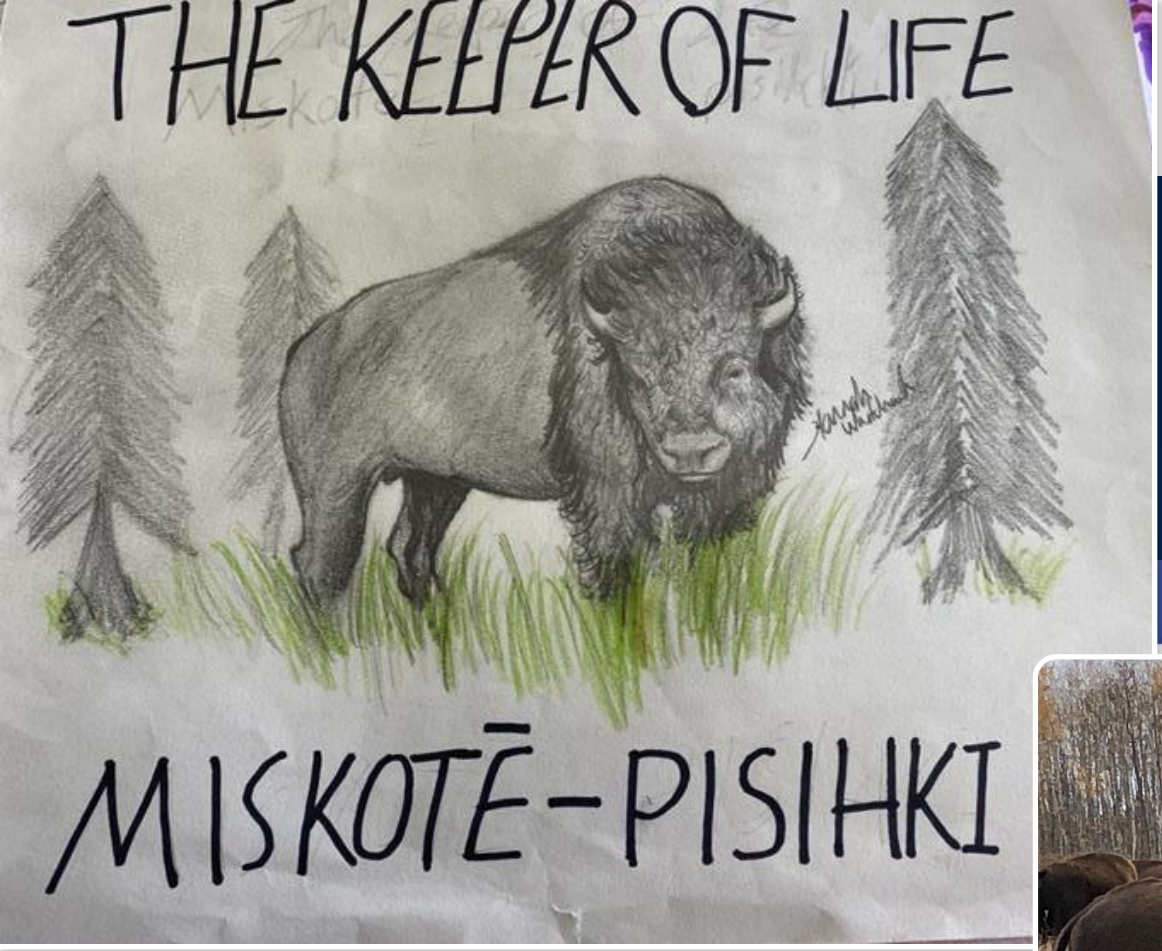


Building Indigenous Sustainability in our Nation (B.I.S.O.N)



