



NUNAVUT EMERGENCY MANAGEMENT

Annual Report

2021-2022





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Introduction

The Nunavut Emergency Management (NEM) division is committed to making a difference in the areas of safety and emergency preparedness in Nunavut. Currently, all activities and programs listed in the report are carried out by five staff members, three of whom are Inuit. NEM is currently seeking to fill three regional positions with Inuit candidates from each region who have a good understanding of the area and the culture.

NEM oversees the provisions of search and rescue operations and emergency preparedness. The division is responsible for:

- Developing emergency preparedness plans and assisting Nunavut communities in creating their own plans; and
- Enhancing community-based ground search and rescue (GSAR) capabilities and preparedness across Nunavut by providing search and rescue (SAR) training to Search and Rescue Organizations (SARO) and assisting with certain SARO equipment and communication systems.

NEM also provides advice, guidance, and ensures compliance with mandatory territorial and federal legislation as well as policy regarding emergency management. Some of the ongoing initiatives and priorities for NEM include:

- Collaborating with GN divisions and departments to develop emergency plans/business continuity plans and map out their emergency preparedness;
- Enhancing community-based searches by improving the SAR program through training and assistance with equipment and communication systems;
- Improving programs and services for community stakeholders by developing and implementing northern-based training to meet national search and rescue standards, and delivering ongoing training to meet the unique needs of each community; and
- Ensuring NEM's organizational structure aligns with operational needs.

This report provides an overview of the key operations undertaken by NEM throughout fiscal year 2021-2022.



Community Emergency Preparedness

NEM, in collaboration with the Nunavut Municipal Training Organization, has delivered Community Emergency Response Plan (CERP) training to communities across Nunavut.

The CERP training is a three day course that provides municipalities with an all-hazards approach framework to assist in planning and organizing during an emergency.

The training provides communities with the tools and knowledge necessary to respond to any potential emergency. Communities learn how to identify risks and the probability of occurrence using a Hazard Identification and Risk Assessment (HIRA).

The program helps to identify the community control groups made up of key players during an emergency, including:

- The Senior Administrative Officer of the each hamlet;
- Local RCMP;
- Health centre staff; and
- Other hamlet staff as required





Community Emergency Response

In 2021/2022, the Government of Nunavut responded to two requests for assistance from communities: the Iqaluit water crisis and the Clyde River snow removal equipment failure.

Iqaluit Water Crisis

On October 13th, 2021, the City of Iqaluit declared a local state of emergency due to the contamination of the city's water supply. On October 14th, the Government of Nunavut escalated the crisis to a territorial state of emergency.

The objective of the CGS Emergency Response was to:

- Address short-term drinking water needs;
- Produce treated water in the community to meet drinking water needs and reduce dependency on bottled water;
- Ensure residents have access to water from the utilidor via a by-pass.
- Identify specialized treatment and system flushing options;
- Maintain public confidence.

NEM supported this response in two key areas: distribution of potable water and alternative water treatment efforts.

Distribution of Potable Water

After the state of emergency was declared, the City began transferring water from Sylvia Grinnell River to water trucks for delivery to residents and businesses. The City subsequently requested support in the form of equipment. NEM responded by providing generator-powered light towers and Herman Nelson heavy duty construction heaters to aid in the operation. NEM also provided two water distribution tanks to support water transfer by being loaded into the back of a pickup truck. NEM and the Territorial

Nunavut Emergency Response Team (NERT) team organized aircraft charters to fly bottled water into the community. NEM procured and managed warehouses to store bottled water, while the transportation of water from the airport to warehouses and other distribution points was contracted to RL Hanson Ltd.

In collaboration with the City of Iqaluit, NEM assisted in identifying suitable sites for water distribution. The water was subsequently transported to two distinct locations for distribution to Iqaluit residents. As the crisis continued and seasonal temperatures began to drop, it was decided that distribution of water to residents would have to move indoors.





Alternative Water Treatment

After declaring a territorial state of emergency, the GN called upon the federal government for additional assistance. Specifically, the Canadian Armed Forces were requested to deploy reverse osmosis water treatment plants. These treatment plants were set up at Sylvia Grinnell River, and additional equipment and tentage were flown in to support the operation.

