

VILLAGE OF GRAND COULEE

EMERGENCY SERVICES



MASTER PLAN

2012 – 2021



EXECUTIVE SUMMARY

The development of the master plan provides a road map to the future.

By articulating goals and objectives of the Grand Coulee Emergency Services (GCES) members can strive towards their completion and in doing so realize the mission and vision statements of the organization, achieving a sense of accomplishment in work well done for the betterment of our community.

Articulating the resource requirements of the GCES will enable the department to focus on the development of a long range resource plan that provides financial and personnel security into the future.

Calls for service have remained fairly constant over the past 5 years in spite of a dramatic increase in population but continued growth will no doubt have an impact in call volume going forward.

The evolving and emerging challenges faced by the GCES during the life of this master plan include:

- Urban Growth
- Recruitment
- Training
- Apparatus
- Equipment
- Fire Prevention & Fire Safety Education, and
- Economic Circumstances

The current overall situations faced by the GCES are physical and human resource based needs. The recruitment, retention and training of volunteers and the replacement of emergency equipment and frontline fire apparatus are top priorities. If the GCES is to continue to fulfill our mission and vision statements there will have to be an increased emphasis by municipal government, the community and most important by the GCES ourselves on providing the resources the service requires.

This Master Plan is a living document, and should be updated as circumstances evolve over time. Only by keeping the plan up to date can the village and residents be sure that the services provided by the GCES continue to reflect the needs of the community.



PREAMBLE

To be effective, the emergency responders must arrive at the scene of the emergency quickly, be well-trained and be well equipped. These three factors are critical for successful outcomes in emergency response. Fulfillment of one of these conditions without the others renders the emergency response system ineffective.

The time has come for a decision to be made as to how much value there is too having the GCES active in the community and surrounding area. In order for the service to continue to function in this day of increased liabilities and government regulation there needs to be a commitment of resources, both financial and volunteer to maintaining the GCES as an effective service.

From a physical resource perspective the liabilities are too great for the community not to invest financially in the service. The health and safety of responders and those they help is paramount. Proper equipment and training can be expensive but ways can hopefully be found to decrease the financial burden on the municipality. In spite of the financial cost it is still cheaper than the possible human cost of using inadequate equipment and the possibility of being found liable for an injury or worse, a death.

From a human resource perspective the community is too small for a dedicated paid staff of emergency responders; volunteers are the backbone of the GCES. The department is beginning preliminary work to recognize the volunteers already engaged with the GCES and to try to recruit new members. The engagement of the community in the future viability of the GCES is imperative, no volunteers means no service, with no service why spend money on equipment? However with no equipment there cannot be any service even with volunteers.

Our community is growing, the province is growing; now is the time to invest in the Grand Coulee Emergency Service, make it better able to service those in the community and surrounding area in need of our services.



PURPOSE

The GCES Master Plan serves as a strategic, forward-thinking document that reviews and evaluates local emergency services needs and circumstances. It aims to strengthen the Village's ability to provide the most effective, efficient and safe emergency services possible by providing a foundation from which to build strategic plans and budget documents.

INTRODUCTION

The Village of Grand Coulee is a fast growing community in the Province of Saskatchewan. Grand Coulee's population was approximately 550 as of 2010¹ a rise of over 25% from 2006.

As well as providing emergency services to the Village of Grand Coulee the GCES responds too fire and medical emergency related calls outside of the village into the RM of Sherwood when requested. The response area encompasses a portion of the Trans Canada highway.

As a result of continued growth in the Village and the RM, demands on the current system of emergency services have and will continue to increase in a significant manner.

MISSION STATEMENT & VISION

The following **Mission Statement** is the stepping off point of where we want to go.

To preserve the quality of life of the residents of Grand Coulee and surrounding area by providing for the efficient and effective delivery of emergency services within our training and ability.

The following represents the **Vision** of what the department wants to achieve.

To become a responsive and progressive organization by building a dedicated team of motivated individuals that recognizes the importance of serving and protecting their community.

CAPABILITIES OF EXISTING EMERGENCY SERVICES

Amalgamation of the Grand Coulee Fire Department and The Grand Coulee Medical First Responders into the new Grand Coulee Emergency Services (GCES) will streamline operations and provide for a better use of municipal funds and greater service delivery. Combining the two departments allows for greater opportunities for cross training and the possibility of increasing staffing levels of each service by pooling the current cadre of volunteers.

