EMERGENCY MANAGEMENT NON-STRUCTURAL MITIGATION AND PREPAREDNESS PROGRAM APPLICATION

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Consult your ISC regional office to confirm eligibility and to clarify program funding requirements.

Recipient Information

Recipient Name (First Nation or Organization)	Recipient Number
Wasagamack First Nation	

Emergency Program Coordinator/Project Lead

Given Name	Family Name	Telephone Number	Facsimile Number
Jerry	**Knott**	**(204) 457-2339**	**(204) 457-2255**

Email Address
jerryk@ilfnfs.ca and larrybharper@live.ca

Project Information

Project Title	Region
Wasagamack Gearing up for full preparedness for Climate Change Emergency	**Manitoba**

Project Type ► ○ Capacity Building ◉ Non-Structural Mitigation and Preparedness ○ FireSmart

Project Description

Wasagamack First Nation has to reduce the risk from natural hazards like fire but also be prepared to deal with energy/power failures, which are very common in the community. To do this, we need to build capacity in fire smart and preparedness in non-structural mitigation, such as firebreak and emergency programming with an emergency/ warming centre for the community.

Objectives

1. To provide a fire and forest management plan designed to protect Wasagamack as a fly-in community prone and highly impacted by forest fires due to prevailing winds, a fire break is needed. We will start with the northern windbreak, removing logs so that this fallen wood is not a fuel source in a fire but a fuel and a building source for the community. A fire break and fire hazard mapping and action plan will be carried out in order to ensure that fires do not impact Wasagamack people, housing and community infrastructure. Experts will provide information to spot and manage fire hazards assist by capturing images with drones of forest and housing infrastructures. Maps from these drones will show where the canopy has to be trimmed, debris moved, and the fire break cut. These maps will assist not only with hazard identification and management but also recording and developing evacuation strategies considering families' vulnerabilities (disabilities, elderly, infants). This hazard assessment will allow planning and programming to apply the fire smart guide to measure and then reduce high and medium risk areas around housing but also in the surrounding forest by a forest break.

2. To implement risk reduction, Wasagamack First Nation (WFN) will have to buy the necessary equipment to remove logs and debris to reduce risk (chainsaws, safety equipment, snowmobiles, skidder, boats) to bring up over winter roads. This equipment will be maintained every year and some parts will need to be replaced.

3. To build capacity Wasagamack will train youth to assist with the emergency management plan and develop an effective fire block and hazard reduction in the community including chainsaw safety certified course and small motor course certificate, wilderness safety certificate, job readiness, first aid certificate, and heavy equipment operation certificate in the winter and updated or level 2 courses each year to ensure there are enough people able to undertake the task. In 2020/2021, Wasagamack will train local trainers to teach on an on-going basis emergency management and fire safety. In the first year, they will bring in

experts who will train the trainers but also the community. In subsequent years, the trainers can implement most of the training assisted by an expert. Each local trainee will get certificates and knowledge in fire smart awareness, chainsaw safety/use, wilderness safety, emergency planning, emergency coordination and forest management. Then the successful trainees who complete all the programs will be hired to cut brush in areas determined as the high or medium risk for a fire to community housing and infrastructure and to put in place fire breaks and emergency protection.

4. Develop an emergency management plan and conduct emergency management training for 30 to 50 community people in many departments (housing, construction, school, childcare, transportation, water, government, band office, infrastructure, food) to ensure that sufficient people will be on hand in an emergency to deal with the different aspects of an emergency in a remote community including protecting infrastructure. Also, these people will be trained and able to incorporate emergency in planning and building different programming.

5. To design, plan and prepare for an emergency shelter and coordinating centre with heat and power from renewable energy (wood biomass, solar, etc.) if hydro fails in an emergency for the renovated building of George Knott School, which will be decommissioned as a school in the summer of 2020, or WFN community centre to ensure there is a place people can go to eat and sleep with heat and receive safe water in case of a power failure. Not everyone in the case of an emergency will require a place to sleep as some houses do have wood stoves. However, most people will require communication (cell phone charging) and emergency preparedness centre and food preparation. A key step is to design an emergency shelter/warming centre in case of power outages - with feasible, reliable energy sources, such as a biomass heater with hopper for wood chips and/or solar distributed power with battery back-up to allow cooking and lighting to continue in the community until the power issues are resolved. Then after an engineering and architectural plan is in place, we will install the alternative energies to the emergency shelter/warming centre to this sturdy, large brick building that is away from any forest location and near to the lake for water and transport.

6. To consider emergency and climate change in developing a feasibility plan for a Wasagamack Airport. The St. Theresa airport, which is used by WFN, has a very short runway, and so is dangerous under bad weather conditions. It is also a 20-40 minute boat ride away, depending on weather conditions. This lack of an airport leaves people stranded in Wasagamack and evacuation perilous. There is a business case for an airport in Wasagamack, which is made stronger by the risks of climate change.

