

a little background...



TEK & TECH



TRIBAL GEOSPATIAL SYSTEMS

ERIC KERNEY

NHBP





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a little background...



myself



400 Years



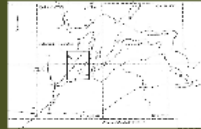
1620

Contact - Huron River Basin



1797

Treaty Era - Land Cessions



1821

Nottawaseppi Reserve



1840

Removal and
Pine Creek Settlement



1904

Taggart Roll Established



1940's

Dispersal Era - Post War Years



1995

Re-Affirmation



2008

Pine Creek Reservation in Trust

FireKeepers Casino Opens



2009

FireKeepers Hotel & Event Center Opens



2012

Government Center Completed



2013

Waseyabek Economic Development LLC

2014

Environmental

NATURAL RESOURCE ACCESS

Inventory and mapping of natural resources on NHBP Lands & Waters to enhance citizen access to prime wildlife viewing, gathering and hunting areas. Continual restoration of marginalized landscapes to protect and expand habitats for threatened bird and turtle species. Expansion of canoe and kayak fleet, including 24 foot historic explorer canoe, which can hold up to 10 Members for lake and river excursions.

ENVIRONMENTAL PROTECTION

ANEMOWEN - AIR

The NHBP Air Program focuses on monitoring and reducing air quality. Our efforts have been to test all Tribal government buildings and homes for radon gas, and to improve those that show elevated levels. As of 2022, we have tested over 100% of Tribal government buildings, and reduced average radon levels to 3.5 pCi/L. We are still working to improve several homes for radon gas.

AKIWIEN - LAND

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WILDLIFE

The Wildlife Program aims to improve habitat for fish and wildlife through a culturally appropriate approach to resource restoration. The first portion of a stream management plan for the Pine Creek Reservation has been completed, with a focus on wetlands and riparian development. A staff member and Wildlife Coordinator, Jordan Parker, manages species inventories, native plant propagation, and habitat mapping. We are committed to ensuring the health of the native ecosystems on Tribal lands.

MISSION STATEMENT

The Nottawaseppie Nation Band of the Potawatomi Indian Reservation is committed to the protection, enhancement and restoration of the Tribe's environmental, natural and cultural resources. We remain dedicated to achieving the community goals related to natural resource conservation through direct interaction with the community, including participation with the TNC. We will continue to recognize the inextricable bond between traditional Potawatomi people and the environment, and to incorporate culture and history in our activities in 2025.

COMMUNITY PROGRAMS

MNOMEN

Cultivate the recovery and scientific understanding of mnomen, a highly important ecological and cultural foundation for our Tribe.

Through surveys of remaining wild rice have been conducted, traditional rice camp has become a yearly routine, and a mnomen restoration plot was established on the Pine Creek Reservation.

ZISBAKWET

Botwevami people have been tapping sugar maple trees when the snow melts, to produce golden syrup from sap for many generations. Zisbakwet has been an important connection both to spring awakening and to our culture. With the Environmental Department as steward since 2017, this long-held practice has returned to Tribal Lands.

Harsh's brother has become one of the more popular artists based on the Reservation. A Gita's Grandmother was adopted in 2020, which has allowed us to increase capacity to over 40 gallons, depending on the season. A large collection was made in 2023, and the installation of a new community tribute sugar shack facility.

KALAMAZOO RIVER OIL SPILL

In July of 2020 the Kalamazoo River NE Pipeline ruptured in a wetland area near Marshall, Michigan, spilling up to 3 million gallons into Kalamazoo Creek and the Kalamazoo River. Heavy rains caused the oil to travel 26 miles downstream and settle in large areas of the floodplain. While the spill did not occur on our Tribal Lands, many of our Members live on or utilize the River, and its within one mile of Firekeepers. NHBP has been recognized as a Trustee for the Natural Resources Damage Assessment and Recovery (NRDAR) process, and we keep the community informed through local Shawishvake gatherings. The spill has heightened our pipeline awareness and we are taking steps to become more resilient to future pipeline releases.

