



# INDIGENOUS SERVICES CANADA'S CLIMATE CHANGE AND HEALTH ADAPTATION PROGRAM FOR FIRST NATION COMMUNITIES SOUTH OF 60°N

"BUILDING WASAGAMACK'S HEALTH AND SAFETY TO COPE WITH CLIMATE CHANGE"

**SUBMITTED BY:**

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**AMOUNT OF FUNDING REQUESTED FROM INDIGENOUS SERVICES CANADA: \$100,000.00**

## **Project Objectives - What do you hope to achieve now and for the future?**

### **Project objectives:**

1. To provide a fire break to protect Wasagamack as a fly-in community prone and highly impacted by forest fires due to prevailing winds.
2. To provide an emergency shelter with heat and power from renewable energy (wood biomass, solar, etc.) if hydro fails in an emergency for George Knott School or band office or community centre to have an emergency shelter.
3. To explore opportunities to create food security while creating capacity and engaging with the members of the community through establishing two community gardening projects that will educate members about gardening and provide training for six post-secondary students through 10 day International permaculture design course at Wasagamack First Nation as well as creating independent, self-sufficient and sustainable food sources for both personal use and by enabling economic, employment and educational opportunities for our people and our community.
4. To share traditional community practices of healthy living through reviving and promoting our connection to the land by hunting, fishing, trapping, raising livestock, harvesting and gardening to meet our food and nutritional needs.
5. To rebuild capacity by strengthening the skills, abilities, learning and sharing of best practices to support holistic health and well-being for all members of Wasagamack First Nation.

## **What will a successful project look like?**

We envision our project will be highly successful and look like:

- Learning and sharing together in a safe environment the best practices to be healthy and reconnect to our food and forest, whether it is grown in gardens or sustainably harvested from our traditional territory (food and forests);
- Fueling the fire of our Indigenous knowledge systems to learn modern and ancestral ways to live sustainably in relation to energy, our food systems and education programs to pass this legacy of Indigenous knowledge, stewardship of our boreal forest, language and healthy eating on to our grandchildren;
- Transforming the attitudes and lifestyle choices in relation to the food we eat and how we heat our homes to ensure health (E.g., eradicate diabetes and other chronic illnesses in our First Nation) as well as safety in the case of a blackout.

## **Why do you need to do it?**

In Manitoba, early death rates before 75 years of age are three times higher for First Nation people (Katz et al, 2019). Katz et al (2019) blame the lack of access to adequate infrastructure and services: quality housing, clean water, healthy and affordable food, healthcare close to home, continuity of care and mental health supports (Katz et al, 2019). First Nation people are diagnosed with a mood or anxiety disorder to a larger extent than are other Manitobans (Katz et al, 2019). This results in higher suicide rates with the rate of suicide attempts of First nation people being four times higher than for all other Manitobans. Death rates resulting from suicide among First Nations is also much higher (Katz et al, 2019).

Higher rates of most chronic and infectious diseases, as well as a lower life expectancy rate, are experienced by Indigenous peoples compared to other Canadians (Statistics Canada 2016). The prevalence of type 2-diabetes among First Nations populations is four to five times higher than the rate experienced by the rest of Canada (Young, 2000). However, that rate is higher still in Wasagamack and the other Island Lake

communities, where children as young as eight years old have been diagnosed with type 2-diabetes (Young, 2000). This is blamed largely, on the transition starting in the 1970s from the wild-food diet in Wasagamack to the ultra-processed food typically sold through the Northern Store (Thompson et al., 2012). Processed foods, compared to wild foods, have lower nutritional values for calcium, folacin, iron, vitamins, fiber but higher fat and sugar ratios (Batal et al. 2018; Kuhnlein et al., 2006). These foods are nutrient deficient and loaded with unhealthy calories (Batal et al., 2018). The dietary transition of Indigenous peoples from a traditional diet to processed food resulted in dental caries, lowered resistance to infection, higher rates of obesity, diabetes, chronic diseases and higher food insecurity (Batal et al. 2018; Willows, Hanley, & Delormier, 2012). Price (1939, p. 11) blames colonial diets on the degeneration of the health of Indigenous peoples, reporting: "No era in the long journey of mankind reveals in the skeletal remains such a terrible degeneration of teeth and bones, as this brief modern period records." The excessive amounts of sugar found in processed food are blamed for the high rates of poor dental health for Indigenous children in Canada, with 85% of Indigenous children in Canada aged three to five experiencing dental decay and 80% of Indigenous children six to eleven afflicted with dental caries (Mathu-Muju, McLeod, Walker, Chartier, & Harrison, 2016).

