

2022 Spring Flooding

After Action Review

July 2025

Prepared for:
Government of Northwest Territories

Prepared by:
Stantec Consulting Ltd.

Project/File:
144903329



K'áhshó got'íne xadā k'é hederí ʔedjhtl'é yeriniwé ní dé dúle.
Dene kádá

ʔerihʔi's Dēne Sųtine yati t'a huts'elkēr xa beyáyati theʔa ʔat'e, nuwe ts'ēn yóti.
Dēne sųtine

Edi gondi dehgáh got'je zhatié k'éé edat'éh enahddhę nide naxets'é edahí.
Dene zhatié

Jii gwandak izhii ginjik vat'atr'ijahch'uu zhit yinothtan ji', diits'at ginohkhii.
Dinjii zhu' ginjik

Uvanittuaq ilitchurisukupku Inuvialuktun, ququaq'luta.
Inuvialuktun

ᑕᑦᑭᑦ ᑎᑎᑦᑲᑕ ᐱᑭᐱᑦ ᐃᑭᑎᑕᑦᑲᑭᐱᑦ, ᐅᑦᑎᑦᑭᑦ ᐅᑦᑕᑦᑲᑦᑕᑎᑦ.

Inuktitut

Hapkua titiqqat pijumagupkit Inuinnaqtun, uvaptinnut hivajarlutit.
Inuinnaqtun

kīspin ki nitawihitīn ē nīhīyawihk ōma ācimōwin, tipwāsīnān.
nēhiyawēwin

Tłjchq yatı k'èè. Dı wegodi newq dè, gots'o gone de.
Tłjchq

Langues autochtones
request_Indigenous_languages@gov.nt.ca

2022 SPRING FLOODING: AFTER ACTION REVIEW

This document entitled 2022 Spring Flooding: After Action Review was prepared by Stantec Consulted Ltd. ("Stantec") for the account of Government of Northwest Territories Emergency Management Organization (EMO) (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on the conditions and information existing at the time the document was developed and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information provided to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by: 

Alyssa Pepper, MPA

Emergency Management Specialist

Reviewed by: 

Zane Beall, MPA

Principal Planner

Sommaire

Le 6 mai 2022, la débâcle de la rivière Hay s'est produite à proximité de la collectivité de Meander River, en Alberta, entraînant le refoulement de grandes quantités d'eau de surface dans les secteurs du chenel Ouest et de Paradise Gardens de la ville de Hay River (VHR) et dans la réserve de la Première Nation K'atl'odeeche (PNK), aux Territoires du Nord-Ouest (TNO). La montée continue des eaux a donné lieu à l'activation des organismes d'intervention d'urgence de la VHR et de la PNK, de l'Organisation de gestion des urgences régionale (OGUR) du Slave Sud et de l'Organisation de gestion des urgences territoriale (OGUT) afin de porter assistance aux populations. Le conseil municipal de la VHR a déclaré l'état d'urgence local (EUL) le 7 mai 2022. Entre le 7 et le 12 mai 2022, des évacuations de secteurs à risque précis au sein de la VHR et de la PNK, puis de l'ensemble des collectivités ont été organisées. En marge de ces évacuations, des services de soins et d'hébergement de masse ont été proposés jusqu'au 21 mai 2022, date à laquelle tous les résidents ont pu retourner dans leurs collectivités.

Plusieurs collectivités, deux OGUR et l'OGUT ont participé aux efforts d'intervention pour soutenir la VHR et la PNK, notamment en surveillant les niveaux de risque, en aidant les collectivités à bien se préparer, en coordonnant l'évacuation et l'hébergement des personnes déplacées et en distribuant des fournitures et des ressources d'urgence.

Plus de 4 000 habitants de la VHR et de la PNK ont été touchés par ces inondations, qui ont endommagé environ 500 habitations, entreprises et infrastructures communautaires et 43 sites contaminés. L'OGUT a commencé à coordonner les efforts de rétablissement, notamment l'aide financière en cas de sinistre, dès la fin des activités d'intervention d'urgence.

Depuis le début de ces efforts de rétablissement, on a compté 509 inscriptions à l'aide en cas de sinistre de la part de particuliers et de petites entreprises, et deux demandes de collectivités concernant les interventions d'urgence et la remise en état d'infrastructures communautaires endommagées. Le coût total des efforts d'intervention et de rétablissement après les inondations de 2022, qui devraient prendre jusqu'à cinq ans, est estimé à 93,6 millions de dollars.

À la fin de 2022, le gouvernement des Territoires du Nord-Ouest (GTNO) a demandé à Stantec Consulting Services Inc. de mener une évaluation indépendante des activités de préparation, d'intervention et de rétablissement liées à cette catastrophe. Cette évaluation a pris plus de deux ans, car les données sur les activités de préparation et d'intervention ont été collectées dans les mois qui ont suivi l'événement, tandis que les données sur les activités de rétablissement ont été collectées plus d'un an après, le temps que ces activités se mettent en place.

La présente analyse après incident fournit une description détaillée des activités de préparation, d'intervention et de rétablissement liées aux inondations de 2022 qui ont touché la VHR, la PNK et les secteurs environnants. Elle présente la méthodologie utilisée pour collecter et analyser les données, ainsi que les observations et recommandations qui en découlent.

Le rapport recense 6 pratiques exemplaires, 17 points à améliorer et 80 observations à l'appui donnant lieu à 38 recommandations à l'intention du GTNO, de l'Organisation de gestion des

urgences des Territoires du Nord-Ouest (OGU des TNO) et des administrations communautaires. En outre, il met en évidence les points forts et les points à améliorer.

Les recommandations du rapport sont réparties en plusieurs catégories :

- Six sont liées à la gestion des ressources;
- Cinq sont liées à la formation et aux exercices;
- Huit sont liées à la gestion de l'information;
- Trois relèvent des activités de préparation de la structure opérationnelle;
- Neuf relèvent des activités d'intervention de la structure opérationnelle;
- Sept relèvent des activités de rétablissement de la structure opérationnelle.

Les recommandations formulées dans cette analyse après incident seront utilisées par l'OGU des TNO pour mettre à jour ses politiques, ses programmes et ses services. Elles seront également transmises au Comité de planification territoriale et aux organisations de gestion des urgences (OGU) régionales et locales pour qu'elles en tiennent compte lors de la mise à jour de leurs protocoles et de leurs plans d'urgence. Ces améliorations permanentes permettront aux TNO de se préparer à faire face à une gestion des urgences toujours plus complexe aux TNO et au risque de sinistres plus fréquents et plus graves à l'avenir.

Un résumé détaillé de ces conclusions figure à la fin du présent rapport.

Executive Summary

On May 6, 2022, breakup of the Hay River occurred near the community of Meander River, Alberta, resulting in high amounts of surface water backing up at the West Channel and Paradise Gardens areas of the Town of Hay River (THR) and at the K'at'l'odeeche First Nation (KFN) in the Northwest Territories (NWT). Continuing rising water led to the activation of both THR and KFN emergency response organizations, the South Slave Regional Emergency Management Organization (REMO) and the Territorial Emergency Management Organization (TEMO) to provide support. THR town council declared of a State of Local Emergency (SOLE) on May 7, 2022. Evacuations of specific risk areas of THR and KFN and then ultimately full community evacuations occurred between May 7-12, 2022. Evacuation-related mass care and shelter services were available until May 21, 2022, after which time all residents were allowed to return to their communities.

Several communities, two REMO's, and the TEMO assisted with response efforts to support THR and KFN which included monitoring risk levels, supporting community preparedness, coordinating evacuations and hosting of residents, and providing emergency supplies/resources.

Over 4,000 residents of THR and KFN were impacted by the flood event which resulted in damages to approximately 500 homes, business and community infrastructure and roughly 43 contaminated sites. TEMO began coordinating recovery efforts including disaster financial assistance immediately after the active response efforts were completed.

Since the beginning of recovery, there have been 509 registrations for individual and small business disaster assistance, and submission of two community claims for emergency response and recovery of community infrastructure damage. The total cost for the 2022 flood response and recovery is estimated at \$93.6 million and is expected to take up to five years to complete.

In late 2022, the Government of Northwest Territories (GNWT) engaged Stantec Consulting Services Inc. to lead an independent assessment of the preparedness, response, and recovery activities associated with this event. This assessment took over 2 years to complete as data on the preparedness and response to the event was collected in the months following the event and more than a year later (allowing time for recovery activities to take place) data on recovery was collected.

This After-Action Review (AAR) provides a detailed description of the preparedness, response and recovery activities related to the 2022 flood event that impacted THR, KFN, and the surrounding areas. It identifies the methodology used to collect and analyze the data, and the resulting observations and recommendations.

The report identifies 6 Best Practices (BPs), 17 Opportunities for Improvement (OFIs) and 80 Supporting Observations (SOs) leading to 38 recommendations (Rs) for the GNWT, Northwest Territories Emergency Management Organization (NWT EMO) and community governments. In addition, it identifies strengths and areas for improvement.



The report recommendations are broken down into:

- 6 related to Resource Management,
- 5 related to Training and Exercises,
- 8 related to Information Management,
- 3 under Concept of Operations – Preparedness,
- 9 under Concept of Operations – Response, and
- 7 under Concept of Operations – Recovery

The recommendations in this AAR will be used by the NWT EMO to update policies programs and services. It will also be shared with the Territorial Planning Committee (TPC) and with regional and community Emergency Management Organizations (EMOs) for consideration in updating protocols and emergency plans. These ongoing improvements will ensure the NWT is prepared for the changing complexities of emergency management in the NWT and the risk of more frequent and move severe events in the future.

A detailed summary of these findings can be found at the end of this report.

Summary of Findings

GNWT

1. The GNWT should conduct research on the placement of the NWT EMO within government to ensure emergency management services are effectively coordinated across the territories including during major and complex events. (Example: Reassess NWT EMO placed within Municipal and Community Affairs (MACA), as opposed to being a standalone agency).
2. GNWT should create or update flood risk maps for all flood risk communities in the NWT.

NWT EMO

1. NWT EMO should continue capacity building in support of communities and to increase available staff, training and knowledge in preparation for future events.
2. Conduct Emergency Operations Centre (EOC) training for TEMO and REMOs to train additional staff and increase capacity to sustain EOC and support operations.
3. Conduct an EOC informational session with leadership and other departments to establish an understanding of staffing requirements during emergency operations.
4. MACA should increase emergency management staffing for recovery to include permanent, full-time employees related to finance/administration and policy.
5. NWT EMO should continue to update and educate communities on processes and procedures for requesting GNWT resources during emergencies.