Kelly Jones, Tetra Tech

Landis Tourangeau, Lands Manager Cote First Nation

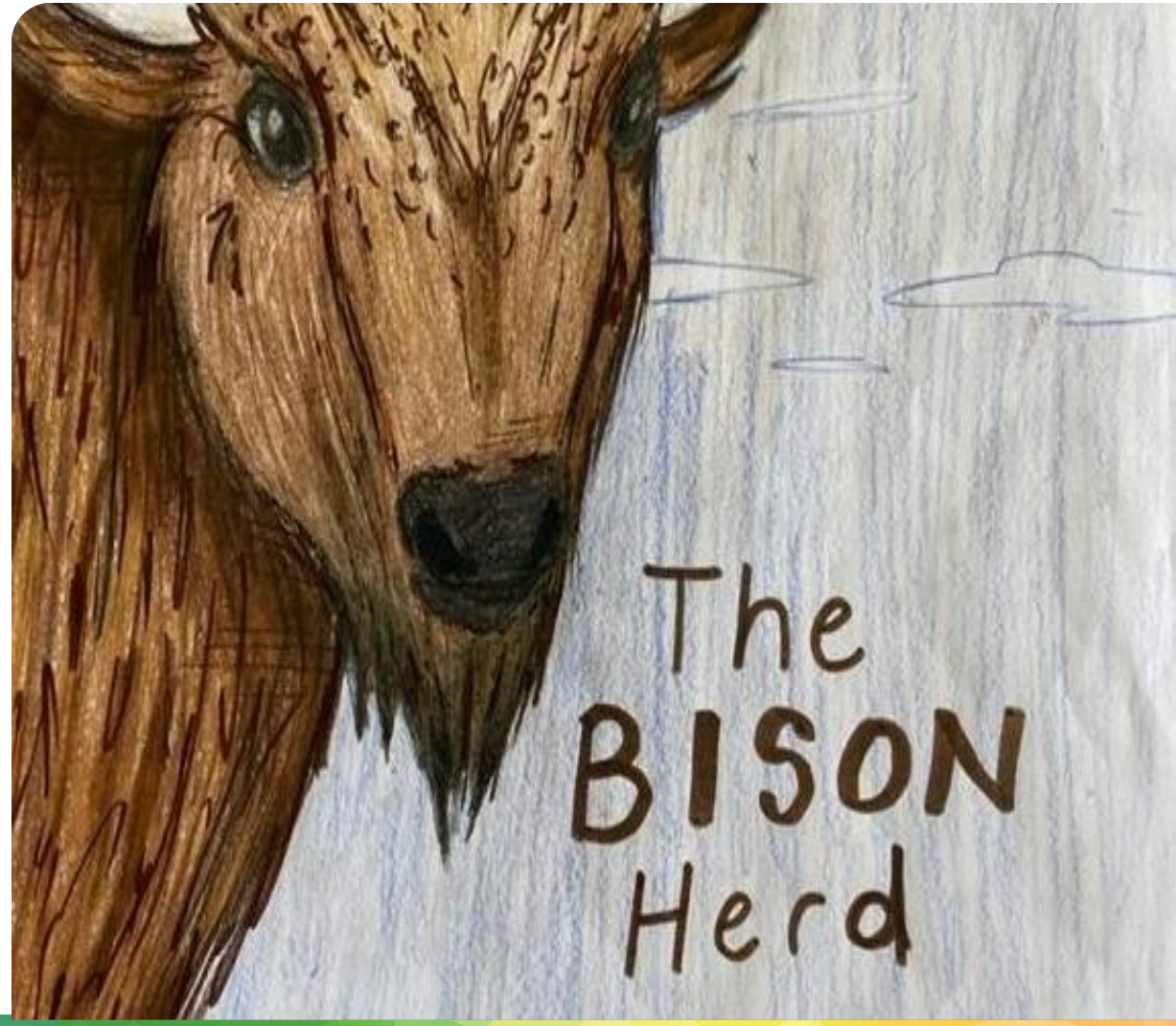
TETRA TECH



Disclaimer: Funding for this study was provided by Indigenous Services Canada. The information and opinions expressed in this publication are those of the authors/researchers and do not necessarily reflect the official views of Indigenous Services Canada.

