

Town of High River
After Action Report
June 2013 Flood



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After Action Report: June 2013 Flood

PURPOSE:	3
METHODOLOGY:	3
ASSUMPTIONS AND LIMITATIONS:	3
SUMMARY OF THE FLOOD EVENT RESPONSE:	4
SEASONAL PREPARATION:	5
UNDER WATER	6
<i>June 20</i>	<i>6</i>
<i>June 21</i>	<i>8</i>
<i>June 22</i>	<i>9</i>
<i>June 22-27</i>	<i>9</i>
<i>June 27 onward</i>	<i>10</i>
COMMUNICATION DURING THE CRISIS	11
LESSONS LEARNED	12
<i>Flood Preparations</i>	<i>12</i>
<i>Personnel</i>	<i>12</i>
<i>Notification and Warning</i>	<i>13</i>
<i>Rescues</i>	<i>13</i>
<i>Evacuations</i>	<i>14</i>
<i>Animal Rescue</i>	<i>14</i>
<i>Reception Centres for Evacuees</i>	<i>14</i>
<i>Infrastructure Protection</i>	<i>15</i>
<i>Crisis Communications</i>	<i>15</i>
<i>Welcome Centre</i>	<i>16</i>
RECOMMENDATIONS	16
CONCLUSION	18

After Action Report: June 2013 Flood

PURPOSE:

The purpose of an After Action Report is to examine the actions of the Town of High River's Emergency Operations Centre (EOC) in response to the June 2013 flooding event to determine successes, challenges, lessons learned and recommendations. This report summarizes the After Action Report of the June 2013 High River Flood in respect to the Town of High River's Emergency Management Program.

Although there were numerous organizations that provided support to the response, the scope and focus of the After Action Report is on the Emergency Operations Centre and the coordination role that it played in directing the overall response from June 20 to the end of July. It is important to note that the report does not address the subsequent recovery/renewal operations that have taken place and continue to take place in High River.



METHODOLOGY:

Information for the After Action Report was compiled from several sources, including the following:

- an event chronology based on scribe notes, press releases, personnel feedback, and corroboration with partner agency timelines;
- analysis of ICS 221 demobilization forms collected from EOC response personnel by the Demobilization Unit in the EOC;
- facilitated interviews with more than 150 personnel, including: Town staff, non-governmental organizations; Family and Community Services and Emergency Social Services personnel from across the province, external response organizations, provincial government personnel and utility company personnel;
- collaboration on content development with Town staff personnel; and
- fact-checking and feedback from relevant organizations on specific sections of the report.

ASSUMPTIONS AND LIMITATIONS:

The report was developed from the perspective of the Town of High River, with the ultimate goal of providing lessons learned and recommendations for the improvement of its Emergency Management Program. As a result, the bulk of the interviews were conducted with Town employees. All recommendations in this report are from the perspective of the Town of High River for the Town's use.

Limitations:

- There were thousands of individuals who contributed to the response in High River. For logistical reasons as well as the specific scope of this document, it was not possible to collect feedback from all responders.

After Action Report: June 2013 Flood

- Interview requests were sent to key organizations and partner agencies, but staff turnover and availability meant that it was not always the individuals on the ground that provided feedback on behalf of their organizations.
- The focus of the report is on the functionality of the EOC, so organizations that primarily provided support to the field or on early recovery without a notable presence in the EOC were not included in this report.
- This report does not address either the concurrent or subsequent recovery/renewal operations that have taken place and continue to take place in High River.

The timeline is an approximation; in many instances it was not possible to determine the exact time of the event

SUMMARY OF THE FLOOD EVENT RESPONSE:



The Alberta flood of June 2013 was the largest natural disaster ever experienced in Alberta and one of the worst in Canada. Nowhere was the impact felt more severely than in the community of High River. Long accustomed to spring flood possibilities, the Town has a program of flood mitigation and preparedness, including keeping residents informed. No previous experience could have prepared the Town for the unprecedented volume of water that inundated the community on June 20, 2013.