The most important aspect of the amalgamation will be that the GCES may be dispatched as one department doubling the potential responder resources to any incident. This can be important when

¹ Annexation Lands Concept Plan: Final Report September 30, 2010



responding a fire call with the possibility of fire victims and or responder injury, (typically a fire call) or responding to a vehicle accident with the possibility of trapped persons (fire or first responder call).

Whatever the call one service compliments the other by providing additional resources within the limits of their training and experience.

The GCES currently dispatches the following units:

-  Class 1 Pumper – 1965 Mack – 4542 L/min
-  Brush Truck - 1976 Ford F350 - 400 gallon tank - 18 hp Briggs & Stratton – 946 L/min
Total L/min capacity is 5488 L/min
-  Rescue Van – 1982 Ford Box Van used by First Responders

The current GCES staff is composed of volunteers and breaks down as follows:

-  Fire Chief
-  2 First Responder Coordinators
-  Firefighter Training Captain
-  10 Firefighters at various levels of certification
-  10 Medical First Responders

CALL VOLUME AND RESPONSE TYPE

Over the past few years, the number of emergency calls that Grand Coulee Emergency Services (GCES) responds to has remained fairly consistent. Between the years 2007 and 2011, GCES has been called to an approximately 60 calls. This represents an average of 11 calls annually.

Of those 60 calls:

-  25 or 41%* were for medical emergencies
-  12 or 20%* were fire calls, and
-  23 or 38%* were calls to motor vehicle incidents requiring both a fire and/or a first responder response.

* (Call volume is less than 100% due to rounding)

The majority of emergency calls have been for medical purposes. The GCES provides initial medical response by First Responders to compliment RQHR Emergency Medical Services (EMS). Firefighters are currently able to respond quickly to fire and non-fire emergencies throughout the Village depending on the time of day. Residents can be reached in 5 to 10 minutes from the time the GCES is notified by dispatch of an emergency when sufficient personnel are available. Response times increase



the further away from the Village responders are required to travel. Factors such as day-time staffing shortages lead to longer response times to emergencies.

CURRENT FIRE RISK

Fire Loss

Fire loss has remained relatively constant over the last 6 years, with the Village experiencing very few fire incidents. From the year 2007 to 2011, there have been 0 fatalities and 0 injuries resulting from structural fires. Dollar loss and economic impact from fire incidents have also been relatively low with two structures damaged by fire and smoke with one resulting in a complete loss.

The major cause of residential fires in the Village has been:

-  Electrical short circuit
-  Combustion of flammable vapors

Demographic Profile

In 2006, the population of Grand Coulee was 435. This represented growth of 18.9% from 2001 when the population was 366. As of 2010, the population is estimated at 550 representing a growth rate of 26.5% since 2006.

In 2006, Grand Coulee showed the highest percentages of the population in the 10 – 14, (10%) 15 – 19 (10%), 40-44 (13%) and 45 – 49 (13%) age groups.²

Buildings

Fire risks in the village are mostly one to two family residential dwellings of varying size but the village also contains a church/community hall, K to 8 elementary school and a combination Village office, maintenance shop & firehall building.

Fire Flow Requirements

Although adherence to its standards is not compulsory, the National Fire Protection Association (NFPA) is a recognized authority on fire service requirements and is referenced in the Canadian Fire Code. The NFPA standard on fire flow requirements states:

“H.5.1 One- and Two-Family Dwellings.

The minimum fire flow and flow duration requirements for one- and two-family dwellings having a fire area that does not exceed 3600 ft² (334.5 m²) shall be 1000 gpm (3785 L/min) for 1 hour.

² Annexation Lands Concept Plan: Final Report September 30, 2010



H.5.2 Buildings Other Than One- and Two-Family Dwellings

The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table H.5.1”³

Based upon the size of the current structures in the village and referenced in the applicable NFPA documents the current fire flow requirements of the village’s largest structures is as follows:

Largest private residence in the village

Type V construction 210.7 sq m = 3785 L/min

Church/community hall

Type V construction 391.8 sq m = 6624 L/min

Stewart Nicks School

Type I construction 609.7 sq m = 5677 L/min

Village Office/Maintenance/Firehall

Type V construction 297.3 sq m = 3785 L/min

The current overall flow capacity of the GCES is 5488 L/min but the Church/community hall and school both require higher flow rates.

