Service implement a pre-incident planning program.

4.4   Pre-Incident Planning

Pre-incident planning should be adopted as regular practice within fire prevention and fire operations to gather information on specific target hazards.

> **Information could include:**
>
> 1. Building layout and size
> 2. Type of occupancy, commercial, industrial, institutional
> 3. 24-hour building manager or maintenance contact information
> 4. Type of construction
> 5. Identify local hazards and potential for an incident to occur
> 6. Location of the main fire alarm panel
> 7. Hazardous materials storage areas
> 8. Fire protection systems and equipment
> 9. Familiarization with on-site evacuation plans
> 10. Initial response capabilities and capacities - (minimums)
> 11. Initial response actions
> 12. Gauge industry capabilities
> 13. Gauge industry expectations

All this pre-gathered information would be an invaluable asset for fire command and staff if an incident should occur. It must be accessible and supplied in a usable form. It could be available in hard copy form (binder) and kept as part of the apparatus inventory, or online as a component of a computer aided dispatch system, or both. Pre-incident planning also instigates the relationship between your Fire Department and its commercial, industrial and institutional stakeholders, allowing each party to understand and explore response capacities, capabilities and expectations.

The use of an all hazards approach in coordination with pre-incident planning focuses on developing capacities and capabilities that will minimize harm, personal injury and the loss of assets or property and promote public safety. It takes what seems like a monumental task and renders it into a scalable, manageable plan to mitigate the hazard or disaster.

Current and future risks can be identified through the use of planning and development and the inclusion and input of WCFES Prevention & Education in the process. This allows Fire Prevention to provide subject matter expertise to planning and development to ensure fire prevention best practices, such as access of apparatus and water supply capacities are utilized and identified early in the building and development process, and that proper fire prevention and mitigation systems will be in place. This process would also provide adherence to both building and fire codes. It also affords the opportunity for the County to access the services of a fire protection engineer for large industrial and commercial projects outside of the scope of Fire Administration.

Pre-incident planning is a cost-effective proactive endeavour that should be implemented as part of the local fire & emergency services operations involving a collaborative approach with Fire Prevention and Operations. Creating a SOP in this regard will ensure compliance by staff. Setting a goal for minimums, such as completing one Pre-incident Plan every quarter would bode well for the QMP (Quality

Management Plan) and assist in the justification for training and a demonstrated need for appropriate apparatus. It also promotes officer development, teamwork and trust between Fire Administration and Staff.

4.5   Recommendations and Schedule

The following recommendations and schedule are in support of mitigating the risk profile of Wheatland County:

1. Clearly identify Fire Prevention as a major portfolio with clear guidelines and expectations for the Fire Service Administration and ensure this portfolio is assigned to a capable member of this leadership team. (12 months)

2. Create a pre-incident plan procedure with established targets for plans completed. (3-5 years). The protocols for this hazard assessment and pre-incident plans should be captured in an SOP.

3. *It is recommended that the initial response to all events be evaluated to ensure the proper amount of resources, capabilities and staff are dispatched and respond to reflect best practices, align with NFPA, industry, and OHS standards. (Immediate)*

5.0   Fire Service Governance and Structure

5.1   Overview

Providing rural fire services is a complex and expensive endeavor. Without prudent and effective management and administrative processes, value for service can be lost in dysfunction and indifference. Management that provides clear communication regarding well defined operational guidelines and expectations will certainly be the most successful. The requirement for visionary leadership is necessary as the fire service evolves. While acknowledging the past, changes to legislation, regulations, standards, Occupational Health and Safety (OHS), and fire dynamics requires that fire services adapt to the constant changes.

Information and observations from Stakeholder interviews and document reviews indicated gaps in response and service. There can be many reasons why these gaps occur, but in many instances, administration and operations of a fire service overwhelm the Fire Chief and Fire Service Administration, leading to shortfalls in strategic planning, procedures and guidelines. It is essential that Wheatland County Administration support the Manager of Emergency Services with adequate staffing to administer and operate the fire service to achieve the defined level of service.

Keys to Successful Fire Service Management Models

1. Design Fire Services that meet the needs of the taxpayers and citizens, addressing hazards and risks in their community - expressed as a Level of Service (LOS)
2. Consistent, safe, stable and flexible service delivery
3. Attention to fire prevention, safety initiatives, and community support programs, and emergency response.
4. Establish Key Performance Indicators (KPIs) to review performance of the system and departments to support successful fire service delivery and drive improvements.
5. Training of Fire department members to support delivery of services mandated by the LOS.
6. Providing opportunities for personal growth for members through training, education and experience, in addition to meeting program and department needs.
7. Establish management processes that provide leadership, structure and direction to the departments and provide opportunities for input and involvement of all department members.
8. Refine records management processes to provide outcome reporting to decision makers and the public increasing public awareness of community safety issues.
9. Reviews of governance and management processes to ensure that community needs are being addressed and make service adjustments.

5.2 Service Delivery Model

The provision of fire services in Alberta, by individual municipalities, typically falls within one of three models selected by each municipality based upon their local circumstances. The municipality may use a direct delivery fire service model, a contract delivery service model or a mixed model that combines the direct delivery and contract models. The alternative to individual municipalities providing the service is to utilize a regional governance model. For additional information on the different delivery options please see Appendix "G".

The current service delivery model used by Wheatland County is a Mixed Model and WCFES should continue to foster this model. The fire response services are managed and directly delivered to the portions of the County including those provided from the fire stations at Wheatland West (Strathmore area), Hamlet of Carseland, Hamlet of Cluny and Hamlet of Gleichen. Services provided by contract with local Fire Associations include those provided by the fire services located in the Village of Hussar, Village of Rockyford and Village of Standard, Hamlet of Rosebud as well as the Dalum area.

The Fire Associations each have Joint Fire Service Agreements with Wheatland County to provide services to a specific response area and access other fire services when needed in an emergency situation. Fire Capital Agreements have also been established between Wheatland County and the Fire Associations that addresses the cost sharing for capital assets for fire services.

A mutual aid agreement covering all municipalities within Wheatland County have been in place since 2007. A separate agreement between Wheatland County and the Town of Strathmore expired in May 2019, although aid responses between the two municipalities continue. Fire aid agreements are also in place for other adjacent Counties. The fire response provided, includes some use of automatic aid between the different services for specific types of incidents. This is based upon the need to ensure that minimum response requirements and appropriate resources are activated in a timely manner. See section 7 for mutual aid, auto aid and Wheatland County Fire Agreements.

Programs including Safety Codes inspections, enforcement and fire investigations were previously delivered or managed through Wheatland County Fire Management. Currently these services are being provided by a contractor and discussion is occurring with other municipalities on the possibility to collaborate on services. The management of training, occupational health & safety, record keeping, and reporting previously involved both Wheatland County staff and members of the individual fire departments.

5.3 Governance

In 2019 Wheatland County enacted the Fire Services Bylaw 2019-06 and Bylaw 2019-34. Bylaw 2019-06 outlines the roles and responsibilities of the Fire Service Leadership and Bylaw 2019-34 defines the creation of a Fire Board for Wheatland County. To date this Fire Board has not been established and is not operating, however it has been communicated to TSI the intention is still to move forward with this Fire/Advisory board. The Fire Board is to be composed of five (5) Association Presidents, one (1) representative from each of the Villages (Standard, Hussar, and Rockyford), two (2) citizens-at-large, and no more than three (3) members of Council who are appointed by Council. TSI notes that this board, in the proposed structure, is heavily weighted in representation by the Fire Association districts but has little input from the districts that function under the governance of Wheatland County. We believe it is important to have equal representation and input from all fire districts.

The proposed scope of the fire board is also not clear, nor is if the intention is for this board to be advisory in nature or if it is to be involved in the approval process of key decisions. We believe it is important not to add an unnecessary level of bureaucracy which could impede the ability of the Manager of Emergency Services and the Deputy Fire Chief to fulfill their roles.

The current system used by Wheatland County is increased further in complexity due to the nature and variety of these contracts and the relationships that have occurred in the past. Through our interviews it became clear that while the past is affecting the present there is a desire to move forward and create fire services that meet the needs of all. It was also identified that there was no desire at this time to consider a regionalized fire service delivery model.

Because Wheatland County Administration already has an established governance model, we won't go into detail here on other governance options. However, more information on Governance Model options is available in Appendix J.

5.4   Municipal Fire Management Structure

WCFES management processes are established that provide leadership, structure and direction to all County departments and associations, and provide opportunities for input and involvement of all department members. These Management processes are established to provide fire suppression and life safety services and outcome reporting to decision makers and the public which creates increased public awareness of community safety issues. Governance and management processes include timely service reviews to ensure that community needs are being addressed and promote service adjustments.

Management structure is provided by a para-military tiered supervisor - subordinate system supported by a clear chain of command. Each subordinate reports directly to one supervisor for clarity and efficiency in function and design. Efficiency is achieved through the empowerment of supervisors to solve problems or resolve issues at their level, only requiring going up the chain when issues are out of scope or require intervention or approval from upper management.

The Manager of Emergency Services is on the top tier and ultimately accountable to ensure the provision of fire services throughout the County. Through his leadership, and in collaboration with the Regional Deputy Fire Chief, District Chiefs, fire service staff and volunteers, the vision, mission and values of the department will be demonstrated in all day-to-day and emergency operations. The current fire management structure has a broad range of responsibility and reporting. Fire Services Bylaw 2019-06 states, "The Regional Fire Chief has the authority over the management and direction of the Fire Services, but is subject to the supervision, control and direction of the General Manager, County Manager and Council." Because the current model involves the Fire Board as indicated by the Fire Board Bylaw 2019-34, this reporting structure may be difficult to support and, for the Manager of Emergency Services to be successful in in the overall management of the fire service . All roles within the fire service are pertinent to the leadership of fire services. All roles, accountabilities and responsibilities must be clearly understood, reporting must be streamlined and refined to increase efficiencies, be progressive and maintain effectiveness in the overall delivery of Wheatland County fire and emergency services.

5.5 Operational Committees

In order to ensure input from all fire services and better coordinate key programs and processes we recommend the establishment of operational committees. Some of these will be ongoing and some may be formed to deal with an issue or specific process, then disbanded. When establishing committees, consideration should be given to ensuring they are representative of the different fire departments. Specific committee recommendations are listed throughout this report.
Appointment of committees should include the following:
1. Reason to establish the committee
2. Terms of reference for the committee including:
    a. Membership – recommend small groups with representatives from all fire districts
    b. Expectations and focus on specific outcomes
    c. Reporting procedures to management
    d. Communication expectation for stakeholders
    e. Authorities
    f. Meeting protocols and process
    g. Term

5.6 Capital and Operating Costs

A cursory review of the capital and operating budgets was done to determine how the recommendations within the plan could impact these budgets. In-depth forecasting and evaluation of capital and operating costs was not included as part of this Master Plan.

Direct impacts to the budget may stem from recommendations regarding:
1. Infrastructure: fire hall replacement, renovation and maintenance
2. Replacement of apparatus: Engines, Tenders,
3. Replacement of equipment: SCBA, turnout gear, TIC, Radios
4. Financial demands from training requirements.
5. Remuneration, honorariums and service pay

Capital Budget:
Fire hall renovations, the building of new fire halls, the purchase or lease of major pieces of apparatus based on replacement programs and anticipated service life, and the costs involved with the lease or upkeep of a radio system will all require long term budgeting considerations.

Operational Budget:
The replacement of equipment and tools with known service life, such as turnout gear, radios, SCBA as well as consumables (fuel, uniforms, office equipment and supplies) should be consistently budgeted within the operational budget. Other key factors seriously affecting operational budgets include:
1. Training programs
2. Professional fees and professional development
3. Costs of regional boards
4. Salaries, service pay, honorariums
5. Building maintenance and utilities
6. Vehicle and equipment maintenance
7. Communications equipment

Advanced planning for long term capital projects, operational needs and procurement, allows for a proactive approach in regard to financial responsibility and sustainability. Sound business planning, practices, and management must accompany the budgetary process.

5.7 Recommendations and Schedule

The following recommendations and schedule for governance and structure are in support of managing the fire service:

1. *Establish an organization structure for the service that includes: (Immediate)*
   a. *Manager of Emergency & Fire Services responsible to:*
      i. *Provide leadership and management in all aspects of fire and emergency services within Wheatland County*
      ii. *Serve as the Director of Emergency Management for the municipality.*
      iii. *Provide supervision and support to volunteer chiefs and staff.*
      iv. *Manage the relationships and contracts with the Fire Associations and other contracted service providers.*
      v. *Support for the Wheatland County Fire Board*
      vi. *Operating and capital budgets*
      vii. *Human Resources: staffing, recruitment, OHS*
   b. *Operational Fire manager (Regional Deputy Fire Chief) to manage and support: (Immediate)*
      i. *Fire operations readiness: emergency response and service to all events*
      ii. *Training: training of staff at all levels and skill maintenance to support LOS*
      iii. *Occupations Health & Safety*
      iv. *Pre-incident planning*
      v. *Dispatch & Technical Services: dispatch services, communications & radio systems*
      vi. *Fire Prevention: public education, fire inspections, fire investigation*
      vii. *Fleet Services: apparatus & equipment maintenance, certification, procurement*

2. Fire department and County administration should assess the above organizational structure for effectiveness after one year of service (12 months)

3. Reaffirm the mixed model and establish which services will be delivered using a contract model and which will be directly delivered by the County. This includes the provision of Safety Codes and Emergency Management. (0-12 months)

4. If the Fire Board outlined in Fire Services Bylaw 2019-34 is established, that it be modified to include equal representation from the region. It should also be the goal of the board to be advisory in nature and not to add arduous bureaucracy to the ability of the Manager of Emergency Services to make and implement decisions. (0-12 months)

5. *Establish a Fire Management Committee comprised of the Manager of Emergency Services, the Regional Deputy Fire Chief and all District Chiefs to create a fire service management plan to coordinate the Fire Services and program delivery that: (0-12 Months)*
   a. *Meets the current approved Level of Service for the municipality*
   b. *Establishes a readiness and training process that supports the organization*
   c. *Establishes key performance indicators (KPI)s for all key services that are created by management with recommendation from the operational committees*

6. *Establish a Capital Committee with representation from all fire districts to provide information on capital planning to the Fire Advisory Board for decisions. (0-12 Months)*

7. *Establish a Training Committee to create a comprehensive training plan that follows the recommendations outlined in section 10.3 of this document. (0-12 Months)*

8. *Establish an Operational Incident Response Process Committee: (0-12 Months)*
   a. *Review response processes and recommend changes.*
   b. *Establish and create SOPs that support the level of service, for use in all direct delivery and contract departments.*
   c. *Review the OHS processes and recommend program changes that meet the OH&S Act.*

9. *Work with OHS to establish a Health and Safety Committee to address the short and long term health and wellness of firefighters through injury prevention programs, long term health considerations, and mental health supports. (0-12 Months)*

10. Create a public engagement process that includes: (1-3 years)
    a. An annual service evaluation and opportunity for public feedback
    b. Reporting to the public on the fire service outcomes and programs
    c. Public Safety and Fire Prevention Programs

11. Establishment and funding of a capital replacement plan for all fire apparatus and equipment that accounts for: (12-24 months)
    a. the life cycle of current equipment and apparatus owned by Wheatland County
    b. all contracted service commitments

12. Wheatland County revise the bylaws and other fire department documentation to create consistent terminology to refer to the Fire Service managers and leaders within Wheatland County. This includes the full-time county staff, as well as the Chiefs in each town, village, or association. ie. Manager of Emergency Services, Deputy Fire Chief, District Chief, etc. (0-12 months)

6.0   Level of Service & Operational Standards

6.1   Overview

The Fire Services Bylaw 2019-06 was enacted on April 2, 2019 and included the authority and direction to establish and operate a Fire Service. This bylaw also establishes the approved Level of Service for those delivering fire services within Wheatland County. WCFES Administration should develop its own response model based on municipal needs, staff and capacity. All Fire Districts should, with the assistance of WCFES Administration, take the necessary steps in order to meet their obligations and the objectives of the response model and LOS within the fire service agreement.