A combination of factors contributed to the rapid rise of rivers and creeks in the Bow River Basin. Environment Canada reported record amounts of rain fell over a 72-hour period on already saturated ground. In the

mountains to the west the rain was falling on snow, causing rapid release of the mountain snow pack, which was bigger than average after a high snowfall winter. Mountain mud slides and raging rivers caused widespread flood damage throughout many southern Alberta communities.

By June 22 the 2013 flood had caused two fatalities in High River. In the immediate aftermath, approximately 13,400 people, 5,400 homes and a total of 6,300 structures were evacuated; thousands of businesses, homes, vehicles and Town facilities were damaged or lost. More than 1,100 pets were rescued while another 400 were fed and watered through home visits via boats.

On June 27th, the Town asked the Government of Alberta to declare a provincial State of Emergency (SOE). The SOE continued until July 11 when High River was returned to a State of Local Emergency.

The response to the flood event involved not only the Town of High River staff but considerable resources and personnel from local municipalities, the Government of Alberta, the Canadian Forces, RCMP, non-government organizations (NGOs), community organizations, businesses, churches, contractors and thousands of volunteers. More than 1,000 emergency management responders and operations staff worked to control the floodwaters, save infrastructure and rescue residents and pets.

After Action Report: June 2013 Flood

The flood of 2013 had a devastating impact on people, properties, infrastructure, health and education services, businesses and Town facilities and services. There were prolonged communications and power interruptions; extensive damage to private and public buildings, roads, lift stations, sewer and water lines, parks, playgrounds, schools, churches and the local hospital. Many businesses were shut down – some for days, while some are still not open eight months later. Hundreds of residents still have not been able to return to their homes at the time of writing this report.

SEASONAL PREPARATION:

The Town of High River is no stranger to the possibility of flooding from the Highwood River. Over the years the Town has undertaken a considerable amount of flood mitigation, including the construction of berms and the implementation of flood protection measures on development permits in new communities. The Town had also recently completed a new flood modelling project in April 2013 to inform its future flood mitigation activities.

In addition, the Town has developed a close relationship with the Alberta River Forecasting Centre and receives constant updates on flow rates for the Highwood River throughout the spring thaw.

The Town's emergency preparedness program includes the following components:

- a Municipal Emergency Management Plan
- river forecast monitoring
- public education
- staff training
- flood preparedness operating procedures

In early June, the Town received indications that it might see high water due to heavy rainfall. Flood tubes were deployed to the northwest in preparation. Several thousand sandbags were filled in anticipation.

The Town of High River began receiving flood updates on May 1 from the Alberta River Forecast Centre. On the same date and in preparation for the typical flood season of May 15 - June 15, the Town began its regular program to communicate with citizens about the flood risk. Information bulletins sent out by the Director of Emergency Management, with updates on river flows, were published on the Town's website and issued to local media.

By June 17, the Alberta River Forecast Centre was predicting 100-125 mm of rain from June 19-22. Forecasters predicted the Highwood River could peak at 320 cubic metres per second, which exceeds flooding thresholds in certain areas of High River.

The Town's program of flood preparedness including deploying flood tubes and sandbags to protect critical infrastructure,



After Action Report: June 2013 Flood

closing the gaps in the dikes and berms that exist to accommodate roads and bridges was put into action. On June 19, as estimates of the amount of rainfall increased, all staff members were put on alert and notified that they may be required to assist with flood response.

As late as the evening of June 19, there were no indications that anything had changed from the earlier update from the River Forecast Centre that the Town was on a flood watch.

UNDER WATER

June 20



- Overnight, the Town was informed by river forecasters that they had changed High River to a flood warning and an approximate 650 cms flow rate was anticipated. The Director of Emergency Management activated the Town's Emergency Operations Centre and it was operational by 5:30 a.m.

- Firefighters began door knocking in Wallaceville advising residents of predicted flood levels and of the need to evacuate. At 6:45 a.m. the first 911 call for rescue was received. Alerts were posted through social media and the Town's website.