6. NWT EMO should conduct a tabletop exercise of the existing emergency plans with Health and Social Services, schools, Housing NWT and the THR. Results and outcomes can be used to improve plans as necessary.
7. NWT EMO should conduct in-person information sessions/workshops with local EMOs pre-flood season to assess resource needs, update local EMOs on territorial EMO capabilities and provide awareness of various roles and responsibilities during emergency incidents.
8. NWT EMO should develop detailed Standard Operational Procedures (SOPs) for pathfinders to ensure standardization of case management and alignment with policy and management direction, and just-in-time training on these SOPs should be provided to pathfinders when activated.
9. NWT EMO should develop and conduct a series of training activities for elected officials and appointed leadership to educate them on their role during emergencies, including the recovery process. Ongoing refreshers of this training should be provided, including opportunities to engage emergency management officials on issues and concerns.
10. NWT EMO should develop a one-pager on the emergency management process, including roles and responsibilities, that can be shared with elected officials, appointed leadership, other departments and the public to share awareness and promote understanding of how the NWT EMO provides support following a disaster.
11. NWT EMO should review operational communications protocols on a regular basis and continue to build partnerships for the sharing of risk and operational information.
12. NWT EMO should review and update public communications protocols to include high water level updates, warnings and alerts, and continue readiness campaigns with public education materials developed for flood risk communities.
13. Review and update public alerting protocols including roles and responsibilities, share this information with community governments and conduct a public alerting test with THR and KFN to validate the process and educate community officials and the public on the system.
14. Public information campaigns and warning information should be reviewed and updated to educate residents about the danger of rising flood waters and remind them of their personal responsibility to be prepared for emergencies, recognize the risk associated with hazardous conditions and to take appropriate action to protect themselves and their families.
15. NWT EMO should ensure consistency of recovery forms and documentation terminology, and information requirements. Remove and update or replace all outdated recovery forms and documentation.
16. NWT EMO should develop a public messaging plan that guides consistent emergency public information during a disaster. This plan should be supported by a process for developing messages, choosing appropriate methods and rating efficacy.
17. While the protection and evacuation of livestock is not a responsibility of the GNWT, efforts should be taken to increase awareness among livestock owners and residents of the responsibilities to have an emergency plan in place and resources available to evacuate livestock when required.



18. NWT EMO should provide emergency management workshops focused on roles and responsibilities, and resource capacities during major emergencies to community governments, other GNWT departments and key partners.
19. NWT EMO should review public alerting protocols and work with community officials to identify opportunities within the alert process that can be streamlined in the future, including establishing trigger points and templates for use during evacuations.
20. NWT EMO should provide training to community governments to better understand roles and responsibilities during full community evacuations.
21. NWT EMO should support communities by providing workshops on the pre-registration process and the types of resources that may be required during evacuations.
22. NWT EMO should work to increase hosting capacities (e.g., pre-stage resources, increase awareness and training) in communities outside of Yellowknife to ensure adequate space and services and minimize the impacts on host communities that may be receiving large numbers of evacuees.
23. NWT EMO should consider providing up-front nominal payments to evacuees as opposed to providing government-arranged services, where it makes sense during evacuations.
24. NWT EMO should review and update the evacuation guidelines in the NWT Emergency Plan to clarify the phases of evacuation, from initial movement to a staging area, and then to the formal evacuation centre.
25. Invest in psychological first aid, vendors, or other resources to ensure psychosocial support services are provided to the public and recovery personnel throughout the recovery period of an emergency.
26. The NWT EMO should continue to coordinate damage assessments as part of recovery response.
27. The NWT EMO should maintain core recovery staffing including the Recovery Manager and hire local pathfinders immediately after an event for periods of 1-2 years.
28. The Disaster Assistance Policy should be reviewed and updated with input from elected officials and appointed leadership and consider perspectives of front-line staff delivering the program.
29. The NWT EMO should establish a formal policy that ensures oversight of contractor activities associated with disaster recovery efforts. In addition, it should consider taking a broader approach to fight fraud and abuse following a disaster.
30. Streamlining mitigation assessments and minimizing the number of steps that need to be completed prior to contracting repair work, could speed up the process and allow the GNWT to work with clients to implement mitigation measures in a timelier manner.
31. Any update to the DAP should maintain current principles and funding amounts.



Community Governments

1. As not all at-risk areas are indicated on current flood maps, update community risk assessments and document new areas at risk of flooding. Community governments should consider reviewing or adopting new community zoning bylaws to better reflect new risk profiles.
2. The Town of Hay River and K'atl'odeeche First Nation should update their Community Emergency Plans (CEPs) to include guidance and procedures for full-scale evacuations and associated activities.
3. Community governments should consider establishing a Memorandum of Understanding (MOU) and pre-standing contracts with community partners and vendors to assist with evacuation registration and tracking, support requirements, and traffic control for future flooding events.
4. Communities should undertake pre-registration for residents in advance of a potential civil emergency to ensure readiness to address anticipated needs.
5. Communities should review and update CEPs to include the phases of an evacuation, identify staging areas and triggers for when people should move from staging areas to evacuation locations. These procedures should be reviewed and tested on an annual basis, and this information should be socialized to residents in areas potentially impacted by evacuations.



Table of Contents

Limitations and Sign-off	i
Executive Summary	ii
Acronyms / Abbreviations.....	viii
1 Introduction	1
1.1 Background	1
1.2 Purpose	2
2 Event Overview	3
2.1 Key Event Factors.....	4
2.2 Preparedness, Response and Recovery Activities by Phase.....	5
2.2.1 Incident Timeline	5
2.2.2 Incident Details by Phase	6
3 Methodology.....	10
3.1 General	10
3.2 Data Collection.....	11
3.3 Data Analysis	12
4 Findings	13
4.1 Resource Management.....	13
4.1.1 Human Resources	13
4.1.2 Supplies and Equipment.....	15
4.1.3 Facilities	15
4.2 Training and Exercises.....	15
4.2.1 Training Requirements – Preparedness and Response.....	16
4.2.2 Training Requirements – Recovery	16
4.3 Information Management	17
4.3.1 Information Exchange	18
4.3.2 Public Information	19
4.4 Concept of Operations	22
4.4.1 Concept of Operations – Preparedness	22
4.4.2 Concept of Operations – Response.....	23
4.4.3 Concept of Operations – Recovery.....	26
5 Conclusion.....	29
6 Summary of Recommendations	30
6.1 Action Items	31

List of Figures

Figure 1	After Action Review Process.....	10
----------	----------------------------------	----



Acronyms / Abbreviations

AAR	After Action Review
BP	Best Practice
CEP	Community Emergency Plan
DAP	Disaster Assistance Policy
EOC	Emergency Operations Centre
EMO	Emergency Management Organization
ECC	Department of Environment and Climate Change
GNWT	Government of the Northwest Territories
ICS	Incident Command System
IMT	Incident Management Team
KFN	K'atl'odeeche First Nation
LEMO	Local Emergency Management Organization
MACA	Department of Municipal and Community Affairs
MOU	Memorandum of Understanding
NWT	Northwest Territories
NWT EMO	Northwest Territories Emergency Management Organization
OFI	Opportunity for Improvement
R	Recommendation
REMO	Regional Emergency Management Organization
SO	Supporting Observation
SOLE	State of Local Emergency
SOP	Standard Operational Procedure
TEMO	Territorial Emergency Management Organization
THR	Town of Hay River
TPC	Territorial Planning Committee
TTX	Table Top Exercise



1 Introduction

1.1 Background

In May 2022, ice jam flooding on the Hay River prompted emergency responses including evacuations throughout the downstream communities. Community governments, including the Town of Hay River (THR) and Kátl'odeeche First Nation (KFN) responded and were supported by the NWT EMO Incident Management Team (IMT) as per the NWT Emergency Plan. The flooding led to unprecedented damage to buildings and infrastructure while also prompting evacuations and health and human service needs.

In the NWT, community governments (local authorities) are the lead authority during emergencies affecting their respective community and are responsible for the development and implementation of their community emergency plans to reasonably protect the public and minimize property damage and loss. Community governments are responsible for the overall safety and well-being of their residents (including the vulnerable populations), implementation of CEPs (including evacuations and hosting), and emergency-related communications affecting their residents. In the event a community's ability to implement their emergency plan becomes exhausted, they can request the assistance of the GNWT through the REMO. These requests must originate from the authorized representative of the community government, and they must be able to demonstrate that all local resources have been fully committed prior to making such a request.

The TEMO consists of representatives from all GNWT departments, five REMOs, partners, and agencies. The TEMO is led by the NWT EMO within MACA.

The NWT EMO is the lead authority for GNWT's emergency management programs including supporting the emergency management activities of community governments. The basic structure for emergency response to emergencies in the NWT follows the Incident Command System (ICS) model. The NWT EMO supports REMOs and communities when required during emergencies and provides ongoing support to communities in preparing for emergencies and developing community emergency plans.

The NWT EMO is responsible for reviewing and recommending modifications to territorial and community government emergency plans and programs. To support this work, the NWT EMO conducts an AAR for all major events. The AAR serves to identify opportunities for improvement, best practices during emergency events and makes recommendations for improvements.

In late 2022, the GNWT engaged Stantec Consulting Services Inc. to lead an independent assessment of the preparedness, response, and recovery activities associated with this event. Two separate data collection engagement activities were conducted as part of this process; one to assess the preparedness and response activities, and the other a year later (to allow time for the recovery process) to assess recovery activities.



1.2 Purpose

After Action Reviews are a standard mechanism used in emergency management to examine the response to an emergency event to identify strengths and weaknesses and recommend areas for improvement in emergency management policies, protocols and programs.

The scope of this AAR is primarily focused on the responsibilities of GNWT through the NWT EMO but may also present findings that identify recommendations to residents, community governments, and other partners. In addition, the findings identified within this AAR largely relied upon observations and feedback shared by residents, GNWT staff, and Town of Hay River staff. Efforts to engage with and solicit feedback from KFN officials were unsuccessful; as such, this AAR may not fully address the experiences of KFN.



2 Event Overview

The timeline of the flood incident from preparation to recovery spanned over eight weeks. This section describes the phases of the incident with descriptions of actions that took place within each phase.

Please note that the NWT EMO uses the following public alerting messages related to evacuations:

- **Evacuation Notice** – is for information only and is an advisory that an emergency event, such as a wildfire or flood, may present an increased risk to a community or a remote area.
- **Evacuation Alert** – issued to advise residents of the potential for loss of life or property from an emergency event and to be prepared to evacuate on short notice.
- **Evacuation Order** – an order for residents to evacuate. Issued by authorities having jurisdiction in response to imminent danger to residents in the involved area.
- **Evacuation All Clear** – is issued by authorities having jurisdiction when it is safe for residents and visitors to return to an impacted community or area.