The Level of Service for Wheatland County fire services is outlined in Schedule "D" of Bylaw 2019-06. The bylaw requires that the Level of Service provided by any contracted party must be equal to or better than that established by the County for the designated service area. The bylaw identifies that the County will provide basic exterior fire suppression only, except by Fire Departments or members properly trained for interior attack. In addition, the bylaw identifies the level of services for specific incidents with established response levels.

While the bylaw provides guidance on the level of service to be provided, it does not cover all the types of incidents that may be encountered. Services not clearly covered by the current bylaw include response to dangerous goods incidents; static water, swift water or ice rescue incidents; high angle or slope (technical) rescue incidents and incidents reported as alarms ringing without smoke. WCFES, being the AHJ can determine whether they are prepared to increase the LOS in scope to accommodate any of these types of responses.

Schedule "D": LOS of Bylaw 2019-06 does not identify the minimum number of firefighters/staff available to respond at the time of an incident. Without identifying the minimum staff number that should be assembled for specific types of response, it leaves the decision up to the fire commander or initial responders, increasing uncertainty and level of risk, which compromises safety. A strategic organized approach encompassed in a clearly defined LOS should rectify these issues.

6.2   Level of Service

Level of service is a product of leadership, response and training. Wheatland County has defined its Level of Service within Bylaw 2019-06. The following excerpts from the Bylaw 1019-06; Schedule "D" Level of Service highlight:

1. Section 1.2. The county will provide basic exterior fire suppression only, except by Fire Department Members who are properly trained for interior attack.
2. Section 1.7. Subject to Paragraph 1.5, the County will use reasonable efforts to provide the following levels of service to the Fire Districts;
    a. Basic Exterior
    b. Non-Structural
    c. Medical First Response
    d. Motor Vehicle Response
    e. Rescue Response
    f. Grassland Wildfire Response

Each Fire Department and Association, with assistance and collaboration from WCFES Administration, should be provided a response model based on needs, staff and capacity, in order to meet the obligations within the fire service agreement.

The definition within the bylaw allows fire service administration to develop a response and service model to achieve the defined level of service, collect information and data over time, and monitor or evaluate its service for effectiveness and efficiency. These evaluations of service will result in further community risk reduction.

The ability to accurately measure performance will allow leaders to make changes to apparatus placement and deployment, make service level improvements, identify service gaps, training needs, and enhance the safety of firefighters and first responders.

To achieve the desired or defined level of service we need to understand the basic principles involved. The formula or model can be broken down into key components. All components are based on time and how quickly we transform the initial emergency or 911 call into an effective response with service.

Dispatch + Response + Service = Level of Service

Dispatch
WADEMSA provides the local dispatch services. This component involves:
1. The initial receipt of the call
2. Time to evaluate the call
3. Time to dispatch the call

Through the review of documented dispatch times. It was recognized that dispatch times are below industry standard averaging 2 minutes 22 seconds. NFPA 1221 indicates an optimum dispatch time of 79 seconds for receipt, evaluation and dispatch.

Response
Response begins upon receipt of the dispatch information to the fire department. It involves:
1. Time for staff to report the fire station (no response without an ERF)
2. Time for staff to don PPE and mount apparatus
3. Travel time to the fire/event.

Through the review of documented response times. It was recognized that response times are below industry standard averaging 27 minutes 20 seconds.

Service
Service begins upon arrival and is based on having an ERF (Effective Response Force) capable of providing the service required and ensuring the safety of firefighters.

Noted below is an example of level of service from NFPA 1720; Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the public by Volunteer Fire Departments. Keep in mind that these are guidelines based on industry best practices and extensive research to promote life safety in emergency response.

Table 1 NFPA 1720 Level of Service Standards

Demand Zone[a]	Demographics	Minimum Staff to Respond[b]	Response Time (minutes)[c]	Meets Objective (%)
Urban area	>1000 people/mi² (2.6 km²)	15	9	90
Suburban area	500–1000 people/mi² (2.6 km²)	10	10	80
Rural area	<500 people/mi² (2.6 km²)	6	14	80
Remote area	Travel distance ≥ 8 mi (12.87 km)	4	Directly dependent on travel distance	90
Special risks	Determined by AHJ	Determined by AHJ based on risk	Determined by AHJ	90

[a]A jurisdiction can have more than one demand zone.
[b]Minimum staffing includes members responding from the AHJ's department and automatic aid
[c]Response time begins upon completion of the dispatch notification and ends at the time interval shown in the table.

Actual operational procedures developed by the AHJ should provide clear performance standards, including minimum staffing required, and response time objectives for structural firefighting. These operational procedures should comply, as nearly as possible, with NFPA 1720 based on low hazard occupancies, service budgets and area demographics.

See Appendix "E" for more information on the importance of Level of Service.

Medical Assist Response
The current model of Alberta Health Services EMS is to leverage every community ambulance as part of the overall provincial prehospital medical response. This application has pros and cons, but it clearly creates unpredictability in where and how long it will takes ambulances to arrive on scene. Therefore, a response from fire departments, with any level of medical training, is becoming increasingly important. Having trained personnel on scene provides a level of comfort to patients and their families for any medical emergency.

WADEMSA recently equipped many stations with LUCAS CPR devices to be used on cardiac arrest incidents, which has the potential to greatly improve patient outcomes in Wheatland rural settings. This is an example of positive collaboration and helpful partnerships that benefits the entire region.

Currently, there is no standard amongst the fire services in Wheatland County in regard to medical aid calls, including training of the medical responders, types of incidents encountered, or the services they offer when they arrive on scene. Some stations are reluctant to provide medical co-response, while others see the need in their community and offer the service. This is a gap in support of the consistent level of service defined in the bylaw.

6.3 Operational Standards

Fire Prevention

Fire prevention is the very basis on which all fire services are established. Through the compilation of statistics resulting from fire investigation and inspections clear evidence provides facts for the development of fire and safety codes. The fire code is in effect for the sole reason to prevent future fires based on the results garnered by the investigative process.

Fire Prevention and Public Education can be put into practice, with the fire service actively involved to assist with community development and building inspections using safety codes, as well as managing fire service core data using key performance indicators (KPI) in part with a records management system and a quality management plan.

Enhancing the visibility of the fire service through public education and public relations with such activities as fire drills, smoke alarm programs and the FireSmart program fortifies the trust the public has in their fire service. Locally, public education tools can be developed to help prevent fires and augment public safety.

Reporting

Currently the reporting system uses antiquated methods of manual paper reports submitted to the administrative assistant to file. This method does not include or compile any Key Performance Indicators (KPI) required for regular analysis and evaluations of fire service performance levels.

Proper records management allows the fire service to measure actual performance against pre-set goals and analyse this information to create efficiencies and improvements. Information provided is used to analyze the overall performance of the fire service including:
1. Compiling total dispatch times and comparing them to industry standards
2. Compiling chute times and comparing them to established expectations
3. Compiling travel times, to gain a mean average
4. Evaluating staffing levels to meet existing protocol, number of staff and rank
5. Compiling call volumes
6. Compiling event locations
7. Compiling total event times
8. Compiling staffing man hours
9. Compiling staff training hours
10. Compiling response by type
11. Compiling billing information for cost recovery
12. Tracking the use of apparatus, equipment and materials
13. Tracking total fire losses

Once established, a purposeful Records Management System (RMS) will enhance the ability of fire services administration to understand the overall performance and quality of service provided and clearly indicate where improvements can be made. It is critical that District Chiefs understand the importance of modern reporting and receive the appropriate support from Wheatland County fire administration of an RMS. With the use of FirePro records management system linked to the CAD system information, annual statistical comparisons should be made to evaluate performance standards, response objectives, and service quality.

Observation: It is unknown whether FirePro RMS is being used as required or intended for statistical analysis.

Reporting Tools

Wheatland County is currently using the FirePro2 records management system. However, not all departments or associations are equipped or trained in its use. Many districts use the "I Am Responding" application which also has some records management capabilities as well as cellular based digital mapping. Recent developments, to have it linked to the WADEMSA CAD system information, is a positive indication toward establishing a suitable records management system. Through the use of analytics, annual statistical comparisons should be made to evaluate performance standards, response objectives, and service quality.

6.4   Recommendations and Schedule

The following recommendations and schedule for level of service are in support of enhancing the Wheatland Counties overall fire service:

1. *WCFES Administration work together with all Fire Departments to develop and implement response model protocols with realistic and achievable expectations, including:*
   a. *Safety - minimum staffing for type of event*
   b. *time to report to the fire station and don PPE*
   c. *time after arrival at the event to flow water and begin fire suppression operations.*
   d. *ensure consistent and accurate reporting (using FirePro or similar software) is done to gather information, data, and KPIs for future evaluation to determine the effectiveness of the response model*
2. *That Bylaw 2019-06 (Schedule 'D' Level of Service) be revised to reflect the minimum number of responders/staff needed for each specific type of response based upon NFPA Standards, best practices and safety, with guidance from the fire service administration. Safe operations demand adequate staffing without compromise.*

3. Each department and association review their service contracts and take the necessary steps to adjust the level of service required to meet the obligations within Bylaw 2019-06, or amend their contract to reflect their service capabilities and capacities. (6-12 months)

4. That consideration be given to establishing service levels for the following types of incidents, even if this involves industry partners or mutual aid. (12-24 months)
   e. Dangerous goods – Awareness level and consider establishing a contractor response protocol
   f. Water, swift water and ice rescue –Operations level and consider establishing a contractor response protocol or aid agreements
   g. High angle and slope rescue – Operations level and establish aid agreements
   h. Alarms ringing with no smoke – Technician level with minimum response of one unit

5. Create consistency in types of medical incidents Wheatland County stations respond to in support of the level of service. (12-24 months)

6. Establish a base level of medical training/skill (First aid, CPR with AED) for all firefighters and if the opportunity exists, support some members in getting further education. (Timeline – 12-24 months)

7. Ensure the use of a records management system (such as FirePro) is linked to WADEMSA's CAD information to enhance, capture and customise reporting of statistics, define KPIs, and monitor trends in dispatch, response, and operations. These statistics will establish baseline response measures/protocols and identify trends with the ultimate goal of establishing achievable response and service levels that can be evaluated over time. (12 - 36 months)

8. That support be provided to all stations regarding the importance, expectations, and procedures required for successful reporting. This includes providing the proper technology, hardware, software, and training. (12 - 36 months)

7.0   Incident Management

7.1 Overview

A new recruit responding on his first emergency call has his sights firmly set on the person in the right front seat of the apparatus. This recruit, in most cases without really knowing that person well, has put their complete trust in the team leader. This complete trust involves listening to any comments, orders, plans of action, and assisting in their execution. The expectation, the silent rule of this complete trust, placed on the Officer or Senior member in charge, is to guarantee the safety of his crew while performing a task and realizing the best possible outcome.

Chiefs, Captains, Lieutenants and other senior members of the fire service rely on their years of experience and formal theoretical & practical training to take control of and manage time sensitive, extremely stressful situations, many times involving life and death, while maintaining safety as a top priority. The demands on the Incident Commander/Manager, and even on the sector officer are enormous.

All incidents within the County are managed using the Canadian ICS (Incident Command System). Many of the staff have taken ICS-100, and many of the Fire Department Chiefs and officers have taken ICS-200 or higher.

7.2 Current State

Officer training in regards to Incident or Fire Command and leadership was limited, but seemed to have been marginally augmented with some Chiefs referring to the 'REVAS' model of fire command. These mnemonics (RECEOVS, REVAS, SLICERS) certainly provide great benefits, add to an officer's toolbox and offer a tactical view of when and how actions and tasks should take place, but the mindset of Incident Commanders needs to reflect the strategic 'thinking' aspect of fire operations rather than the tactical "actions & tasks" method when initiating, planning and finally the implementation of suppression operations.

This change in mindset has come directly from the IAFC (International Association of Fire Chiefs), as the 'Firefighter Safety Call to Action'. This action is based on empirical data from recent studies (UL & NIST) of modern fire behavior, the need for a logical incident command process for sound decision making and accountability systems, translating to increased safety and more efficient tactical operations to reach a desired or positive outcome.

The diagram gives us a quick insight into strategic thinking and risk management.

Figure 2 Fire Ground Command Example

Simply put, this states:
- We will risk a lot to save a lot,
- We will risk something in a calculated manner to save values worth saving and,
- We will risk nothing for those values which have already been lost.

This provides insight into how every incident commander should view a situation. Looking from left to right, we see upon arrival some dark smoke is coming from the eaves and roof. Strategic thinking might have fire command initiate an exterior offensive attack to save the building even if there is no life safety risk. Sound risk versus benefit management would require the incident commander to consider why an aggressive attack is even considered if there is no life safety risk. Further right we see a fully involved structure that triggers a defensive attack mindset to protect exposures and other adjacent property. These observations, strategic thinking and critical decision making are all based on an Officer's experience and training, the ability to read smoke, understand how ventilation and flow path affect fire behavior, and realizing how rapidly conditions can change from tenable to un-survivable.

Dispatch & Communications System Tools - Current State

Currently WCFES uses dispatch services provided by WADEMSA (Wheatland and Adjacent Districts Emergency Medical Services Association). This service is provided 24/7 by a single console unit and highly trained staff. Our interviews indicated no issues or concerns with the current dispatch system and the means in which WCFES is notified and receives requests for service. Notification process includes a paging system to handheld radios. There are no provisions for a dispatch printout or hardcopy. The use of the mobile phone app, "I Am Responding," is generally used by most volunteer staff to advise who is available and responding.

Wheatland County currently operates and maintains its own radio system which is used for public works and fire services. It was mentioned that some areas have poor radio coverage, an issue that has persisted for some time without resolution. Also, there were issues involving extended dispatch times for medical first response resulting in delayed response. With the AHS merger taking over the dispatching of medical calls in 2017, concerns were raised about extended dispatch times leading to extended response times. These extended medical dispatch times were attributed to cell phone calls that had to be transferred from one dispatch centre to another prior to being dispatched. At this time, the issue is with AHS and it is unknown whether these issues have been resolved.