To support this operation, a small parking lot was expanded and a narrow access road was constructed to allow water trucks to reach the location. Additionally, power was routed from the nearby power plant to run the necessary equipment. Due to technical issues and COVID-19 restrictions, the plant was unable to be put into operation.

The plants were originally to be situated next to Lake Geraldine, which is the main water source for Iqaluit.

Due to cold temperatures, some military equipment was malfunctioning. To address this issue, NEM supplied enclosed diesel generators and Herman Nelson heaters to keep equipment warm enough to operate.

Stainless steel totes were procured to assist with distribution of potable water produced by the reverse osmosis water plants.

The City of Iqaluit also installed a bypass line to divert water around the contaminated areas of the water treatment plant. This was part of a list of requirements from the GN to lift the Do Not Consume order.





Clyde River Equipment Failure

On February 10, 2022, the Municipality of Clyde River declared a local state of emergency due to the failure of snow clearing equipment.

Multiple winter storms between November 2021 and February 2022 resulted in large volumes of snow accumulation in Clyde River. The hamlet experienced difficulties clearing community roads in a timely fashion. This was further exacerbated by equipment breakdowns and maintenance issues and breakdowns which significantly delayed snow clearing efforts. As a result of these delays, the hamlet was unable to provide critical services, such as water delivery and sewage services, or respond to medical or fire emergencies in a timely way as roads were inaccessible.

NEM, with other divisions of CGS, coordinated with the municipality to assist throughout the emergency.

NEM supported the municipality in the following ways:

- Coordinating equipment maintenance provided by Toromont CAT in Iqaluit;
- Arranged for the use of snow clearing equipment from the Clyde River airport;
- Providing alternative equipment options, such as new equipment designed to work on low sulphur diesel fuel, as Clyde River only had Jet A fuel;
- Alternative fuel options (fly diesel into Clyde River to operate machinery).





Community Training

Search and Rescue Training

A key function of NEM is to ensure communities are provided with the necessary training and resources to respond to emergency situations. In 2021-22, NEM continued its second year of delivering a Nunavut-specific SAR training program focussed on issues faced by Nunavut communities. This program was developed in collaboration with the Municipal Training Organization (MTO) and Arctic Response, a safety and training company based in Yellowknife that operates throughout the territories. Key components of the training program included:

- Training on the GPS Map 276cx and Garmin In-Reach Explorer units. These units are distributed to SAR groups to assist with real time two-way communication via text with their search coordinator and NEM;
- Utilization of the “go bags” that were distributed to Communities to ensure SAR volunteers have safety equipment available to them when deployed on a search;
- Search techniques used in Arctic operations; and
- Lost person behaviour.

This training resulted in:

- NEM increasing the proficiency and safety of SAR operations and volunteers’ skills; and
- The integration of new technology to improve communication speed.

The success of Nunavut’s SAR training programs (equipment for both land and local searches) has not gone unnoticed by other jurisdictions. Nunavik, for example, has begun to tailor its programs and equipment based on NEM’s best practices and successes.

Due to the high turnover of search and rescue coordinators and searchers, it is essential that NEM increases the frequency of training to ensure that personnel have up-to-date equipment and technology for searches. NEM has committed to increasing training from four communities per year to at least 12. As a result, communities throughout Nunavut will receive biannual training, which is a significant improvement from every four years under the previous program.

In 2021-2022, SAR training was completed in:

- Baker Lake
- Chesterfield Inlet
- Gjoa Haven
- Naujaat
- Taloyoak
- Whale Cove





Contribution Agreement for Municipal Training Organization (MTO)

- **\$350,000** - Contribution agreement amount from NEM
- **\$167,175** - Cost to deliver six GSAR training opportunities
- **\$107,658** - Cost to purchase GSAR training kits
- **\$274,833** - Total cost of GSRA training opportunities and kits
- **\$6,687** - Average cost to train one successful participant
- **\$292,000** - Total amount accessed by MTO from the contribution agreement

The MTO provided training to six communities at a cost of approximately \$160,000, not including the equipment contributed by NEM. With NEM's equipment contribution, the total agreement value of \$300,000 should adequately cover training costs for 12 communities each year. Our goal is to extend this training to every community on a biennial basis.

Participation

Forty participants registered for a GSAR training opportunity. Twenty-five participants successfully attended a GSAR training opportunity.