Activation levels for TEMO and REMOs are referenced in the descriptions of actions that took place during the incident. NWT EMO uses the following activation levels when the TEMO and REMOs are activated in response to an emergency event:

- **Level 1 – Monitoring** – monitoring and sharing of information pertaining to a pending or potential emergency.
- **Level 2 – Partial Activation** – limited or targeted response and support including multi-agency coordination and reporting.
- **Level 3 – Full Activation** – multi-agency and/or multi-jurisdictional large-scale response and support



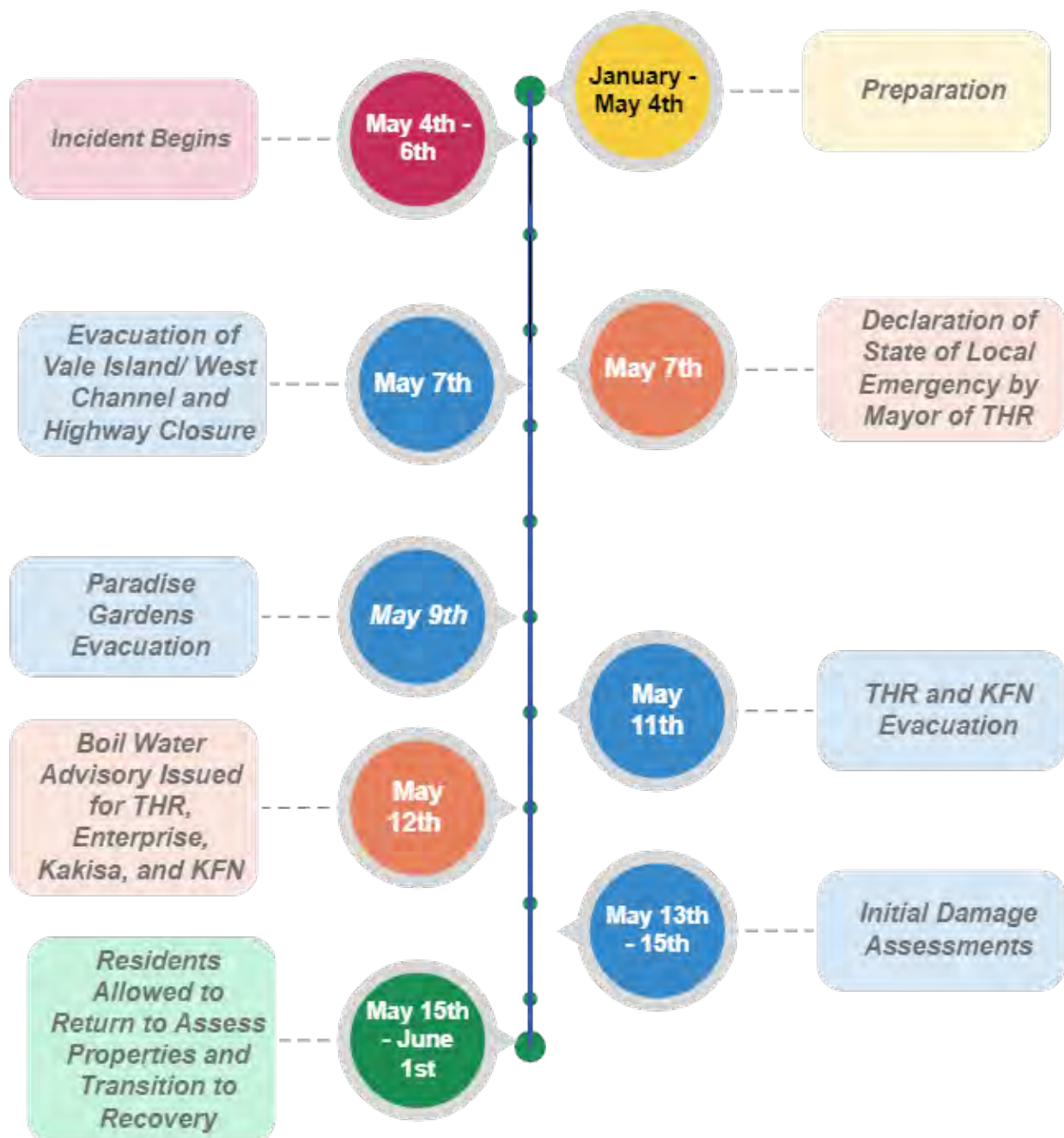
2.1 Key Event Factors

Key Dates	<ul style="list-style-type: none"> • May 6: THR released a public notice regarding the breakup of the Hay River • May 7: State of Local Emergency declared for THR and initial evacuation orders issued • May 8 to 12: Additional evacuation notices issued to impacted communities • May 12: THR released a public notice regarding the subsequential push and release of the ice system on the Hay River • May 15: THR residents allowed to return
Activations	<ul style="list-style-type: none"> • TEMO • South Slave REMO • North Slave REMO • Dehcho REMO
Weather Details	<ul style="list-style-type: none"> • A series of large weather systems slowly moved through the region between May 6 and May 12, leading to major ice breakups of the Hay River • Peak Hay River water level occurred on May 12 at 0600 hours was 12.65 metres
Associated Services and Activities	<ul style="list-style-type: none"> • Activation of evacuation centres <ul style="list-style-type: none"> ▪ Hay River Community Centre: 319 evacuees ▪ Yellowknife Multiplex: 625 total evacuees registered (106 stayed at the reception center; 448 stayed elsewhere) ▪ Dene Wellness Centre: 100+ evacuees • Official hosting communities <ul style="list-style-type: none"> ▪ Fort Smith: 85 evacuees ▪ Enterprise: 107 evacuees ▪ Fort Providence: 87 evacuees
Key Impacts	<ul style="list-style-type: none"> • Approximately 3700 Hay River area residents affected • Approximately 330 KFN residents affected • Around 500 structures affected • 43 fuel spills reported



2.2 Preparedness, Response and Recovery Activities by Phase

2.2.1 Incident Timeline



2.2.2 Incident Details by Phase

Preparation: January – May 4th, 2022

Community governments with their Local Emergency Management Organizations (LEMO), REMOs, and the TEMO conducted flood preparedness activities including distributing a communication package with information on how to prepare for a flood and potential evacuations, holding an open public meeting, and publishing information on Facebook and news media. Throughout the fall and winter seasons, MACA offered CEP and Tabletop Exercise (TTX) workshops to community governments who requested support with emergency planning and preparedness efforts. Department of Environment and Climate Change (ECC) worked with community governments to retrieve water data starting in January. A notice to prepare and make personal arrangements for evacuation accommodations was released to the public. A Public Breakup Preparedness Meeting was held in Hay River on April 20th to advise on home flood preparedness and evacuation and provided registration options for sheltering at the Hay River Community Centre. After a sharp rise of water levels, THR provided for basic essential needs at the Hay River Territorial Park and the Hay River Community Centre.

Incident Begins: May 4th – May 6th, 2022

The Hay River watershed originates in British Columbia and flows east into Alberta where it joins its major tributary, the Chinchaga River. It then flows north just over 700 kilometres, passing through the Town of Hay River and K'at'l'odeechee First Nation, before discharging into the Great Slave Lake. In total, the Hay River covers an area of approximately 51,700 square kilometers. The breakup of the Hay River near the Alberta community of Meander River resulted in high amounts of surface water being pushed downstream to the THR and KFN, primarily near West Channel and Paradise Gardens. At the request of KFN leadership, the Territorial EMO issued a public alert on May 6th at 10:13 PM to the residents of KFN to be prepared to evacuate on short notice. Shortly after, at the request of the THR, the TEMO issued an evacuation alert for Vale Island and West Channel residents on May 6th at 10:35 PM to be prepared to evacuate on short notice. As of May 6th, the TEMO was activated to Level 1 – Monitoring, while the South Slave REMO was activated to Level 3 – Full Activation, on May 7th.

Declaration of State of Local Emergency: May 7th, 2022

The THR Council declared a SOLE on May 7th at 1:32 AM. KFN declared a SOLE on May 7th at 1045 pm. The TEMO remained activated to Level 1-Monitoring.

First Evacuation Orders and Highway Closure: May 7th, 2022

An Evacuation Order for KFN and the Vale Island, West Channel areas of Hay River was issued at 2:00 AM by TEMO at the request of the community governments. THR residents were told that they were required to register at the Hay River Community Centre, through the online registration form, or by calling the phone number provided through emergency services. The Fire Department and RCMP went door to door to evacuate Vale Island, and 500 residents were evacuated in 1 hour.



The Department of Infrastructure closed Highway 2 south of Porritt Landing Marina on Vale Island, as it was deemed impassable due to flowing water and to allow emergency services to remove ice.

Figure 2. Porritt Landing



Evacuation Services: May 7th – May 12

On May 7th, The TEMO remained activated at Level 1- Monitoring while the South Slave REMO was fully activated. As reported by THR, approximately 210 residents from Vale Island and West Channel were registered as evacuees. Approximately 15 KFN Elders were moved to accommodations in Hay River. Residents of the Old Village within KFN were moved out ahead of the order. Two families and three seniors were moved to the Hay River Community Centre or other town accommodations. Additionally, six recreational vehicle (RV) units were evacuated to the Hay River Community Centre. Food services for evacuees were available at the Hay River Community Centre and support services were also available at Soaring Eagle Friendship Centre starting May 10th.

Evacuations began as early as May 7 and continued through May 12. During this period, a variety of evacuation-related services were coordinated by TEMO and community governments. TEMO supported the coordination of transportation for evacuees to host communities. The following communities provided hosting for evacuees: Fort Smith, Enterprise, Fort Providence, Fort Resolution, and Yellowknife. TEMO and the South Slave REMO worked alongside THR and KFN to provide food, accommodations, information, and supplies to support evacuees. In addition, cots with blankets and pillows, meals, access to electricity, and mental health support services were provided.

Paradise Gardens and Riverfront Evacuations: May 9th, 2022

At the request of THR, TEMO issued an evacuation order for Paradise Gardens at 5:10 PM and TEMO activated to Level 2-Partial Activation. The TEMO issued an evacuation alert for THR in the Riverfront area at 8:53 PM for residents to be prepared to evacuate on short notice.