Church/community hall

Fire flow required 6624 L/min

GCES flow capacity 5488 L/min

Flow capacity shortfall 1136 L/min

Stewart Nicks School

Fire flow required 5677 L/min

GCES flow capacity 5488 L/min

Flow capacity shortfall 189 L/min

Relief from strict adherence to H.5.1 and H.5.2 is provided by the NFPA in H.3.1 as follows:

“H.3.1 Decreases. *Fire flow requirements shall be permitted to be modified downward by the AHJ for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire flow requirements is impractical⁴.”*

³ NFPA 1 Uniform Fire Code Annex H Fire Flow Requirements for Buildings
Table H.5.1 is included as appendix 2

⁴ NFPA 1 Uniform Fire Code Annex H Fire Flow Requirements for Buildings



FUTURE FIRE RISK

Building Stock

In 2006 out of a total of 130 private dwellings in Grand Coulee, 99% were single detached. Of the total 130 dwelling in 2006, 100% of them were owned. The housing stock in Grand Coulee is newer than that of the Province as a whole with 58% having been constructed between 1986 and 2006.⁵

It is anticipated that the majority of new building construction within the municipal limits will continue to be residential dwellings.

However future changes to size, occupancy, use and construction type may require the GCES to recalculate the fire flow requirements of the village to ensure adequate water supply is available in the event of a fire.

INSURER'S ORGANIZATIONS ASSESSMENT'S

Periodically assess a community's capacity to provide effective fire services and sets insurance rating for the community based on the assessment. In turn, insurance companies establish individual property insurance premiums based on those ratings. Grand Coulee has received a dwelling location rating code of 1 from SGI and a rating of Grade 1 from the Germania Mutual Insurance Company.

FIRE PROTECTION AGREEMENTS

The current Mutual Service Agreement with the City of Regina was completed in 1999 and continues to provide for mutual aid if required by either party⁶.

The GCES Fire Chief has been involved in discussions with surrounding communities and the City of Regina in the development of the Mutual and Automatic Aid Plan and Program for the District of Echo⁷. The mutual and automatic aid plan and program has been designed:

- To provide general direction to the District *fire co-ordinator* for the co-ordination of *mutual aid systems* and associated *fire protection services* activated within the local district, as well as with neighbouring districts, inter-provincially and internationally if applicable.
- To set forth clarities to local governments, RMs, Towns, Villages and Cities of the roles and responsibilities of the *fire co-ordinator* within the *mutual aid system*.
- To provide other emergency management agencies with an understanding of the *fire co-ordinator's* role within the *mutual aid system*.

⁵ Annexation Lands Concept Plan: Final Report September 30, 2010

⁶ The full text of the agreement has been included as Appendix 1

⁷ A full text of the plan has been attached as Appendix 2



While it is unclear at this time if the Village of Grand Coulee will be asked to join, based upon our current resources, it is and will continue to be a good idea for the GCES to be involved in the development and planning of the “Echo District” initiative. This provides the village and the GCES with insight into the district and paves the way for the community to join the district if desired at a later date.

CURRENT MEDICAL RISK ASSESSMENT

Demographic Profile

In 2006, the population of Grand Coulee was 435. This represented growth of 18.9% from 2001 when the population was 366. As of 2010, the population is estimated at 550 representing a growth rate of 26.5% since 2006.⁸

In 2006, Grand Coulee showed the highest percentages of the population in the 10 – 14, (10%) 15 – 19 (10%), 40-44 (13%) and 45 – 49 (13%) age groups.

The median age of the population is 31.6 with 4.5% of residents over the age of 65⁹

Along with the increases in population in the community, the increase in travel along roads and highways serviced by the GCES will no doubt result in an increase in calls for service from the medical first responders.

EVOLVING AND EMERGING CHALLENGES

Urban Growth

Population: The Grand Coulee *Annexation Lands Concept Plan* (Sept 2010) envisions a total Village population of over 3000 persons upon full implementation of the plan. This is a 500% increase in the population of the community putting an incredible strain on the ability of the GCES to provide adequate emergency services in the future.

Using the data provided in the concept plan the population of Grand Coulee may reach 1000 residents over the life of this master plan, a 100% increase.

Land Use: The concept plan calls for a mix of commercial and residential development including multi-family housing. Depending on the industries that may locate to the community and the multi-family housing that is allowed to be developed there will be impacts upon the apparatus and equipment needs of the GCES.