Of some concern in the current radio system is the lack of capacity for seamless communications at a large multi organizational or multijurisdictional event. Adequate communications during the incipient and subsequent operational stages of a large event are paramount for the safety of all first responders. Safety of personnel on scene is directly affected by the lack of interoperability of scene communications.

Mobile and handheld radios are very expensive capital investments. The estimate is that WCFES has 125 handheld radios and 40 mobile units fitted to front line apparatus. It should be noted that there are different types of handheld radios currently in use. The majority of handheld radios are Motorola, which include a variety of new and older models (XPR-4550, XPR-6550). Overall, with the exception of a few areas that lack radio coverage, Wheatland County departments and associations seem to be satisfied with the current state of communications.

Like many rural municipalities, Wheatland County is undecided whether to upgrade and maintain the current radio system or migrate to the AFRRCS (Alberta First Responder Radio Communications System) system provided and maintained by the province. There are pros and cons to both scenarios. Estimated costs over a ten-year period are comparable, but beyond this ten-year period it is unknown what costs would be incurred with either system. Therefore, a gradual transition to the AFRRCS system should be considered for the following reasons:

1. Improves in area coverage(no gaps)
2. Improves safety of firefighter and first responders
3. Improves interoperability between law enforcement, fire and medical services
4. Decreases liability and risk for the County
5. Consistent budgeting
6. No system maintenance
7. 2020 upgrade allowing the use of cellular technology

Appendix H has more information on the current incident management tools of Wheatland County.

7.3   Post Incident Review: Current Findings

The post incident review process is not clear. There does not seem to be a clearly established protocol regarding post incident review or analysis, or which events should be reviewed. The importance of these reviews is to be able to learn from experience, identify what can be improved, and celebrate what when well. A well-coordinated review can address all the critical aspects of an event including:
1. Dispatch and response
2. Mutual and automatic aid
3. On scene communications
4. Fire suppression operations
    a. Size-up
    b. Fire Attack
    c. Rescue
    d. Ventilation
    e. Evacuation
    f. Exposures
5. Firefighter safety

The post incident review process provides intangible benefits including identifying training needs, advancing policies, procedures and guidelines, officer development, all in the spirit of continuous improvement.

Success of this type of review process is dependent on ensuring there is a capable facilitator to lead the discussions. Operational analysis of incident response and operations must be done through a progressive lens with proactive thinking. This is a session to foster continuous improvement by identifying gaps, celebrate teamwork and collective accomplishments. It also presents an opportunity for administration to offer thanks to the ranks for their valued efforts and commitment.

There is an abundance of online resources available that would allow for development of a tailored platform or template for post incident review suitable for use within WCFES.

7.4   Recommendations and Schedule

The following recommendations and schedule for incident management are in support of enhancing the incident management:

1. *Provide leadership, safety and command training to all staff expected to be in an Incident Command role with the goal to enhance strategic thinking principles, promote the use of best practices, safety and prioritization. The safety component should be based on principles of NFPA 1521 and approved by the AHJ. This training could be provided in a number of ways, but with available time having been identified as a major obstacle, a one-day workshop or seminar developed in-house could be provided. Another option would be to have an outside agency deliver a customised training program. (0-12 months)*

2. Establish a plan or protocol to address on scene radio communications during large scale events that involve outside agencies and multiple radio systems. This should be done with consultation from WADEMSA. (24 months)

3. *Investigate a strategic planned approach to migrate to the AFRRCS radio system over a number of years versus the option of staying with and upgrading the current radio system. (Decision in 6 months)*

4. Once a decision on which radio system is reached, that the migration to a new system, or upgrades to the current system, be completed within three years. (2-3 yrs.)

5. Development of a post incident review process that identifies triggers for which incident to review, or process to request a review, focused on progressive thinking and continuous improvement of all aspects of the fire service. The addition of an SOP in this regard would clearly outline the specifics required for a review and be accessible to all staff. (12 - 24 months)

8.0 Incident Response: Mutual Aid, Auto-aid, and Partnerships

8.1 Overview

Mutual aid and Auto aid are both very important considerations for fire services in rural Alberta. They enhance the abilities of the smallest services to protect the people, property, and businesses in their community and provide increased safety and assistance to front line firefighters. Fire Services in these areas need to find a way to work together across jurisdictional boundaries for the benefit of all.

Mutual aid is assistance that is requested by the responding fire department. Automatic aid is assistance that is dispatched automatically based on predetermined response guidelines. Both types of aid should be governed by formal, written, contractual agreements between fire departments, fire districts, or municipalities. Appendix A describes the current list of service contracts in place for Wheatland County.

Wheatland currently uses a combination of automatic and mutual aid in its response model. This helps ensure coverage between services, and provides firefighters from all stations with the opportunity to respond to an increased number and a greater diversity of calls. It also supports the services in achieving NFPA 1720 response targets by having enough manpower and the right equipment at the site of the incident as quickly as possible.

8.2 Analysis

Themes and considerations around Mutual Aid and Auto Aid based on stakeholder interviews:

1. Auto Aid typically happens for confirmed structure fire calls, where the largest need is additional water supply. Some auto-aide also takes place for motor vehicle response that requires extrication.
2. The region currently works well together for response, given the distances involved in the region.
3. Currently there are some inconsistencies in how auto aide is applied. For example, when certain stations get an auto aide it is clear what apparatus to respond with, and for others they first have to contact with incident command is required to determine what apparatus is required. Formalizing that process is recommended.

One area of investigation is the auto-aid agreement in place between the Wheatland West Hall and the Town of Strathmore. The response process is generally guided by the Fire Services Mutual Aid Agreement, however, there are some inefficiencies and issues with operational response that should be addressed. Currently, both services are potentially dispatched simultaneously to certain types of incidents including motor vehicle response, vehicle fires, structure fires, and other confirmed fires. There are no clear operational response guidelines in place for a coordinated response. Creating and an environment of "racing to calls". For example, having two engine trucks at a rural car fire and no tankers for water supply. Further complicating this is the impression amongst firefighters that the dispatching of Strathmore happens ahead of Wheatland for Wheatland County calls.

Outside Mutual Aid Partners
Mutual Aid agreements are in place with many surrounding jurisdictions, most of these covered under the *Alberta South Central Mutual Aid Agreement.* Wheatland County should review the existing mutual

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aid agreements and communicate what they are for and who they are with to all Fire Chiefs in Wheatland County. There should be a clear plan to ensure that these agreements are understood and updated and signed on a regular basis.

This model is commonplace throughout the industry and is based on intermunicipal collaboration, efficiency and fiscal responsibility.

Beyond formal mutual aid agreements, the Fire Services within Wheatland county works with many different partners and it is important to consider these so efforts are made to collaborate and foster strong relationships. Some key partnering to consider:

Table 2 Wheatland County Partnership Development

Partner	Reasons to foster relationship
The various Towns, Villages, and Hamlets of Wheatland County	Likely the most important relationship, especially considering the history within Wheatland County. This should be a number one priority for the leaders within Wheatland County.
Various Wheatland County departments, including: ● Community and Development Services ● Protective Services (Peace Officers) ● Transportation and Agriculture ● Corporate and Financial Services	Obvious partnerships and strong collaboration is needed with each of the internal departments within Wheatland County. Apparatus maintenance, water systems, radio and communications needs, incident support, and budget considerations are some areas to consider.
Alberta Health Services (AHS)	Fire and EMS have a long history of working together but can at times be in conflict when they don't understand each other's roles. Building and establishing strong partnerships here will be beneficial to citizens and responders
RCMP	Frequently responding to incidents jointly, such as MVC's and others, a relationship with RCMP is paramount. A formal Memorandum of Understanding is in place, signed in 2015.
Alberta Fire Chiefs Association (AFCA)	The AFCA has many resources that may be of benefit to the area fire services. Including the Alberta Fire Services Toolkit
Industry and business community	These entities may be relied on for fundraising drives, public support, and also potentially for response assistance in certain situations. It is also important for the fire service to understand the hazards that may exist in these businesses.
Hutterite Colonies	There are two main reasons to foster this relationship. The first is that the Colonies have large operations and they can have significant fire risk on their property. The second is that these partners can offer important resources to the fire service, including but not limited to

	potential volunteers, community support, and also sources of water during fire operations.
First Nations	There is a history within Wheatland County of working with Siksika First Nation but currently no formal agreement is in place. This relationship should be renewed to discover what support may be available.

8.3   Recommendations and Schedule

The following recommendations and schedule for Mutual Aid and Auto Aid are in support of enhancing the current state of Incident Response:

1. Review all mutual aid agreements to make sure they are current, relevant, and meet the needs of Wheatland County. (2-3 years)

2. The Wheatland County services continue to use automatic aid and continue to work collaboratively amongst fire stations and create an operational model that allows for the nearest station to respond first, assuming they have the appropriate resources to the incident type. (Timeline – 1 year)

3. *A clear response model for all calls that involve multiple Wheatland County stations including:*
   a. *Number and types of apparatus and resources required for each type of incident to get desired and appropriate apparatus to scenes. (0 – 6 months)*
   b. *Standard procedures, policies and guidelines for shared responses including (0-12 months):*
      i. *Standard terminology and benchmarks from the initial size-up to the incident declared under control*
      ii. *Process to establishing incident command and control structure*
      iii. *staging procedures*
      iv. *assignments of crews and fire ground accountability*
      v. *rural water supply procedures*
      vi. *radio interoperability*
   c. Consideration of using auto-aid partners to fill critical positions in the incident command system, such as safety, accountability, staging or liaison officers, a plus for firefighter safety. (12-18 months)

4. Wheatland County adjust its response protocols to increase use of auto-aid from other Wheatland County fire stations rather than relying on mutual aid from Strathmore Fire Department for responses into the Wheatland West fire district. (12-18 months)

5. Negotiate a new service agreement between Wheatland County and the Town of Strathmore to establish and clarify shared response procedures and return to more traditional mutual-aid type of relationship. (12 – 24 Months)

6. Consideration of a long-term strategy to merge the Wheatland West Station with the City of Strathmore Fire Department. This merger would combine both staff, house all apparatus in one fire station, have County apparatus available for structure fires within the city, and still allow

premium fire and rescue services within that district to the residents of Wheatland County. (3-5 years)

9.0   Fire Stations, Apparatus and Equipment

9.1   Fire Stations

Wheatland County Fire & Emergency Services includes nine districts each with its own fire station. WCFES Administration Office is not located within a fire station, but rather at the Wheatland County Administration Offices.

Figure 3: Wheatland County Fire & Emergency Services Stations	
District and Station:	**Managed by:**
Cluny Fire District - #1	Wheatland County
Dalum Fire District: Dalum Fire Protection Association - #2	Fire Association
Gleichen Fire District - #3	Wheatland County
Hussar Fire District: Hussar Rural Fire Association - #4	Fire Association
Rockyford Fire District: Rockyford Rural Fire Association - #5	Fire Association
Rosebud Fire District: Rosebud Fire Association - #6	Fire Association
Standard Fire District: Standard Rural Fire Association - #7	Fire Association
Carseland Fire District - #8	Wheatland County
Wheatland West Fire District - #9	Wheatland County

Fire Station location can be seen in Appendix G

Ownership of these capital assets is defined in the "Fire Capital Agreement". Governance is currently provided by the "Fire Capital Agreement", the "Joint Fire Service Agreement", and is the ultimate responsibility of the "Fire Service Committee" with input, requests and recommendations from the Fire Associations, and WC Manager of Emergency Services. Final decisions for large capital purchases rests with Wheatland County Council.

Overall, the fire stations throughout the county are adequate buildings. Functionally and operationally the Fire Associations have done very well managing to build innovative fire stations of adequate size keeping functionality as a priority. Generally, the fire stations managed by the county are older, have less space, and were built for current needs at that time, not future needs.

Fire Stations are specialty, purpose built structures, with unique operational and service requirements. No guidelines exist within the Fire Capital Agreement, for the inclusion of the basic and essential systems, equipment and infrastructure required for new or future fire station construction. Appendix "B" provides an overview of the Fire Stations age, size & space, operational suitability, safety, and health & wellness to identify options for improvement.

Wheatland County plans to build a new fire station in Carseland, however, long range plans for modernization, renovation or replacement of existing fire stations is not planned. Fire stations built within the last decade may not, for whatever reason, have implemented modern fire station building design concepts. Future fire station renovations and new construction, such as the Carseland Station, should incorporate modern, state of the art design in regard to functionality, utilities, safety, operational use, environmental concepts, water capacity and the health and wellness of staff. Simply adding shower facilities for personal decontamination prior to leaving the station helps prevent cross contamination to personal vehicles, home and family. This need is clearly identified in Section 23 of the OHS Guide to Firefighting.

9.2 Apparatus & Equipment

Fire apparatus are the biggest asset expenditures for any fire service. Well planned procurement and subsequent management of these resources using approved long-term planning and fiscal responsibility is necessary to pass public scrutiny and maintain public trust.

Wheatland County supplied TSI with an inventory of fire apparatus and equipment. This combined with station visits, telephone interviews, and email solicitations for information has enabled a comprehensive review of all apparatus and equipment in relation to the level of service and the regions capabilities and expectations of service. This apparatus and equipment evaluation will focus on in-service front-line units, PPE (Personal Protective Equipment), SCBA (Self Contained Breathing Apparatus), and communications equipment. Guidelines for the evaluation are based on the use of best practices, NFPA standards and OHS requirements.

WCFES is a well-equipped force that provides a wide array of emergency services. TSI evaluated 47 pieces of apparatus with a capital asset value in the millions of dollars as seen in the below table. This concludes that WCFES is certainly not under equipped and all stations have functional, well maintained, front-line apparatus. The entire Fleet is very well cared for and meticulously maintained.

Wheatland County Apparatus by Fire Station Overview

	Carseland	Gleichen	Cluny	Dalum	Hussar	Rockyford	Rosebud	Standard	W West
Engine	X	X	X	X, X	X	X	X	X	X
Tender	X	X	X	X		X		X	X
Rescue				X	X	X		X	
Bush Buggy	X	X	X	X,X	X	X	X	X	X, X
Service/Traffic				X	X	X	X		X
Command	X			X	X			X	X
MFR					X		X	X	
Other				X		X	X		X

Other includes: reserve/retired apparatus and ATV/UTV.

WCFES and the Associations have a wide variety of apparatus. This can be seen as a strength, but in some cases may result in a weakness. The more units in service, increases operation maintenance budgets and downtime if local expertise is not available for repair, inspection and certification. As well, staff must spend valuable time to check inventories and maintain vehicle readiness.

Appendix B: Inventory of Apparatus and Equipment, describes WCFES inventory and life cycle requirement considerations.

Engines
The Engine fleet of Wheatland County Emergency Services is modern with the capacity to provide the necessary flow requirements for exterior structural fire attack and within recommended industry standards (NFPA 1901).