Outline

- Land Acknowledgement
- Baseline Health Assessment Funding
- Cote History
- Goals
- Methodology
  - Interviews
  - Soil sampling
  - Online survey
  - Habitat range assessment
  - Community meeting
- Next Steps



Land Acknowledgement

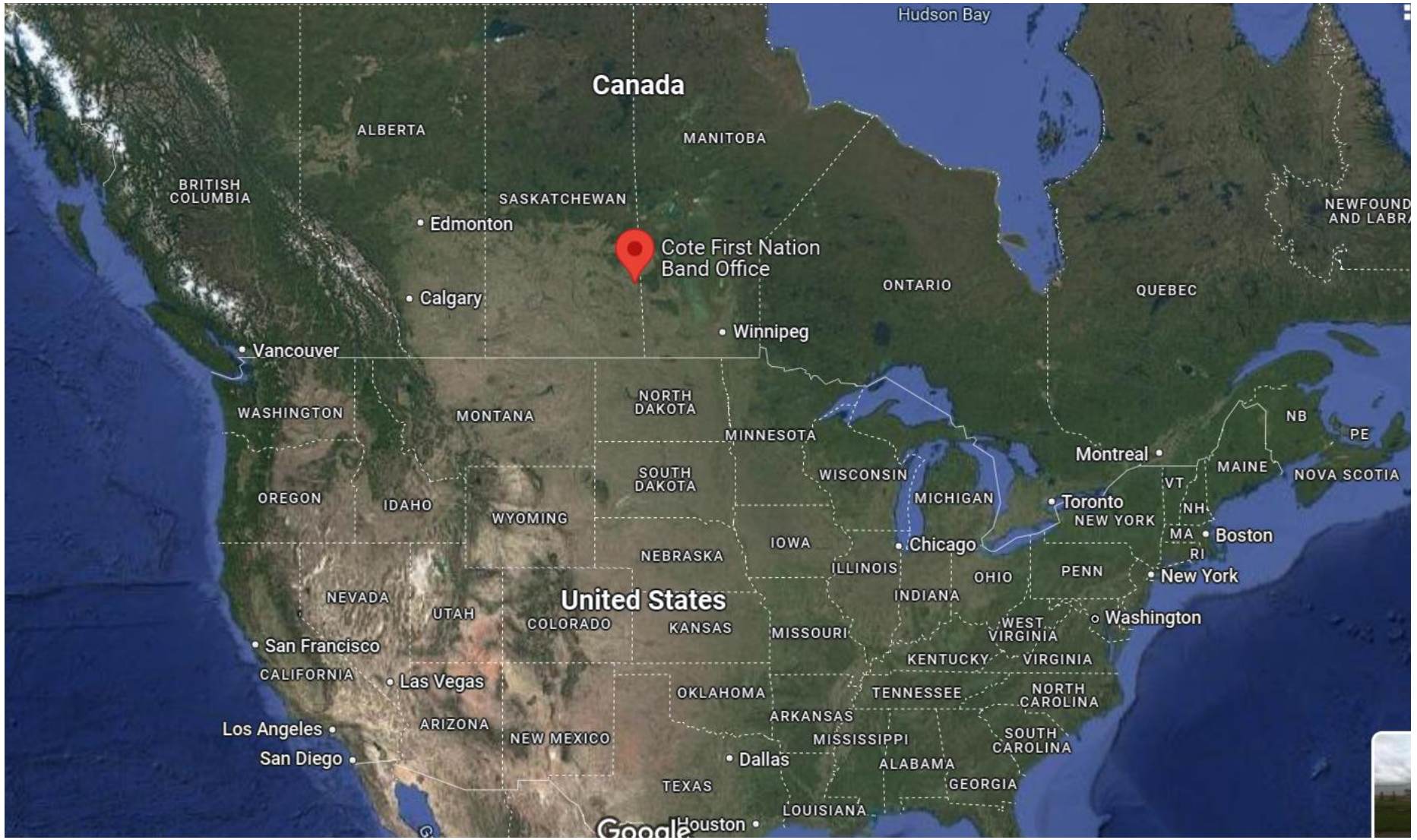
This project was carried out on Treaty 4 lands, the ancestral lands of the Cree, Saulteaux, Dakota, Nakota, Lakota, and the homeland of the Metis Nation. Tetra Tech respects the historic and modern Treaties that exist throughout Canada and acknowledges the harms that Indigenous people have endured over generations. As a company, we are committed to increasing our partnerships with Indigenous communities, businesses, and individuals in a manner that respects and celebrates the traditions, skills, knowledge, and aspirations of Indigenous Peoples as we move forward in reconciliation.