The Northern Store markets unaffordable and unhealthy food, without any other market competition in Island Lake. This market vulnerability compromises food security in Island Lake (Thompson et al., 2012). A research study found food insecurity rates in Wasagamack were very high with 79% of households experiencing some form of food insecurity and 35% of households experiencing severe food insecurity (Zahariuk, 2014). The high levels of food insecurity in Wasagamack and Island Lake reveal the large economic inequities against the remote Indigenous people, with First Nation people in Island Lake having ten times the food insecurity rate of that for Canadians (Sen, 1986).

### **The community of Wasagamack**

The Wasagamack First Nation reserve spans 80.9 square kilometers and is home to a population of 1,403 people, residing in 285 houses (Statistics Canada, 2016). The statistics for housing and income show the economic poverty in Wasagamack. At 4.9 people per house, the average household size is crowded compared to the national average of 2.4 people (Statistics Canada, 2016). The median income in Wasagamack is \$11,499, which is only one-third of the average Canadian income of \$34,204 (Statistics Canada, 2016). Clearly from these statistics, most people in Wasagamack are living in economic poverty. Oji-Cree is the term used by settlers and government to describe the Island Lake dialect spoken in Wasagamack First Nation (Statistics Canada, 2016). However, Oji is considered a derogatory word, meaning a fly or their offspring, the maggot, so this term does not appear in this paper. Andy Wood dislikes the Oji-Cree term being used as a descriptor of his people and their language, asking that his people be recognized for their rich, distinct culture using the appropriate term:

The Anishinew communities were referred to as "Oji- Cree" but are not to be mistaken for being "half" Cree nor "half" Ojibway... "Anishinew have their own distinct and rich cultural heritage that differs from both Ojibway and Cree communities" (McDonnell, Lavoie, Wood, Kornelson, Cidro, & Manoakesick, 2018, p. 12).

Similarly, a recent press release from the four Chiefs of the four First Nations in Island Lake stated: "We are not part Cree or part Ojibwe, we are *Anishiniwuk*, a distinct and sovereign nation with rights that deserve to be respected" (Winnipeg Free Press, 2018, para. 5). For these distinct communities, people, and language, this paper applies *Anishinew* for the communities, *Anishiniwuk* for Island Lake people, and *Anishinimowin* for the language (FARHA, 2018). Most people (64%) in Wasagamack identify *Anishinimowin* as their mother-tongue and as the primary language used at home and some workplaces in the community. *Anishinimowin* names say a great deal about the history and geographical attributes of the location, so these names were sought out as part of this research.

Wasagamack is one of four *Anishinew* communities in Island Lake in the vast swath of roadless communities on the east-side of Lake Winnipeg near the border of Manitoba with Ontario in Canada. Wasagamack means "bay" in *Anishinimowin*. This location of Island Lake was as "remote as the North Pole" before air transport, according to Fiddler & Stevens (2003). From Norway House to Island Lake requires portaging 30 different times over a week-long canoe trip, making a motorboat trip impossible (Hallowell, 1938). Wasagamack remains roadless today and is only accessible by winter road, plane or canoe. 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. Travel by plane is further complicated and

expensive as Wasagamack lacks an airport, requiring 12 kilometers of open water travel between the airport at St. Theresa Point to reach Wasagamack. During freeze-up and break-up getting to the airport 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.

