

# Climate Change Adaptation



**MUSKEG LAKE**  
CREE NATION



Alfred Gamble  
Lands Manager  
MLCN



# AGENDA

## Introduction

Alfred Gamble,  
Lands Manager at  
Muskeg Lake Cree Nation

## Climate Change Adaptation at MLCN

Resilient Food systems,  
Environmental Responsibility  
Waste Management  
Education  
Cultural Mapping  
Water Resource Mapping

## Resilient Future

Future initiatives to  
build resilience at  
Muskeg Lake Cree Nation



# MUSKEG LAKE CREE NATION

## Alfred Gamble – Lands Manager Muskeg Lake General Overview

- Population 2,035 total – approximately 300 on reserve
- +32,000 acres of land, includes urban reserves and CP land
- First Band in Canada to establish urban reserve – Saskatoon
- Has diverse investments and corporate ventures
- Main land use: Cultivated, pasture land, forested, and residential/commercial/administrative
- Most Veterans of any First Nation in Canada, represented in every major conflict since WW1



# Climate Change Adaptation at MLCN

Several initiatives are already underway to increase resilience;

- **Creating a Food Forest**
- **Cultural Mapping**
- **Emergency Preparedness Plan**
- **Waste Transfer Station and Lagoon**
- **Source Water Protection Plan**
- **Climate Change Education**
- **Interconnected Planning and Design**



## Trees and Shrubs Planted at Food Forest and School 2018-2019

- 100 Saskatoon berry shrubs
- 21 Plum trees (3 varieties)
- 138 Apples (5 varieties)
- 50 Cherries (2 varieties)
- 60 Haskap berry shrubs
- 100 Raspberry shrubs
- 100 Chokecherry shrubs
- 20 Northern Gooseberry
- 20 Northern Currant shrubs

## The Food Forest

- 40 Sea Buckthorn shrubs
- 5 grape vines
- 4 rhubarbs
- 20 Mountain Ash
- 20 Birch trees
- Several transplanted local Spruce
- More “Layers” to be planted year by year!



- Culturally Appropriate
- Resilient to Climate Change
- Long-term Food Security
- Holistic Design
- Diverse Yields
- Ecologically Beneficial

# Sharing Circle for Cultural Mapping



Sacred Places:  
"Pow Wow Arbor"