Figure 3. Paradise Gardens



THR and KFN Evacuation: May 11th, 2022

Additional Evacuation Orders were issued late on May 11th and into May 12th to include for all of Hay River including all riverfront properties and KFN. Evacuees were instructed to register at the Hay River Community Centre or to contact support services for those requiring assistance in evacuating. Onsite emergency crews supported a full evacuation of THR. The Department of Infrastructure closed Highway 2 at Enterprise until water could recede and an evaluation of the highway integrity could be made and emergency repairs conducted. Emergency crews, including Coast Guard Auxiliary and local contractors facilitated water rescues as required. TEMO and North Slave REMO supported the evacuation by coordinating reception centre and hosting arrangements in Yellowknife and deploying buses to Enterprise to transport evacuees. The THR monitoring stations along the river were damaged due to the ice and therefore determined to be unreliable.

Boil Water Order: May 12th, 2022

Ice moved through the community on May 12th, significantly impacting infrastructure. Electricity, fresh water supply and sewer services were impacted. A boil water advisory was issued for THR, Enterprise, Kakisa, and KFN. Some fuel spills had been reported, but GNWT could not assess the impacted areas until the waters receded due to safety issues. TEMO and REMOs remained fully activated and provided resources for response planning and coordination. Evacuation Centres remained open at Hay River Community Centre and the Yellowknife Multiplex.

Initial Damage Assessments: May 13th – May 15th, 2022

As of May 13th, the TEMO and the South Slave and North Slave REMOs were fully activated, and initial damage assessments began. As initial assessments were being completed, TEMO continued to fill resource requests from THR by providing additional staff and continuing to work to restore power and other essential services. Upon the end of the initial assessments, THR Mayor, Kandis Jameson released a [message via the THR website](#) stating the Riverview Pump Station would be inaccessible for 7 days, there was no power on Vale Island, water and sewer services would be trucked in until services could be resumed, and all infrastructure damages could take months to address.

Residents were not allowed to return as several areas of the Town were inaccessible and essential services were unavailable. It was therefore deemed unsafe for those not involved in emergency response activities to be in the impacted area. Highway 2 remained closed as well as the airport's paved runway.

Transition to Recovery: May 15th – June 1st, 2022

A reopening plan was released to all THR residents permitting them to return as of 6:00 PM on May 15th, while an Evacuation Order remained in place for KFN. TEMO deployed buses to help residents of Hay River transition from evacuation centres to Hay River. Also included in the public releases were further infrastructure updates, guidance for returning home safely, and recovery updates by zones and severity. As of May 20th, THR and KFN transitioned to a recovery posture, with the TEMO and South Slave REMO remaining activated. The City of Yellowknife Evacuation Centre closed for overnight sleeping on May 21st. THR continued to provide services for those impacted by flooding.

Long Term Recovery: June 1st, 2022 – Present

Since the beginning of recovery, there have been 509 registrations for individual and small business disaster assistance, and intent of two community claims for emergency response and recovery of community infrastructure damage. The total cost for the 2022 flood response and recovery is estimated at \$93.6 million and is expected to take up to five years to complete.

In addition to the recovery funding, through the Disaster Mitigation and Adaptation Fund (DMAF), the federal government is investing \$1,164,288 to enhance an existing berm along the West Channel village in Hay River and provide a barrier between land and water. Funding will also go towards preparing and protecting the Alaska Road from future damage.

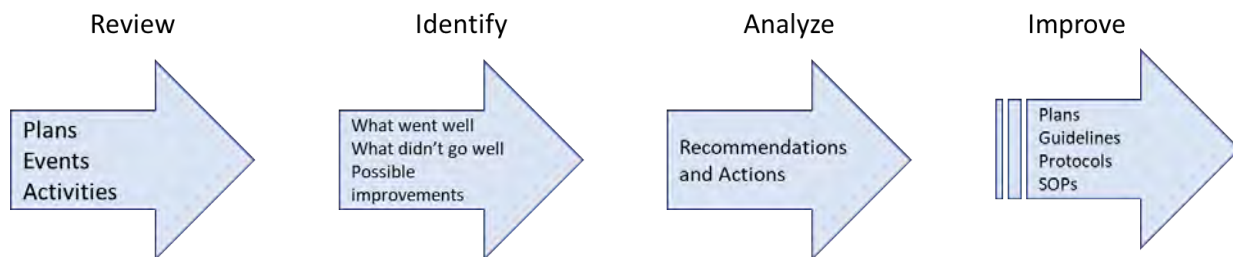


3 Methodology

3.1 General

An AAR process is a key element in enhancing local, regional, and territorial EMO capabilities. The AAR process allows for consistent and timely review of both real or simulated emergency operations (e.g., exercises and incidents) to understand what happened and, to the extent possible, why, and ensures that observations are captured while still fresh in the minds of those involved. The desired outcome of the after-action process is to identify strengths and areas for improvement that inform recommended actions to sustain and improve emergency management policies, protocols and programs.

Figure 1 After Action Review Process



Data collection and analysis included the collection of both qualitative and quantitative information through surveys and engagement activities with the public and territorial and community government officials. This included reviewing the NWT Emergency Plan (2018), the Town of Hay River Community Emergency Plan, and TEMO Flood Response Situation Reports.

Preparedness, response and recovery activities included in this assessment focussed on four key areas as follows:

- **Resource Management:** Considers the ability of the territorial, regional and community government EMOs to sustain long-term operations through trained personnel, necessary equipment, and other support mechanisms. This includes the availability of supplies and equipment critical to an effective response as well as ease and efficiency of accessing items not immediately available.
- **Training and Exercise:** Considers the knowledge and experience of available staff when required to fill emergency management functions and positions.

- **Information Management:** Considers the effectiveness of the exchange of information between supporting government departments, community responders, and the quality of messaging to the public.
- **Concept of Operations:** Considers the overall function of the EOC and recovery structure in its ability to support operational activities including each section and staff member needs during an extended response and recovery operation. It also includes coordination of response and recovery with respect to interoperability of supporting departments and agencies.

3.2 Data Collection

Active response to the flood incident occurred May 7th through June 1st, 2022, with recovery efforts still ongoing at the publication of this document.

Data collection for this AAR process was conducted in two parts to allow a full year of recovery to take place before recovery activities could be properly assessed and included in this report.

- Part 1 – collection and review of data related to preparedness and response activities in the lead up to and during the flood event to identify observations and recommendations for improvements related to preparedness and response. This included:
 - **Public Engagement** – A public meeting was held at the Town of Hay River Community Centre on January 17, 2023, and attended by 62 residents. Additionally, web-based surveys were socialized on community government and GNWT websites and via social media to residents between January and March 2023 and resulted in 86 responses
 - **GNWT and Community Government Engagement** – A series of meetings were conducted with key GNWT staff and local community governments to validate public perception and provide an opportunity to identify additional lessons learned. Additionally, web-based surveys were socialized to Regional and Territorial EMO members, GNWT departments, and partner agencies as well as THR community government representatives.
 - **Incident Documentation and Existing Plans and Procedures** – Incident documentation reviewed to inform this AAR included TEMO Consolidated Situation Reports, emails, and log reports with photos. In addition, existing emergency plans and procedures were reviewed and used to validate observations.
- Part 2 – collection and review of data specific to recovery activities conducted after the response ended to identify observations and recommendations for improvements specifically related to recovery activities. This included:
 - **Public Engagement** – A public meeting was held at the Town of Hay River Community Centre on February 23, 2024, and attended by 25 residents. Additionally, web-based surveys were socialized on community government and GNWT websites and via social media to residents between January and March 2024 and resulted in 33 responses.



- **GNWT and Community Government Engagement** – A series of meetings were conducted with key GNWT staff and local community governments to validate public perception and provide an opportunity to identify additional lessons learned. Additionally, web-based surveys were socialized to Regional and Territorial EMO members, and 8 survey respondents provided feedback.
- **Incident Documentation and Existing Plans and Procedures** – Incident documentation reviewed to inform this AAR included Territorial EMO Consolidated Situation Reports, emails, and log reports with photos. In addition, existing recovery policies and procedures were reviewed to validate observations.

3.3 Data Analysis

Numerous territorial and community government emergency plans and guidelines were considered to provide context and serve as a baseline for expected actions and activities. Data extracted from the online survey, interviews, and engagement session were analyzed to address common themes and similarities that indicated trends in the collective experience. For each category, context is provided, and key findings are identified and presented with supporting observations.

The information collected was aggregated to preserve anonymity and identify general trends in observations.

Findings are presented as either a Best Practice or an Opportunity for Improvement. Both types of findings are based on Supporting Observations. The Supporting Observations come from the data: either the surveys, focus groups, or interviews. Recommendations are provided for all findings.

Definitions	
Best Practice (BP):	An activity, procedure, or process that consistently enhances performance and excels from the current standards. It is appropriate to single this out as a good practice for implementation elsewhere.
Opportunity for Improvement (OFI):	Issues that reflect a weakness that caused or had the potential to cause a negative impact on the effectiveness of preparedness, response and recovery activity. Identified opportunities for improvement could be related to existing procedures, training, concept of operations, etc.
Supporting Observations (SO):	SOs are observations from the data that support the identified BP or OFI and development of the Recommendations.
Recommendation (R):	A suggestion that is considered the best course of action, based on best practices, which may address any identified shortcomings, or perpetuate high standards of performance moving forward to optimize preparedness, response and recovery activities.



4 Findings

4.1 Resource Management

The 2022 Flood event was an unprecedented flooding event in the NWT, which placed significant strain on the availability and sustainability of required resources for both the overall emergency response and recovery.

While it is recognized that the need for resources will vary for large-scale responses, the focus of this review is the availability of resources which includes staff, equipment and supplies, and facilities. Due to the duration of this event and the demand that it placed on resources, responding organizations were challenged with human resource capacity but were able to effectively acquire the necessary equipment/supplies and operate evacuation centres for the duration of the response.

4.1.1 Human Resources

Although human resources were stretched significantly during the initial phase of the emergency, this did not appear to negatively impact the overall response, and organizations were able to effectively carry out their respective roles throughout the 2022 flood. It is important to note that had there been concurrent emergencies, some organizations may not have had adequate capacity to sustain some operations.

4.1.1.1 Human Resources – Preparedness and Response

BP-1	The TEMO Incident Management Team and REMO teams were expanded compared to previous years, and this made operations much more manageable than during previous incidents.
SO-1	Local EMOs coordinated operations, TEMO/REMO supported communities, and provided increased support compared to previous incidents.
SO-2	The unprecedented scale of the event was managed through increasing available staff, training, and knowledge.
SO-3	Several communities showed a willingness to unexpectedly host evacuees without prior engagement and limited preparation time.
R-1	NWT EMO should continue capacity building in support of communities and to increase available staff, training and knowledge in preparation for future events.