An overall assessment of the engine fleet shows that it is moderately aged. The average age of the Engine fleet is 12.5 yrs. Several of the Engines are single cab with a crew capacity of two, limiting the transport of staff to an event. Best practices indicate that no less than four adequately trained staff be present to initiate fire suppression operations.

Wheatland County and fire service administration should ensure a strategic capital asset management plan is in place to support the capital asset replacement of front line Engines.

Tenders

Tenders throughout Wheatland County have acceptable capacity and are moderately aged with an average age of 11.67 yrs. Crew capacity for Tenders is not as critical and a crew of two is adequate if the Tender is in support of an Engine and crew training and skill maintenance is current.

NFPA 1142 provides the standards for rural firefighting water supplies and flows, and suggests that the minimum water supply for any structure without exposures shall not be less than 2000 gl. (7600 L). At the minimum standard flow rate of 250 gl. (950L)/minute the supply would last 8 minutes. As a comparative to the NFPA standard, the tender from Cluny Fire District carries a water supply of 11,365 L(3000 gal.), providing 12 minutes of continuous suppression operations at the minimum standard flow rate demonstrating adequate capacity in a rural setting.

Newer Tenders in the fleet carry a greater water capacity, however, tenders in Rockyford, Rosebud and Carseland are older apparatus and do not have the desired capability or capacity.

Rescues

A fleet of four rescues are distributed throughout the County located in Standard, Rockyford, Dalum and Hussar. Generally, they are comprised of Ford F-550 crew cab trucks, and equipped for a number of key uses including transporting personnel, carrying a multitude of equipment, vehicle extrication tools, air bag lifting systems, and SCBA to name a few. The Fleet is relatively new with an estimated average age of 8.25 years.

All Rescue Apparatus is supplied and operated by Fire Associations. The role of this class of apparatus, as it pertains to and supports the level of service, is not clearly defined. Establishing clear operational guidelines for these units, whether they are dispatched in support of structure fires, motor vehicle collisions, rescue or special operations should be part of a response plan.

Bush Buggies

There are a good number of "Bush Buggies" in service within the County. In fact, every district is equipped with a Bush Buggy and some districts have two. This trend is indicative of the types of fires that occur throughout the county. Although the statistics provided don't differentiate between types of fire, it can be assumed that a great majority are grass or wildland fires and that Bush Buggies are the apparatus of choice for support and fire suppression in these situations.

These apparatus are generally half-ton to one-ton, crew cab four-wheel drive pick-up trucks. A few are flat decks with permanently mounted tanks and pumps. Many are outfitted with skid units and are equipped as required for the season. With the recent delivery of 3 new units, the estimated average age of Bush Biggies is 5 years.

How Bush Buggies assists and mesh with the current response model and service is not clear but there is a clear trend toward their use. Should the department receive an emergency call for a grass, brush or wildland fire, what is the priority of response, Engine, Tender or Bush Buggy; Tender and Bush Buggy? Engine and Bush Buggy? Or all three? The need for clear response guidelines is evident here.

Observation: There seems to be no Vehicle Purchase Specification Guidelines to address the overall specifications required of a 'Bush Buggy', or any other unit classifications. What are the absolute requirements from a design role and service perspective, starting with chassis, drive-train, gross vehicle weight, load carrying, and fire suppression equipment requirement? The term "Bush Buggy" may be confused with apparatus such as ATVs.

Other Apparatus & Light Duty Trucks
The remaining apparatus in service with WCFES can be reclassified into several categories in support of the level of service. They include:
1. Command
2. Medical First Response
3. Service
4. ATV, UTV

Generally, there is a Chief's vehicle designated as the Command vehicle. Based on what type of vehicle it is, it may carry a variety of equipment and be able to transport staff to and from an event. Some Associations and Departments may use the same unit for Command, MFR and service. WCFES does not provide any guideline to what type of vehicle for each role. The decision comes from the District Chiefs.

A few Associations have ATV (quad) or UTV (side-by-side) apparatus in service customized with fire suppression equipment, towable trailers with fire suppression equipment or stretcher carrying capabilities for difficult or remote terrain response.

Alberta OHS performs random spot inspections at fire stations requesting information on apparatus such as ATVs to ensure attachments have been engineered properly and that the units have been tilt table tested for compliance. Fire Departments or Associations should be aware of this if they plan on purchasing this type of apparatus and making custom additions for functionality.

Apparatus Life Cycle & Replacement
There is no set standard or guideline for replacement or life cycle of apparatus. NFPA 1912 suggests that every 15 years is an acceptable life cycle throughout the industry and to designate apparatus older than 15 years to a reserve/backup capacity. It also states any apparatus manufactured prior to 1991 as a high risk to safety.

In a draft copy of the Master Service Fire Agreement section 14, "*Apparatus will have a life cycle replacement of 20 years with replacement schedule of 15- 20 years".* Factors such as call volume, mileage, hours of use, suitability and capacity may be used to justify or formulate a plan for replacement of front-line apparatus that is acceptable, manageable and fiscally responsible.

Notwithstanding the aforementioned, WCFES has done excellent work in maintaining a relatively modern fleet of front-line apparatus. Table 4 describes front line apparatus inventory. With some of the aging apparatus it is the decision of the Fire Services Administration to determine the level of liability or risk the County is willing to take in regard to the use of aged out apparatus. There is no SOG for the retirement, refurbishment or replacement of apparatus. This should be developed and integrated with capital planning.

Table 4 WCFES Apparatus Average Age								
District	**Engine**	**Age**	**Tender**	**Age**	**Rescue**	**Age**	**Bush Buggy**	**Age**
Rockyford	2008	12	2000	20	2005	15	2009	11
Carseland	2016	14	2003	17			2020	0
Dalum	2006	14	2004	16	2011	9	2017	3
	2009	11					2013	7
Cluny	2007	13	2001	9			2012	8
Gleichen	2007	13	2017	3			2020	0
Hussar	2007	13			2015	5	2014	6
Rosebud	2006	14					2017	3
Standard	2007	13	2014	6	2016	4	2008	12
					2006	14		
Wheatland West	2012	8					2020	0
Average Age		12.50		11.83		9.40		5.00

Self-Contained Breathing Apparatus (SCBA)

The age of the equipment varies, but indications are that there is a combination of new, relatively new and older equipment, all in accordance with industry (NFPA 1981 & 1982) and OHS standards. Maintenance and testing are included in the regulations and standards. The manufacturer should be consulted in regard to SCBA maintenance, serviceability, decontamination procedures and retirement from service. SCBA are predominantly supplied by MSA, but a few associations are using SCOTT™ Fire and Safety. SCBA should sourced from a single supplier for cost savings and consistent district interoperability.

Ancillary Equipment

Each of the Departments and Associations has ancillary equipment expected of an active and effective fire service that include:

1. Vehicle extrication tools (hydraulic, electric, and manual)
2. Lifting airbags
3. Fire hose & nozzles of various sizes
4. Breathing air compressors (Jordair)
5. SCBA filling stations
6. TIC – Thermal Imaging Cameras
7. Chainsaws, reciprocating saws, and cut-off saws

Ancillary equipment of Wheatland County meets the goals for providing expected core services.

9.3   Recommendations and Schedule

The following recommendations and schedule in support of enhancing the current state of for Fire Stations, Apparatus and Equipment:

1. The Capital Committee assess urgent and long term needs and enhancements of infrastructure including fire stations and procurement of apparatus. This Committee may forward recommendations, using suitable rationale and best practices, for consideration to Wheatland County Administration. (24 Months)

2. The following should be included as part of WCFES Capital investments for fire station improvements:
    a. Short term improvements and renovations include: (12 months)
        i. Internet access for reporting and training purposes
    b. Medium term improvements to fire stations include. (3-5 years)
        i. Installation of showers for personal decontamination
        ii. Installation of laundry facilities for decontamination
        iii. Installation of industrial wash stations for cleaning of equipment and PPE
    c. Considerations for long term improvements and renovations include: (5-10 years)
        i. Installing vehicle exhaust extraction systems
        ii. Separate HVAC systems for apparatus, PPE, office, and meeting space
        iii. Renovations or additions to add separately ventilated turnout gear room
        iv. Additions or renovations to include a workstation and space for equipment maintenance and storage

3. Cluny Fire Hall #1 be marked for replacement. The station is overcrowded and well past its prime even after a renovation in 2019. The apparatus floor is a safety concern, overcrowded for the efficient movement of apparatus. Other interior requirements include an office, meeting/training room and adequate washroom facilities. (5-10 years)

4. In the short term consider redeployment of the Tender from Cluny to Rosebud or Hussar. This helps with overcrowding and safety concerns in Cluny and addresses the need for a Tender in either Rosebud or Hussar. (12 months)

5. Consideration may be given to a long term strategy to merge Gleichen and Cluny Fire Districts and stations to gain operational and financial efficiencies with the construction of a modern fire station staffed by and servicing both communities. (5-10 years)

6. ***WCFES and the Fire Associations of Rockyford and Rosebud, as well as the Carseland Fire District, immediately review the capital cost and replacement strategies for their Water Tenders. (within 6 months)***

7. WCFES should work closely with the Associations to determine the specific roles the rescues will be utilised for and ensure they are integrated into the response model. (12 months)

8. That WCFES Administration consult with local expertise within the Associations and Departments and form a committee to standardise new purchase specifications for each class of apparatus. This will streamline the acquisition of apparatus that is designed and customized for

the specific fire suppression, rescue, and emergency service needs within Wheatland County. Further, it will provide cost efficiencies and familiarity for firefighters working on the apparatus. (12-24 months)

9. Future purchases of Engines and Tenders should have a minimum crew capacity of four to ensure adequate staffing upon arrival at an incident. (Ongoing)

10. Development of policy to plan for the retirement, refurbishment and replacement of fire apparatus, based on industry best practices and fiscal responsibility. (12-18 months)

11. That WCFES contemplate changing the name of apparatus known as the "Bush Buggy", to a more descriptive term such as "All Terrain Engine", 'Mini Engine", "Wildland Engine". (12 months)

10.0 Training Programs

10.1 Overview

Training is a large consideration in any fire department and should be a major focus in Wheatland County. Overall, the level of training within the various services in the Wheatland County services is strong, but stronger in some communities than others. While there are some similarities in the approach to training, we also saw potential for improvements.

10.2 Analysis

A major theme within WCFES is very little sharing of knowledge and resources amongst the different stations. Working together, sharing plans and approaches, and pooling resourcing in this area could help create additional training opportunities that may not be accessible to each station on their own. TSI recognizes the challenge in joint training nights with long travel times within the region as well as life commitments of the members but feels there are additional opportunities for collaboration on training within the region.

TSI believes that if all stations in Wheatland County develop a shared training plan, they will be able to collaborate on training resources and costs, better support each other in call response, and build comradery to support the service overall. In particular, consideration should be made to running recruit training in larger groups. For example, at a set date or dates the County could run a joint training program that would ensure all firefighters achieve the same basic training prior to starting operations.

Some conversation around a practical training facility took place. Some would like to see a training facility located in Wheatland County that provides access to all stations and associations. It is also known that the operational cost and upkeep of a facility would be a significant consideration. At this time, no in-depth cost analysis has taken place, but TSI does not recommend undertaking the construction of a training facility at this time as resources should be focused at higher priority administrative and operational items at this time.

The following observations were made by TSI through stakeholder interviews:

1. No clear direction or plan from Wheatland County management on what training should involve or how often it should be done.
    a. Most stations are meeting twice a month, some more and some less. It recognized that too much training would be a strain on the members as their time is limited.

2. Little or no support in training plans or material, limited sharing of resources amongst the stations. Strong desire for shared training plans and packages. This has been done on a limited basis in the past.
    a. Support for the idea of subject matter experts traveling around to many stations to teach specific topics.
    b. Examples of desired topics came up, like traffic control and vehicle extrication on modern vehicles.

3. Some stations have training officers; some have the Chief create the plan.

4. Some stations have a somewhat formal training plan they have developed in house, while others have a less formal approach and training topics are chosen based on an "as needed" basis.

5. Many have previously focused on the "s" series of fire training courses but find the current NFPA model of 1001's difficult to commit to for their members.
   a. Having said that, there are many 1001 trained firefighters in the area.

6. No consistent tracking of training records attendance, skills, JPRs, etc.

7. No consistent budget on training dollars being provided by Wheatland County
   a. History of budget being taken away and leaving the stations or associations to apply for government funding for training.

8. Joint training committees have been established in the past and functioned well for a brief period of time.

9. Foster the relationship with WADEMSA EMS and incorporate them into fire department training. This will have the benefit of increasing team effectiveness on incidents and increase the medical training level of firefighters. (Timeline – 12-24 months)

10. Space is an issue, it is difficult to train in the limited area of the stations.

11. A live training site, in a central location would be welcomed by many but cost is a recognized concern

10.3 Recommendations and Schedule

The following recommendations and schedule for training are in support of enhancing the performance and safety of all fire service personnel:

1. *A training program be formalized through a joint training committee to provide more consistent training to all firefighters in the region using the Alberta Fire Chiefs Association Core Competency Framework and other tools to identify program minimums. This should include firefighter and officer training. (0-12 months)*
   a. Aim to establish a set training calendar to provide firefighters with a consistent and clearly set training plan. This can also be done to recognize the times of the year that are more difficult for firefighters to attend training, and the times of the year they are more readily available. ie. Avoiding seeding and harvest time for farmers.

2. Training be regularly documented to maintain accurate training records. The goal is to increase the ability of firefighters to effectively and safely provide fire response and to reduce any liability to the individuals, municipalities, and the county by not having documented training. (12 months)

3. Identify opportunities for cross-training between stations for special training events such as live fire training, vehicle extrication scenarios, mass casualty incidents, etc. Held approximately twice a year, these training events would be part of the training calendar and could be held on weekends to allow for travel time to meet at set locations. These opportunities would allow firefighters from all stations to come together to build a unified skill set to support mutual response and comradery of all county members. (12-24 months)

4. Consideration should be made to bringing in external trainers in to support high-need training areas, such as large vehicle extrication, firefighter self-rescue, etc., and that these training opportunities be open to all stations. (12 months and ongoing)

5. Occasionally deploying training officers or firefighters with subject matter expertise from each district throughout the region to share skills and knowledge with all stations. (12 months and ongoing)

6. Consider implementing a formal online training program and video conferencing for joint training opportunities over time. Several different online training tools are available, but more can be done to build an online training library accessible across the county and expand the ability to learn from trainers across the county through video conferencing. (3-5 years as part of evolution of training program)

7. Foster a formal mentorship processes for firefighters and officers (12-24 months)

8. Wheatland County initiate discussions to explore the long-term potential establishment of a practical fire training site within the County. (2-3 years)

Reference: Alberta Fire Chiefs Association Core Competencies Framework. http://abfirechiefs.ca/

11.0 Recruitment and Retention

11.1 Overview

Given that the Wheatland County services predominantly rely on volunteer fire services, recruitment and retention were identified as key challenges being faced by the fire services. While many stations in Wheatland are operating with a strong and stable number of volunteers, there is not an abundance of firefighters available for them to pull from. Recruitment and retention has largely been through general word of mouth, and occasional community events. Wheatland County could be in a difficult position in the future if a large number of current members retire or resign at the same time.

