

**SEPTEMBER 20, 2019** 

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

"RECLAIMING OUR FOOD SECURITY FOR IMPROVED HEALTH"

\*Draft\*

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:**

- To improve food security while creating capacity on food with employment training youth and workers
  opportunities programs with the members of the community through establishing a berry grove, an
  orchard, a wild rice pond, bee hives, home gardens and larger scale agriculture projects that will educate
  members about permaculture design, planting, growing, harvesting fruit trees, berries and vegetables.
- 2. To teach traditional knowledge, permaculture principles and modern practices for fishing, trapping, raising livestock, harvesting, designing food and gardening to meet our food and nutritional needs that includes International certificate 10 day workshop on permaculture design, post-secondary programming on Indigenous food systems in Brokenhead, curriculum development, language revitalization, lesson plans and educational resources, such as making videos.
- Pilot small bee and small layer and broiler poultry operations in consultation with neighboring bee farmers, the University of Manitoba, Food Matters and government to provide technical support and information on these matters as well as on soil management, soil conservation, acquiring agricultural expertise and obtaining environmentally friendly energy sources.
- 4. Plant berries, fruit and other trees in school yard, homes and farm to provide shade to cool the environment.
- Incorporate modernized approaches and equipment such as automated controls, effective
  tracking of results and electronic management of date that will inform to the development of
  sustainable practices and advance efficiency and both reducing waste and consumption of
  resources.
- 6. Continue to implement our 5-year strategic 2015 Growing Forward Program plan, and action the research findings from the Statistical Analysis of Community Health and its Connection with Transition from Traditional to Modern Lifestyle Diet, the Brokenhead Ojibway Nation undertook under the 2019 Indigenous Services Canada's climate change and health adaptation program for First Nation communities south of 60°n.

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

We envision a successful project to look like:

- Bringing people together in a safe learning environment to learn about ways to reconnect to our food, whether it is grown in gardens or sustainably harvested from our traditional territory;
- Brokenhead Ojibway Nation members will have a demonstrated capacity, skills, abilities, learning and sharing of best practices in food production, and will be independent, selfsufficient and possess sustainable food sources for both personal use and distribution in local cooperatives.
- Fundamental changes in our attitudes and lifestyle choices in relation to the food we eat and ongoing commitment to eating healthy will be informed by the findings from the 2019 Statistical Analysis of Community Health and its Connection with Transition from Traditional to Modern

Lifestyle Diet research project with the ultimate goals of eradicating diabetes, improving quality of life and addressing other chronic illnesses in our First Nation

- Re-awaken and incorporate traditional knowledge of our ancestors with western technologies
  and data in relation to safeguarding and accessing our food systems and sources, and make it
  a priority to protect, preserve and promote and transfer this knowledge to our men, women
  and children so that we can pass the legacy of healthy eating on to our grandchildren;
- Establishing partnerships with organizations and experts to facilitate information sharing and drive innovative practices to support the development of transferrable skills that could be applied in the service sector, in agriculture and in the food processing industry.
- Member will gain skills they may self-declare and utilize to gain employment and educational opportunities.
- The Brokenhead Ojibway Nation will have skill sets that will to be responsive to the future
  economic ventures such the production of non-traditional crops, competing for contracts to
  provision locally raised food and traditional foods to Elders and members at nursing homes
  and other institutions, beekeeping and poultry farming.

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

It is well documented that First Nations in Canada suffer from a wide spectrum of social inequities, such as higher rates of chronic and communicable diseases and are exposed to greater health risks because of lower education attainment, higher unemployment, a higher dependency on social assistance and limited access to healthy foods. Brokenhead is no exception and the connection between healthy food and health in Indigenous communities have been already researched and proven, for example The Lancet Editorial (2009) remarks on the Indigenous health and the negative effects of their transition from traditional to modern lifestyles. These effects are reflected in "diseases, such as obesity, cardiovascular disease, and type 2 diabetes, and physical, social, and mental disorders linked to misuse of alcohol and of other drugs" (p.1). Kuhnlein et al. (2004) also found that the transition from traditional foods to modern market foods is a determinant of the high rates of obesity among Canadian Aboriginals.

#### Rationale

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

Brokenhead Ojibway 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 drought, flooding and through indirect effects that have impacted us by the water quality in Lake Winnipeg and its impacts on our fishing activities; to impact social dynamics and overarching health impacts that are having devastating affects on the health and well being of the people through the reduction of our traditional diet and more dependency on purchasing our food and the consumption of enriched, processed and foods filled with preservatives foods that have manifested itself in different

chronic illnesses as a result of undernutrition. The community has a high number of its members who are diabetic and have experienced amputations as a result of their health condition.