Project Outcomes

Many positive outcomes will result in preparedness from the plan, including:

1. Dr. Thompson at University of Manitoba and/or North-south consulting has the forest management background and mapping with drones expertise to assist with providing maps to assess fire risk. This investment in mapping the forest and community housing using their drones will develop a housing management plan considering debris and forest cover/canopy that can be updated regularly.

2. Purchase 12 chainsaws, 15 safety equipment for chainsaw and wilderness safety, 3 snowmobiles, 1 skidder and 2 boat for sending up on winter road.

3. The employment training program with MITIK will train 12 to 20 safety trainees per year in chainsaw, forestry, wilderness and fire emergency training, fire smart, hazard management and emergency preparedness. The outcome will be an emergency preparedness training program, trained local people, 3 train-the-trainers and a schedule for people to carry out the fire smart and emergency preparedness work plan. Trainees will receive post-secondary credentials from Anokiiwin Training Institute (ATI) or other experts from Red Cross (certificates and potentially diploma). Each year, 10 to 15 safety trainees will have received many fire smart-related certificates and can effectively safety plan, manage forest, reduce fire risks, cut and remove brush, trees and other debris. The outcome will be that Wasagamack can employ 8 to 15 skilled, trained workers in emergency preparedness. For the forest management, the firebreak will be removed as a fuel source. The employment training will seek WOP funding.

4. MITIK, with employment training, will develop an emergency management plan, including developing a three-year emergency management training program with councilors, housing, education and health staff as well as the University of Manitoba. The plan will include 25 to 50 community people in many departments (housing, construction, school, childcare, transportation, water, government, band office, infrastructure, food) to ensure that sufficient people will be on hand in an emergency to deal with the different aspects of an emergency in a remote community including protecting infrastructure. Experts will be brought in for the first year for a week to train WFN designated trainer people asking them to incorporate emergency in planning and building different programming, including a simulation of an emergency. An annual community

workshop will update the emergency plan and including conducting a simulation of an emergency. Three key people will develop specialized environmental management training to hold responsibility for implementing the plan in the health sector, education sector and infrastructure sector. A result will be a climate change-emergency and adaptation plan that the community has agreed to, is capable of carrying out, with climate change trained emergency managers versed to oversee and manage, as well as workers who are competent in reducing hazards and assisting with emergencies.

5. George Knott School will be designed to be an emergency shelter with alternative distributed power and as a food hub. Appropriate technology will be considered by Aki Energy and University of Manitoba engineers and then implemented. Wasagamack will use this functional community multi-purpose building to be both a forestry management and emergency planning centre as well as an emergency shelter after George Knott school is decommissioned in July 2020. Renovating the George Knott School ensures that this facility that has the great worth of several million dollars (est. $5 million) is designed to meet the needs of this fly-in community in the case of an emergency with the University of Manitoba architects and engineers as well as AKI Energy. After the design and engineering blue print, a competent program manager will be put in place to run the emergency/warming centre. George Knott School was built in the 1970s from brick and on bedrock and is ruled to be structurally sound, according to a preliminary engineering report finding. An emergency centre in a remote community is necessary for blackouts but also considering that gas and food may result in shortages if a winter road is not possible some years. The redesign will consider alternative energy to ensure a warm shelter with electricity and food is available in an emergency. The layout will be designed to accommodate vulnerable people (elders, children, youth) and provide food supplies through designing to consider appropriate food production (permaculture, hydroponics, chicken production and farming). George Knott School has 46 rooms, including a kitchen, washrooms, storage, etc., and is made of brick - allowing some protections in the case of a fire emergency. The outcome will be community meetings and architectural design charettes with the community regarding the design for a local emergency shelter/warming centre that will accommodate or feed the approximately 2000 permanent residents of the community in an emergency situation, Then we will retrofit with technologies to make us prepared for energy shortages or power failure with experts in the industry and competent project managers to oversee.

6. A feasibility study will be undertaken to consider the need and cost benefit of an airport at Wasagamack considering the cost of evacuation in a climate change or natural emergency. Being without an airport and road means that the community has no direct way to evacuate in a forest fire situation or other emergency situation. At all times evacuation would be difficult wihtout an airport. However, during freeze-up and break-up people are required to take helicopters to get to St. Theresa airport to evacuate. In the event of an evacuation WFN needs to have a way to vacate the area safely. As well the St. Theresa airport has a very short runway, with a need for a better airport in the area to meet market demands anyway.