The average cost of delivering the training to each successful participant was \$6,687.





Nunavut Municipal Training Organization Emergency Management - GSAR

2021/22

March 31 2022	GSAR Baker Lake	GSAR Chesterfield Inlet	GSAR Gjoa Haven	GSAR Kugaruk	GSAR Naujaat	GSAR Talo-yoak	GSAR Whale Cove	GSAR Kits	Total
Revenue									
CGS Emergency Services	30,000.00	30,000.00	30,000.00	-	30,000.00	30,000.00	30,000.00	112,000.00	292,000.00
Total Revenue	30,000.00	30,000.00	30,000.00	-	30,000.00	30,000.00	30,000.00	112,000.00	292,000.00
Expense									
Delivery Expense: Advertising	30.75	37.42	30.75	30.75	12.30	-	8.25	-	150.22
Delivery Expense: Materials/Supplies	230.53	907.60	310.68	-	1,093.53	583.96	405.79	107,657.42	111,189.51
Delivery Expense: Facility Rental	3,075.00	2,440.47	2,870.00	-	2,000.00	1,886.00	800.00	-	13,071.47
Instructor Accommodations	3,869.33	4,540.72	3,330.00	-	5,809.62	3,382.50	4,290.65	-	25,222.82
Instructor Fees	8,251.25	10,916.25	11,582.50	-	12,915.00	10,250.00	10,250.00	-	64,165.00
Instructor Per Diems	2,511.50	2,623.95	3,313.50	-	3,241.30	2,904.45	2,682.70	-	17,277.40
Instructor Travel	4,288.62	6,536.70	6,069.31	-	4,905.81	7,248.31	4,357.41	-	33,406.16
Participant Training Allowance	950.00	1,900.00	1,200.00	-	2,000.00	3,550.00	750.00	-	10,350.00
Total Expense	23,206.98	29,903.11	28,706.74	30.75	31,977.56	29,805.22	23,544.80	107,657.42	274,832.58
Net Income	6,793.02	96.89	1,293.26	-30.75	-1,977.56	194.78	6,455.20	4,342.58	17,167.42



2021-2022 Participation

		Totals				Costs		
Project		Baffin	Kitikmeot	Kivalliq	Nunavut	Course/ Workshop	Per Participant	Cost Course Development
Emergency Management								
GSAR Course Delivery	Baker Lake	0	0	3	3	\$ 23,207	\$ 7,736	0
GSAR Course Delivery	Chesterfield Inlet	0	0	5	5	\$ 29,903	\$ 5,981	0
GSAR Course Delivery	Gjoa Haven	0	3	0	3	\$ 28,707	\$ 9,569	0
GSAR Course Delivery	Kugaaruk <i>(Cancelled due to COVID.)</i>	0	0	0	0	\$ 31	\$ -	0
GSAR Course Delivery	Naujaat	0	0	5	5	\$ 31,978	\$ 6,396	0
GSAR Course Delivery	Taloyoak	0	7	0	7	\$ 29,805	\$ 4,258	0
GSAR Course Delivery	Whale Cove	0	0	2	2	\$ 23,545	\$ 11,772	
GSAR - Training Kits								\$107,657
Total		0	10	15	25	\$ 167,175	\$ 6,687	\$107,657



Search and Rescue Authority

In Nunavut, ground and in-land water search and rescue is the responsibility of the territorial government. In other jurisdictions, it is covered under the Community Police Service Agreement.

NEM coordinates with local search and rescue volunteer groups in the municipalities to ensure that guidance, training, and support are available.

On-the-land medivacs are the responsibility of the Department of Health. NEM's role is to assist in locating air and ground support as needed. This is covered under a Memorandum of Understanding between CGS and Health.