Subsistence harvesting provides a mixed economy in Wasagamack, augmented with the money from government socialist programs. The social services available in the community consist of a federally operated nursing station, one school for kindergarten to grade 12 students, a band office, and a postal station. The community has a gas station and in 2019, as part of this research, a housing and sawmill corporation was formed called Mitik 299 Corp. However, Wasagamack has neither grocery store, laundromat, convenience store, hardware store, bank, restaurant nor any police service, without any Royal Canadian Mounted Police (RCMP) outpost in the community. The only grocery store, the Northern Store, is located on a separate island, requiring a \$5 boat trip to buy costly food, much of which is ultra-processed. *Mino bimaadiziwin* is the term Wasagamack people use to describe the spiritual and good life that people led in pre-colonial times and resulted in well-being. People in Island Lake lived in small family groups dispersed across the land eating a local wild food diet, which had many health benefits.

### **How has climate change affected the health of your community/region and/or how might it affect your community/region in the future?**

Wasagamack Nation has long been aware that there have been linkages between climate change and the health of its members. The direct effects of climate change in our territory by way of fire and by the short duration or lack of winter road period in Island Lake. Climate change poses a major threat as we are completely surrounded by fire. Forests are to the north, south and west of us and with northerly winds blow the smoke and fire into our community to threaten our community people and infrastructure. As we have no winter roads evacuation of our community is very difficult and requires we take 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.

In the winter, ice storms or other weather-related event can cause a down electrical line. This lack of any power in forty below weather is a life or death matter for our community members, particularly as we are so isolated without any connecting road or airport nearby. Also, with the threat of short or no winter roads, our food supply, gasoline and materials for housing and infrastructure will be compromised and requires we become much more self-sufficient.

### **Have steps been undertaken in the past to understand or solve this issue? If so, what were they?**

Wasagamack has taken steps to protect the sacredness of its traditional territory, having a land use plan that includes a review of forestry resources, and had created partnerships with the Mino Bimaadiziwin partnership. We are trying to become self-sufficient in more housing materials, through our saw mill program and have recently formed a non-profit company called Mitik Inc 299 to help us with our forestry issues. Our community members have been trained in chainsaw safety and how to repair chainsaws to assist with the firebreak. By cutting a fire break we will protect our community and may be able to feed into our boreal home building program (see program details at <http://ecohealthcircle.com/home-design-workshop-in-wasagamack-and-garden-hill-first-nation-building-houses-building-capacity/> and video at <https://www.youtube.com/watch?v=xYz5xtLom8A&t=16s> ) and build our fledgling sawmill and housing construction company, Mitik.

### **Indicate if this project is a continuation of any other community or regional research projects, including the names of any partners and funders**

The Wasagamack Nation is working with the Four Arrows Regional Health Authority on food issues but has never started a community garden or run training programs on food production by Employment & Training people. They have also received some funding for a community food centre, which could provide local food. Wasagamack hopes to receive funding from the Growing Forward Program to develop a strategic plan that would look at the effects of food insecurity and its linkages to diabetes and other chronic disease on members.

Wasagamack does have a traditional land use plan with overall direction for community development that was done with the University of Manitoba. The community priorities in the community plan are having adequate healthy housing, post-secondary education opportunities in their community, food sovereignty and infrastructure, including an airport in the community. This Wasagamack land-use plan of Mino Bimaadiziwin inspired by the creator and natural law is the path forward that not only protects the environment but revitalizes culture, language and economy (see presentation on the land use planning in Wasagamack- <http://ecohealthcircle.com/wp-content/uploads/2017/02/land-use-planning-presentation.pdf> ).