- Closing of the Centre Street Bridge was recommended and it was decided to commence evacuation of George Lane Memorial Park.
- EOC representatives were calling additional assistance from external resources including Canadian Dewatering and other contractors.
- Just after 7 a.m. a State of Local Emergency (SOLE) was declared and the Town notified the Alberta Emergency Management Agency (AEMA) and Alberta Municipal Affairs of the situation. A media release was issued to the local media.
- Up to this point in time, all of the flood protections were in place as planned but they were designed to limit the damage caused by a 750 cms flood event. High River was about to get inundated by water of a magnitude never before experienced (upwards of 1750 cms).
- Flood conditions escalated rapidly from 7 a.m. Additional Operations equipment arrived at the Recreation Complex

After Action Report: June 2013 Flood

to resume sandbagging and more personnel were called in to assist. A call was made for community volunteers to help with sandbagging. A number of staff had difficulty getting to the EOC because of the flooding.

- The Emergency Social Services (ESS) Team opened the Charles Clark Medical Centre as a Reception Centre for evacuees, and the Salvation Army was asked to assist.
- At 8:30 a.m. road access to the Beachwood neighbourhood was lost, and the decision was made to evacuate the SW area of High River. Changing conditions throughout town including the lifting and displacement of the CP rail tracks made it apparent that this was a much larger flood than had ever been experienced.
- The river forecast update received at 9 a.m. indicated the flow rate for the Highwood River was now estimated to reach 1270 cms by mid-afternoon.
- Communication between the EOC and field staff became a challenge because of high radio traffic.
- The River breached its banks at Centre Street and downtown High River began flooding. Power problems escalated.
- By 10 a.m., flood waters were observed to reach the main floor of the TELUS building, creating further communication issues. The Town of High River website crashed due to extremely high levels of traffic. Website access was then intermittent over the next few days. Communication issues escalated as the Primary Rate Interface (PRI) for the TELUS phone lines failed, compounding challenges to communicate with citizens, Town and emergency operations staff.
- By 10:30 a.m., all schools and seniors centres had been evacuated to the Highwood High School, and parents were arriving to pick up children. Operations staff was working to protect the Water Treatment Plant. Both the hospital and the Town Hall had sandbag berms in place.
- The town suffered a major loss of telecommunications capabilities when the mobile phone network failed at 11:00 a.m.
- Evacuations began in the neighbourhoods of Montrose and Eagleview. FORTIS and ATCO crews were asked to help with door knocking in order to alert remaining residents to evacuate.
- The EOC was relocated to the Fire Hall, but most EOC equipment was lost during this evacuation due to the quickly rising high water levels. Radio communication failures were increasingly affecting operations. The EOC abandoned its attempts to protect infrastructure and focused solely on rescuing residents.
- At 11:30 a.m. the Town of Nanton was called to open a Reception Centre for High River residents, and the centre was open within the hour. With flood waters topping Little Bow Canal and reaching 12th Avenue, the decision was made to evacuate the Highwood High School Reception Centre to Nanton.
- By 2 p.m. evacuation of the remaining SE area of town was under way. Within the hour, an advance party of the Canadian Armed Forces arrived to assist with rescues. Buses continued to move evacuees and supplies from the

After Action Report: June 2013 Flood

Highwood High School to Nanton before the highway was closed. Other evacuees were re-routed to Blackie.

- At approximately 3 p.m. the decision was made to re-locate the EOC from the Fire Hall to Nanton, because of the potential for the Fire Hall to flood. Highway closures resulted in only some EOC staff arriving, while others were routed to the Fire Hall at Heritage Pointe. The community of Blackie was asked to open a Reception Centre for evacuees at their site.
- Just before 4 p.m. the mandatory evacuation of High River was declared; however, the lack of working communication networks meant the order could not be well communicated.
- Water began to backflow from downstream and flow into northeast neighbourhoods that had not been previously flooded.
- Over the next few hours, rescues took place by whatever means were available over the now inundated streets. Search and rescue teams assisted 38 people who were unable to evacuate their homes on their own. Helicopters could not take pets, so additional coordination was required to find alternative means for residents with pets.
- At 8 p.m. on June 20th, the decision was made to return the EOC to the Fire Hall in High River, since the flood waters had not reached the facility.
- The Alberta River Forecast Centre indicated that the Highwood River had crested at an estimated 2000 cms at around 9 p.m. Highway 2 southbound was reopened, but 498 Avenue had to be closed. The EOC was notified that there had been fatalities; confirmation on the number was not available immediately.