Canada's SAR Response Authorities

Type of SAR Incident	Lead Authority
✦ Aircraft Incidents Anywhere in Canada	Canadian Armed Forces
✦ Maritime incidents On the oceans, coastal waters, and Great Lakes/St. Lawrence River system	Canadian Coast Guard
✦ Ground and Inland Water (GSAR) On land (e.g., hikers, hunters, lost persons); On inland waterways (e.g., pleasure boaters, anglers, paddlers)	Provincial/territorial governments; usually delegated to the jurisdictional police force
✦ Marine Conservation Areas On land (e.g., hikers, mountain bikers); On inland waterways (e.g., anglers, paddlers)	Parks Canada Agency

Source: *Quadrennial Search and Rescue Review, Government of Canada, 2013*



SAR by Community

April 1–March 31, 2021-2022

Community	Total # of SARs
Arctic Bay	8
Arviat	16
Baker Lake	9
Cambridge Bay	7
Cape Dorset	2
Chesterfield Inlet	6
Clyde River	3
Coral Harbour	11
Gjoa Haven	22
Grise Fiord	1
Sanirajak (Hall Beach)	22
Igloolik	14
Iqaluit	5

Community	Total # of SARs
Kimmirut	1
Kugaaruk	2
Kugluktuk	3
Pangnirtung	2
Pond Inlet	9
Qikiqtarjuaq	0
Rankin Inlet	10
Naujaat	8
Resolute Bay	1
Sanikiluaq	7
Taloyoak	12
Whale Cove	8
Total	189





Incidents by Month April 1 – March 31, 2021-2022

Month	Incidents
April 2021	23
May 2021	18
June 2021	28
July 2021	7
August 2021	18
September 2021	20
October 2021	16
November 2021	10
December 2021	13
January 2022	10
February 2022	10
March 2022	16
Total	189

Incidents by Region April 1 - March 31, 2021-2022

Region	Incidents
Qikiqtaaluk Region	75
Kivalliq Region	68
Kitikmeot Region	46
Total	189

SAR Statistics April 1 – March 31, 2021-2022

Community	Total # of SARs
600-Unidentified Emergency TEST	2
605-Fire Emergency	0
610-Aircraft Emergency	1
610-Environmental Emergency	0
615-Power Emergency	0
625-Air Search and Rescue	1
630-Marine Search & Rescue	18
635-Ground Search and Rescue	108
640-RCMP Request for Assistance	13
645- JRCC Request for assistance	2
650-Medivac	1
655-Ground SPOT Activations	29
660- General request for assistance	2
670-Ground Search on Ice	8
675-Marine SPOT Activations	0
680-Ice SPOT activations	4
Total	189



Community Emergency Response Plan

Community Emergency Response Plan (CERP) Training Delivered in Fiscal Year 2021-22

\$230,000 - Total value of contribution provided to MTO to deliver 12 CERP courses*

\$159,766 - Total cost to deliver seven CERP courses**

\$3,196 - Average cost of delivering training to each successful participant, based on seven training courses***

Communities that received CERP training courses:

Baker Lake	5
Chesterfiled Inlet	6
Clyde River	5
Coral Harbour	7
Gjoa Haven	5
Naujaat	7
Sanirajak	15

*The delivery schedule was amended multiple times because of COVID-19 restrictions.

**An eighth course (in Cambridge Bay) had to be cancelled the day prior to the delivery because of an emergency in the community. As of the date of this report, three invoices for venue rental were outstanding and will be accrued.

***The average cost of delivering the training would be \$2,896 if the cost of the Cambridge Bay missed opportunity is excluded.





Nunavut Municipal Training Organization Emergency Management - CERP

March 31 2022	CERP Baker Lake	CERP Cambridge Bay	CERP Chesterfield Inlet	CERP Clyde River	CERP Coral Harbour	CERP Gjoa Haven	CERP Naujaat	CERP Sanirajak	Total
Revenue									
CGS Emergency Services	28,000.00	29,000.00	29,000.00	29,000.00	29,000.00	29,000.00	28,000.00	29,000.00	230,000.00
Total Revenue	28,000.00	29,000.00	29,000.00	29,000.00	29,000.00	29,000.00	28,000.00	29,000.00	230,000.00
Expense									
Delivery Expense: Catering	103.33	-	-	-	-	-	103.33	-	206.66
Delivery Expense: Materials/Supplies	-	80.98	80.98	57.60	80.98	57.60	-	57.60	415.74
Delivery Expense: Facility Rental	1,537.50	-	2,460.00	-	507.37	2,152.50	-	1,944.94	8,602.31
Instructor Accommodations	3,003.21	1,564.13	2,331.85	1,753.33	1,738.39	1,833.82	2,175.43	2,110.73	16,510.89
Instructor Fees	18,603.75	9,020.00	11,890.00	9,737.50	11,172.50	12,607.50	18,245.00	11,531.25	102,807.50
Instructor Per Diems	1,883.20	1,023.75	1,369.60	969.25	856.00	1,261.80	1,268.70	1,475.65	10,107.95
Instructor Travel	2,005.44	3,301.44	2,214.80	3,392.41	1,137.56	2,546.21	2,736.66	3,790.80	21,125.32
Total Expense	27,136.43	14,990.30	20,347.23	15,910.09	15,492.80	20,459.43	24,529.12	20,910.97	159,776.37
Net Income	863.57	14,009.70	8,652.77	13,089.91	13,507.20	8,540.57	3,470.88	8,089.03	70,223.63