OFI-1	GNWT had limited available and trained staff at the EOC, and several staff had only recently started their employment.
SO- 4	The territorial EOC does not have a deep bench of trained personnel and resources to support a prolonged incident, such as the flood. Therefore, EOC staff were working long hours for a considerable amount of time, which can potentially lead to exhaustion, burnout, or mistakes.
R-2	Conduct EOC training for TEMO and REMOs to train additional staff and increase capacity to sustain EOC and support operations.
R-3	Conduct an EOC informational session with leadership and other departments to establish an understanding of staffing requirements during emergency operations.
OFI-2	The NWT EMO may be more effective operating under a different structure than a division within MACA.
SO-5	The incident illustrated several challenges associated with working across departments and agencies within GNWT. As the NWT EMO sits within MACA, there was, in some cases, a lack of ownership regarding assisting with emergency response from other GNWT departments.
SO-6	A few interviewed staff within GNWT indicated that departments and agencies failed to deliver upon their roles and responsibilities as stated within the NWT Emergency Plan. Upon further discussion, individuals perceived this to potentially be due to the lack of clarity or departmental authority.
SO-7	There is a growing trend to establish emergency management activities under the structure of a standalone agency with the authority to enforce and/or persuade other agencies to fulfill their expected roles and responsibilities. This is an approach that has been researched and considered by a large number of EMOs across North America.
R-4	The GNWT should conduct research on the placement of the NWT EMO within government to ensure emergency management services are effectively coordinated across the territories including during major and complex events. (Example: Reassess NWT EMO placed within MACA, as opposed to being a standalone agency).

4.1.1.2 Human Resources – Recovery

OFI-3	MACA is currently understaffed to provide adequate finance and policy support associated with the response and recovery phases of an emergency.
SO-8	Inadequate and untrained staffing led to inconsistent application of the Disaster Assistance Policy (DAP) and misunderstandings regarding the adequacy of disaster assistance financial support.
SO-9	GNWT staff interviewed acknowledged that there was an initial gap in staffing related to recovery finance and policy within MACA. As record keeping and filing with Canada for financial support is very stringent, a disaster requires multiple people to process and track financial records.
R-5	MACA should increase emergency management staffing for recovery to include permanent, full-time employees related to finance/administration and policy.



4.1.2 Supplies and Equipment

Overall, the availability of equipment and supplies remained adequate throughout the response. Generally, there were no observed supply chain issues and items typically arrived promptly according to the available transportation resources.

4.1.2.1 Supplies and Equipment – Preparedness and Response

BP-2	Community resource requests were responded to promptly using established standard operational procedures.
SO-10	Staff at THR indicated that TEMO and REMOs responded promptly to all resource requests and utilized existing processes and procedures to ensure the effectiveness of these efforts.
SO-11	TEMO and REMOs responded to resource requests even when established processes for requesting this support were not properly followed.
R-6	NWT EMO should continue to update and educate communities on processes and procedures for requesting GNWT resources during emergencies.

4.1.3 Facilities

A well-designed workspace is integral to maintaining a productive and stress-free atmosphere. It becomes even more important during prolonged response situations where the comfort and well-being of staff are paramount to ensure sustained productivity and morale. Staff need to feel comfortable and calm in their physical work settings to optimize productivity. While it is expected that during a prolonged events like the flood response and recovery, some staff would become fatigued there were no issues or suggested improvements identified in the collected information.

4.2 Training and Exercises

The NWT EMO has set training standards for its staff and coordinates the delivery of territorial emergency management training programs sufficient to sustain the NWT emergency management system. The NWT EMO also provides training opportunities, advice, and assistance to departments and community governments for the development of their own emergency management training programs.

In addition, the NWT EMO coordinates and participates in emergency management exercises to practice and improve the NWT emergency management system. These exercises may include community, regional, territorial, and partner organizations. At least one territorial-level exercise takes place every three years.

This section considers how previous training and/or experience impacted GNWT and community government staff's understanding of their role during the flood response and identifies additional training requirements that may help during future emergency response efforts. Appropriate training and discussion-based tabletop and/or live mock exercises are useful tools to assist community governments to better prepare for emergencies.



4.2.1 Training Requirements – Preparedness and Response

OFI-4	Some community, regional and territorial staff lacked knowledge of GNWT plans and procedures to prepare for and respond to a flood emergency.
SO-12	In the event of an incident that triggers the need for an evacuation, it is the responsibility of the community government and host communities to exhaust all of their resources and then request GNWT support.
SO-13	The Health Emergency Management Plan needs updating as the number of health authorities identified in the plan is incorrect and contacts within the plan are out dated.
SO-14	A teacher reported they do not have a plan of how the school would contact every parent and how they would manage an evacuation.
SO-15	Housing NWT felt prepared to evacuate seniors, but the plan did not include where people should be sent.
R-7	NWT EMO should conduct a tabletop exercise of the existing emergency plans with Health and Social Services, schools, Housing NWT and the THR. Results and outcomes can be used to improve plans as necessary.
R-8	NWT EMO should conduct in-person information sessions/workshops with local EMOs pre-flood season to assess resource needs, update local EMOs on territorial EMO capabilities and provide awareness of various roles and responsibilities during emergency incidents.

4.2.2 Training Requirements – Recovery

OFI-5	Inadequately prepared frontline disaster recovery workers present a number of challenges to successful recovery operations.
SO-16	Limited experience and documented workflow led to challenges among pathfinders in navigating the disaster assistance process. While there were routine calls set up for Pathfinders to ask questions and discuss issues, there was a lack of training during onboarding. None of the Pathfinders had previous recovery experience. While the Pathfinders built their knowledgebase throughout the recovery operations, the early phases would have been much smoother with some form standardization for case management support guidance.
SO-17	Many pathfinders brought a strong knowledge of the impacted communities, but some had limited recovery experience in similar roles during previous incidents. In addition, limited training and onboarding was provided to pathfinders which led to challenges with implementing consistent case management support. Pathfinders serve as the face of recovery operations and must be provided with adequate upfront training to ensure they have the knowledge and information required to effectively interface with members of the public. Furthermore, the provision of training provides pathfinders with an opportunity to ask questions and understand how and why decisions are being made that they may need to implement and explain to the public.
R-9	NWT EMO should develop detailed SOPs for pathfinders to ensure standardization of case management and alignment with policy and management direction, and just-in-time training on these SOPs should be provided to pathfinders when activated.



OFI-6	A lack of training for elected officials hindered the efficiency of the recovery process.
SO-18	Key NWT elected officials, and appointed leadership lacked a clear understanding of the disaster recovery process and the role of the TMO to navigate this process. This lack of understanding led to challenges in which unrealistic expectations were established and deviations from policies, plans, and procedures occurred.
SO-19	A lack of training for elected officials also hindered the efficiency of the recovery process. For recovery staff that were trained on the existing policies and procedures, frequent policy changes during the recovery efforts created challenges not only with executing recovery but also communicating the recovery process to applicants.
R-10	NWT EMO should develop and conduct a series of training activities for elected officials and appointed leadership to educate them on their role during emergencies, including the recovery process. Ongoing refreshers of this training should be provided, including opportunities to engage emergency management officials on issues and concerns.
R-11	NWT EMO should develop a one-pager on the emergency management process, including roles and responsibilities, that can be shared with elected officials, appointed leadership, other departments and the public to share awareness and promote understanding of how the NWT EMO provides support following a disaster.

4.3 Information Management

Information is the most valuable commodity during emergencies or disasters. It is what authorities and the public need to make decisions and is an essential aspect of an organization's ability to gain (or lose) visibility and credibility. Above all, it is necessary for rapid and effective assistance to those affected by a disaster. This section addresses the effectiveness of information exchange between responding agencies, as well as messaging provided to the public.

The NWT Emergency Plan indicates that public communications are a critical and continuous process.

It requires coordination to ensure consistency and accuracy and must be timely, clear, and easily understood by residents. The GNWT Communications Group is responsible for guiding government-wide public communications in accordance with the Emergency Communications Protocol.

Operational communications used by the NWT EMO are essential to the development of situational awareness and objectives necessary for the effective management and coordination of emergency operations. Complete, accurate, and timely communication must be maintained between all departments, all levels of government, and all response elements. The NWT EMO also manages the Territorial Public Alerting System, NWT Alert, which provides public alerts to NWT residents during emergencies and disasters. It is designed to immediately deliver critical and potentially life-saving alerts to residents through cell phone systems, television, and radio networks across the NWT. When required the NWT EMO will use NWT Alert to advise and update the public on emergency critical information including, information on risk, protective measures, and instructions when residents are or may be impacted by emergencies.



4.3.1 Information Exchange

Clear communications by all appropriate authorities are critical before, during, and after an emergency.

As part of the GNWT response, REMOs are the direct point of contact and communication link with community governments for support. In turn, the TEMO is the link for GNWT support to all REMOs. The TEMO hosted weekly meetings with territorial EMO members and partners to provide updates and allow for questions throughout the event. Additionally, the EMO issued the following situational awareness tools regularly (typically each Monday, Wednesday, and Friday) throughout the event:

- Situation Reports: issued to all territorial EMO members, partners, and regional EMO leads; and
- Executive Incident Reports: issued to Deputy Ministers and the Minister of Municipal and Community Affairs (subsequently sent to Ministers and Members of the Legislative Assembly).

Most TEMO, and REMO members, and community government officials surveyed indicated that emergency information was shared effectively between the GNWT and community governments. Communication tools were viewed as effective and reliable by most NWT EMO members however only some community government participants thought favorably of those tools. The situation reports issued by the TEMO were considered effective as were the ongoing TEMO meetings in maintaining situational awareness. Additionally, the majority of NWT EMO and community government respondents indicated that the GNWT effectively communicated information on high water levels and the risk of flooding, preparedness measures for individuals, small businesses, and community governments, and evacuation and hosting information.

Sources used to obtain situational awareness varied depending on the response group with “conversations with people” indicated overall as the most relied upon and consistent source of information for EMO members, community government officials, and the public based on those surveyed.

4.3.1.1 Information Exchange – Preparedness and Response

BP-3	NWT EMO effectively shared information through various mechanisms including regular TEMO/REMO meetings, Consolidated Situation Reports, and public information releases.
SO-20	Information sharing was enhanced through collaboration with ECC, including the Water Resources/Hydrology team that effectively worked with THR in preparing for the flood by retrieving water data for the 2022 risk season since January 2022.
SO-21	The THR used sensors at the river to monitor the water level and identify when water/ice levels rose. This information was shared with emergency management partners to enhance situational awareness. Note: these sensors were damaged during the 2022 flood event.
SO-22	GNWT Department of Infrastructure was proactive during the flood response and knowledgeable of mandates, plans, and expectations.
R-12	NWT EMO should review operational communications protocols on a regular basis and continue to build partnerships for the sharing of risk and operational information.