June 21

- At 6:30 a.m. on June 21, the EOC ordered a search of all town residences to ensure that people had been evacuated.
- By mid-day on the 21st, the Blackie Reception Centre was full. The Nanton Centre increased its capacity to take more residents. A boil water advisory was issued as a precautionary measure. Operations personnel were continuing their efforts to restore access to the water treatment plant. While pressure was maintained in the water system, wells had to be shut down.
- During the afternoon and evening, additional resources continued arriving to provide support, from neighbouring municipalities, the RCMP and more Armed Forces personnel to bring that complement up to almost 400 people.
- Reports continued to come in of missing people. The RCMP added additional resources to conduct home search and rescues. At 6 p.m. the mobile phone network was restored which provided some relief for communication issues.
- The issue of pet rescue began trending on social media.
- At 10 p.m. mandatory evacuation orders were made using bullhorn announcements throughout High River streets.

After Action Report: June 2013 Flood

June 22

- The morning of June 22nd, the EOC reviewed options for how best to limit water movement and facilitate dewatering of flooded areas. The decision was made to build a berm on 2nd Avenue to assist dewatering efforts. It was determined that 80% of the Town was without power. Fortis transferred its command centre to High River and began working to get power on for the Town's mainline and lift station.
- The Town of High River and MD of Foothills representatives met at Heritage Pointe at 8:30 a.m. to begin planning for recovery, and to assess staffing and resource requirements.
- Utility companies began clearing water and damage from their facilities.
- Later in the day, personnel from the Alberta Emergency Management Agency arrived to help plan for resident re-entry.
- Town representatives visited the Blackie and Nanton Reception Centres to provide updates to evacuees.
- The Lethbridge Incident Management Team arrived to assist in the EOC.
- Intermittent internet service is now back online.
- Access to main lift station is now possible and staff begin dewatering.

June 22-27

Throughout June 22nd and the next two days, numerous decisions and actions took place as the EOC and Town administration continued to work to ensure resident safety and to restore infrastructure. Bylaw Services was assigned the management of animal/pet rescues and placed a call for animal services resources. The SPCA and a number of Calgary humane service organizations responded. Over 1,100 pets were rescued and another 400 were fed in homes by responders travelling by boat.

- The EOC was moved to the Highwood High School on June 24.
- On June 24th one water well was brought back into service but its turbidity meant that a filter backwash was required. As the water plant requires gravity to backwash and the river was still high, the plant could not be backwashed. Sewer service was not operational until day 6.
- On June 25th, the Government of Alberta advanced \$50 million to the Town of High River to help deal with the immediate costs of the response and early recovery.
- Management of the massive flood recovery operations became increasingly more difficult for the limited staff of the Town of High River. Infrastructure and communication technology was still unstable, and the need for information and involvement by citizens, media and elected officials increased.

After Action Report: June 2013 Flood

June 27 onward

On June 27th, the Town of High River asked the Alberta Government to declare a provincial State of Emergency (SOE) for the town. This meant that leadership of the EOC was transferred to provincial command and additional staff resources were seconded to assist High River. It also allowed the Town to rotate some staff out of the EOC for much needed rest and to begin to concentrate resources on recovery, renewal, re-establishing municipal services and assisting business recovery. A staged re-entry plan was developed for residents. Inspections and coding of homes, businesses and facilities were coordinated with building inspectors, utility providers and Alberta Health Services in order to inform the re-entry plan. Re-entry began on June 29th.

- A Welcome Centre was established at the Agricultural Grounds in High River and was staffed by Town and Provincial employees, NGO's and volunteers.
- The Town of High River assessed the critical post-flood situation and began to plan for augmented staff, established a Renewal Operations Department and developed a formal plan to conduct infrastructure damage assessments. Modeling of the flood event began to inform future mitigation plans and reconstruction work.
- Over the ensuing weeks the Town and the Government of Alberta made plans for a new temporary neighbourhood, called Saddlebrook to be built adjacent to High River that would house more than 1,000 people. A second temporary neighbourhood, Great Plains, was developed by the Province in Calgary. Plans were also made for a temporary business park to be located in the downtown area. Temporary Town offices were established in mobile trailers by early July.
- The town was returned to a State of Local Emergency (SOLE) on July 11, 2013 and remained under a SOLE until September 27, 2013.