## **Project inform adaptation? How will your community/region benefit from this project?**

Wasagamack will benefit in the following ways:

- Increased capacity building around advocacy and participation in platforms that directly affect our traditional territory through the dissemination of information and knowledge that will be transmitted as a part of the learning and bringing together of our community members in this project.
- A better understanding of the eco-system in our traditional territory and how this has impacted our overall health and how the effects of climate change impacts our Nation's ability to participate in traditional harvesting activities.
- A platform of learning that will bring together our Elders and our Youth through a gardening project, and opportunity to learn together, get healthier together and to feed one another.

## **Who will you work with?**

### **1. Capacity Building**

We will build the awareness and capacity through radio programs and open house. The project staff will attend Wasagamack Resource Staff & Leadership Meetings, provide updates about the project by producing a quarterly Newsletter and Weekly Facebook updates of project activities and workshops. Through Facebook and posters, they will effectively coordinate all Workshops & learning/ training events using mailouts, as well as through the Wasagamack website to get the information out. The project infrastructure such as the construction of the garden beds will be used in the following years and supported through education programming and employment and training.

The project plans to increase knowledge and offer skills transfer through workshop sessions that focus on climate change such as the Climate Change Awareness & Adaptation and offering the First Nations & the Environment workshops offered through Anokiwiin Training Institute (ATI) and Centre for Environmental Indigenous Resources (CEIR). Also, the project plans to contract a project coordinator who will be mandated to seek out and continue to network with Island Lake Tribal Council, Fort Whyte Farms, Norwest Food Centre, University of Manitoba, Mino Bimaadiziwin partnership and Manitoba Agriculture. We will provide an opportunity for project participants to gain their Food Handlers Certificate for other proposed activities where they would be handling food.

### **2. Youth and Elders**

The project will focus on bringing Elders and Youth through learning opportunities such as workshops, lunch and learns and other activities. The goal is to have a series of workshops that will create a strong educational base for the participants who will be participating in the project and the broader community as well. Our goal is to conduct a minimum of 12 workshops sessions that will enhance the knowledge transfer such as but not limited to indoor seed starting, Canning and preserves, Food handlers safety, Traditional medicines and medicinal plants workshops, how to eat healthy on a budget, Climate Change Awareness & Adaptation, First Nations & the Environment, how to make healthy baby foods, Nutrition & Diabetes, Shitake Mushroom Growing and Diabetes 101.

### **3. Traditional Harvesters, Foresters, Hunters and Medicine Gatherers**

We will coordinate, design and deliver a workshop designed to capture the impacts of climate change on traditional harvesting activities; we will invite our hunters, foresters, gardeners, and medicine people and run an educational program to teach youth and community members. We will involve our Employment and Training people and Education programs in work around the fire break and the garden. This project will recruit and utilize local members of the community who have been gardening and who have gained knowledge about various best practices through trial and error. We will retain and compensate them for their contributions.

### **4. School Garden/farm**

Garden will be coordinated in partnership with Staff and Students of George Knott School and will seek out other partners, programs that provide programming to schools and nutrition programs. This project will also be modelled around the container gardening concept and will see the construction of 10 gardening containers and a greenhouse will be utilized to enhance the health and science curriculum currently being taught from grades 1-12. This project will recruit and utilize local members of the community who have been gardening and who have gained knowledge about various best practices through trial and error. We will retain and compensate them for their contributions.

A few young adults (4 to 7) will be employed as gardeners with a coordinator to oversee their work. These young adults with the coordinator and possibly an Elder will be sent out of the community for two weeks to receive training in permaculture design. During these 10 days of training at Brokenhead First Nation they will design their school garden and community gardens and achieve an International permaculture design certificate organized by the University of Manitoba. Permaculture gardening means "permanent culture or permanent agriculture" as it works with the natural forces – the wind, the sun, and water – to provide food, shelter, water, and everything else your garden needs besides plants and seeds. Permaculture focuses on sustainable and regenerative practices. Permaculture is a comprehensive design process. Each site, whether school, farm or business or household has a unique set of elements (topography, natural elements, soil, etc.), which it considers in the design to create sustainable food environments that optimize food growth and minimize human labour through Indigenous knowledge.