Project Deliverables

With the funding provided to Wasagamack First Nation (WFN) we will deliver the following:

1. A fire hazard assessment, hazard mapping and hazard reduction plan will be delivered by the University of Manitoba and/or North-South Consulting. Based on this hazard assessment and maps, we will enact a fire smart and climate change safety action plan that incorporates a firebreak and reducing debris around housing with high and medium risk for fire as well as looking at other issues.

2. Wasagamack will oversee and ensure that there are cost quotes and purchase agreements for winter or early spring for the purchase of 12 chainsaws, 15 safety equipment for logging/chainsaws, 3 snowmobiles, 2 -16 foot boats with 30 horsepower motor, and one skidder for winter roads.

3. 12 to 20 people will have received chainsaw safety certified course, wilderness safety certificate, first aid certificate and heavy equipment operation certificate annually with updates and retraining each year to ensure adequate preparedness. First, with experts, local WFN people will obtain train the trainer certificates that allow them to start to teach these programs with an expert in the community the following year, choosing local people with appropriate backgrounds. In 2021/2022 and future years, the trainers will train the community youth on these programs each year to update and train more youth to build capacity and 12 to 20 people will receive their certificates each year.

This will deliver:

- 10 to 15 safety trainees who have received many fire smart and emergency-related certificates and will be able to effectively develop with the community the safety plan, manage forest, reduce fire risks, cut and remove brush, trees and other debris overseen by employment and training. The management program will monitor and ensure the work training program and

schedule for the trainees to carry out the emergency and fire smart work plan as required to accomplish all the deliverables to reduce most risks from fire, climate change and lack of winter road.

4. A written emergency management plan, video and three-year community awareness/training plan will be developed. MITIK will develop an emergency management plan with councilors/band staff and health staff as well as the University of Manitoba. Three key people (MITIK, health person and infrastructure) will develop specialized environmental management training to hold responsibility for implementing the plan in the health sector, education sector and infrastructure sector. This will result from emergency management training for 25 to 50 community people in many departments (housing, construction, school, childcare, transportation, water, government, band office, infrastructure, food) to ensure that sufficient people will be on hand in an emergency to deal with the different aspects of an emergency in a remote community including protecting infrastructure. Also, these people in the workshop will also be asked to write out how too incorporate emergency in planning and building different programming. Experts will be brought in for the first year for a week to train WFN designated people asking them to incorporate emergency in planning and building different programming, including a simulation of an emergency. An annual community workshop will update the emergency plan and including conducting a simulation of an emergency. Wasagamack will hold workshops, school education programs and radio programs to solicit input and feedback emergency and adaptation plans to ensure community buy-in and awareness and build the relationship with the safety trainees to oversee and manage.

5. An emergency shelter and coordinating centre with heat and power from renewable energy (wood biomass, solar, etc.) as required if hydro fails. Different design charrettes and incorporate graduate architecture and engineering students from University of Manitoba to have drawings and visions of a long-term plan to meet the needs of the community. The idea and design process will involve the community in considering what they need for an emergency shelter. We will explore whether this is multi-purpose community building as well as forestry management and emergency planning centre after being decommissioned as a school in July 2020. Wasagamack will hold 2 community meetings with architectural design charrettes, with University of Manitoba architects, regarding the design for a local emergency shelter/warming centre that will provide services to the Wasagamack population of approximately 2017 people in this fly-in, remote community considering distributed power of solar and biomass and possibly wind (possibly retrofitting an existing building or building a new one). Some people may require accommodation, but others will have woodstoves in their houses and may need only food and water supplies.

- Wasagamack will have an engineer stamped design/ blueprint of alternative energy systems, workplan and contracts with experts and a project manager to implement alternative energies to an emergency shelter/warming centre using where possible local capacity and building local capacity. The building might require some renovations for energy efficiency, sustainability and alternative energies (biomass and solar), to prepare the building as a warming centre for blackouts but also considering that gas and other materials may be blocked if a winter road is not possible. The redesign will consider alternative energy after energy efficiency to ensure a warming shelter is available in an emergency, as well as layout to accommodate vulnerable people (elders, children, youth), as well as for food production and emergency supply in the case of lack of winter road limiting food and other supplies. The deliverables will be community meetings and architectural design charettes with the community regarding the design for a local emergency shelter/warming centre that will accommodate approximately the population of over 2000 people in this fly-in, remote community considering distributed power of solar and biomass and possibly wind. Then this will deliver engineer-stamped designs and the contracts with project management and energy company to retrofit with technologies to make Wasagamack prepared for energy shortages or power failure or other climate change disasters. As well as a design plan, an implementation and operations plan will be created.

6. A feasibility report will be prepared regarding an airport in the community.

Funding Requested

Are you applying for a multi-year project?