4.3.2 Public Information

Communications with the public is a critical part of emergency preparedness and response. It advises the public on how to prepare for emergencies and when they occur, advises on risk and what they can do to protect themselves and their families. It also provides direction from authorities managing the emergency event during emergency response operations to ensure the public is kept safe and out of harms way.

4.3.2.1 Public Information – Preparedness and Response

BP-4	Public information efforts on emergency preparedness and flood risk were successful in reaching most residents.
SO-23	Over 80% of public survey respondents indicated they were aware of high-water level updates that were issued throughout the 2022 river breakup season and the flood risk to their community/property prior to the 2022 flood event.
SO-24	About 76% of public survey respondents acknowledged receiving a warning of the increased flood risk. Additionally, THR's decision to request an alert to evacuate Vale Island allowed those residents to evacuate in a timely manner.
SO-25	Survey results show that over 53% of respondents indicated their main source of information during the floods came from social media, with word of mouth also receiving a large share of responses cast as "other sources".
SO-26	Discussions with THR indicated that their Public Safety division and cooperating partners were able to register and evacuate 500 people from Vale Island in one hour through door-knocking. It also indicated that THR and public safety partners were able to coordinate a very effective evacuation due to pre-planning and positive existing relationships.
SO-27	A readiness campaign and public education materials developed and coordinated by NWT EMO were provided to potentially impacted communities in advance of the flooding. Much of this outreach was focused on high-risk areas including Vale Island and Old Town.
SO-28	Public alert messaging templates were prepared in advance and ready to be issued despite the perceived delay in evacuation messaging by THR and some residents.
R-13	NWT EMO should review and update public communications protocols to include high water level updates, warnings and alerts, and continue readiness campaigns with public education materials developed for flood risk communities.



2022 Spring Flooding

Section 4: Findings

July 2025

OFI-7	While preparedness campaigns and public information may have reached most residents, the severity and potential impacts were not well understood.
SO-29	Slightly less than 40% of survey respondents indicated that they had prepared themselves for a potential evacuation in advance of the flooding.
SO-30	Preparedness and targeted community information distribution in the THR did not focus on the entire Town, rather, it was targeted to traditional flood areas (Vale Island, West Channel). Historically, THR and KFN have not required full community evacuations.
SO-31	Some impacted residents who responded to the survey indicated that their areas of town were not included as areas of risk or as low flood risk areas on community maps, so flood maps were not useful.
SO-32	While 81% of surveyed residents indicated they were aware of the 2022 river breakup season, 73% indicated that this information provided inadequate information to inform their preparedness activities.
SO-33	When warnings from the community and GNWT were issued, many residents did not heed the warnings. Residents were driving to the flooding event to witness the damage. Cars would get stuck and then impede traffic.
SO-34	In 2021, less than 30 people stayed on Vale Island rather than evacuating. In 2022, more than 60 people stayed on the Island despite the evacuation order, cautions and other communications.
SO-35	During the public forum in THR, some residents acknowledged a perceived lack of awareness that the flooding would continue to progress to a worse state. This sentiment was backed by videos and photos shared on social media, as well as interviews with community governments and the GNWT.
SO-36	Residents were unclear on what to expect during a community-wide evacuation and those expectations were not understood by host communities in advance. In some cases, there was an expectation that unrealistic services would be available. In other cases, residents simply were uncertain about what to expect – including where to go and what services would be available, which limited their decision-making during a condensed timeframe during evacuations.
R-14	Review and update public alerting protocols including roles and responsibilities, share this information with community governments and conduct a public alerting test with THR and KFN to validate the process and educate community officials and the public on the system.
R-15	As not all at-risk areas are indicated on current flood maps, update community risk assessments and document new areas at risk of flooding. Community governments should consider reviewing or adopting new community zoning bylaws to better reflect new risk profiles.
R-16	GNWT should create or update flood risk maps for all flood risk communities in the NWT.
R-17	Public information campaigns and warning information should be reviewed and updated to educate residents about the danger of rising flood waters and remind them of their personal responsibility to be prepared for emergencies, recognize the risk associated with hazardous conditions and to take appropriate action to protect themselves and their families.



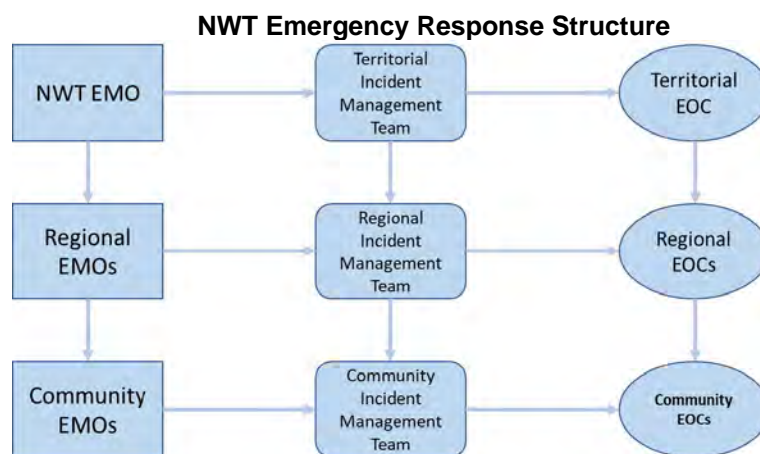
4.3.2.2 Public Information – Recovery

OFI-8	Using the required forms and satisfying documentation requirements that changed over the course of the recovery period was challenging for both pathfinders and impacted residents leading to confusion and frustrations.
SO-37	Pathfinders and impacted residents identified critical challenges in providing proper documentation and making use of required forms. In addition, it was identified that form and documentation requirements and verbiage changed over the course of the recovery phase, leading to further confusion.
SO-38	As forms changed during the middle of the recovery process, it does not only delay the delivery of recovery funds, but it delays the process and causes frustration to both the Pathfinders and the impacted residents.
SO-39	Pathfinders must be trained on and delivered the most current forms to provide sufficient support and build trust with the residents they are helping.
R-18	NWT EMO should ensure consistency of recovery forms and documentation terminology, and information requirements. Remove and update or replace all outdated recovery forms and documentation.
OFI-9	While information and updates on recovery were continuously provided to impacted residents, the methods used tended to be via internet sources (e.g., social media, government websites) and many residents did not have access to these sources or were unfamiliar with them in advance of the recovery process.
SO-40	Numerous residents indicated that information provided regarding the disaster assistance process was difficult to interpret and differing information was shared by different agencies.
SO-41	Messaging about co-pays and paying contractors was unclear as many residents were surprised when faced with co-pays up to 50% of the allowable expenses and that clients may be contacted by collections if allocated funds are not used exactly as intended.
SO-42	Many impacted residents were elderly and did not have the computer skills to access recovery information.
SO-43	Residents identified that they would have preferred to have seen a GNWT presence on the ground supported by additional public meetings and bulletin updates.
R-19	NWT EMO should develop a public messaging plan that guides consistent emergency public information during a disaster. This plan should be supported by a process for developing messages, choosing appropriate methods and rating efficacy.



4.4 Concept of Operations

The basic structure established in the NWT Emergency Plan for the response to and recovery from emergencies follows the ICS model. REMOs through Regional EOCs support communities during emergencies. NWT EMO through the territorial EOC supports regions in their response and lead territorial-level responses. This section considers the overall function of the EOC and TEMO/REMOs in the ability to support operational activities for each section and satisfy individual staff needs during an extended emergency event. This includes coordination of response and recovery with respect to interoperability of supporting departments and agencies.



The concept of operations is addressed in each phase of an emergency: preparedness, response, and recovery.

4.4.1 Concept of Operations – Preparedness

Preparedness activities increase the ability to respond when a disaster occurs. Two key aspects of preparedness are to have an emergency plan in place and to understand the risk environment.

Emergency planning involves a coordinated, cooperative process of matching expected response requirements and essential needs with available resources based on likely risk profiles. The *Emergency Management Act* requires community governments to have an updated emergency plan in place that is reviewed each year.

While the GNWT does not have a flood forecasting or prediction system, it does issue an annual flood preparedness media campaign to promote risk awareness and personal preparedness, and REMOs connect with flood risk communities to discuss risk and encourage community emergency plan review. Additionally, ECC monitors river breakup and issues high water warnings throughout the season. The TEMO coordinates closely with ECC hydrologists to monitor real-time water levels and assess risk to communities during river breakup.

OFI-10	Roles, responsibilities and capabilities of the GNWT and community government were not well understood.
SO-44	Residents identified several areas of concern that are not a direct responsibility of GNWT including riverbank stabilization and livestock planning. Residents were concerned that THR removed trees and vegetation along the bank of the river, which decreased the barrier to flooding. Lack of commercial animal management and evacuation plans resulted in the loss of livestock.
SO-45	Survey results indicate an overall disapproval or ignorance by residents of preparedness activities conducted by the THR community government with roughly 60% indicating disapproval and another 24% indicating uncertainty.
SO-46	Community governments had unrealistic expectations regarding the capacity of GNWT to support certain response activities and may be unaware of the capacity constraints of the territorial government's ability to support and/or carry out emergency-related functions. Resident and community governments survey respondents appeared to have a perception that GNWT would be able to provide services and supports that are not consistent with existing human and physical resources or in line with the NWT Emergency Plan.
SO-47	There was a perceived lack of environmental monitoring presence during the response reported by residents within THR. Residents reported during the public forum that there didn't seem to be any responsible parties to monitor environmental issues during the response such as fuel drums floating through the river.
R-20	While the protection and evacuation of livestock is not a responsibility of the GNWT, efforts should be taken to increase awareness among livestock owners and residents of the responsibilities to have an emergency plan in place and resources available to evacuate livestock when required.
R-21	NWT EMO should provide emergency management workshops focused on roles and responsibilities, and resource capacities during major emergencies to community governments, other GNWT departments and key partners.
R-22	THR and KFN should update their CEPs to include guidance and procedures for full-scale evacuations and associated activities.

4.4.2 Concept of Operations – Response

The approach to emergency management in the NWT relies on participation from everyone including individuals/families, communities, the territorial government, and other governments. An individual affected by an emergency is expected to have taken prudent precautionary measures beforehand and must provide for their initial response. When an emergency is of the type or magnitude that exceeds an individual's capabilities, the community government, through the local EMO, will respond. When the community government's capacity to manage the response using local resources is exceeded, territorial assistance may be requested or offered.