### Project Partners

Name	Affiliation	Project Role	Associated Activity #
Dr. Shirley Thompson	University of Manitoba	Researcher who will provide International permaculture program	3
Ian Knott & Staff (Norah Whiteway)	Health Director	Project Lead- oversight and reporting	all
Adam Knott & Teachers	Wasagamack Education Director	Will be responsible for the oversight of the gardening	3,4,5
Emma Harper	Cultural Director	Project Support on Traditional Knowledge and workshop	3,4,5
TBD	Anokiwii Training Institute & Centre for Indigenous Environmental Research	Environmental and Climate Change Workshop facilitators	5

### Activities/Outcomes

We plan to:

- Wasagamack has a Cultural Director who is knowledgeable about medicinal plants in our Traditional Territory. He will be used as a workshop facilitator and tour guide for our workshop on traditional medicines and medicinal plants workshops and also as a project advisor and resource on all aspects of the project.
- Upon the completion of all gardening activities and the harvest of the food that is grown the project will host a community feast and invite all members to participate in the harvest. We will have a giveaway of preserves that participants prepared as gifts for members, elders and families.

The project will hire a Project Coordinator on a contract basis to create the workplan items and create a schedule for the overall project deliverables. The Coordinator will be responsible for-

- communicating with the all identified project partners such as the Principal and Health Director for the Gardening projects; the project researcher to coordinate meeting spaces, and working with band staff ;
- creating the work plan and implement all project activities including financial oversight of all project spending, purchases and tracking expenditures;
- get contract with Mitik to provide fire break , wood for woodstove and make garden boxes;

- assist band staff and University of Manitoba to select wood stove and solar panels and ship up;
- coordinate and schedule all workshops and presenters, meeting spaces, audio visual equipment, snacks and honoraria payments;
- oversee the Gardening activities from construction, planting, growing and harvesting, work collaboratively with the project participants, school and health center staff;
- Implement the Communication Strategy and Final reporting .

## Communication Strategy

**Table: Communication Strategy for Wasagamack’s Climate Change Adaptation Plan**

Activity	When
Open House and Information Session	At the beginning of the project – Feb. 2020
Resource Staff & Leadership Meetings	Quarterly in conjunction with existing Managers
Weekly Facebook updates of project and workshops	Weekly
Workshops & learning events	Monthly/ Quarterly/ Ongoing as determined by
Radio programs to update people on the activities and educate about climate change adaptation and gardening	Biweekly
Final report on the project to Funders and Community	At the end of the project
Feast and report the updates to the community	September 2020

## Work Plan and Timelines

This table below lists each activity of the Wasagamack project, with the assigned activity number, the timelines for each activity and any potential factors that might affect timing (e.g., seasons, availability of resources, migration patterns, etc.).

**Table: Wasagamack’s activities for Climate Adaptation**

	Activity	Timeline/Dates	Factors affecting timing	Project Activity
1.	Hire Project Coordinator (Contract)	Feb 2020	Can't find a suitable candidate	All- coordinate the project
2.	Open House and Information Session	Feb- April 2020	We may not get approval in time (but then will bring up next year and implement before March 31st)	3,4- explore opportunities
3.	Get Mitik Inc. (a local sawmill and housing company who hires local youth) to do fire	April 2020 or January 2021	Weather may not have ground frozen	1- fire break
4.	Bring materials by winter road including a rototiller and garden supplies as well as solar panels and biomass heater	Feb- April 2020 or January 2021	We may not get approval in time for winter road (but then will bring up next year and implement before March 31st)	2,3,4- materials for the structures
5.	Install solar panel and biomass furnace	May – September or Feb/march 2021	Winter road not available	1- emergency shelter
6.	Hire 4 to 7 youth (age 18 to 35) by employment training (WOP program) for summer to participate in Permaculture & gardening workshops	April 2020	May not identify 4 to 7 students by that time who want to garden/farm. May not receive WOP funding for these students.	3,4,5- Community Engagement, Capacity Building, and holistic well being