Climate change poses a major threat to the Brokenhead Wetland Ecosystem. In the summer of 2006 Southern Manitoba endured a major drought. The Brokenhead Wetland and surrounding area received only 59% of the average annual rainfall and areas nearby received as little as 32% of annual rainfall (MB Water Stewardship, 2006). Changes in climate patterns pose a threat to the wetland by changing the amount of water available for the fen ecosystem. The wetlands are an area where Brokenhead Elders and our medicine people harvest medicines and teas for traditional remedies that have been with our people for over 300 years.

The Netley-Libau Marsh is one of the largest coastal wetlands in Canada. In a healthy state, this marsh could help control algae blooms in Lake Winnipeg by filtering out phosphorus and other nutrients and contaminants from the water that flows in and out of it. However, Netley-Libau Marsh is no longer functioning as a healthy wetland; open water has increased dramatically over the past 30 years, resulting in a corresponding loss of nutrient-filtering vegetation. This has impacted the availability of water fowl and access to muskrat and beaver reserves as food sources for the members of the community.

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

Brokenhead has taken steps to protect a sacred area of its traditional territory and had created partnerships with a variety of non-profit organizations to have the Brokenhead Wetland protected under the Manitoba government's Protected Areas Initiative. In 2005, 560 hectares (1385 acres) of the wetland received the highest protection allowable, designation as an ecological reserve. In 2012 the size of the ecological reserve was increased to 1240 hectares (3064 acres). Soon after the Brokenhead Wetland was declared an ecological reserve, some members of BON expressed an interest in building a trail so that elders could pass on their traditional knowledge of the wetlands to their children and grandchildren in a safe environment.

Brokenhead remains apart of the Lake Winnipeg Indigenous Collective which consists of 14 Indigenous nations from around Lake Winnipeg who came together to discuss challenges and opportunities for First Nations living near the shores of Lake Winnipeg to have their voices heard due to a lack of under-represented from the stakeholder conversations, decisions and actions on Lake Winnipeg.

We believe that our efforts to date have been successful as the Wetland Interpretive trail is used to teach our School children and visitors about our efforts and the medicines and rare orchid species in our protected area site.

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

The Brokenhead Ojibway Nation received funding from the Growing Forward Program in 2015 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 of the Brokenhead Ojibway Nation; secondly to explore

opportunities to create food security while creating capacity with the members of the community and thirdly to seek out economic opportunities that are associated with small scale agriculture and food production. As a result of the funding received the First Nation has identified 5 Strategic Priority areas and goals 1. Education and Awareness 2. Health and Wellness 3. Culture and Traditional Knowledge 4. Land and Infrastructure 5. Economic and Business Development

In addition, the community submitted a proposal and received funding under the Indigenous Services Canada's Climate Change and Health Adaptation Program for First Nation Communities South of 60°n: "reclaiming our food security for improved health" 2019. The project resulted in 1) the construction of 30 raised garden beds to accommodate the physical capacities of the Elders and still lived independently. 2) Partnership was extended to the Brokenhead Home Care Program and the Lighthouse program. 3) This project recruited and utilized local members of the community who had prior gardening experience and consultation with tradition knowledge holders was ongoing. 4) A Statistical Analysis of Community Health and its Connection with Transition from Traditional to Modern Lifestyle Diet research component identified the need and resulted in improved collection of local health data. 4) Gardening was coordinated in partnership with Staff and Students of Sergeant Tommy Prince School to enhance the health and science curriculum currently being taught from grades 1-8.

# How will the results of this project inform adaptation? How will your community/region benefit from this project? Brokenhead will benefit in the following ways by:

- Utilizing traditional knowledge and research to better understand the eco-system in our traditional territory and how this has sustained our overall health and how the effects of climate change impacts our Nations ability to participate in traditional harvesting activities.
- through the farm, wild rice development, greenhouse, rototilling and gardening project planning and implementation the membership will acquire insight on improving soil capacity, sustainable soil management practices and soil conservation strategies.
- Adaptation strategies developed through traditional knowledge, applied research, funding and an informed community membership can contribute to the Brokenhead Ojibway Nation in being a leader and a mentor in reducing a carbon footprint, reducing greenhouse gas emissions and purchasing locally grown food.
- Incorporate modernized approaches such as automated quality controls, utilizing technologies, effective tracking of results and electronic data collection to create and contribute to sustainable practices, and advance efficiencies to both reduce waste and the consumption of resources.
- Food security will increase the availability of healthy food that will directly improve the quality of life and the health of members which will reduce the need to transport them medical centres.