IMPACTS OF THE FLOOD:

- Highwood River peaked in 8.5 hours (at approximately 1850 cms)
- River width expanded 35 times its usual width (to 1.34 km in some areas)
- 59% of High River covered in water
- Over 70% of Town structures directly affected by water
- 13 lift stations affected by floodwaters
- 5 electrical substations damaged
- 50% of communication infrastructure damaged
- 4 gas lines broken
- 4.8 km² lake created by floodwaters in a residential neighbourhood

After Action Report: June 2013 Flood

Early recovery

- Dewatering removed an estimated 1,796,608,000 gallons of water
- 40,000 tonnes of debris hauled away from homes over 16 days
- Business taskforce established
- Town Hall and information expos held for residents and businesses
- More than 164,000 volunteer hours were contributed to assist High River residents

COMMUNICATION DURING THE CRISIS

The public need and demand for information during the flood disaster was overwhelming. Despite the many constraints that impeded communication, a valiant effort was made to fulfill these information needs.

At the time of the flood, the Town's Communications Department was comprised of two people, both of them trained in crisis communications. On June 19, the Town posted the first stream flow warning on its Facebook page; this post had a 2,500 reach. On June 20, the declaration of the State of Local Emergency was posted on social media and the Town's website and a media release was issued to the local media.

Communications tools used during the crisis included:

- Alberta Emergency Alert System
 - Website: www.highriver.ca
 - Twitter: @townofhighriver; #ABflood
 - Facebook: TownofHighRiver
 - Email – to local media; directly to local radio station DJ booths
 - Email directly to Town Crier subscribers
 - Town Crier newsletter both online and paper distributed as possible by hand around the community
 - Bullhorns
 - Amateur Radio Emergency Service (ARES) – to link to reception centres in Blackie and Nanton; June 21 only
 - Text messaging/telephone to media
- Town Hall meetings and information expos were also used once the initial crisis was over.
 - Statistics pulled from electronic communications mediums demonstrate that many individuals were using the Town's social media to get their information. For example followers on Twitter increased by approximately 3,000 following June 20th and Facebook followers increased by approximately 4,500.
 - Starting June 29th, the Town booked radio updates from the Mayor, which aired on all three local stations. Originally

After Action Report: June 2013 Flood

they were aired 4-7 times per day immediately after the news; as people returned to their homes, this number gradually lessened to twice weekly.

- The Town Crier e-newsletter had 1,648 subscribers pre-flood. This increased by approximately 1,350 from June 20. The Town Crier contact list is an opt-in list that people subscribe to from a link on the Town's home page. Pre-flood the Town sent out the Town Crier to this list twice per month and published it for distribution through the High River Times newspaper. From June 20 – Aug 6 this email list was used to send 27 flood updates. Circulation of the hardcopy of the Town Crier resumed on July 11 and continued twice weekly until the end of August.
- When the provincial state of emergency was called, the Province of Alberta took over communications and dissemination of updates and announcements. Several information bulletins were posted to the provincial site and linked to the Town's webpage.

LESSONS LEARNED

The purpose of the lessons learned is to constructively review the factors that contributed to the flood and the initial response. There is no intent to assign blame. Small communities such as High River are in no position to respond to a disaster of this magnitude. Even a much larger town or city would be missing some of the extensive resources—equipment and personnel—required for a thorough response to such a calamitous event as occurred on June 20th, 2013 in High River.

The Town's Municipal Emergency Management Plan (MEMP), resources and facilities were not of sufficient scale to handle an event of this magnitude. Following is an overview of insights and lessons learned that have formed the basis for recommendations used to revise the Plan.

Flood Preparations

The Town's program of flood preparedness is based on the expectation that the Town would receive eight hours' notice of a major flood. The standard flood protection was for a 750 cms flood, which was the 1-in-100 year flood rate.

Town Operations Services staff was well-trained on the flood preparedness plan and put it into action as soon as they received notice of the rising waters. The volume of the flood waters overwhelmed the Town's sandbagging operations, both for filling the sandbags and for transporting them to where they were needed.