11.2 Analysis

Themes and considerations around recruitment and retention based on stakeholder interviews:
- Some stations, specifically Cluny, rely heavily on the neighbouring colonies.
- There is strong community support for the fire service, especially in the smaller communities.
- There is limited official public relations from the fire service into the community. Fire Services is positively viewed in the communities, but the public may not know much about what they do.
- Past volunteers have resigned from the county having too many commitments for training.
- Some programs have taken place to highlight the fire department in the communities, such as a Fire Department sponsored program to place AED's in the community.

Colony involvement in the fire service varies through the region, and in some communities the Colonies are heavily involved. This pool of resources is important to sufficient manning in those communities.

Wheatland West station has some unique recruitment and retention needs as their pool of firefighters is typically from within the community of Strathmore. This does create some competition between the Strathmore Fire Department and the Wheatland West station as they are recruiting from the same pool of people. TSI has been told that members are not allowed to be a part of both fire services. Firefighters working in the Wheatland West suggested that they at times feel they do not have a voice with Wheatland County administration, as they live in Strathmore and live under their municipal government structure and not Wheatland County's.

One area related to recruitment and retention is considerations to the long-term health of members, both physical and mental health. Some stations support a physical fitness program, with good use by members and many members engage in physical fitness while at the station. All stations are aware of the importance of mental health as well, having some sort of CISM support in place. Many spoke highly of an area Chaplin or Pastor by the name of Dawn. WADEMSA has also helped make access to mental health support when the fire departments have been involved in medical calls that have had impacts on the members.

The final area to be discussed in this area is Remuneration. Volunteerism is the backbone of all communities in Alberta, but perhaps even more important in the smaller rural communities. At the heart of this volunteerism is the volunteer firefighter. We heard during our interviews that remuneration was clearly not the driving force for why firefighters join or stay with their fire service in

Wheatland County. Pay is not in the spirit of volunteerism. For these volunteers the main incentive is the personal satisfaction of helping others.

However, we did hear that there are some associations or stations that are being remunerated modest amounts. Although the decisions to pay firefighters is likely one left to the individual associations, it would likely be beneficial for WCFES to do an audit of what firefighters in all stations are being paid and aim for consistency when possible.

Another consideration here is that through this plan we will be asking fire department leaders and fire department members to contribute further to their service. Through committee work, safety initiatives, leading and planning training activities, and other duties on top of responding to incidents, certain members will be pushing their work-life balance to the limit. As stated earlier, pay is not the driving force for these members however these additional duties may become easier for members to accept if they receive some remuneration for their time. And from the perspective of the county, the consideration should be there to see if there is more that can be done to support these dedicated members.

11.3 Recommendations and Schedule

Recruiting and training new volunteers is just the beginning. The long-term challenge will be to create an environment in which individuals want to stay because they continue to be motivated, interested, challenged and supported as valued members of the team.

Fire Services Leadership needs to be proactive, involved and present to motivate firefighters. Recognition of their efforts and gratefulness at every opportunity should be common practice. Empower firefighters and provide them with the tools to do the tasks safely. This way they can be qualified to do everything, to the best of their ability.

To further enhance and improve recruitment and retention, TSI recommends:

1. Establish a sub-committee on recruitment and retention with representatives from all municipalities. (12 months)

2. Work with the Training Committee to plan for a joint recruit training program between all stations in the area to onboard new recruit firefighters. (12 months)

3. To support Recruitment and Retention, a number of initiates can be found in appendix I for consideration by the committee (12-24 months)

4. Review the pay strategies for all associations and stations in Wheatland County and consider implementing and supporting a consistent approach. (12-24 months)

5. Establish extra duty pay scale for fire department members who take on extra efforts for the service. An example of possible pay strategies is included in appendix I. (12-24 months)

12.0 Fire Safety

12.1 Overview

Firefighters worldwide face unprecedented challenges in safety and Health. Exposure to toxins, chemical compounds, smoke and products of combustion, effects of heart disease, exposure to communicable disease, and mental or psychological stress brought on by post-traumatic stress and critical incident stress, are all factors faced everyday, everywhere by firefighters. Firefighters accept a level of personal risk that is unacceptable to the average person, therefore it is a must that Leadership ensure the safety and well-being of all Fire Service staff.

Firefighters are trained to tackle all events, but the physical and mental demands are greater than originally anticipated and a post event process is required to protect all fire service staff from long term physical and mental impacts.

Mental Health and Wellness
When we discussed post-event processes the general discussion was focused on providing staff with the appropriate mental health initiatives. Both understanding the effects of psychological trauma on volunteer staff and how to best support them is at the forefront of Wheatland County. The awareness regarding mental health and the effects that emergency response has on staff was encouraging and positive.

Current processes are in the form of simple debriefings while returning to, or immediately upon returning to the fire station. There was reference to the availability of a Pastor for assistance, as well as assistance from the WC FCSS, should there be a need for follow-up and treatment of staff suffering post incident effects such as PTSD, CIS, depression or other disorders. It was clear that all associations and departments watch out for each other and are in tune with subtle changes in each other's personalities and behaviors.

Observation: No formal training, awareness, processes or practices are in place to address mental health within the organization.

Occupational Disease
Exposure to contaminants, products of combustion, products released by the burning of synthetic & plastic materials, toxic gases and fumes released at vehicle fires, has made the fire ground and in some instances, the fire truck and fire station very unhealthy places. Unnecessary cross contamination of the cab and the fire station happens after working fires and live training when proper decontamination procedures are not followed. There are no less than 14 presumptive cancers recognized by WCB.

*The presumption applies to full time, volunteer, part-time and casual firefighters who have been regularly exposed to the hazards of a fire scene, other than a forest fire, for the minimum period shown for the specified cancer.

Firefighters must be vigilant for their own safety by ensuring the proper use of PPE and being certain that gross decontamination begins on scene and careful protocols are followed for personal decontamination and the decontamination of PPE and equipment. Firefighters cannot be protected

from all exposures, but limiting these exposures through proper safety procedures and processes to reduce the risk of chronic health disorders should be enforced.

Reference: https://www.nfpa.org/-/media/Files/Membership/member-sections/Metro-Chiefs/2018-conference/MetroMondayCancerMentalHealth.ashx

Communicable Disease

Firefighters responding to medical assist events are also susceptible to communicable disease such as viruses and bacterial infections. AIDS, Hepatitis, and Influenza are a few examples of communicable disease that first responders may be exposed to. Relevant, targeted training, the implementation of and strict adherence to medical control guidelines will provide very effective protection for first responders from the possibility of infection. However, in cases of possible exposure, the provision for immediate medical treatment should be in place. Assistance and guidance with prompt treatment, and the establishment of protocols, can be found through your local AHS office and their infectious disease specialist.

Physical Injury

Firefighters are susceptible to all types of physical injury, thermal exposure and burns, falls, injuries from falling debris, muscle pulls and strains, acute pulmonary exposure to heated gases & smoke and hazards associated with working on busy roadways. Fortunately, with safety as a priority, these types of injuries are mitigated by using safe work practices, following safety procedures, strict adherence to the use of PPE, maintaining good physical conditioning, and getting adequate rest.

Health and wellness should be a priority of the fire service Administration. Such programs reinforce, to the rank and file that Council and FD administration truly care for their wellbeing.

12.2 Recommendations and Schedule

The following recommendations and schedule in support of enhancing safety and wellbeing of firefighters:

1. Information regarding mental health and wellness awareness and associated support services be included as part of initial recruit training and future officer development within the fire service training program. (1-2 yrs.)

2. Action to establish and mandate summer and winter, on scene, gross and personal decontamination procedures to be addressed in an SOP. This is a procedure that is generally inexpensive to establish and maintain, but provides the greatest return, that of continued good health. Large centres such as Calgary and Edmonton would be a good resource to help establish these protocols. (1-2 yrs.)

3. The adoption of the "Clean Cab Initiative" to avoid cross contamination of fireground contaminants into the fire apparatus. Basically, anything that goes into the fire doesn't go back into cab of the truck until it is thoroughly cleaned and decontaminated. (1-2 yrs.)

* from The Firefighter Presumptive Cancer Fact Sheet
https://afca.ca/latest-news/item/243-firefighter-presumptive-cancer-fact-sheet

13.0 References

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APPENDICES

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Appendix J: Governance Options

Appendix A: Wheatland County Service Agreements

Joint Fire Service Agreement			
Association Responsibility	**Wheatland County Responsibility**	**Fire Departments Covered by Contract**	**Comments**
- Fire Association agrees to provide fire suppression and rescue emergency services - Be responsible for the billing and collection of any fire fees - Maintain and insure all equipment - Provide liability insurance on equipment and for all personnel - Provide recruitment, remuneration and ongoing training and management - Provide Wheatland County an annual report on the status and condition of their fire assets and equipment, training and fire and emergency response statistics, active members, and a budget for long term planning purposes. - Provide an annual financial statement, audited, as defined by the Societies Act - Provide their respective selection for Fire Chief to the Wheatland County Fire Coordinator	- Provide acceptable call answer and dispatch services - Provide operating funds to the Fire Association - Provide capital funds to the Fire Association - Provide Workers' Compensation coverage for fire personnel listed as volunteers for the Fire Association. - Provide insurance to the Fire Association, as required, to ensure adequate coverage to address accidental death, disability (if applicable), liability, property including building and contents and heavy equipment and automotive with costs for such coverage to be determined and paid for through mutual understanding between the Fire Association and Wheatland County. - Utilize in long term planning, budgeting and financing of fire operations, the information provided annually by the Fire Association. - Wheatland County Council will approve the appointment of the Fire	**Hussar** **Dalum** **Rosebud,** **Standard** **Rockyford**	

	Chief so that the Fire Chief and Firefighters qualify for Workers Compensation Board coverage
	• To provide a Fire Coordinator to assist rural fire associations and fire departments with the following services:
	   i. Chairman for Fire Chief meetings, training meetings and fire capital meetings;
	   ii. Attend Fire Department meetings when requested;
	   iii. Main contact person for Fire Chiefs and Fire Associations for Wheatland County;
	   iv. Grant application submissions for Fire Departments;
	   v. Fire Permits;
	   vi. Institute fire bans during dry conditions;
	   vii. Main contact person to the Fire Commissioners office representing Wheatland County.		

Fire Capital Agreements

Association Responsibility	Wheatland County Responsibility	Fire Departments Covered by Contract	Comments
• Cost sharing established by County Council Resolution • Assets owned by Association • Assets maintained and inspected by Association • Recommend sale, disposal or replacement of assets • Provide Liability and other insurance	• Establish a Council Fire Capital Committee • County lien on assets purchased	• **Rockyford** • **Hussar** • **Dalum**	**No agreement provided for Rosebud or Standard**

Fire Mutual Aid Agreements

• Provide fire response upon request • Procedures to activate, command, respond and deactivate • Obligations and limitations • Joint training		• **Strathmore**	**Expired May 2019**
• Provides fire response upon request		• **Vulcan County**	
• Procedures to activate, command, respond and deactivate • Obligations and limitations • Joint training		• **Rockview County**	

Wheatland Fire & Disaster Mutual Aid Agreement

• Provides fire response upon request • Procedures to activate, command, respond and deactivate		• **Includes all municipalities and associations within Wheatland County**	

Transfer of Assets Agreements			
• Covers the transfer of all assets for Gleichen and Cluny Fire Associations to Wheatland County		• **Gliechen Fire Association,** • **Cluny Fire Association**	**No Transfer Agreements provided for Carseland or Wheatland West**

Appendix B: Inventory of Apparatus & Fire Equipment

Wheatland County Apparatus Inventory

	Carseland	Gleichen	Cluny	Dalum	Hussar	Rockyford	Rosebud	Standard	Wheatland West
Engine	X	X	X	X, X	X	X	X	X	X
Tender	X	X	X	X		X		X	X
Rescue				X	X	X		X	
Bush Buggy	X	X	X	X,X	X	X	X	X	X, X
Service/ Traffic				X	X	X	X		X
Command	X			X	X			X	X
MFR					X		X	X	
Other				X		X	X		X

Other includes: reserve/retired apparatus and ATV/UTV.

Wheatland County Apparatus Average Age

WCFES Apparatus Average Age																				
District	Engine	Age	Tender	Age	Rescue	Age	Bush Buggy	Age	Command	Age	Medical	Age	Service	Age	Traffic/Util	Age	ATV	Age	Other	Age
Rockyford	2008	12	2000	20	2005	15	2009	11							1995					
Carseland	2016	14	2003	17			2020	0	2007	13										
Dalum	2006	14	2004	16	2011	9	2017	3	1980	40			1997	23	2010	10	2015	5	2015	5
	2009	11					2013	7												
Cluny	2007	13	2001	9			2012	8												
Gleichen	2007	13	2017	3			2020	0							2008	12				
Hussar	2007	13			2015	5	2014	6	2019	1			2002	18						
Rosebud	2006	14					2017	3												
Standard	2007	13	2014	6	2016	4	2008	12			2006	14								
					2006	14														
Wheatland West	2012	8					2020	0							2013	7				
Average Age		12.50		11.83		9.4		5.00		18		14		21		9.67		5		5

Indicates Front Line Apparatus as noted in the Fire Services Bylaw 2019-06

Indicates a strong trend toward the use of Bush Buggies

Appendix C: Fire Stations

Cluny Fire Station - #1

Located on 1ˢᵗ Ave. providing easy access to Hwy 842 and the Trans-Canada Hwy, Cluny Station is a Quonset that has previously had the addition of a light duty truck bay. There is a common area for office, meetings and training, and perhaps room for a future washroom upgrade or kitchenette. It houses an Engine, Tender and Bush Buggy. The main apparatus bay is overcrowded for the movement of the engine or tender in or out. Working area around the engine and tender is very limited as well. The turnout gear is also located in racks within the apparatus bay.

Because of its age, it was not designed with the modern efficiencies, health and wellness or OHS initiatives in mind. It is not equipped with shower facilities for self-decontamination following fire operations. There is no vehicle exhaust removal system or separately ventilated gear room. However, in its present basic form, and in our climate, it provides proper heated storage, an adequate water system, allowing the ability to perform checks, inventories, theoretical training, gear and apparatus cleaning.

Recommendation: In the short term, depending on Wheatland Counties building life cycle, Improvements should be in the form of a vehicle exhaust extraction system, upgraded washrooms with showers, and office. In the long term consideration should be made for the replacement of this station with a larger more suitable building, or an amalgamation with Gleichen in a new building. A short term option would be to re-deploy the Cluny Tender to Hussar. This takes care of safety and overcrowding issues in Cluny and moves a Tender into a gap in east central WC.

Dalum Fire Station #2: Dalum Fire Protection Association

Located at the intersection of Hwy 56 & Hwy 569. Dalum Fire Station has been in operation for 6 years with a operational focus of suppression and rescue.