First Nations Baseline Assessment Program on Health and the Environment (BAPHE)

- The BAPHE through the federal department of Indigenous Services Canada (ISC) awards funding to First Nations for research projects that gather baseline data on human health and the environment.
  - Cultural and spiritual health
  - Food safety and security
  - Soil quality
  - Land use / quality
- Chief George and Cote Council also matched the funding received by ISC

Cote Map


Hudson Bay
Canada
ALBERTA
MANITOBA
BRITISH COLUMBIA
SASKATCHEWAN
Edmonton
Cote First Nation Band Office
ONTARIO
QUEBEC
Calgary
Winnipeg
Vancouver
NORTH DAKOTA
WASHINGTON
MONTANA
MINNESOTA
NB
PE
Montreal
SOUTH DAKOTA
WISCONSIN
MAINE
NOVA SCOTIA
VT
OREGON
IDAHO
MICHIGAN
Toronto
NH
WYOMING
NEW YORK
MA
Boston
IOWA
Chicago
NEBRASKA
RI
ILLINOIS
OHIO
PENN
New York
NEVADA
United States
INDIANA
UTAH
COLORADO
KANSAS
Washington
MISSOURI
WEST VIRGINIA
San Francisco
KENTUCKY
VIRGINIA
CALIFORNIA
Las Vegas
OKLAHOMA
TENNESSEE
NORTH CAROLINA
ARKANSAS
Los Angeles
ARIZONA
NEW MEXICO
MISSISSIPPI
SOUTH CAROLINA
San Diego
Dallas
ALABAMA
TEXAS
GEORGIA
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Houston
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Cote First Nation History

- By 1870 the bison had disappeared on the prairies and the hunting grounds around Cote lands were being infiltrated by white settlers. Cote lands were cleared for farming.
- Treaty 4 territory consist of 34 different first nations. Gabriel Cote, who was head Chief of the Prairie Saulteaux in Saskatchewan signed the treaty in 1874.
- Today the Cote Reserve is 81 km^2 with an on-reserve population of 1,199 and a total population of 4,100.
- Cote school has 180 students learning a land based education, which includes the Saulteaux language.
- Cote runs 4 businesses on-reserve.



Cote Bison Herd

- In 2021 Cote was gifted a herd of Bison by Loko Koa with hopes that in 5 years Cote would gift a herd to another First Nation.
- Cote currently has 600 fenced acres of pastureland for the bison and the herd has grown from the original 2 bulls and 18 females to 73.
- Mānācītowin (bison)– symbolizes respect (7 sacred teachings)



Cote Bison Herd 2026 Update

- 14 calves born in 2025 and 15 calves born in 2026.
- In November 2026, Cote First Nation will gift 20 female bison and 2 bulls to White Bear Firs Nation.
- This transfer will help support the growth of the buffalo herd at White Bear First Nation and continue the tradition of sharing buffalo between communities



Goals of the Project

Short Term Objectives

- Document the current conditions of the lands;
- Engage Elders;
- Engage youth;
- Gauge the current health of the community; and
- Document the changes

Long Term Objectives

- Create employment opportunities within the community.
- Create economic opportunities within the community.
- Improve community health; and
- Incorporate the bison into the Yearly Youth Cultural Camp as traditional food, crafts, and cultural items.