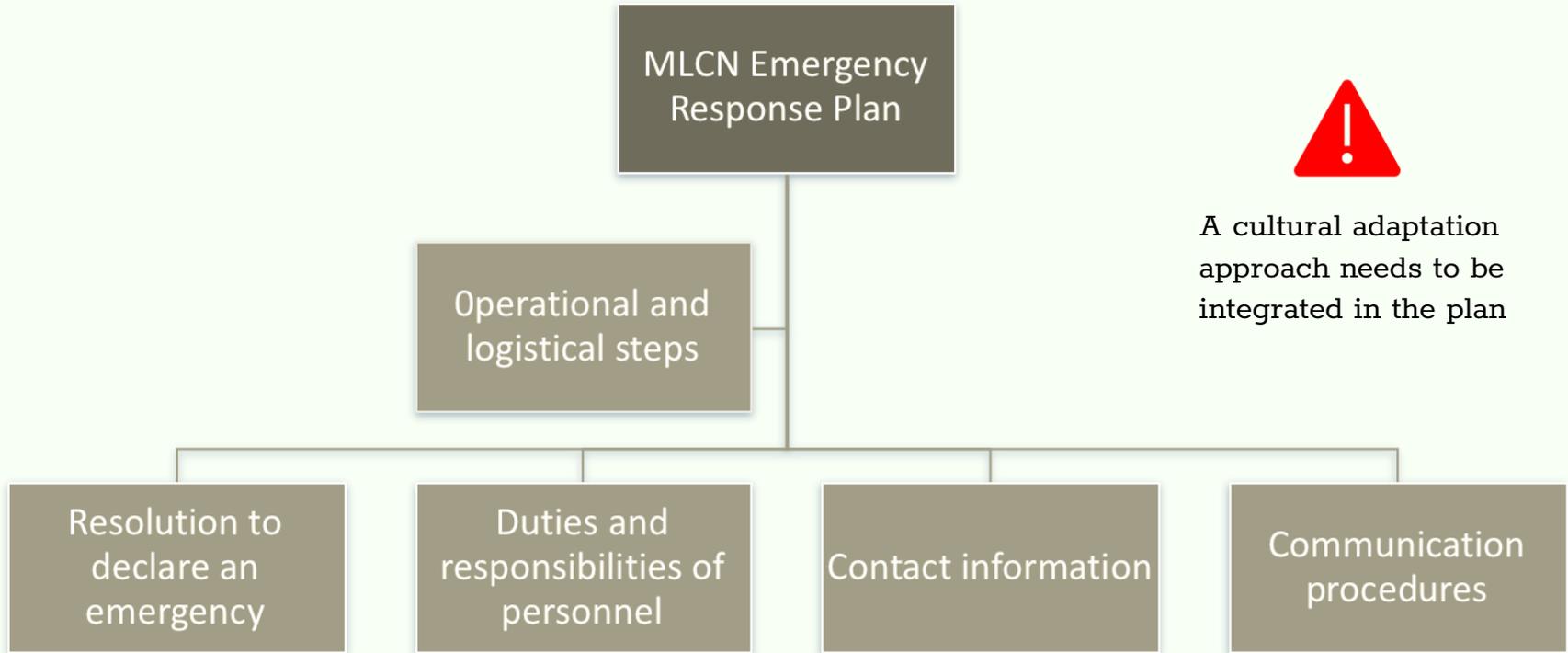


Fauna



Flora

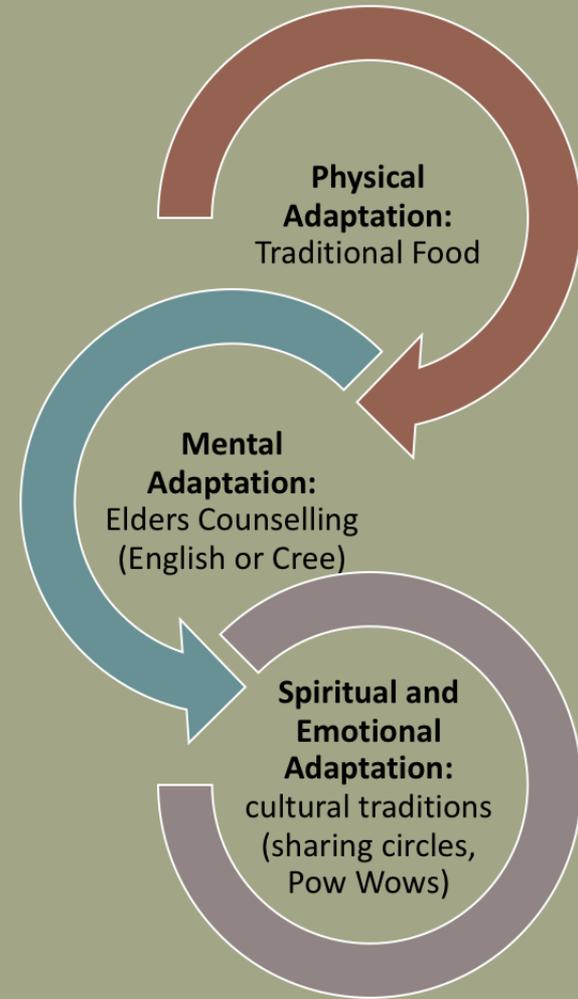
# Emergency Preparedness Plan



# Cultural Adaptation of MLCN Emergency Preparedness Plan

Cultural adaptation is key to enhancing the ability of a community to effectively address an emergency scenario. Since culture informs the well being and tools at hand of a community, it is important that the plan considers the varying dimensions.

Some of the current categories that are being considered for adapting the plan are:



# Waste Transfer Station and Lagoon

Muskeg Lake, Town of Gregville  
Future Development Plan

\*Decommissioned landfill and lagoon were hazardedly close to the town.



# WATER SOURCE PROTECTION PLAN



**Objective 1:** Increase awareness among residents of the need for water conservation and the benefits of using water more efficiently.

**Objective 2:** Ensure that all residents of Muskeg Lake have continued, long-term access to safe, clean drinking water

**Objective 3:** To ensure a steady, reliable and safe supply of drinking and cooking water for all residents

**Objective 4:** Reduce or minimize surface water contamination and groundwater pollution from animal fecal bacteria.

**Objective 5:** To ensure that the above-ground activities of Muskeg Lake do not contribute to contamination or pollution of the groundwater; to ensure that Muskeg Lake residents have continued confidence in the safety of the source of their drinking water.