Retention & Recruitment

Because of the volunteer nature of departmental staffing more members are needed to ensure sufficient numbers of firefighters are available in the event of an emergency. The ability of the

⁸ Annexation Lands Concept Plan: Final Report September 30, 2010

⁹ Statistics Canada



department to attract volunteers is linked to the image portrayed by the emergency services and how that image is perceived by residents.

The Grand Coulee Firefighters Association has begun a program to build a more positive image of the department through the amalgamation of service delivery (fire & first response medical), “branding” the GCES by producing a new logo that incorporates this amalgamation and by providing volunteers with a token of appreciation for their continued support.

The GCES also needs to spend a significant amount of time on a public relations campaign to entice more residents of the village to participate.

Training

The well being of response personnel at the emergency scene is paramount and the provision of consistent and positive training improves the responder’s ability to conduct operations in a safe and efficient manner.

Firefighter Training: New IFSTA 5th Edition manuals & instructor CD’s have been purchased along with a new computer and A/V equipment to aid in the training of firefighters. Once proficiency is reached an application for testing by the Office of the Fire Commissioner can be made to certify firefighters up to the NFPA 1001 - 1 or 2 levels.

Providing consistent quality training is critical to keeping a dedicated group of fire-rescue volunteers.

Medical First Responder Training: The RQHR provides training and certification to new and existing GCES medical first responder members. Also in-house training and orientation is provided on existing and newly acquired equipment/ devices and protocols.

Apparatus

The age of the current fleet combined with continued growth of the community will soon require the department plan for the replacement of first line response vehicles.

Fire - Rescue

The GCES is currently able to meet the fire flow requirements of the village with the Class 1 pumper and brush truck; however the age of these fire apparatus (1965 & 1976 respectively) and a scarcity of spare parts make it imperative that planning for replacements be undertaken. The following is taken from NFPA 1901 *Automotive Fire Apparatus; Annex D Guidelines for First Line and Reserve Apparatus*

*It is recommended that apparatus built to meet the 1979 or 1985 edition of NFPA 1901 (or equivalent ULC standards) be placed in reserve status and upgraded to incorporate as many features of the post-1991 fire apparatus as possible (see Section D.3). **Apparatus not built to NFPA apparatus standards or manufactured prior to 1979 (over 24 years old) should be considered for upgrading or replacement.***



Given the estimated required fire flow for the village, it is recommended that a minimum 1500 gpm pump be acquired to provide sufficient water volume.

The department will work with the village and other stakeholders to acquire the sufficient apparatus.

First Responders

The 1986 box van used by first responders is also in need of replacement. It is unsuited to travel along roads and highways, lacking sufficient seats and seat restraints to safely transport more than 2 persons. An alternative needs to be found that will enable a sufficient number of responders to safely get to the incident site and back to the station in accordance with applicable provisions of provincial and federal legislation. (Highway traffic act, OH&S etc.)

Equipment

Ongoing replacement of personal protective equipment for firefighters and first responders, hoses, tools and medical equipment is part of the departments mandate to protect the public and the health and safety of firefighters and first responders.

Fire-Rescue

The GCES is in the process of replacing old firefighter bunker gear with 5 new sets in 2011 and 3 to 5 new sets scheduled for purchase in 2012.

Planning for the replacement of breathing apparatus bottles has begun as the current ones have almost reached the end of their useful life and are due to expire shortly

A new foam nozzle and a hooligan rescue tool were purchased in 2011 to replace worn out equipment.

First Responders

The GCES has recently acquired a blood glucose monitor from the RQHR as a quick way of checking blood sugar levels in the field when required.

Fire Prevention & Public Safety Education

Inspection of residential properties, initiation of a smoke alarm program and presentation of the Learn Not to Burn (LNTB) program to school students are initiatives that, if implemented, will help maintain the quality of life for residents and enhance the departments presence in the community.

Economic Circumstances

The GCES needs to continually review all of its expenditures to ensure that it is in the position to meet current and future fire/medical emergency and safety requirements.

The approved budget for the GCES needs to address vehicle and equipment replacement, training and fire prevention & fire safety education.



Notwithstanding this budgetary requirement the GCES also has to consider alternative funding options for its future projects. Corporations and companies doing business in, and around, the community will be asked to consider funding a portion of the department's vehicle and equipment needs. Along with this initiative all potential sources of government funding will be explored.