Research Methodology

- Assessment of current environmental conditions
  - Desktop Ecological Study
  - Vegetation and Habitat Assessment
  - Soil sampling of pastureland
- Traditional Use Interviews
  - 4 sets of interviews with youth (grades 8-11) and elders. Survey questions developed by Tetra Tech and administered by the youth
- Online Community Survey
- Community Meeting / Supper
  - Present interim findings to community
  - Provide traditional foods



Youth / Elder Interviews

- First Interview session was March 28, 2024.
- Students were asked to write a 1 page paper on what they know about the Bison
- Some interesting findings from the interview:
  - Bison did not roam Cote lands, Cote were ‘bush Indians’ not plains Indians. Cote now 80% farmland
  - Bird numbers have decreased on reserve since the elders were young.
  - Several stories were told such as Nanabush and the mudhen and others about the White Buffalo.
  - Elders talked of the distractions today and that the youth need to have the heart to learn



Youth / Elder Interviews

- Second Session was June 17, 2024
- Survey questions were re-worked after first session
- Interesting findings
  - Wood ticks have increased dramatically since the elders youth
  - Lots of berries that used to be here are scarce now
  - In the elders youth most food came from the land, unlike today
  - Bison represent food and respect to the elders



Youth / Elder Interviews

- Third session was Oct. 5, 2024
- Some interesting findings from the interview:
  - In the elders youth food and other needs were communal. Trading didn’t occur.
  - Ceremonial grasses are harder to find now
  - Berry picking used to be a common job, not anymore
  - Bison are protectors, they have a gift, they give themselves to the people
  - Bison skulls and horns are used in ceremonies



Soil Sampling for Pesticides

- Soil sampling scheduled for 1 day.
- Team included Tetra Tech staff, project coordinator, lands manager, bison keeper, an elder, and 3 students
- Tetra Tech staff instructed everyone in proper sampling techniques and health and safety
- Elder and project coordinator instructed everyone about the land (animals, plants, stories)
- Lunch was a hot dog roast supplied by the community