(●) Yes ( ) No

Items	Amount ($) 2020-2021	Amount ($) 2021-2022	Amount ($) 2022-2023
12 chainsaws (and repair or replacement in future years)	**$6,000.00**	**$2,000.00**	**$2,000.00**
safety equipment for chainsaws (15)	**$22,500.00**	**$2,250.00**	**$22,500.00**
3 snowmobiles & maintenance	**$30,000.00**	**$2,000.00**	**$2,000.00**
16 foot boat & storage/gas (2)	**$8,000.00**		
2 motors for boat & maintenance	**$10,000.00**	**$1,000.00**	**$2,000.00**
skidder (and repair/gas in future years)	**$50,000.00**	**$5,000.00**	**$5,000.00**
training certificates and employment of trainees	**$50,000.00**	**$50,000.00**	**$50,000.00**
gas and oil (50 litres per week x 52 x $2.00)	**$5,200.00**	**$5,200.00**	**$5,200.00**
community awareness and training workshops on emergency preparedness and firesmart (including food and speakers)	**$10,000.00**	**$10,000.00**	**$10,000.00**
risk mapping (GIS and drone work) and climate change smart firesmart hazard design	**$10,000.00**		
architectural and engineering charettes for design workshop & openhouse	**$10,000.00**	**$5,000.00**	**$5,000.00**
engineering designs and engineer stamped renovations for emergency shelter/warming place (design in year one) over 2 years - building in solar and biomass furnace or other alternative	**$50,000.00**	**$200,000.00**	**$200,000.00**
emergency coordinator	**$40,000.00**	**$40,000.00**	**$40,000.00**
feasibility study considering climate change of Wasagamack Airport		**$30,000.00**	
Total Requested from ISC ▶	**$301,700.00**	**$352,450.00**	**$343,700.00**

Other Sources of Funding	Amount ($) 2020-2021	Amount ($) 2021-2022	Amount ($) 2022-2023
Funding provided by your First Nation	**$200,000.00**	**$200,000.00**	**$200,000.00**
Funding provided by Regional District/Local Government/Other	**$50,000.00**	**$50,000.00**	**$50,000.00**
Total Funding from Other Sources ▶	**$250,000.00**	**$250,000.00**	**$250,000.00**

Optional - Additional Information

Has your community experienced emergency disasters in the past? If so what type of emergency(ies) and when?

Wasagamack Nation has suffered the impacts of disasters and been largely unprepared without an airport or road to evacuate and no emergency centre/warming shelter. A wildfire in the forests adjacent to the reserve forced a mass evacuation of the entire community in 2017 for more than three weeks, which without an airport required that people boat out and then fly out from the St. Theresa Airport. Climate change poses a major threat as we are completely surrounded by forests. Forests are to the north, east and west of us and the northerly winds blow the smoke and fire right into our community to threaten our community people and infrastructure. As Wasagamack has no winter road evacuation of our community is very difficult and requires taking boats or helicopters/float planes to St. Theresa Point airport to fly out. Thus, a mass evacuation requires days to get everyone out as there are not enough boats for everyone to go at once from the community or airplanes from St. Theresa Point. These climate change impacts not only include increased forest fire impacts and shorter or no winter road, which we are dependent on for all our housing, fuel and other supplies.

Being remote causes extreme challenges as Wasagamack has no road access to an urban centre or the St. Theresa airport. Access for Wasagamack is only by winter road and airplane. As Wasagamack lacks an airport, requiring travel from St. Theresa's airport to Wasagamack is over 12 kilometers of open water, which during freeze-up and break-up requires a helicopter trip, costing as much as $700 one-way. A connecting road to an urban center or even the other reserves is not expected to start construction until 2050. The distance to Winnipeg, the largest urban center in Manitoba, is: by ice road, approximately 1500 km taking 17 to 20 hours, or, by plane, approximately 610 km, taking 1.5 hours and $360 one way.

The distance and accessibility of Wasagamack to any urban centre to get the necessary equipment, materials and experts is an issue being a fly-in community that lacks road access and without their own airport. Therefore, shipping materials up by winter road provides only a short time to send materials and equipment for housing and renovation projects. With climate change, there will be fuel shortages and food shortages that have to be planned for.

The funding provided by our First Nation will include our experts for employment training assistance, MITIK assistance, health assistance and chief and council. We will provide dedicated space for the emergency centre and supports for administration and finance for the emergency coordinator.

Do you agree to have ISC's Emergency Management Assistance Program contact you to discuss highlighting your emergency preparedness or non-structural mitigation project on ISC's website?

(●) Yes ( ) No

Declaration

The information provided is accurate to the best of my knowledge.

Given Name	Family Name	Title	
Jerry	**Knott**	**Band Manager**	
Signature			Date (YYYYMMDD)
X			**2019-10-29**