7.	Youth and coordinator participate in a 10 day permaculture design workshop and design gardens in Wasagamack as a result.	May 2020 — Ongoing	Break up of ice may make it expensive to travel at that time.	3,4,5- Community Engagement, Capacity Building, and holistic well
8.	Implement the Garden plan types of produce that will be grown, recruit Gardening advisors and youth workers through Employment Training	May – September	Weather constraints	3,4,5- Community Engagement, Capacity Building, and holistic well being
9.	Harvest, Preserve and Feast	September – October	Bad crops, theft or vandalism	4,5- healthy living and holistic well-being, Culture and giving thanks
10.	Implement Communication Strategy and Final Reporting	March 2020- March 2021	Project fails to gather participants	5- holistic well being

### **Budget Summary**

- Total funding requested from Indigenous Services Canada = **\$100,000.00**
- Total support from other sources, including in-kind = **\$108,000.00 (In-kind)**
- Total cost of the project (request plus support from other sources) = **\$208,000.00**

<b>Expense</b>	<b>Description</b>	<b>ISC Funding Request</b>	<b>Funding from Other Sources (including in-kind)</b>	<b>Comments</b>
<b>Core Expenditures</b>				
Salary	Project Coordinator	\$20,000	\$12,000	Office and gardens at old George Knott school
Salary	Researcher	\$7,500	\$20,000	In-kind Meeting space, University of Manitoba
Honoraria	Elders/ Harvesters/Gardening Advisors	\$2,000	\$1,000	Wasagamack band office to coordinate
Contract for Mitik to cut swath of trees around community to prevent fire	Implement a fire break and forest management plan to protect the reserve	\$16,000	\$14,000	Wasagamack has the chainsaws and bulldozers required to implement this.
4 to 7 students to achieve a post-secondary Indigenous permaculture design workshop at Brokenhead FN	Tuition and travel costs to fly the community members out and stay at Brokenhead facilities for two weeks.	\$10,000	\$10,000	University of Manitoba is organizing 10 day intensive permaculture workshop with Brokenhead.
Open house and Final Gathering	Food and prizes	\$2,000	\$3,000	Wasagamack to provide facility

Training fees	Workshops – hiring presenters and for materials to distribute	\$5,000	\$15,000	University of Manitoba
Transportation, accommodation and meals	Researcher and Coordinator	\$2,000	\$1,000	Wasagamack band
Communication technology	Coordinator (Laptop)	\$1,500	0	
Labour and Building Materials for garden boxes	Container Gardens built of wood and small greenhouse	\$5,000	\$2,000	Mitik and Wasagamack will have local wood to provide.
Biomass furnace/stove installed in community building & small solar panel with battery	Buying and transporting wood stove and Installation to provide a community shelter that provides heat and power and ship	\$19,000	\$10,000	Mitik to provide wood for hopper to burn. University of Manitoba to assist with planning and mapping for forest management. University of Manitoba to
Gardening Equipment	Rototiller, Wheelbarrow, Rake, Shovels & Spades, Hoes, Forks etc. and	\$5,000	0	
<b>Core Expenditures</b>		<b>\$95,000.00</b>	<b>\$88,000.00</b>	
Administrative/Management Costs (maximum 10% of total request from Indigenous Services Canada)				
Office materials/supplies	Printing, paper	\$1,000	\$11,500	Wasagamack In-kind office rental
Video	Video, posters	\$1,000	\$1,000	Video supplies and materials assisted by University of Manitoba
Telephone and telecommunication		\$1,000	\$1,000	Wasagamack In-kind
Human resources, pay services and finance		\$2,000	4500	Wasagamack administrative staff for budgeting and payroll
<b>Admin Subtotal 2</b>		<b>\$5000</b>	<b>\$18,000.00</b>	
<b>Total Cost of Project (subtotal 1 plus subtotal 2)</b>		<b>\$100,000.00</b>	<b>\$106,000.00</b>	