## 1. Who will you work with?

**Capacity Building** 

We plan to engage our community through the coordination of hosting an Open House and Information Session to let people know what is going on. We will work continuously on the recruitment of participants through home visits (Elders, youth and interested Community members). Through out the project the project staff person will attend BON Resource Staff & Leadership Meetings, provide updates about the project by producing a quarterly Newsletter and Weekly Facebook updates of project activities and workshops. Coordinate all Workshops & learning/ training events using mailouts, social media and the BON website to get the information out. The project infrastructure improvements and equipment will consist of the purchase of 2 greenhouses and 2 rototillers.

The project plans to hire a masters student through the University of Manitoba to increase knowledge and offer skills transfer through curricula development and workshop sessions that focus on climate change such as the Climate Change Awareness & Adaptation and offering the First Nations & the Environment workshops offered through CEIR.

Also, the project plans to offer a contract for a project facilitator who will be mandated to seek out and continue to enroll the help of organizations such as Food Matters, University of Manitoba, Fort Whyte Farms, Nature Manitoba and Manitoba Agriculture to host information workshops for Brokenhead members.

There will also be an opportunity for project participants to gain their Food Handlers Certificate for other proposed activities where they would be handling food. Skills development will include gathering soil samples for testing, improving the productivity of soils, design and implement organic gardening strategies and training in small engine maintenance and repair. This approach will lessen greenhouse gas emissions, less impacts on the environment and facilitate in the safe storage of equipment and solutions.

Furthermore, strategic partnerships can provide the most current technical information and facilitate skills transferences on technologies that be incorporated and contribute to the development of modernized approaches such as automated quality controls, effective tracking of results, computerized monitoring to create and contribute to sustainable practices, improve quality control, maintain health standards and advance efficiencies that will both reduce waste generation and the consumption of resources.

#### **Greenhouse Garden Project**

The Brokenhead Ojibway Nation will purchase 2 greenhouses to provide an extended growing season, a controlled environment to germinate seedlings and prevent pest infestations. The greenhouses will be established and located at a former bison ranch. Seedlings will be distributed to on and off reserve Brokenhead members.

The project will mobilize returning local summer job students to assist will the care of the greenhouse produce, tilling of soil and maintenance of the grounds. The students will also provide labour to assist local Elders in the upkeep of raised gardens.

#### **Tractor and Rototilling Project**

A tractor and rototilling will enable in the breaking and tillage of gardens. A coordinator will seek out other partners, resources and programs that will provide technical advice on biomass removal, seeding and tillage practices that will optimize yields, address issues regarding weed management methods, adopting practices that enhance and maintain soil health and balance soil nutrient content.

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.

#### **Traditional Harvesters, 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, gardeners, and medicine people. This workshop will map out the activities of our Traditional Territory and will be offered through our partners at the Centre for Indigenous Environmental Research (CIER) and BON Lands Department

#### Integrate the Ojibway Language into the process

Language is an important vehicle in any culture in the transmission of its cultural identity whether it be through songs, storytelling, and ceremonies. The local Indigenous languages have been deeply impacted by colonization and the residential school system. For instance, though Anishinabemodda is the language of the people of Brokenhead, today there are only a small number of people that still speak the Ojibway language in the community. As demonstrated by the findings of the Truth and Reconciliation Commission of Canada, the revitalization of language is vital in reconnecting members to their community, promoting healing, reestablishing family connections, strengthening identity and the establishment of connection to land (2015).

#### **Community Kitchen**

A Community Kitchen can be understood as space that brings together community members, local knowledge, local produce, creativity and a good supportive atmosphere that will advance entrepreneurial paths. The Community Kitchen will provide a healthy gathering place where community members, youth, Elders and local knowledge can merge with specialist to learn about healthy foods, a place to gain and transfer food knowledge. Second, a community kitchen can create a learning atmosphere for Brokenhead members to integrate the greenhouse project, rototiller project and local traditional knowledge to share in locally sourced food.

#### **Value-Added Enterprise**

There is a need to conduct research on establishing a value-added venture. This could accommodate creative Brokenhead members interested in entrepreneurial paths and how would this endeavor may be undertaken, for example does this become a social enterprise venture by a group of people or does this become a community-based initiative that could potentially generate wealth for Brokenhead? These are questions that can be answered through further research, partners, agriculture committee, leadership and Band members.