It is a large station consisting of seven apparatus bays that provide ample space to work around apparatus. Amenities include a large, well-appointed and well-furnished boardroom, with an adjacent spacious kitchenette and living space.

Construction of Dalum is of a concrete foundation, wood frame building, including a metal roof, zoned hydronic heating, auxiliary unit heaters for winter, dedicated storage areas and wall mounted locker systems for PPE. Also within the infrastructure is a 20,000 gallon cistern.

Dalum Fire Station houses the following equipment:
1. Three Engines,
2. One Tender,
3. Two Bush Buggies,
4. One Rescue,
5. One Command,
6. One Service,
7. One Traffic, and
8. One ATV & Trailer

Due to its recent construction Dalum includes vehicle exhaust extraction system, washrooms with showers, an area for washing/pressure washing and decontamination of equipment and gear. This provides additional safety for the staff of Dalum to prevent any additional contamination prior to leaving the station. An example of leadership, teamwork and community achievement and there are no recommendations for this station at this time.

Gleichen Fire Station #3

The Gleichen Fire Station is located within the Hamlet of Gleichen, in the extreme south central area of the County. Just two blocks from Hwy 547 and less than 2 miles south of the Trans-Canada Hwy it is well situated for quick response. It too, however, is located on the extreme southern border of the county prompting pre-determined auto-aid response with Standard to ensure best scenario response times.

First impressions were that this station is well kept, organized and tidy. Housed within the building is an Engine, Tender, Bush Buggy and a Traffic Unit. The layout signifies that an addition was made. The Engine and Tender are housed in the north portion of the station and this portion is very cramped for space. There is no option to change this configuration because of no available ceiling height and overhead door access. This portion of the station was probably the original fire hall. The southern portion of the building was added for light duty trucks and office/living space. Nevertheless, there is a place for everything.

There is a common area/boardroom for meetings and theoretical training. Overall the station is an adequate building. Updates to its structure are limited because of the design and available land. Again, improvements such as vehicle exhaust removal systems, the addition of a wash station to clean and decontaminate equipment and upgrades to washroom facilities could be improvements considered for the capital budget. Priorities for such improvements will rely on recommendations from the Fire Service Committee.

Recommendation: Improvements such as vehicle exhaust removal systems, the addition of a wash station to clean and decontaminate equipment and upgrades to washroom facilities could be improvements considered for the capital budget. Also the long term consideration of the amalgamation of the Cluny with Cleichen stations.

Hussar Fire District: Hussar Rural Fire Association - #4

The Hussar Fire Station is located in the Village of Hussar and has immediate access to Hwy 561. There was no formal interview conducted regarding this Fire Station.

Hussar is a recent station and is currently in full operational use and houses the following equipment:

1. Engine #40
2. Engine #42
3. Rescue #46
4. Tender – Command #41
5. Bush Buggy #45
6. EFRT #44 – Emergency First Response Team

There are no recommendations for Hussar at this time.

Rockyford Fire District: Rockyford Rural Fire Association - #5

Located on the northwest corner of Main St. & Railway Ave. in the Village of Rockyford is a community focal point. No formal visit was conducted in regard to the Rockyford Fire Station. It is a large station with six apparatus bays and a two story office and living space.

Rockyford Fire Station houses the following equipment:
1. Engine #56
2. Tender #52
3. Rescue #55
4. Rescue #54
5. Bush Buddy #53
6. ATV #57

The station is well situated for response within the Village of Rockyford and into Wheatland County. The building with its architecture and strong lines, represent pride, ownership, and commitment. There are no recommendations for this fire station

Rosebud fire Station #6   Rosebud Fire Association

Rosebud fire station has been located within the Hamlet of Rosebud with access directly on to Hwy 840 for 10 years.

It is in full operation and houses the following:
1. One Engine,
2. Two- Bush Buggies, and
3. One Reserve Tender

With a four bay layout, it provides enough space for the Engine, two Bush Buggies as well as a reserve Tender. There is ample space for working on and around the apparatus. The area behind the apparatus is used for storage of turnout gear on wall racks. There is a dedicated map/dispatch/communications office and a generous area for use as a workstation and equipment storage. The upstairs is a large meeting/conference room with a large table with chairs for meetings and training.

Rosebud fire station is an example of recent construction by the Rosebud Fire Association and an exemplary example of leadership, teamwork and community achievement. Pride in the fire service and within the community is evident. The story-and-a-half design is well thought out and includes exhaust fans for apparatus floor to exchange air, washrooms with showers. Unfortunately, common modern principles with regard to health and wellness were not incorporated in the design.

Recommendation:
Consideration should be made to enclose, isolate and vent the area for turnout gear to avoid off gassing throughout the apparatus area.

Standard Fire Station - #7   Standard Rural Fire Association

Standard fire station is located within the town of Standard on 2nd Ave. West, at 120 Elsinore Avenue. It has been in full suppression operations for five years

The fire station is a large 6000 ft^2 steel building with concrete foundation, metal roof, 6 apparatus bays and has municipal utilities and water supply. Amenities include a boardroom, map and communications room, offices and storage.

Standard houses the following equipment:
1. Engine #75,
2. Tender #71,

3. Rescue #73,
4. Rescue #74,
5. Rescue #76,
6. Bush Bubby #73,
7. Command #72, and
8. EFRT #74

This building is more than adequate and Standard Fire Station is well equipped for safety and wellness of the staff with air replacement & exhaust fans, washrooms with showers, and space for washing gear

Recommendation: The addition of and industrial washing station for cleaning of equipment and gear should be considered.

Carseland Fire Station #8

The Carseland fire station is located in the Hamlet of Carseland at 101 Railway Avenue East opposite of Main St. and backs onto the CNR tracks.

Currently it is inadequate in size and location for continued use. It houses:
1. Engine #8,
2. Tender #8,
3. Bush Buggy #8, and
4. Command #8.

Recommendation:
This station is slated for replacement and plans for replacement are underway. The new station is to be located south of the hamlet, across the rail line and south of highway 24 in a vacant subdivision. A report submitted by TSI to Wheatland County Council on September 2019 outlines the needs and requirements of the new Wheatland station.

Wheatland West Fire Station - #9

The Wheatland West fire station is located within the City of Strathmore on the George Freeman Tr. (GFT), and Centennial Dr. It has been in operation for 21 years.

Constructed of steel clad, a wood frame, concrete foundation, and natural gas heaters. Wheatland West Fire Station has been adequate thus far. It currently houses:
1. One Engine,
2. One Tender,
3. One Service Traffic, and
4. Two Bush Buggies

Wheatland West when responding south, is within one mile of the Trans-Canada Hwy, but passes through a school zone along George Freeman Trail. Responding north it is one mile to TWP Rd. 224.

Appendix D: Level of Service
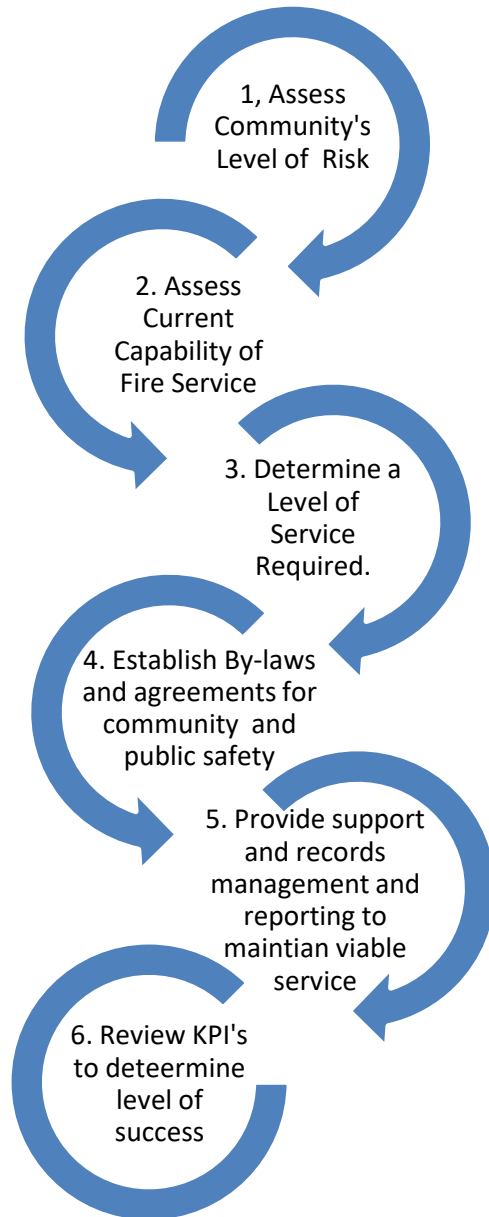
The use of the this process can provide both Council and FD Administration a roadmap or template on consultation and discussion regarding the best way to reach a desirable goal for the protection and public safety within the county.

Steps 1 and 2 of the process is to provide focus on the municipalities risk, capabilities, goals, objectives and structure.
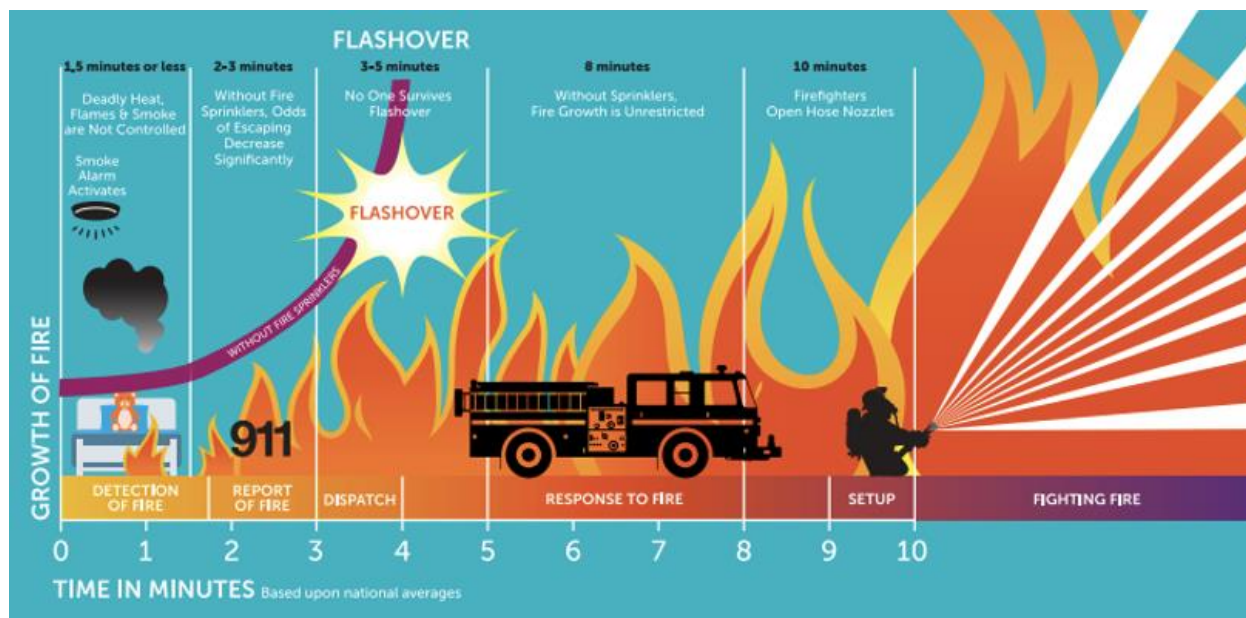
Steps 3 and 4 can be achieved when WC has established its current state of the LOS. WC will now understand what LOS is achievable and can establish the proper bylaws and agreements for community and public safety.

Steps 5 and 6 provides support, guidance, measures and principles that foster continuous improvement. When a fire service achieves continuous improvement. The entire fire service will be working in unison to provide the LOS service expected of the community and themselves.

Once these elements are realized cooperation with neighboring municipalities is key to establishing agreements that benefit the entire region and provides adequate staffing to deal with even the most serious of emergency events.

1, Assess Community's Level of Risk

2. Assess Current Capability of Fire Service

3. Determine a Level of Service Required.

4. Establish By-laws and agreements for community and public safety

5. Provide support and records management and reporting to maintian viable service

6. Review KPI's to deteermine level of success

Industry changes including light weight residential construction, new construction materials, community development plans, modern dwelling contents and compartmentalisation have led to extremely high heat release rates during fire events. These factors all affect fire behavior, life safety, and shorten our available time to get fires under control.

The graphic below indicates why an organized, efficient and measured approach is necessary in the modern fire service. Fire service leadership must respond to this call to action.

Level of Service Matrix

Wheatland County Proposed Minimum Level of Service Requirement				
Service or System	**Service Type**	**Description**	**Required Skills**	**Comments**
Fire Suppression - Structural Exterior Operations Staff required: minimum 4	Core Service	Ability to respond and attempt a defensive exterior fire attack of a common structure	Based on NFPA 1001. Water Supply; Hydrant use; Extinguish Class 'A' fires; Salvage; Overhaul; Hose line use; Scene preservation; SCBA use	**Compulsory** Optimal staff of 4 for more
Medical Co-Response Staff Required: minimum 2	Core Service	Public Aid / Medical Response. Generally, fire crews will arrive before AHS/EMS services and can provide immediate lifesaving procedures such as CPR and AED.	Based on Industry best practice. Alberta Health services 'MFR- Medical First Response' program; Advanced First Aid and CPR may suffice.	**Compulsory** No less than 2 staff. No single person response for safety of staff.
Motor Vehicle Collisions Staff Required: minimum 3	Core Service	Response to MVCs on village roadways	Based on NFPA 1001; Scene Safety; Traffic Control; Hazard Awareness unique to Vehicles; Fire Attack/Suppression;	**Compulsory** Optimal staff of 4 for more
Wildland / Grassland Fires Staff required: minimum - 3	Core Service	Response and extinguishment of grass fires within the Village.	Fire attack wildland/grassland; control perimeter; General wildland knowledge NFPA 1051; Combat of ground fire	**Compulsory** High frequency event Optimal staff of 4 or more
Alarms & False Alarms	Core Service	Consistent response to fire alarms; monitored &	As per structure fire - exterior	**Compulsory**