**Objective 6:** To preserve the natural beauty of the land by minimizing the community's ecological footprint; to maintain a healthy and safe landscape for the human and animal inhabitants of Muskeg Lake.

Initial Plan completed  
in 2009

Update of the plan is  
currently underway

# Climate Change and Lands-based Education



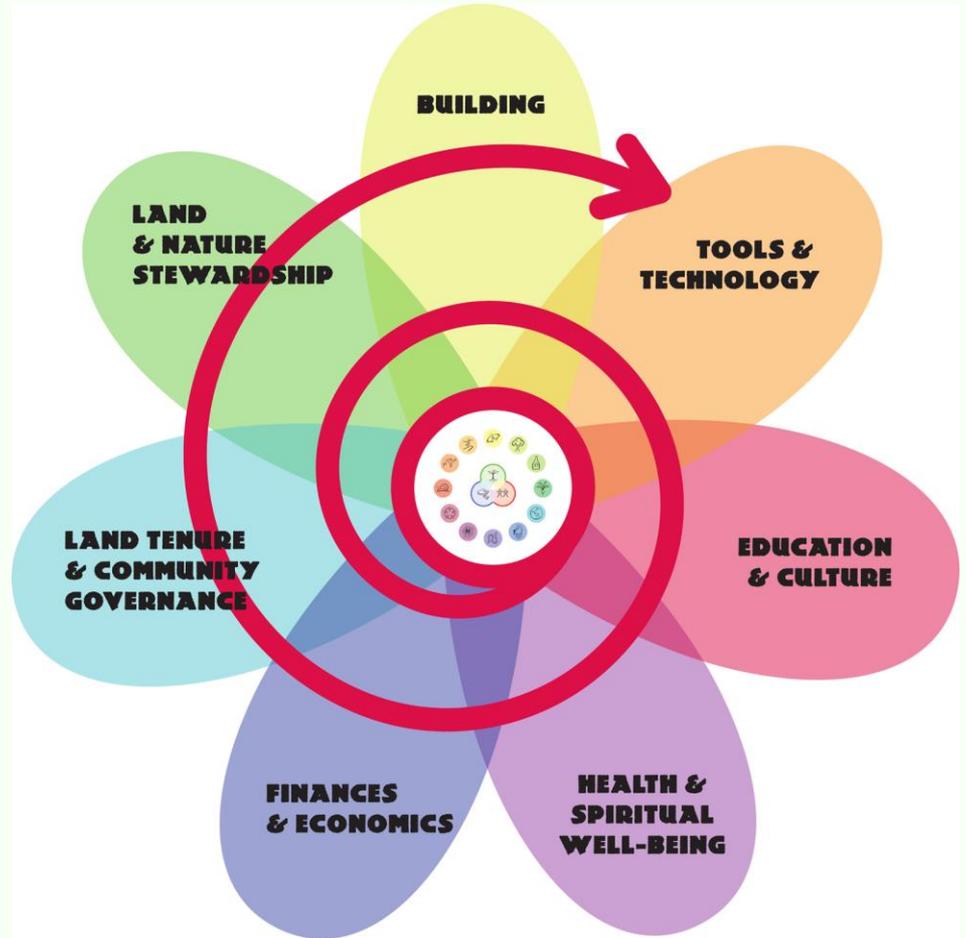
- School presentations and workshops
- Cultural Island Camp - Lands-based education
- Programs for Elders' Traditional Knowledge transfer to students

# Weather Station



Understanding of how everything is *Interconnected*.

This is the mindset of Muskeg Lake in dealing with Climate Change.



# A RESILIENT FUTURE

## FOOD SECURITY

- Increasing Biodiversity of the food forest
- Multi-season greenhouse
- Food processing and preservation facility
- Playscapes in Food Forest

## RESOURCE MANAGEMENT

- Data collection and effective organization of data (e.g. Gis Mapping)
- Protecting waterways, the water table, and bodies of water
- Conserving and restoring biodiversity and health of the natural land

## EDUCATION

- Respectful and Inclusive consultation with the community
- Workshops and Presentations relating to Climate Change and Adaptation
- Lands-based education
- Organic food production and processing

Thank-you,  
on behalf of



**MUSKEG LAKE**  
CREE NATION

For more information please contact

[agamble@muskeglake.com](mailto:agamble@muskeglake.com)

or

[climate@muskeglake.com](mailto:climate@muskeglake.com)