The integration of traditional knowledge, technologies, healthy foods, infrastructure, innovations and acquired technical skill sets and applied research can advance in the establishment of a community kitchen with a value-added component. Together these will represent the continuum and synergizing of the 5 priority areas identified in *The PATH to a Healthier Community* (2015), consisting of: 1) education 2) health and wellness 3) culture and tradition 4) land and infrastructure, and 5) economic development.

Undoubtably, the Community Kitchen concept will bring: 1) together end-users, partners and organizations, 2) a structured environment, and 3) an organizational structure and then collectively advance in the establishment of a viable enterprise.

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

## WHAT IS PERMACULTURE?

**Permaculture gardening** means "permanent agriculture" and it is defined as working with natural forces – the wind, the sun, and water – to provide food, shelter, water, and everything else your **garden** needs besides plants and seeds. The word is derived from the words "permanent agriculture" and focuses on sustainable and regenerative practices. Permaculture is different than a model as it 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) and design considerations to create food environments.

#### Project Partners

Name	Affiliation	Project Role	Associated Activity #
James Queskekapow, M.A, Traditional harvester	University of Manitoba	Researcher/Coordinator for post- secondary Indigenous food systems	1
Aliesha Desjarlais	Health Director	Project Lead- oversight and reporting	all
Rhonda Michaud & Teachers	STSP Principal	Will be responsible for the oversight of the gardening project for school students	4,6,7
Carl Smith	Cultural Director	Project Support on Traditional Knowledge and workshop facilitator	1, 5,6,7
Leona McIntyre	Growth Enterprise and Trade- Indigenous Relations	Referral and connections to resources within the province of Manitoba	4,5,6
TBD	Centre for Indigenous Environmental Research	Environmental and Climate Change Workshop facilitators	5
Dr Shirley Thompson & Students	Mino bimaadiziwin	University of Manitoba (will organize a 10 day permaculture course at Brokenhead) and develop design for farm and	

	assist to ipmlement.

#### **Activities/Outcomes**

### **Acknowledgement Ceremony**

Retain an Elder and Woman Elder to conduct a Neemama Akee (Mother Earth) and Neepee (Water) Acknowledgement Ceremony. Present tobacco, clothe and gift to both Elders.

#### Education

With University of Manitoba we will deliver a 10 day International Permaculture design certificate that develops a design for the farm including bees, orchards, wild rice, poultry farming and vegetable farming. This plan will consider climate change and adaptation.

# Indigenous Knowledge

Brokenhead 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 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 give away of preserves that participants prepared as gifts for members, elders and families.

## **Project Facilitator Position**

The project will hire a Project Facilitator on a contractual basis to create the workplan items and create a schedule for the overall project deliverables.

The Facilitator will be responsible for

- communicating with the all identified project partners such as the STPS Principal and Health Director for the Gardening Projects; the project researcher to coordinate meeting spaces, meeting participants for the survey/focus groups, etc.
- creating the workplan and implement all project activities including financial oversight of all project spending, purchases and tracking expenditures
- Supervise summer student employees.
- coordinate and schedule all workshops and presenters, meeting spaces, audio visual equipment, snacks and honoraria payments
- Facilitate community gardening workshops and undertake research
- oversee the Gardening activities from construction, planting, growing and harvesting, work collaboratively with the project participants, School and Health Centre Staff

- Contact and establish an information exchange partnership with local bee farmers.
- Implement the Communication Strategy and Final reporting

# **Tractor and Rototilling**

It is advisable a tractor is used for initial land tillage, as land may harbour tough established turf. WE will employ a farmer who has a tractor to undertake this. Rototilling of gardens will be undertaken by student in an in-kind partnership with Staff and Summer Jobs Office and priority given to hiring post-secondary students.

#### **Language Component**

As part of this project, the Brokenhead Ojibway Nation will purchase a software program that can be used and shared with the membership, and a Masters Student will be brought in to develop language curricula and instruct on the Anishinabemodda. This will enable community members to identify foods, water, traditional lands and traditional clans in the original language.

#### **Community Kitchen Workshops**

The project will focus on bringing food experts, partners, 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. A master student from the University of Manitoba will be assigned to research and develop an appropriate training curriculum.

#### **Communication Strategy**

communication curatogy	
Activity	When
Open House and Information Session	At the beginning of the project
Press Release with Selkirk Record	At the beginning of the project
Resource Staff & Leadership Meetings	Quarterly in conjunction with existing Managers Mtgs
Quarterly Newsletters to Community, Funders and Partners	Quarterly
Weekly Facebook updates of project and workshops	Weekly
Workshops & learning events	Monthly/ Quarterly/ Ongoing as determined by project staff
Final report on the project to Funders and Community	At the end of the project

#### WORKPLAN and TIMELINES

Prepare a table with a list of each activity of the project, with an 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.).