Personnel

- Municipalities of the size of High River do not have sufficient personnel for large scale or extended emergency/disaster situations. In a wide-spread regional disaster, competition for resources and contractors becomes an issue.
- It is important to establish relationships with other municipalities to supplement existing capacity, and to know of alternate sources for potential resource requirements.
- Realistically, given the size of its administration, the Town has a limited ability to staff both the EOC and field

After Action Report: June 2013 Flood

operations for a disaster response that extends beyond four days. Staff fatigue, stress, and management of shift lengths presented significant challenges for the initial response.

- Roles and responsibilities for some positions and personnel could be more clearly defined.
- Partnering staff with other departments during an emergency provided an invaluable response experience, ultimately increasing knowledge and capacity within the Town administration.
- There was no clearly defined accountability system for Town staff to check in and report that they were safe. Many had been evacuated and lost both their cell phones and computers in the flood. This also made staffing the EOC a challenge.

Notification and Warning

The Alberta River Forecast Centre (ARFC) is the agency within the Environment and Sustainable Resource Department of the Government of Alberta which monitors flow rates in Alberta's rivers. In the 2013 flood, a number of issues arose with regards to river monitoring:

- The river monitoring stations were not sufficiently robust to withstand the impact of the fast-moving water and debris experienced in this unprecedented flood.
- Gauge stations experienced damage and malfunctioned resulting in a lack of accurate or reliable information about the river flow.

Damage to communications infrastructure made it difficult to provide updates to residents, including notifications to media outlets and information postings on the Town's regular channels: website, Facebook and Twitter. Loss of phone landlines and cellular service added to notification challenges.

Not even local media was effective in reaching some residents as they were scattered across western Canada staying with friends or family.

Door knocking and bullhorn announcements are important tools for communication when electronic options are not available. Both of these did occur in some parts of the community but they are resource intensive and could not be used for the entire town.

Rescues

The decision to re-direct the Operations Services staff and contractors with large equipment from protecting infrastructure to conducting rescues saved many lives. Providing the Fire Department with administrative support freed up firefighters for rescue operations.

Amphibious quads, zodiacs, air boats, mud boats, front-end loaders, rock trucks and combines were deployed and essential to rescue operations.

Traffic control is vital to rescue and evacuation operations. Traffic entering High River while residents were being

After Action Report: June 2013 Flood

evacuated created traffic congestion and blocked egress routes. This also introduced more individuals who required rescuing, putting a strain on already limited resources.

Evacuations

Given that the river flow rate information was changing so rapidly and the resources available, the evacuation plan targeted the most at-risk communities first and progressed quickly as the water levels were rising. Town staff and utility personnel took initiative to provide evacuation notices.

- Care facilities need to have an appropriate tracking system for their residents' final destination.
- Better communication with residents who did not evacuate is required so they understand the strain that they are putting on fragile town infrastructure and that the increased resource requirements to do adequate security patrols takes away from other important response objectives.
- A centralized people tracking system would facilitate more timely information about the location of evacuees.
- Clear guidelines for all responding agencies assisting with the search and rescue/evacuation operations are required to provide the most efficient coordination of the evacuation and rescue operation.
- Residents and contractors must be directed away from the Fire Hall in order to not impede emergency response operations.

Animal Rescue

Once the threat to human safety had been resolved, Bylaw Services was able to implement a formal animal rescue operation. This operation involved the collaboration of numerous agencies and volunteers, including Calgary Humane Society, ASPCA, ARRCs, Pound Rescue, The City of Calgary, Fish and Wildlife (ARS), and the RCMP and was successful in evacuating 1,100 pets and feeding 400 more in their homes.

Tracking of rescues was initially done using a paper-based system. Once the Animal Rescue Unit got access to more resources and personnel, tracking became more efficient.

The Municipal Emergency Management Plan did not have policies and procedures for animal rescue because there had been sufficient notice during previous floods for residents to retrieve their pets.

Reception Centres for Evacuees

More than 1000 people were provided food, shelter, clothing, and access to health services during the flood disaster, from the three Reception Centres located in Blackie, Nanton and Okotoks. 10 communities formally billeted people. The support and resources provided from these host communities, including volunteers and corporate sponsors, was invaluable.