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Service or System	Service Type	Description	Required Skills	Comments
Fire & CO (carbon monoxide)		unmonitored systems; private systems, commercial & industrial occupancies		Municipal Demand Zone: see response below. Optimal staff of 4 or more
Dangerous Goods - HazMat Awareness Electrical Hazards Staff required: minimum 3	Core Service	Ability to identify hazardous material releases and spills as well as electrical hazards and protect the public from such hazard using zoning.	NFPA 1074; containment of basic fuel spills, Zoning, public safety initiatives; awareness of Hazardous sites within the municipality.	**Compulsory** Safety of staff and public from these hazards
New Recruit Orientation Dedicated program is suggested	Core Service	Introduction and understanding of OHS health & safety; Dept. goals & objectives; safe work practices; basic hazard assessment; understanding chain of command; general work practice, routines & expectations	Self and situational awareness; ability to use checklists, use electronic training versions and JPR resources; ability for self-study	**Compulsory** Can appear overwhelming to new recruits. This can be overcome with a well-designed recruit intake program & support.
Recruit Initial Training	Core Service	Minimum training required to satisfy OHS and have new staff operate safely on the fire ground or emergency scene	NFPA 1001; familiar with Dept. SOPs & SOGs	**Compulsory** Opportunities exist to partner with neighboring emergency services to optimise training.
Apparatus Operations	Core Service	Competency in operation and routine testing and inspection of fire apparatus.	NFPA 1002; driving, backing, use of mirror, use of spotter, ability to operate apparatus in restricted spaces, pump operation etc.	**Compulsory**
Wheatland County Proposed Level of Service Requirement				
Service or System	**Service Type**	**Description**	**Required Skills**	**Comments**
Team Lead	Core Service	Leadership is key in the Fire Service. Properly trained team leads are a necessity to operate efficiently, and maintain the highest standard of safety and service to the public.	NFPA 1021 & 1006; Officer Pro Qualification or equivalent; Strong leadership skills, good communications skills; Ability to perform a size up	**Compulsory** Officer training should not be overlooked. Strong leadership is key to organizational stability and effective operations.
Municipal Zone Demands Response Model (expectation)	Core Service	Minimum of 3 trained staff with a response time of 30 minutes, meeting this objective 85% of the time. (example)	Commitment by Staff; clear expectations by FD Administration.	**Compulsory** Should be included as part of and SOG within the department.
Traffic Control Staffing required minimum 2	Core Service	Basics of safety and tactics in response to MVC's with the sole purpose of traffic control	Part of 1001; Scene safety while working on roadway; using proper PPE & equipment; awareness to assist with extrication	**Optional** Emergency operations on roadways is extremely dangerous for 1st Responders Optimal staffing 4

Fire Suppression - Structural interior Operations Staff required: minimum 4	Core Service	Competencies related to common structures with an offensive/interior mode of operations	NFPA 1001; Team lead requirements for interior operations	**Optional** Adequate staffing, training & experience required
Public Education	Core Service	Educating your community in fire prevention, safety and emergency preparedness.	Ability to use a multitude of resources available for programs within the community.	**Optional** Excellent opportunities for public relations and promotion of fire and community safety
Vehicle Firefighting Staffing required: minimum 3	Core Service	Response and extinguishment of vehicle fires and awareness of unique hazards associated with these fires.	NFPA 1001; Awareness of unique hazards; extinguishment of metal fires; safety of working on a roadway; use of reflective high visibility clothing.	**Optional** Optimal Staff 4
Vehicle Extrication Staffing required: minimum 3	Core Service	Extrication of entrapped, injured or disabled persons from a damaged vehicle using a variety of hand and hydraulic tools.	Based on NFPA 1001 & OHS Codes. Work as part of a team, proper use of hand & power tools, awareness of unique hazards and vehicle stabilization.	**Optional** May provide this service if properly trained staff and tools are available Optimal staff 4

This Service Level Document was prepared by TSI (Transitional Solutions Inc.) to allow Council to review and consider amendments to the level of Fire & Emergency services provided to the Wheatland County. The Document, its scope and requirements are based on best practices, OHS codes, NFPA (National Fire Protection Association) standards, and the AFCA (Alberta Fire Chiefs Association) Risk Assessment and core competency tools. It is designed as a minimum requirement level of service that the Fire Department should attempt to meet or exceed. It should not be considered as a limiting tool but rather a starting point and planning tool, in efforts to exceed expectations and enhance service to the community by Wheatland County Fire and Emergency Services.

It also needs to be understood that to operate safety a minimum number of staff with different levels of training are required to respond. This is why each Service or System has a staff requirement noted. As indicated most of the events that the WCFES will respond to with the exception of Medical Co-Response, will require a 3 member team. Each event requires a Command position or Team Lead, an Operator, and a member for fire attack, rescue or other task as assigned by Command. Optimal staffing is noted in the comments section. People/Volunteers are our most valuable resource. Without our volunteer members we cannot provide any form of emergency service to the community. Therefore, it is paramount that Council, ultimately responsible for Public Safety, supports the volunteers and invests in their training and the Fire Department as a whole.

Based on the first arriving vehicle, and example of the Level of Service is described as: (example only)

"Fire and Emergency Response should include a minimum of three, appropriately trained staff, responding with an Engine or other apparatus (as assigned in the response model) arriving on scene within 30 minutes, 85% of the time."

The recommendation is designed to be achievable and sustainable.

*Represents current level of service as described in the current Fire Services Bylaw. TSI assumes that vehicle extrication and traffic control is considered as part of the rescue response as described in the bylaw.

TSI recommends that Council review the level of service and in consultation with fire services administration consider amendments to the level of service to include:

- Minimum staffing requirement (non-negotiable) for each incident type
- Include response to Alarms incidents (no visible fire or smoke) and False Alarms
- Include response to CO (carbon monoxide) alarm incidents
- Response to dangerous goods incidents (awareness level)

To look closer at a developing an appropriate level service, consider using the AFCA Core Competency Tool. This tool can be found at http://abfirechiefs.ca/

Appendix E: Wheatland County Bylaws

This Appendix provides a summary of the following Bylaws:
- Bylaw - 2019-06: Outlining roles and responsibilities of the Fire Services leadership, and
- Bylaw - 2019-34: The establishment of a Fire Board for Wheatland County.

Bylaw - 2019-06: Fire Services
The Fire Bylaw establishes a Manager of Emergency Services, appointed by the County Manager, whose duties and responsibilities include:

1. The Manager of Emergency Services has the authority over the management and direction of Fire Services, subject to the supervision, control and direction of the General Manager, County Manager and Council.

2. the Manager of Emergency Services has the authority to direct Fire Services including the County's Fire Departments and Members to carry out all Fire Protection Service activities in accordance with this Bylaw, the Policies and any other applicable Federal, Provincial or County legislation, bylaws, rules, policies or procedures.

3. The Manager of Emergency Services shall consult and coordinate with the District Fire Chiefs and Fire Association District Chiefs for the purpose of providing an efficient and effective delivery of Fire Protection Services throughout the County

4. Subject to the approval of Council, the Manager of Emergency Services may establish policies and procedures as necessary for the proper organization and administration of the County Fire Services Department including use, care and protection of County Fire Service, Department property; recruitment, conduct, performance, and discipline of Members; efficient operations of the County Fire Service Department, Member training and Establishing, implementation and execution of Policies.

The Fire Bylaw also establishes a Regional Deputy Fire Chief responsible for:

1. Developing, coordinating and monitoring Member training programs and training program records, all in accordance with NFPA standards for firefighting, rescue and Medical First Response, in all Fire Departments.

2. Conducting cause and origin fire investigations as mandated by the QMP in accordance with all Applicable Legislation.

3. Monitoring adherence by all Fire Departments to all Applicable Legislation;

4. Conducting life safety inspections in accordance with all Applicable Legislation.

5. Monitoring and, as required, providing direction and assistance for the completion of all Fire Department reports in accordance with the applicable legislation and/or fire service agreements to ensure that all County reporting requirements are met.

Bylaw - 2019-34: Fire Board

The Fire Bylaw has been established to govern the fire services within Wheatland County. This includes those services delivered directly by the County as well as those contracted from the Fire Associations.

The Bylaw indicates that the Fire Board shall have the following duties:

4.1   To propose a budget to Council for the fire service of Wheatland County each year. The Board shall be assisted by Municipal staff to accomplish these budget proposals.

4.2   To prepare a long-term plan for the fire service and to review and update, if necessary, the fire protection master plan each year, including capital items and replacement of assets.

4.3   To decide issues of volunteer personnel matters which may arise in the administration of the County Fire Service. The Municipal Council will be the body for all appeals.

4.4   To consider all administrative proposals with reference to the Fire Master Plan. All on scene procedures will be dictated by fire department standard operating guidelines, as approved by the Fire Board.

4.5   To establish operating procedures for the Board such as location of meetings and staff required to be present at meetings.

4.6   At least annually and after a major event, review such matters as procedures, equipment, staff training and reporting for each Wheatland County fire hall.

4.7   Provide to Council comments on any proposed changes to the Inter-municipal fire agreements.

4.8   Determine steps that will be taken to ensure payment of fire invoices and to recommend to Council which invoices will be added to taxes.

4.9   Review and provide recommendations to Council on any matter in dispute between the Municipality and another jurisdiction.

4.10   To hear and determine a course of action regarding any fire-related matter forwarded to the Board by a citizen. The Municipal Council will be the body for all appeals.

The Bylaw indicates that The Fire Board shall be composed of five (5) Association Presidents, one (1) representative from each of the Villages (Village of Standard, Village of Hussar, Village of Rockyford), two (2) citizens-at-large, and no more than three (3) members of Council who shall be appointed by Resolution of Council.

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Appendix F: Service Delivery Model Types

A fire service can adopt a direct delivery, contract management or a mixed model of direct and contract to meet the level of service required.

Direct Delivery
The direct delivery model establishes a fire service as part of the municipal structure with the Fire Chief reporting to the CAO or a Senior Administrator within the municipality. Council is responsible to establish a Level of Service (LOS) and provide municipal support to meet that LOS. Council reviews the needs for service delivery and the community risks in order to establish the LOS.

The senior municipal administration and fire service management create the fire department's structure and programs to meet the LOS and create a strategic plan and management system to support the service. The fire department is funded through a municipal budget that accounts for the service costs as well as any income from other sources (donations, fees, etc.).The approval of the operating budget presumes that the department will be prepared to meet the approved LOS and if not, Council will be asked to alter the LOS to one that can be met.

Training and support of the Officers and Firefighters to meet the LOS and workplace minimums are essential. Some direct delivery models limit the amount of training due to budget limitations. Others attempt to balance the need for all to have basic skills with the potential to support personal growth through developing specialty skills that enhance the response and service delivery processes. The levels of training and support are often reflective of the leadership style, values and priorities established by the Chief and Deputy.

The assessment of which programs or services are given support may be challenged by high profile emergency events and community requests. Public or business offers of support, such as donations of response equipment (boats, hazmat suits, etc.), may attempt the fire department to deliver more than the established level of service without a full assessment of the needs, service parameters and costs. This may occur without the knowledge or support of the governing Council and lead to increasing liability and public expectations that are outside of the approved LOS. The municipality is fully responsible for the standard of the service and remains responsible for any issues that arise.

The direct delivery model LOS is provided by the fire departments and monitored through a reporting process to ensure service delivery meets community and workplace standards. Otherwise, service delivery issues may not be highlighted. Direct delivery models may be more forgiving of poor performance and can be less open to exploring new opportunities or ways of providing the best service. The use of key performance indicators and reporting can balance the right performance and cover the entire service expectations.

Contract Management
The contract model provides fire services using a series of service and or management contracts or a single contract that covers the full scope of the service requirements. It takes advantage of the fire services that are successful and have available capacity. It can reduce duplication of services, define the service parameters and limit liability for each involved municipality.

The contract model may be considered where one municipality has resources and a functional operating process that meets or exceeds the capacity or standards of services delivered by the neighboring municipalities. It is often considered as one of the options to investing increasing amounts in to developing or supporting a direct delivery system. This system may be seen as the best way to create a fire response system that is affordable and economically feasible.

Many municipalities have operational inter-municipal aid agreements in place that allow for sharing resources, establishing cooperative planning processes, and allowing municipalities to provide aid to their neighbours in fire or emergency response, when requested. These agreements still require that each municipality maintain the ability to manage their own emergency events, declare a State of Local Emergency (SOLE) and manage their own fire service.

In the Contract Model the municipality that provides the service can use the contract as a means to increase the service capacity and depth. It can also create processes to deal with the challenges faced by smaller fire services including recruiting, training, opportunities for skill development, retention of staff and provision of service improvements when required. This can improve the capability to provide consistent training and support to the firefighters at a level that may not be attainable for individual services.

For the municipality that contracts the service it can establish a service that meets their needs at an acceptable cost that is defined in the agreement. Relieving the municipality of managing the day to day operations of the fire services, limits the municipality's liability and can provide a broader service process available to the citizens.

Contracts can provide consistency and should be built to provide clear expectations of services to be delivered through the agreement. In addition to ensuring services are delivered, the contracts should include provisions for tracking and reporting on the services provided. This can include clarifying the expectations as using key performance indicators that reflect what success looks like. It must also have provisions to review service changes and requests for new services to be considered. Overall there needs to be a clear process to report to the municipality receiving the service and inform the public.

Mixed Model – Direct Delivery and Contracted Services
The mixed model provides some services through the direct delivery model and the contract model. This model establishes and delivers the fire service as part of the municipal structure for some portions of the municipality and uses contracted services for other portions. Alternatively, the model could provide fire services through the municipality and rely on contracts for specialty services such as water rescue, hazardous materials response, etc.

This model requires the municipality to establish and manage their own fire services with the Fire Chief reporting to the CAO or a Senior Administrator within the municipality. In addition, the municipality creates, negotiates and manages service and or management contracts to cover specific portions of the municipality or services. Use of a mixed model can tap into neighboring fire services that are successful and have capacity to fill service gaps within their municipality. While it may limit the municipality growing their own service delivery capacity, it provides the switch between the direct delivery and contract processes more easily when the time comes.

The mixed model is a more complex model to manage since the municipality must deal with the processes and relationships needed for both direct management of some resources as well as managing

the relationship and functions of contracted services. When structured correctly, this can be a very effective model.

Appendix G: Wheatland County Emergency Hot Zones Map

Appendix H: Incident Management Tools

Dispatch System Tools & Technology (Fire Response)
WADEMSA runs a sophisticated digital dispatch system, providing CAD (Computer Aided Dispatch) and the capability to provide GIS (Geographical Information System) digital mapping. HFPA (Hussar Fire Protection Association) has a toughbook MDT (Mobile Data Terminal) that allows digital mapping provided by the CAD. This hardware is generally securely mounted in the apparatus for use by the responding officer. This is a common method for responding crews to receive accurate updates and graphical route mapping information. It also provides messaging capability.
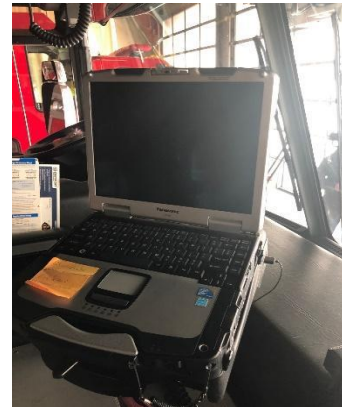
Other available hardware includes the "Panasonic ToughPads" and the use of applications such as "I AM Responding" or "Active 911" for use in response that include staffing, graphical mapping and route information. This is based on cellular technology. These applications are customizable and can include data inputted from pre-incident planning, fire inspections and prevention. They can be used by all staff using cell phones. A ToughPad, for example, can be mounted in the cab for use by the Officer or, easily removed and be used as a portable device.

Observation: The possibility exists to greatly enhance dispatch and response communication methods and information through the use of digital and wireless communications technology.