2022 Spring Flooding

Section 4: Findings

July 2025

OFI-11	The use of the Public Alerting System in support of communities could be improved.
SO-48	THR Council reported there was an hour delay from the time THR requested an NWT Alert to evacuate the entire town to the time the NWT EMO executed the alert. By the time the alert was received, residents reported they had five minutes to evacuate before the flood waters breached the roads.
SO-49	The process of receiving a public alert request, reviewing it for accuracy, obtaining a French translation, and submitting an alert cannot be performed immediately. NWT EMO indicated that one hour is well within the average response time and that alerts can often take even longer to issue.
SO-50	An understanding of the public alerting process and capabilities would have allowed THR officials accurate information to consider its use during the floods and to consider in determining the timing of the evacuation.
SO-51	Of those residents who responded to the survey, only 30% of those aware of the evacuation order indicated that they were notified by NWT Alert. The majority relied on social media or in-person notification to evacuate.
R-23	NWT EMO should review public alerting protocols and work with community officials to identify opportunities within the alert process that can be streamlined in the future, including establishing trigger points and templates for use during evacuations.
OFI-12	Evacuation plans and procedures were not well understood prior to the flooding event resulting in many challenges and ad hoc arrangements during evacuations.
SO - 52	Evacuations within the Town of Hay River were coordinated by THR officials with minimal involvement from the TEMO and South Slave REMO, which was perceived as a challenge by some THR staff. All public safety personnel were tasked to knock on doors, assist with registration, and encourage people to evacuate when the water level rose. The fire department drove through neighborhoods with sirens to notify residents of the evacuation.
SO-53	THR evacuations lacked traffic control elements to manage the flow of evacuees and emergency response vehicles. Volunteers were sent to regulate territorial highways and prevent drivers from passing, but they lacked the authority to enforce the road closures.
SO-54	It was challenging for the THR council to obtain assistance from RCMP to manage the highways and to keep them there once they arrived, leading to roads appearing to be open when they were flooded. This role is normally a community responsibility.
SO-55	Enterprise was not pre-identified as a staging location and therefore had not been engaged to assist, further confusing coordination and expected responsibilities. When evacuees were sent to Enterprise, there was a lack of understanding that Enterprise was a staging location and not a formal evacuation site. THR residents evacuated to Enterprise only to be told they needed to move again to a more formal evacuation location.
SO-56	Some residents moved to three different areas within the Town of Hay River prior to being told to evacuate the town. Residents reported evacuation centres were not prepared for evacuees upon their arrival. A full community evacuation had never been anticipated for, given the scale of previous flooding, and this level of need may not have been reflected in current planning.
SO-57	Approximately 60% of survey respondents indicated they received inadequate support or were undecided regarding the adequacy of evacuation activities provided by government partners. In addition, residents indicated during public meetings that staging areas and evacuation centres were unprepared to respond to their needs.



2022 Spring Flooding

Section 4: Findings

July 2025

SO-58	Residents at the public forum held in the THR indicated that there was a lack of organization at the registration site, and some indicated they were left uncertain of how to receive necessary social services supports. THR officials oversaw pre-registration and managed and tracked all people who decided to evacuate or stay. A lack of documentation makes it unclear if the information associated with the individuals who stayed at THR evacuation centres was tracked or provided to health authorities. Though the health authorities managed the evacuee registration site in Yellowknife, it was perceived that it provided minimal support with registering and tracking evacuees and there was confusion on the effectiveness of the tracking system. In addition, it was reported that resources were not properly accounted for, and plans were not effectively followed.
SO-59	Slightly over 6% of respondents indicated they evacuated to an evacuation centre. In addition, surveyed residents indicated an overwhelming preference for receiving an up-front payment to support their social service needs (meals, accommodations, transportation), as opposed to government-arranged accommodations.
R-24	NWT EMO should provide training to community governments to better understand roles and responsibilities during full community evacuations.
R-25	NWT EMO should support communities by providing workshops on the pre-registration process and the types of resources that may be required during evacuations.
R-26	NWT EMO should work to increase hosting capacities (e.g., pre-stage resources, increase awareness and training) in communities outside of Yellowknife to ensure adequate space and services and minimize the impacts on host communities that may be receiving large numbers of evacuees.
R-27	Community governments should consider establishing a Memorandum of Understanding (MOU) and pre-standing contracts with community partners and vendors to assist with evacuation registration and tracking, support requirements, and traffic control for future flooding events.
R-28	Communities should undertake pre-registration for residents in advance of a potential civil emergency to ensure readiness to address anticipated needs.
R-29	NWT EMO should consider providing up-front nominal payments to evacuees as opposed to providing government-arranged services, where it makes sense during evacuations.
R-30	NWT EMO should review and update the evacuation guidelines in the NWT Emergency Plan to clarify the phases of evacuation, from initial movement to a staging area, and then to the formal evacuation centre.
R-31	Communities should review and update community emergency plans to include the phases of an evacuation, identify staging areas and triggers for when people should move from staging areas to evacuation locations. These procedures should be reviewed and tested on an annual basis, and this information should be socialized to residents in areas potentially impacted by evacuations.



4.4.3 Concept of Operations – Recovery

Recovery is the measures taken to repair or restore conditions to an acceptable level after a disaster. It involves decisions and actions relative to the return of evacuees, rebuilding homes, repairing or replacing property, resuming employment, restoring businesses, and permanently repairing and rebuilding infrastructure. The process may take years and requires balancing the more immediate need to return a community to normalcy with the longer-term goal of reducing future vulnerability.

OFI-13	Additional effort is needed to ensure impacted residents, support workers and others involved have psychosocial supports in place to help them emotionally throughout the recovery period.
SO-60	Community members continue to deal with the stress and trauma associated with the flooding, which has been exacerbated by a slow recovery process. Over 90% of surveyed residents indicated that their recovery is moving slower than they expected it to.
SO-61	In this event, Pathfinders were part of the community and dealt with their own personal flood impacts in addition to helping those in the community. The Pathfinders take on the stress of other impacted residents and need to have access to resources available to clients and themselves. It is important not only to provide psychological support to the residents but also the Pathfinders and contracted support working with recovery clients.
R-32	Invest in psychological first aid, vendors, or other resources to ensure psychosocial support services are provided to the public and recovery personnel throughout the recovery period of an emergency.
BP-5	GNWT facilitating and paying for damage assessments eased the burden on recovery clients.
SO-62	Approximately 83% of recovery staff felt GNWT coordinated damage assessments were useful. A majority of surveyed residents also agreed that GNWT was the most appropriate entity to coordinate damage assessments.
SO-63	Pathfinders were able to assist residents, small businesses, and non-profit organizations with arranging for damage assessments.
R-33	The NWT EMO should continue to coordinate damage assessments as part of recovery response.
OFI-14	While the initial disaster recovery organization and recovery approach facilitated a timely and effective start to recovery activities, as time went on, NWT EMO experienced near constant continuity disruptions with the departure of Recovery Managers and rolling expirations of 6-month staffing assignments for Pathfinders.
SO-64	Within six weeks, a Pathfinder office was stood up in THR and Pathfinders were hired. MACA assigned a Recovery Manager to lead the effort and coordinate with pathfinders to assemble teams and begin supporting clients.
SO-65	The initial Recovery Manager showcased the importance of strong managerial skills and experiences for the position and possessed strong knowledge of the people and communities that had been impacted.
SO-66	Hiring Pathfinders that were local to the area supported the ability to stand up the recovery operations. This helped to build a strong local presence of community-based pathfinders that provided impacted residents with recognizable faces to support them through the challenging aspects of disaster recovery.



2022 Spring Flooding

Section 4: Findings

July 2025

SO-67	Advance payments were issued promptly. NWT EMO staff felt THR was a great coordinating partner and their collective experiences with disasters was helpful. THR government experience with smaller flooding events helped prepare them, enabling them to be helpful recovery partners to NWT EMO.
SO-68	Staffing disruptions led to periods in which objectives and tactics changed causing frustration among recovery staff including Pathfinders who were required to quickly adjust to changing priorities without adequate time or insights into the decision-making process.
SO-69	Turnovers of the Recovery Manager and Pathfinder positions may have led to shifting levels of understanding of the situation and changing priorities that may have delayed the provision of disaster assistance and created inconsistent delivery of recovery services.
SO-70	Rolling 6-month assignments for pathfinders, while necessitated by human resources policies led to case management gaps that presented major challenges and concerns for impacted residents.
SO-71	Many factors played into the prolonged recovery process, delays were exacerbated by the 2023 wildfires and ensuing evacuations. Many federal resources were diverted towards the wildfire efforts and contractors lost most of a construction season.
R-34	The NWT EMO should maintain core recovery staffing including the Recovery Manager and hire local pathfinders immediately after an event for periods of 1-2 years.
OFI-15	A new policy was established in the months leading up to the flooding event that included key changes that were not well understood by elected officials leading to confusion on decision-making and a lack of clarity on top-level disaster recovery priorities.
SO-72	NWT EMO should have been fully engaged to inform the new disaster recovery policy development process, as the subject matter experts on emergency management operations within the GNWT. Policy development must include elected officials and those tasked to implement it as it will build confidence and buy-in on the program.
SO-73	Lack of proper input complicated the rollout of the new policy and led to a policy that had significant barriers to implementation.
R-35	The Disaster Assistance Policy should be reviewed and updated with input from elected officials and appointed leadership and consider perspectives of front-line staff delivering the program.
OFI-16	A lack of direct oversight of contractors leads to an increased potential for fraud and abuse.
SO-74	In 2022, a policy decision was made that the GNWT would not coordinate directly with contractors providing abatement, clean-up, and reconstruction services. Instead, contractors were required to work directly with property owners.
SO-75	Surveyed residents and interviewed GNWT staff shared a sentiment that the generous disaster assistance payments (up to \$600,000 to replace a home) led to situations in which contractors would bid on jobs up to the maximum regardless of assessed damage, out of an understanding that the money would be coming through the disaster assistance program.
SO-76	Setting up a project management team to provide oversight on all claims and repairs would limit the unreasonable claims contractors were claiming to fix damages and ease the stress of the applicants feeling like they have to navigate all the repairs on their own.
R-36	The NWT EMO should establish a formal policy that ensures oversight of contractor activities associated with disaster recovery efforts. In addition, it should consider taking a broader approach to fight fraud and abuse following a disaster.



OFI-17	There were delays in getting mitigation assessments resulting in delays in applying mitigative measures.
SO-77	Mitigation Assessments were taking 4-8 weeks and were conducted apart from the Structural Assessments on all properties.
SO-78	As staff were learning how to conduct mitigation assessments for the first time, delivering the mitigation reports expeditiously, and before repairs, was a challenge.
R-37	Streamlining mitigation assessments and minimizing the number of steps that need to be completed prior to contracting repair work, could speed up the process and allow the NWT EMO to work with clients to implement mitigation measures in a timelier manner.