- Given the length of time evacuees were in the Reception Centres—up to two weeks—personnel were able to create a sense of community to build support networks for evacuees.

After Action Report: June 2013 Flood

- Daily visits from the Mayor of High River to the Reception Centres were well-attended and provided much-needed information updates to the evacuees.
- Information about evacuees needs to be shared among the Reception Centres, other agencies and the call centre/inquiry lines.
- Providing updates to the EOC about emerging issues needs to occur in a timely fashion.
- In some situations lack of communication infrastructure impacted both the personnel trying to operate the Reception Centres and the evacuees.
- Some of the Reception Centres did not have appropriate security and could not get security contractors because of competing needs from other communities.
- Information about any special requirements of evacuees needs to be available to the Reception Centres in advance in order to coordinate the appropriate accommodation.
- Planning must include consideration for the use of Reception Centre resources by evacuees that are living in alternative accommodations.
- Appropriate support services need to be readily available to evacuees as the transition plan around closing of the Reception Centres is developed including their employment transportation requirements.

Infrastructure Protection

- The Town's decision to berm the water treatment plant protected the facility from extensive flood damage, even though it was surrounded by water.
- Sewage lift stations need to be more resilient to withstand higher rates of river flow.
- Communication infrastructure is more vital than ever in this electronic age. Backup systems are required to support web services, phone and cellular service in order to access technical data and files and for communications between the EOC and, emergency workers in the field, critical facility operations staff, reception centres, residents and the media.
- Backup systems and recovery need to be reviewed with utility providers and off site server storage and back up providers.

Crisis Communications

- The major impediment to public communication during the flood was the lack of delivery channels either because critical communication infrastructure was lost or residents did not have access to electronic communications or were not in the immediate area to use local radio stations or local newspapers.
- Establishing and maintaining credibility of the source and accuracy of information is critical to managing rumours.
- Using opportunities to provide printed information to residents such as during evacuee registration and when

After Action Report: June 2013 Flood

residents were receiving debit cards helped to supplement other forms of communications.

- In the absence of direct channels of communication to residents, mass media has to be relied upon.

Welcome Centre

The Welcome Centre was established at the Agriculture Society Rodeo grounds and was a one-stop-shop for all of the information and support services required by High River residents re-entering the town.

The partnerships between non-governmental organizations, volunteer agencies, Alberta Health Services, utility companies, Town staff and others were the key to the success of the Welcome Centre.

Having an EOC representative brief Welcome Centre staff each morning helped the staff members understand the situation and in turn provide better service to residents.

As much advance planning as possible must be given to transition from a re-entry centre to a more traditional welcome centre.

A first aid station must be available as long as there are volunteers in the community to assist with clean-up and remediation of houses.

Operational decisions made at the EOC that affect the Welcome Centre need to be communicated in a timely manner.

RECOMMENDATIONS

1. Revise and update the Emergency Management Bylaw. *(Completed. Bylaw passed April 28, 2014)*
2. Revise and update the Municipal Emergency Management Plan to create an all-hazard plan that incorporates lessons from the flood and municipal best practices including:
 - Animal Rescue Plan *(In progress)*
 - Crisis Communications Plan *(Completed)*
 - Roles and Responsibilities for all positions and resources to staff these positions *(Completed)*
 - Resource Management Plan *(Not started)*
 - Notification and alert systems *(Completed)*
 - Disaster Response Toolkit *(In progress)*
 - Emergency Social Services Plan *(Completed)*
 - Business Continuity Plan *(Completed)*
 - Public Education Program *(Ongoing)*
3. Revise and update the training program for all emergency related staff including cross-jurisdictional/organization training. *(Completed. More than 200 Town staff participated in training through April and May of 2014. This has been included as a formal part of the emergency management program and will be ongoing.)*