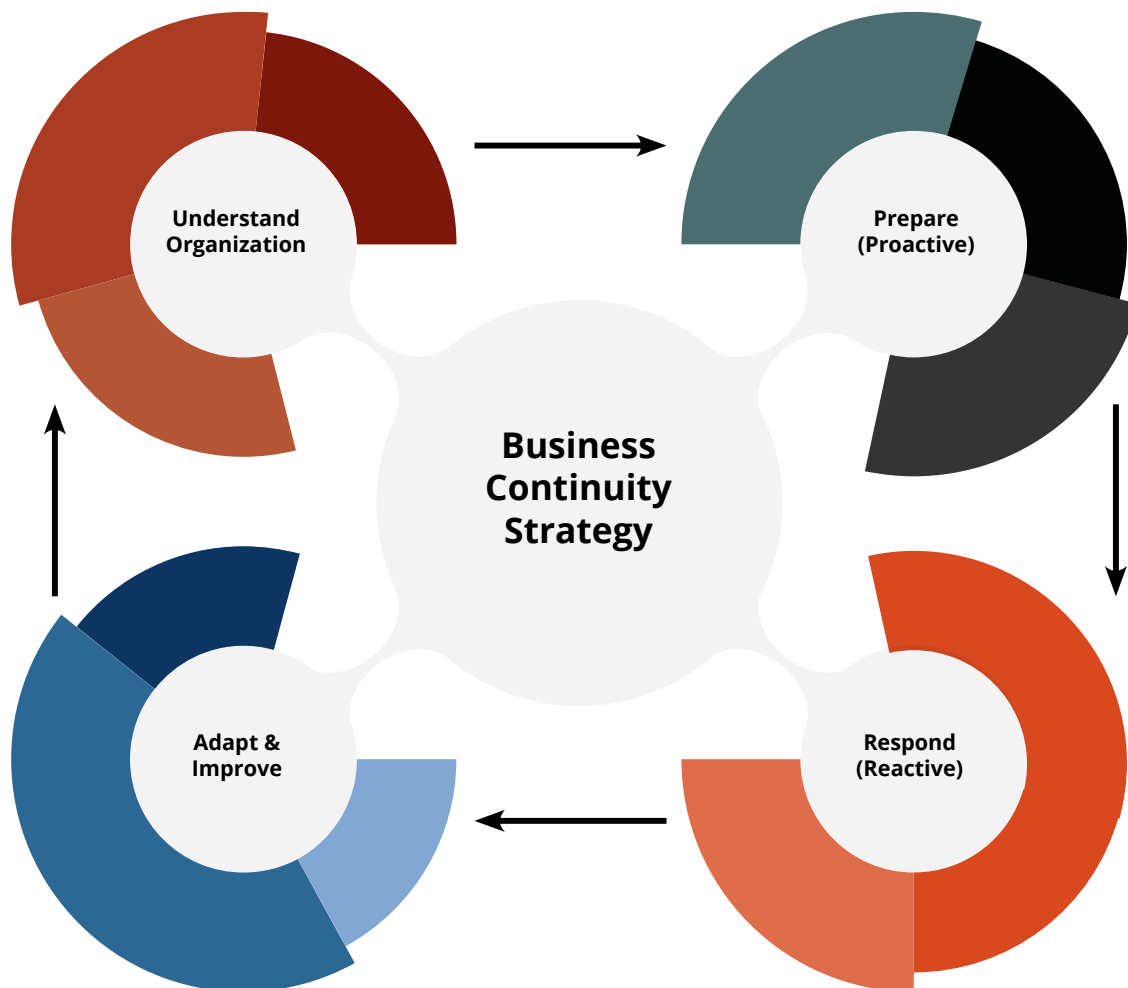
Government of Nunavut Emergency Response/Business Continuity Planning

NEM has also taken a leading role in the GN's business continuity planning. This process involves developing a plan that outlines how specific divisions and/or departments will continue to function during or after an emergency, disaster, or event. It includes planning how key services or resources can be continued and/or recovered.