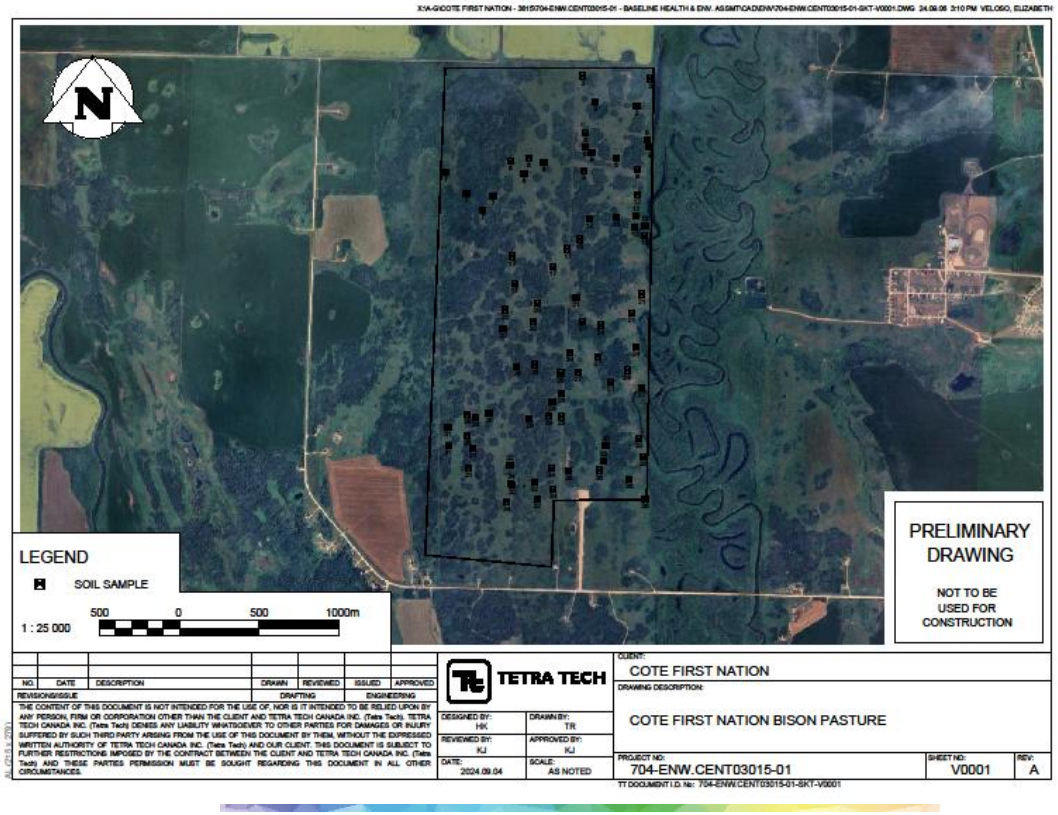






Soil Sampling for Pesticides

- Pasture was divided into 40 grids
- Soil samples were a composite of 5 samples per grid from a depth of 0-25 cm
- 18 composite samples submitted for Total Metals, Pesticides (incl. Phenoxyalkyl Acid, Organochlorinated, and Organophosphorus), PCBs, Herbicides
- No Pesticides, Herbicides, or PCBs were found above the detection limit.
- 5 composite samples had arsenic above the guideline and 2 had selenium above the guideline.



Habitat and Range Assessment

- A Tetra Tech Ecologist and Biologist performed a field visit on Oct. 3, 2024.
  - Included were 3 Cote members and 6 students
  - Drove around the pasture and stopped to assess plants, ask questions and listen to stories
  - Lunch was a wiener roast in the pasture.
- The pasture is beautiful native prairie, there's almost no invasive species (weeds) present.
- Some of the older pasture appears over grazed and is quite rocky







Habitat and Range Assessment

- Bison are known as “ecosystem engineers”.
- A variety of other wildlife species occur in the area and occupy the pasture alongside the bison.
- The bison fence does not restrict the movement of other wildlife
- Bison are provided hay and water to supplement them throughout the winter. Minerals are provided in the summer.
- Scattered amongst the grass, you can see the Buffalo Sage (silver plants). The taller plants in the forefront (not grasses) are goldenrod, which is traditionally used to make tea
- Buffalo don’t eat plants that are sacred to the people





Findings

- SETAC North America – October 2024
- SustainTech – March 2025
- Community Engagement Session July 31, 2025
  - Get students to speak on their experience
  - Give preliminary findings from knowledge gathering
  - Provide meal with traditional foods
- Final Report submitted to ISC in September 2025



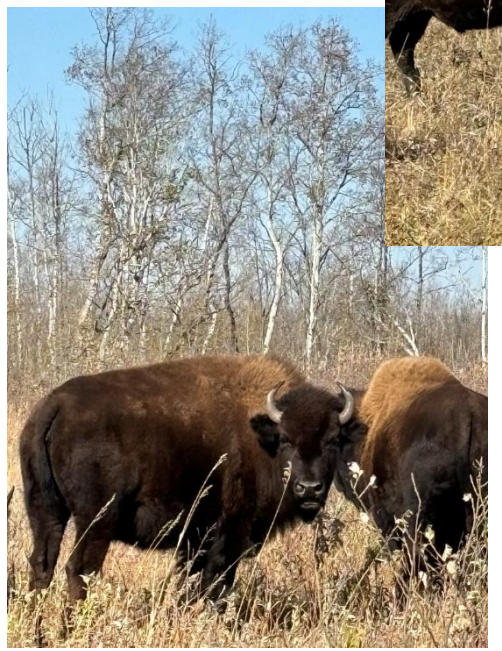




Other Notable Findings to Date

- Community feels diabetes, drug use, and mental health issues are biggest overall health concerns currently
- Elders all talk of going back to more traditional ways to improve health.
- Since the establishment of the bison pasture Cote is seeing animals coming back to the land: moose, elk, bears
- There are seven sacred teachings or sacred animals: the bison, bear, wolf, sasquatch, turtle, eagle, and beaver. With the introduction of bison, all seven sacred animals are now present on Cote lands.





Final Thoughts and Looking Ahead

- The growing herd at Cote First Nation demonstrates the importance of maintaining healthy pasture and responsible herd management. The buffalo project supports food security, land stewardship, cultural revitalization, education, and economic development. It also provides opportunities for Youth and Elders to participate in traditional teachings and reconnect with the cultural importance of buffalo.
- Looking ahead, Cote First Nation will continue to focus on maintaining healthy pasture, responsible herd management, and developing the infrastructure and resources required to support a sustainable buffalo operation. The continued growth and sharing of the herd creates opportunities for cooperation with other First Nations and helps strengthen buffalo restoration and stewardship across Indigenous communities.



Questions?