Recommendation: TSI recommends researching, procuring, developing, and implementing digital MDT technology for use in all front line apparatus.

Wheatland County Radio System Information
Wheatland County, like many other municipalities, has wrestled with the decision to maintain their current radio system for departments such as public works, enforcement, and fire services or to start migrating to the Alberta First Responder Radio Communication System (AFRRCS). TSI was engaged to provide a high-level review of the current system and AFRRCS for decision makers to review and come to a resolution on the matter.

- Repeaters – Attached with this document is the "Wheatland County Radio System Drawing Package – 2019" which is a technical document displaying a future state of the repeater system which was designed for radio coverage of the County. The system uses newer digital technology with an estimated life span of approximately 10 years (it should be noted this is an extremely rough estimate. As technology develops, manufacturers have been known to end the life of systems in the past).
  - Currently Bearcom has been engaged to install a tower at the HammerHill Site since Q1 of 2018. The site has been prepared and only dual piles installed. The installation of the tower is an additional project with unknown costs.
  - Wheatland County would be expected to maintain the current infrastructure if they remain on the current system. There is no existing maintenance agreement and

currently if there are issues with the infrastructure, a typical service call is invoiced anywhere from $1500-3000/call.

- o For using areas on the current towers Wheatland can expect to remunerate telecommunication providers at a rate of $20, 865/year
- ● Radios – the estimated number of current radios for Wheatland Fire Services is 125 handheld and 40 portable radios. Enforcement services have no current radios. Other departments in the municipality are not included in this review but having secondary services on AFRRCS is a service that is offered by the system with a usage rate of

AFRRCS Infrastructure

The AFRRCS infrastructure was built and is maintained by the province. There have been issues with the system, but these have been remediated by the AFRRCS team. A significant upgrade is scheduled for 2020 which will also allow for limited GPS location of radios, unified communications using cellular technology, providing some users the ability to use their cell phone as a radio.

AFFRCS Interoperability

Interoperability of communications on emergency scenes can be critical to orient and deploy resources appropriately during smaller events, but more critical as events grow larger. Recent experience with interoperable systems with AFRRCS on major events (Ft. McMurray Fire – 2016, NW Alberta Fires – 2019) displayed some of the challenges and the advantages of having the capability of multijurisdictional and multi-organizational groups ability to communicate seamlessly. This ability can also augment day-to-day operations between enforcement, fire and emergency medical services during incidents like motor vehicle collisions.

Currently, all Wheatland County fire services are on the current system and are operable within the county and, if required, bridged through to AHS by Wheatland and Adjacent Districts Emergency Medical Services Association (WADEMSA). WADEMSA is currently using a radio console which is compatible with the current radio system. Wheatland Enforcement Services is the only department on AFRRCS. Other municipalities are transitioning over to or in the process AFRRCS.

AFFRCS Costs

The chart is an estimate of upfront and maintenance costs associated with a ten-year life span between the current system and AFFRCS. Please note, exchange rates, changes in technology and other factors can alter some of these costs.

	Investment	Infrastructure Maintenance	Radio Maintenance	Use Rates	10 Year Total
Current System	$233,162 to install a new tower to improve coverage	Current rate of $1,500 - $3000 per callout, with 6-10 callouts per year = $9,000-$30,000 annually	Typically, $5000-$10,000 (estimated)	$20,865 annual	$581,812 – $841, 812 Estimated over 10 years
AFRRCS	$751,638 to outfit WCFS with 125 handheld and 40 portable radios	No maintenance cost for infrastructure	$10, 000 annual estimate	No use rate cost	$851, 638

1. Current system
    a. Coverage – the area covered by the system when compared to AFRRCS is approximately 10-15% less. Changes with use of either mobiles or portables Unknown building penetration in areas such as arenas or community halls for example
    b. Required for public works.
    c. Investment to install the current site was approximately $30,000 plus $233,000 to install a tower.
    d. Risk of technology reaching end of life through attrition or by manufacturer.
    e. WADEMSA doesn't have to invest in more equipment.
    f. As other municipalities transition, interoperability may decrease with other organizations
    g. Less investment but more risk taken on by Wheatland County.

2. AFRRCS
    a. Coverage – area for both portable and mobile is 100% with portables having slightly less optimum coverage.
    b. AFRRCS does allow non-responders on the system, but there are capacity costs that would raise costs significantly.
    c. No maintenance costs on infrastructure now or in the future as the province bears those costs.
    d. Technology is designed for at least 10 years (until 2029-2030) and other broadband options are currently being explored to "future-proof" the system.
    e. WADEMSA would have to invest in a new console at some point (unknown cost at this time).
    f. Interoperable with other municipalities in the immediate area and many other areas in the province (increased likelihood of responding as additional resources for major events).
    g. More investment but less risk taken on by the County.

Options Between AFRRCS and Current System

Wheatland County has three options available. These are to stay with the current system, transition to AFRRCS or utilize a hybrid of both. Each option has advantages and disadvantages as outlined below.

1. Stay on current system
    a. Advantages
        i. Less cost and limited training requirement,
        ii. WADEMSA does not have to transition.
    b. Disadvantages
        i. More risk with responders not having same level of coverage,
        ii. Risk of technology reaching end of life in next ten years,
        iii. Have to maintain infrastructure – unforeseen costs if the system fails.

2. Transition to AFRRCS
    a. Advantages
        i. Coverage is more complete and during building penetration the signal is usually exceptional when compared with analog systems, equalling less risk to community and responders,
        ii. No infrastructure maintenance,

   iii. Known life span of 10 years,

   iv. Interoperability built in with enforcement (RCMP and County) and other municipalities.

  b. Disadvantages

   i. Increased cost as WADEMSA would have to transition and train in how to use AFRRCS.

Hybrid implementation

Wheatland County could also transition slowly to AFRRCS over a number of years by installing/implementing a number of radios initialing and planning out other years. Recommendation is to install mobile and one portable in each front line vehicle. Initial estimate of investment would be somewhere between $50-100k but this would depend on requirements and pricing of radios.

- Advantages
  - Less initial investment in AFRRCS
  - Provides interoperability advantage
  - Coverage for specific
  - WADEMSA does not have to change over system in near future
- Disadvantages
  - Still requires investment in current system
  - Not all vehicles would have access to AFRRCS which could cause confusion during larger events

Appendix I: Recruitment & Retention

Retention Initiatives
1. Create an annual event (e.g. firefighter's recognition ceremony) that not only allows the different stations to come together but also promotes the contribution the fire service makes to the region and provides annual service recognition to members who have served their communities. Leaders could use this event to recognize years of service, retirements, major events, or other noteworthy acts by members This event could also have the added benefit of acting as a fundraiser for the regional fire service.
2. Fire station dinner before practice night, set at regular intervals to create tradition. Perhaps monthly or bi-monthly.
3. Establish a system to track hours for firefighters. Firefighters not receiving remuneration have potential tax credit options for volunteer firefighters. Firefighters may be able to claim a tax credit of $450 (15% of $3,000) if you meet the certain requirements:
    a. You are a volunteer firefighter.
    b. With the year you performed at least 200 hours of eligible service.
4. A point system could be developed rewarding members who consistently show up for training and incidents. These points could be used for the members to acquire station wear, personal gear, or other fire department goods.
5. Public recognition, peer recognition and recognition using social media.
6. Rewards for years of service such as uniforms, equipment, and other items.
7. Training engaged junior firefighters, senior firefighters, and officers for positions beyond their current rank where deemed appropriate. These types of training opportunities for these strong members often leads to further engagement and leadership from them.
8. Consider recruitment for other positions that support the fire department or public safety including medical response, public educator for fire and safety, records management, equipment management, etc.

Recruitment Initiatives
1. Clear and available information be provided on the Wheatland County website about how individuals can become involved in the fire service. Ie. Firefighter recruitment.
2. Creating social media accounts that can act on behalf of all the area fire service to highlight their activities and creates excitement about joining the service.
3. Holding recruitment drives at events attended by a large portion of the region (e.g. tradeshows, regional events, etc.).
4. Providing a small incentive for members to bring a friend to a recruitment night.
5. Developing a video that interviews a few firefighters about their experiences as a volunteer firefighter and share it on social media. Add some video of responses in as well.
6. Connect with high schools and consider a "Sponsor a Firefighter" program to sponsor a new graduate to get their fire training at a recognized college.
7. Start a junior firefighter program for the region. Again, working with the high schools and school boards, attempting to get course credit for students being involved with the fire service as a trade opportunity.

Other valuable resources for identifying recruitment and retention strategies include the:
1. Alberta Fire Chiefs Association Volunteer Firefighter Recruitment & Retention Toolkit: https://afca.ca/latest-news/item/238-volunteer-firefighter-recruitment-and-retention-toolkit

2. US Federal Emergency Management Agency (FEMA) Retention and Recruitment for the Volunteer Emergency Services: https://www.usfa.fema.gov/downloads/pdf/publications/fa-310.pdf

Pay Scale Examples

Schedule of Wages 2020

	Example 1:				Example 2:	
Description	Year	% of 5th year FF	Hourly		Description	Hourly
Chief		151%	$33.76		Chief, Deputy	$31.63
Deputy Chief		142%	$31.75			
Fire Investigator		138%	$30.86			
Fire Marshall		138%	$30.86			
Captain		127%	$28.40		Captain	$29.51
Lieutenant		110%	$24.60		Lieutenant	$27.34
Firefighter	10th	106%	$23.70		Engineer	$25.15
	8th	102%	$22.81			
1st Class	5th	100%	$22.36		1st Class	$22.94
	4th	90%	$20.12		2nd Class	$20.78
	3rd	80%	$17.89		3rd Class	$18.58
	2nd	75%	$16.77		4th Class	$16.40
	Prob/1st	70%	$15.65		Recruit	$15.00
2% COLA						

These examples of emergency response pay are based on two similarly sized fire services and their most recent pay scales. In a true volunteer fire service, they could be referred to as honorariums or extra duty agreements. The information is as current as can be expected.

There are many other variables not included in the basic chart including:

• Pay or emergency work on statutory holidays (generally 1.5 times) regular wage.
• Minimum call out (generally 2 hours), but there are many options
• Role Allowances: Example – Deputy Chief $2000/yr. – Member on floor $500/yr
• Overtime: example – calls exceeding 8 hrs. in a 24 hour period.
• On-Call Pay: example – Holiday weekend on-call standby pay to ensure staffing (generally paid at 2.00 to 2.25/hr)
• Other pay: Seminar and training attendance; duty approved by Fire Chief etc.

Appendix J: Governance Options

Municipalities have a wide range of governance options to choose in overseeing organizations that are connected to, but external from their administrations. These governance options, include:

	Intermunicipal Agreement	Regional Service Commission	Municipal Controlled Corporation	Cooperative	Society	Part 9 Company	Public Private Partnership	Growth Management Board
Separate legal entity		X	X	X	X	X	X	X
Can borrow and incur debt servicing costs		X	X	X	X	X		X
Can directly expropriate land		X						
Can make a profit and distribute to members			X	X			X	
Requires provincial government approval for establishment		X	X	X	X	X	X	X
Party responsible for establishment	Municipalities	Municipal Affairs		Service Alberta			Municipalities & Partners	Municipal Affairs
Legislation restricting types of services provided	MGA			Cooperatives Act	Societies Act	Companies Act	MGA	

1. *Intermunicipal Agreements:* Intermunicipal agreements are entered into vis-à-vis the passage of a resolution of two or more participating municipalities. These agreements can lead to the formation of an authority, board, or committee that oversees the provision of services on a regional basis. Important to note is that an authority, board, or committee formed by an intermunicipal agreement is subject to the provisions of the MGA as if the authority was the municipality providing the service.

2. *Regional Service Commissions:* Regional service commissions have their own distinct legal status with natural person powers separate from the member municipalities. Commissions can hire employees, administer their own payrolls, own property, and raise capital. Any financial surplus must be used to reduce costs and may not be distributed back to the member municipalities. Rates charged for services must be established by bylaw and based upon a full-cost recovery rate model. Commissions are eligible for loans from the Alberta Capital Finance Authority.

3. *Municipally Controlled Corporations:* Municipal controlled corporations are for-profit corporations that are controlled by a municipality or group of municipalities to provide a regional municipal service. There are less than twenty municipally controlled corporations in Alberta. EPCOR Utilities Inc. (owned by Edmonton) and Aquatera Utilities Inc. (owned by the City and County of Grande Prairie and Town of Sexsmith) are two examples. They are regulated

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by the MGA, Business Corporations Act, Control of Corporations Regulation, and the Debt Limit Regulation. They are a separate legal entity that can hire employees, administer payrolls, own property and raise capital. Municipally controlled corporations cannot borrow from the Alberta Capital Finance Authority.

4. *Cooperatives:* Cooperatives are incorporated under the Cooperatives Act and, in general, are intended for individuals to come together for a common purpose. One cooperative that municipalities may be familiar with are Rural Electrification Associations (REA's). Cooperative principles are specified in the Act and determine how the entity carries on business. Cooperative surpluses may be used to develop its business, improve its services, establish reserves or pay interest on member loans or dividends on shares, support community welfare, or can be distributed among its members.

5. *Societies:* Societies are legal entities incorporated under the Societies Act. They are created for any benevolent, philanthropic, charitable, provident, scientific, artistic, literary, social, educational, agricultural, sporting or other useful purpose, but not for the purpose of carrying on a trade or business. Agricultural Societies and Community Associations are typical examples of societies. While societies can incur debt, they cannot borrow from the Alberta Capital Finance Authority.

6. *Part 9 Companies:* Part 9 companies are formed to promote art, science, religion, charity or other similar endeavours, or solely to promote recreation for their members. A Part 9 company must apply its profits in the promotion of its objects and no dividend should be paid to its members. Part 9 companies are regulated by the Companies Act. A Part 9 company may borrow funds for carrying out its objectives but is not eligible for direct loans from the Alberta Capital Finance Authority. The Alberta Industrial Heartland Association (an economic development entity consisting of the City of Edmonton, City of Fort Saskatchewan, Lamont County, Strathcona County, and Sturgeon County) is an example of a Part 9.

7. *Public Private Partnerships:* Public-private partnerships may be a separate legal entity depending on the partnership agreement. Typically, the include an arrangement between two or more public and private sector entities with a long-term life span. The construction and ongoing operations of the Anthony Henday Ring Road around Edmonton is an example. NorthWestConnect (a consortium of companies) and the Province entered into a P3 Agreement for the design, construction, operation, and maintenance of Anthony Henday Drive from Hwy 16 to Manning Drive until 2041. They usually involve significant capital investment and ongoing operational costs.

8. Growth Management Board: Growth Management Boards are defined in Part 17.1 of the MGA. There are only 2 Growth Management Boards in Alberta – the Edmonton Metropolitan Region Board and the Calgary Metropolitan Region Board. When in place, Growth Management Boards can be responsible for overseeing emergency services in a region. The Growth Management Board model was not considered for this project due to its complexity and requirement for provincial legislation.

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