Activity	Activity	Timeline/Dates	Factors affecting timing	Project objective
1	Open House & Information Session	April 2020	We may not get approval	2 - Engagement
2	Hire Project Facilitator (Contract) Position	April 2020	Can't find a suitable candidate	1 and 2 – Coordinating project activities
4	Retain the assistance of a curriculum developer through a partnership with the University of Manitoba & create a permaculture workshop in early May.	April 2020 – March 2021		
5	Retain an Elder and Woman Elder to conduct Neemama Akee (Mother Earth) and Neepee (Water) Acknowledgement Ceremony	May 2020		Culture and Giving Thanks
6	Construct green houses and replace / repair raised gardens and fences	May 2020	Unable to get a permit or lease from BON Lands Department	2,3,4,5- Community Engagement, Capacity, Knowledge Transfer
7	Develop Ojibway language training curriculum and schedule language workshops -	January 2020-April 2021.	She decides not to work with us, finding a new researcher	
5	Create a Workshop Schedule and coordinate Workshop presenters, Researcher meetings	May 2020 – Ongoing	Facilitators may not be available	2-Community Engagement, Capacity, Knowledge Transfer
6	Plan the Garden Schematic, types of produce that will be grown, recruit Gardening advisors	May - September	Weather constraints	2,3,4,5- Community youth and elder engagement
7	Harvest, Preserve and Feast	September - October	Bad crops, theft or vandalism	2,3,4,5 - Community Engagement, Capacity, Knowledge Transfer
8	Implement Communication Strategy and Final Reporting	April- November 2019	Project fails to garner participants	1 and 2,

# **Budget Summary**

- **→** Total funding requested from Indigenous Services Canada = \$100,000.00
- → Total support from other sources, including in-kind = \$ ? (In-kind) \$10,000.00 (BON Cash Contribution)
- → Total cost of the project (request plus support from other sources) = \$.

Expense	Description	ISC Funding Request	Funding from Other Sources (including in-kind)	Comments	Associated Activity #
Core Expenditures					
Salary	Project Facilitator	\$24,000	\$12,000		1 -8
MITAC	Masters Student	\$ 7500	\$7500	In-kind Meeting space	3
Neemama Akee and Neepee Ceremony	Elders	\$500.00	0		
Honoraria	Elders/ Harvesters/Gardening Advisors	\$3,000	\$1,000	BON OSR	5
Benefits	N/A	0	0		
Professional services	Presenters	\$9,000	\$5,000	BON OSR	5
Final Gathering Feast		\$1,000	\$3,000	BON OSR	
Permaculture workshop – 10 day international certificate and 10 other 2 day workshops	Creating post- secondary programming at Brokenhead with University of Mantioba	\$15000	\$60000	University of Manitoba	1
Transportation, accommodation and meals	Project Facilitator	\$2,000	\$1,000	BON OSR	1-8
Equipment and facilities	Facilitator	\$3,500	0		1-8
Building Materials	Container Gardens and Greenhouse Flooring	\$4,500	0		
Gardening Equipment	2025R Compact Tractor	\$22,995.00	0		
Tractor Attachment	Tiller	\$4,000.00	0		
Greenhouse	Greenhouses X 2 @ \$2,500.00 ea.	\$5,000.00	0		
Greenhouse shelves		\$1,200.00	0		

Gardening	Rototillers x 2 @	\$2,400.00	0			
Equipment	\$1,200.00 ea.					
Trees, berry		\$4000.00	0			
bushes, seeds, soil						
Core Expenditures		\$\$109,595.00	\$89,500.00			
Subtotal 1						
Administrative/Man Canada)	Administrative/Management Costs (maximum 10% of total request from Indigenous Services Canada)					
Office materials/supplies	Printing paper,	\$2500	\$12,000	BON In- kind office rental	1-8	
Copier and photocopies	Newsletter		\$1,000	BON in-kind photocopying	1-8	
Telephone and telecommunication			\$1,000	BON In-kind		
Postage, shipping and handling		\$500			1-8	
Accounting fees						
Human resources, pay services		\$1500 n	20,000		1-8	
Admin Subtotal 2		\$4500.	\$34,000.		1-8	
		\$\$109,595.00	\$89,500.00			
Total Cost of		\$115,095.00	\$123,500.	\$28,400		
Project (subtotal 1				Inkind \$10K		
plus subtotal 2)				Cash		
				contribution		