After Action Report: June 2013 Flood

4. Develop a Critical Infrastructure Protection Plan that assesses risk and prioritizes protection measures based on a river flow rate of 1850 cms. *(Assessment completed for flood risk, and protective measures are in place.)*
5. Incorporate other municipalities, volunteer organizations and specialized service providers into the Town's emergency management planning and formalize these relationships, roles, responsibilities and training. *(Ongoing. More than 30 participants from other agencies and communities participated in the Town's training in April and May.)*
6. Develop a Flood Response Plan with decision matrices based on flow rates and warning times to guide actions for community evacuations, infrastructure protection, sandbagging operations, and shelter-in-place recommendations. *(In progress. As the permanent mitigation measures are completed and new flood modelling is done, this document will be updated.)*
7. Update the Public Education Program for hazard awareness and emergency preparedness, taking into account current technologies and use of social media. Work with healthcare facilities, schools, daycares, and other care facilities on developing emergency preparedness plans and education for their clients. *(Ongoing. The Town held several information sessions, distributed a household emergency guide, held an evacuation workshop, and put on an emergency preparedness expo in the lead up to the 2014 flood season. Public education is an ongoing process and the Town will continue to develop and strengthen its relationship with healthcare facilities, schools, daycares, and other facilities in High River.)*
8. Establish a permanent EOC for the Town in a secure location; along with a fully equipped secondary location should the main location not be usable. *(In progress. Surveys are being done of facilities in Town and nearby for use as potential backup EOCs.)*
9. Develop an evacuation strategy that includes the identification of egress routes; transfer points and procedures for blocking off access into town. *(Completed)*
10. Work with the Government of Alberta to establish a centralized registration process as part of the Emergency Social Services Plan with information accessible to both the EOC and Reception Centres. *(In progress. The Province and municipalities have created working groups to improve emergency social service responses.)*
11. Develop a regional plan for Reception Centres with neighbouring municipalities including standard operating procedures and an Emergency Social Services kit to establish a centre. *(Completed. A Foothills Region Reception Centre Manual was completed in early May and regional partners participated in the training and exercise held in May.)*
12. Implement an employee care plan which addresses the practical and emotional needs of municipal staff, considering such things as need for adequate rest, loss of housing, transportation, child care, need for timely communication and role clarity. *(Completed. The Employee Care Plan includes information and training on how to identify and cope with stress, how to ensure families are prepared, and updated procedures for employees to check in following an evacuation.)*
13. Develop an orientation package for external response personnel to include expectations, processes, information on the local environment and assigned roles and responsibilities. *(In progress)*

After Action Report: June 2013 Flood

CONCLUSION

The complex and swift-moving nature of disasters make them challenging to deal with. The challenges are even greater when major events take place in smaller communities where people and resources are fewer. Anticipation, planning and preparation are key to the safety of people, the protection of property and infrastructure and to the ensuing recovery of communities. It takes a multitude of resources and cooperation to manage such events.

On the whole, the response to the June 2013 High River flood was remarkable, given the circumstances. Town staff as well as considerable resources and personnel from other municipalities, the Government of Alberta, the Canadian Forces, Non-government Organizations, community organizations, businesses, churches, contractors and thousands of volunteers worked to rescue and house thousands of people and pets and help clean up and rebuild a community.

Lessons learned from the experience will help the Town of High River and other communities better prepare for potential disasters and floods in particular. These lessons are already being applied to the Town of High River's Municipal Emergency Management Plan including:

- improved notification and alert systems;
- a more extensive resource plan;
- increased training;
- a more detailed crisis communication plan;
- additional public education on preparedness;
- formalizing relationships with other municipalities in respect to staff resources;
- a pet rescue plan; and,
- revisions to the emergency social services plan.

In respect to future flooding, a comprehensive flood mitigation program is underway to protect High River from flood levels experienced in 2013. Currently, permanent and temporary diking systems are in place to protect the community from flow rates of 1200 cubic metres/second or more. Once completed, the dikes will protect to 1850 cubic metres/second levels plus approximately 1 metre of freeboard.

Implementing the recommendations coming out of the lessons learned provides High River with a greater degree of support and protection required to keep people and the community safe.

The Town of High River is exceedingly grateful to the Government of Alberta, other municipalities, non-government organizations, private contractors, the RCMP, the Canadian Armed forces, churches, community organizations and the hundreds of volunteers that responded to calls for assistance during the initial response to the flood and that continue to support the recovery of High River.

“ We look forward to continuing to work with all government departments and non-government agencies as the community recovers, but in the end, High River will rebuild High River. ”

- Mayor Craig Snodgrass
February 10th, 2014

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