NEM assists departments with developing a plan for various emergency scenarios. Business continuity planning differs from an all-hazards approach plan

in that it uses the same framework to deal with every possible incident. Throughout 2020-21, NEM supported every GN department with the completion of a COVID-19 business continuity plan.

NEM is preparing a scope of work to cover the business continuity planning for all GN departments. This work would allow section 5 of the Emergency Measures Act to be enforced. This has not been achieved since the Act was amended in 2010.





NEM Program Support Resources

Go Bags

NEM has developed a “go bag” that contains survival items to assist a searcher should they find themselves stranded on the land.

This bag was developed in response to searchers identifying this as a key need. These bags are the property of each search and rescue group and can be signed out by a searcher.

There are approximately 100 “go bags” available across Nunavut. The bag contains:

- Large duffle bag
- Waterproof matches
- Coleman multifuel stove (single burner)
- Coleman fuel funnel
- Stanley camp pot set
- Headlamp
- Signal mirror
- Sleeping bag
- Blue tarp
- Survival blanket
- Machete (snow knife)
- Survival shovel
- Stanley thermos
- Mittens
- Toque
- Face mask





GPS and inReach kits

NEM has provided communities with Garmin GPS map 276cx and inReach units. These units are to assist searchers in tracking and logging their route. The Garmin GPS is a large unit with a user-friendly screen and buttons that can be easily used in the cold. NEM intends to provide enough units for every volunteer identified by each community SAR group. This will be another tool that will assist in safer search and rescue operations.

These units are an upgrade from smaller handheld GPS units and satellite phones that were previously provided.



Garmin GPS map 276cx

**Garmin GPS
inReach**



Preparedness Posters

NEM is committed to continuing education around emergency preparedness and safety.

Posters have been created and distributed to all Nunavut communities outlining:

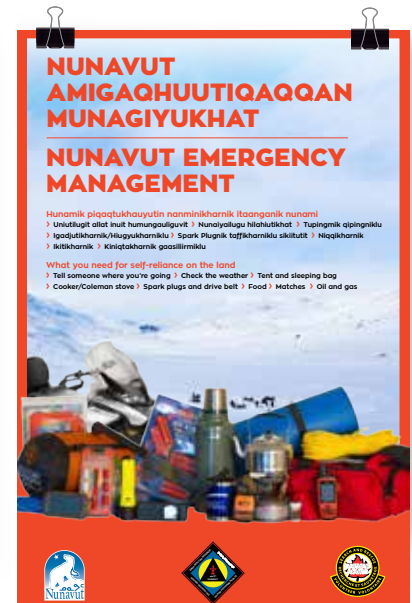
- Summer self-reliance on the land and water
- Winter self-reliance on the land

These posters outline safety items to bring on the land or the water.

NEM also has a poster about 72-hour preparedness that outlines items to have at home in case of a prolonged emergency in the community.

The posters are translated into all official languages.

These posters are visible in all airports and high traffic areas in Nunavut, and are designed to raise awareness and encourage safety at home and on the land.





Community SPOT Program

NEM continues to deliver the Community SPOT program. This program provides municipalities with SPOT units that can be signed out free of charge. Each SPOT unit comes with a card that outline how to use a SPOT unit. This card is translated into all four official languages and has a diagram of the SPOT unit and its functions, as pictured below.

Municipalities follow a schedule to replenish batteries and operation cards. It is the responsibility of municipalities to maintain the equipment and advise NEM of any lost or damaged units so they can be replaced.

This program has significantly lowered the search time required as the SPOT units provide searchers with a location of the individual that is being searched for

Conclusion

NEM strives to find new ways to provide information to Nunavummiut. NEM has reached out to other jurisdictions to learn about new ways to improve the delivery of safety programs for Nunavut communities and for the emergency preparedness of the Government of Nunavut. Nunavut can achieve safety and preparedness through planning and learning together.