4.4.3.1 Concept of Operations – Recovery – Disaster Assistance

After a disaster causing widespread damage, the NWT Disaster Assistance Policy and Disaster Assistance Funding Policy allow the GNWT to provide financial assistance to help individuals, small businesses, non-profit organizations, and community governments with recovery costs for essential basic needs. Disaster assistance does not cover all costs associated with a disaster in the NWT but will provide compensation for essential needs where private insurance does not.

The DAP provides the GNWT the authority, provisions (including eligibility and criteria), and financial resources to administer assistance. MACA, under the Disaster Assistance Funding Policy is responsible to administer the delivery of assistance to eligible recipients to recover from an emergency event to which the Executive Council of the NWT has approved the application of the Disaster Assistance policy.

BP-6	The application of the DAP principles and funding amounts were appropriate for the recovery requirements.
SO-79	Approximately 76% of surveyed residents agreed or somewhat agreed with the DAP principles. Residents and small businesses acknowledged that there is a reasonable amount of personal responsibility that people hold to prevent and minimize damage resulting from a disaster.
SO-80	100% of eligible claims for the \$240,000 and 50% of eligible expenses over \$240,000 not paid by insurance or any other funding program, up to a maximum of \$600,000 were paid to residents in Hay River following the flood. Approximately 64% of surveyed residents found the maximum payable amount of disaster assistance to households to be adequate or even generous.
R-38	Any update to the DAP should maintain current principles and funding amounts.



5 Conclusion

The 2022 spring flood event was the most destructive flood to date in the NWT and required full activation of the NWT emergency management system. The flood resulted in major damages to homes, small businesses, NGOs and community infrastructure and the evacuation of the entire communities of Hay River and the K'at'l'odeeche First Nation (KFN), which had not been done in recent history. The total cost for the response and recovery of this event is estimated at \$93.6 million. It is expected to take up to five years for recovery activities to conclude.

Key preparedness and response activities for this event included monitoring risk levels, supporting community preparedness, coordinating evacuations and hosting of residents, and providing emergency supplies/resources. This response was followed by a recovery period that continues as of March 2025.

This report is intended to serve as a record of the flood event and action items identified will be used to improve emergency management plans, protocols and programs at the territorial, regional and community levels. It is through the AAR process that analysis of preparedness, response, and recovery activities and recommendations made will enhance the NWT emergency management system and allow the NWT to better prepare for future expected increased frequency and severity of events due to climate change.



6 Summary of Recommendations

The following Consolidated Summary of Action Items presents a set of recommended actions based on the observations outlined in this AAR

This report identifies 17 Opportunities for Improvement and 6 Best Practices, 80 Supporting Observations resulting in 38 Recommendations related to four key categories of emergency management. In some cases, recommendations were very similar and specific to the same aspect of response and recovery. These results were consolidated in the following Table as Action Items specific to the responsibility area for each group (GNWT, NWT EMO, and community governments).



6.1 Action Items

No.	Recommendation	Category	Responsible Area
1.	NWT EMO should continue capacity building in support of communities and to increase available staff, training and knowledge in preparation for future events.	Resource Management – Human Resources	NWT EMO
2.	Conduct EOC training for TEMO and REMOs to train additional staff and increase capacity to sustain EOC and support operations.	Resource Management – Human Resources	NWT EMO
3.	Conduct an EOC informational session with leadership and other departments to establish an understanding of staffing requirements during emergency operations.	Resource Management – Human Resources	NWT EMO
4.	The GNWT should conduct research on the placement of the NWT EMO within government to ensure emergency management services are effectively coordinated across the territories including during major and complex events. (Example: Reassess NWT EMO placed within MACA, as opposed to being a standalone agency).	Resource Management- Human Resources	GNWT
5.	MACA should increase emergency management staffing for recovery to include permanent, full-time employees related to finance/administration and policy.	Resource Management – Human Resources	NWT EMO
6.	NWT EMO should continue to update and educate communities on processes and procedures for requesting GNWT resources during emergencies.	Resource Management – Supplies and Equipment	NWT EMO
7.	NWT EMO should conduct a tabletop exercise of the existing emergency plans with Health and Social Services, schools, Housing NWT and the THR. Results and outcomes can be used to improve plans as necessary.	Training and Exercises – Training Requirements	NWT EMO
8.	NWT EMO should conduct in-person information sessions/workshops with local EMOs pre-flood season to assess resource needs, update local EMOs on territorial EMO capabilities and provide awareness of various roles and responsibilities during emergency incidents.	Training and Exercises – Training Requirements	NWT EMO
9.	NWT EMO should develop detailed SOPs for pathfinders to ensure standardization of case management and alignment with policy and management direction, and just-in-time training on these SOPs should be provided to pathfinders when activated.	Training and Exercises – Training Requirements	NWT EMO
10.	NWT EMO should develop and conduct a series of training activities for elected officials and appointed leadership to educate them on their role during emergencies, including the recovery process. Ongoing refreshers of this training should be provided, including opportunities to engage emergency management officials on issues and concerns.	Training and Exercises – Training Requirements	NWT EMO
11.	NWT EMO should develop a one-pager on the emergency management process, including roles and responsibilities, that can be shared with elected officials, appointed leadership, other departments and the public to share awareness and promote understanding of how the NWT EMO provides support following a disaster.	Training and Exercises – Training Requirements	NWT EMO
12.	NWT EMO should review operational communications protocols on a regular basis and continue to build partnerships for the sharing of risk and operational information.	Information Management – Information Exchange	NWT EMO
13.	NWT EMO should review and update public communications protocols to include high water level updates, warnings and alerts, and continue readiness campaigns with public education materials developed for flood risk communities.	Information Management – Public Information	NWT EMO
14.	Review and update public alerting protocols including roles and responsibilities, share this information with community governments and conduct a public alerting test with THR and KFN to validate the process and educate community officials and the public on the system.	Information Management – Public Information	NWT EMO
15.	As not all at-risk areas are indicated on current flood maps, update community risk assessments and document new areas at risk of flooding. Community governments should consider reviewing or adopting new community zoning bylaws to better reflect new risk profiles.	Information Management – Public Information	Community Governments
16.	GNWT should create or update flood risk maps for all flood risk communities in the NWT.	Information Management – Public Information	GNWT
17.	Public information campaigns and warning information should be reviewed and updated to educate residents about the danger of rising flood waters and remind them of their personal responsibility to be prepared for emergencies, recognize the risk associated with hazardous conditions and to take appropriate action to protect themselves and their families.	Information Management – Public Information	NWT EMO
18.	NWT EMO should ensure consistency of recovery forms and documentation terminology, and information requirements. Remove and update or replace all outdated recovery forms and documentation.	Information Management – Public Information	NWT EMO
19.	NWT EMO should develop a public messaging plan that guides consistent emergency public information during a disaster. This plan should be supported by a process for developing messages, choosing appropriate methods and rating efficacy.	Information Management – Public Information	NWT EMO
20.	While the protection and evacuation of livestock is not a responsibility of the GNWT, efforts should be taken to increase awareness among livestock owners and residents of the responsibilities to have an emergency plan in place and resources available to evacuate livestock when required.	Concept of Operations - Preparedness	NWT EMO



No.	Recommendation	Category	Responsible Area
21.	NWT EMO should provide emergency management workshops focused on roles and responsibilities, and resource capacities during major emergencies to community governments, other GNWT departments and key partners.	Concept of Operations - Preparedness	NWT EMO
22.	THR and KFN should update their CEPs to include guidance and procedures for full-scale evacuations and associated activities.	Concept of Operations - Preparedness	Community Governments
23.	NWT EMO should review public alerting protocols and work with community officials to identify opportunities within the alert process that can be streamlined in the future, including establishing trigger points and templates for use during evacuations.	Concept of Operations - Response	NWT EMO
24.	NWT EMO should provide training to community governments to better understand roles and responsibilities during full community evacuations.	Concept of Operations - Response	NWT EMO
25.	NWT EMO should support communities by providing workshops on the pre-registration process and the types of resources that may be required during evacuations.	Concept of Operations - Response	NWT EMO
26.	NWT EMO should work to increase hosting capacities (e.g., pre-stage resources, increase awareness and training) in communities outside of Yellowknife to ensure adequate space and services and minimize the impacts on host communities that may be receiving large numbers of evacuees.	Concept of Operations - Response	NWT EMO
27.	Community governments should consider establishing a Memorandum of Understanding and pre-standing contracts with community partners and vendors to assist with evacuation registration and tracking, support requirements, and traffic control for future flooding events.	Concept of Operations - Response	Community Governments
28.	Communities should undertake pre-registration for residents in advance of a potential civil emergency to ensure readiness to address anticipated needs.	Concept of Operations - Response	Community Governments
29.	NWT EMO should consider providing up-front nominal payments to evacuees as opposed to providing government-arranged services, where it makes sense during evacuations.	Concept of Operations - Response	NWT EMO
30.	NWT EMO should review and update the evacuation guidelines in the NWT Emergency Plan to clarify the phases of evacuation, from initial movement to a staging area, and then to the formal evacuation centre.	Concept of Operations - Response	NWT EMO
31.	Communities should review and update community emergency plans to include the phases of an evacuation, identify staging areas and triggers for when people should move from staging areas to evacuation locations. These procedures should be reviewed and tested on an annual basis, and this information should be socialized to residents in areas potentially impacted by evacuations.	Concept of Operations - Response	Community Governments
32.	Invest in psychological first aid, vendors, or other resources to ensure psychosocial support services are provided to the public and recovery personnel throughout the recovery period of an emergency.	Concept of Operations - Recovery	NWT EMO
33.	The NWT EMO should continue to coordinate damage assessments as part of recovery response.	Concept of Operations – Recovery	NWT EMO
34.	The NWT EMO should maintain core recovery staffing including the Recovery Manager and hire local pathfinders immediately after an event for periods of 1-2 years.	Concept of Operations – Recovery	NWT EMO
35.	The Disaster Assistance Policy should be reviewed and updated with input from elected officials and appointed leadership and consider perspectives of front-line staff delivering the program.	Concept of Operations – Recovery	NWT EMO
36.	The NWT EMO should establish a formal policy that ensures oversight of contractor activities associated with disaster recovery efforts. In addition, it should consider taking a broader approach to fight fraud and abuse following a disaster.	Concept of Operations – Recovery	NWT EMO
37.	Streamlining mitigation assessments and minimizing the number of steps that need to be completed prior to contracting repair work, could speed up the process and allow the GNWT to work with clients to implement mitigation measures in a timelier manner.	Concept of Operations – Recovery	NWT EMO
38.	Any update to the DAP should maintain current principles and funding amounts.	Concept of Operations – Recovery	NWT EMO