CAREER PATHWAYS

The Environmental Department strives to create and maintain environmentally related career paths for Tribal Members. Pathways include job training and job fairs in the sciences, staff shadowing, and assisting in the Youth Loan Work Program. The also explores ways to provide financial support to students through the creation of scholarship opportunities, particularly during the summer field season. Several of our Members working as seasonal Environmental employees have progressed into professional careers with the tribe and other employers.

Tribal Environmental Advisory Committee

The mission of the Tribal Environmental Advisory Committee (TEAC) is to support the protection of the Nottawaseppie Nation Band of the Potawatomi's natural resources, including water, land, air and wildlife. TEAC recognizes the high value the Tribe places on its natural resources, and understands the delicate balance between land use and natural resource protection. TEAC operates in tandem with Reservation Recycling, Wild-Rice Camp, 10 Gaksh (Earth Day), Pollinator Garden Planting, the Wabegon Tribal Environmental Games (WTEG), and is co-hosting a Tribal National Air Quality Conference.

HUNTING & GATHERING

The Nottawaseppie Nation Band of the Potawatomi has a long history of hunting and gathering. Hunting and gathering is a highly important aspect of our culture and a highly important aspect of our economy. The Nottawaseppie Nation Band of the Potawatomi has a long history of hunting and gathering. Hunting and gathering is a highly important aspect of our culture and a highly important aspect of our economy.

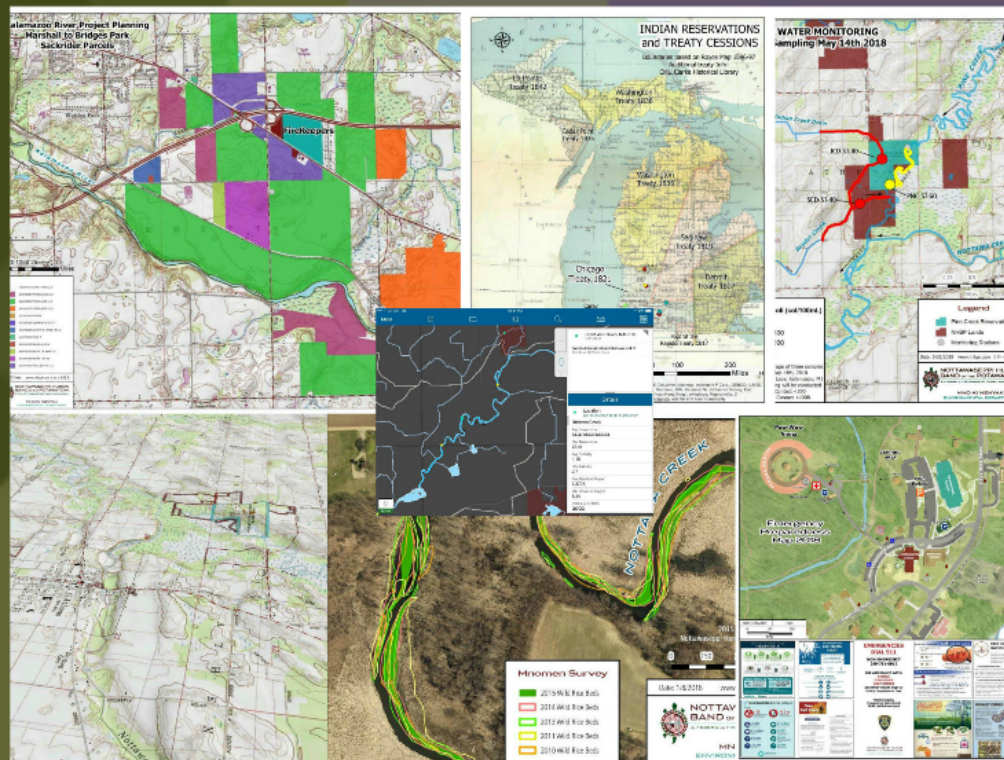
TRIBAL AGRICULTURE

The long-term goal of the Tribal Agriculture Program is to enhance and strengthen the membership of the tribe's economy. The tribe's agriculture program is a highly important aspect of our culture and a highly important aspect of our economy. The tribe's agriculture program is a highly important aspect of our culture and a highly important aspect of our economy.

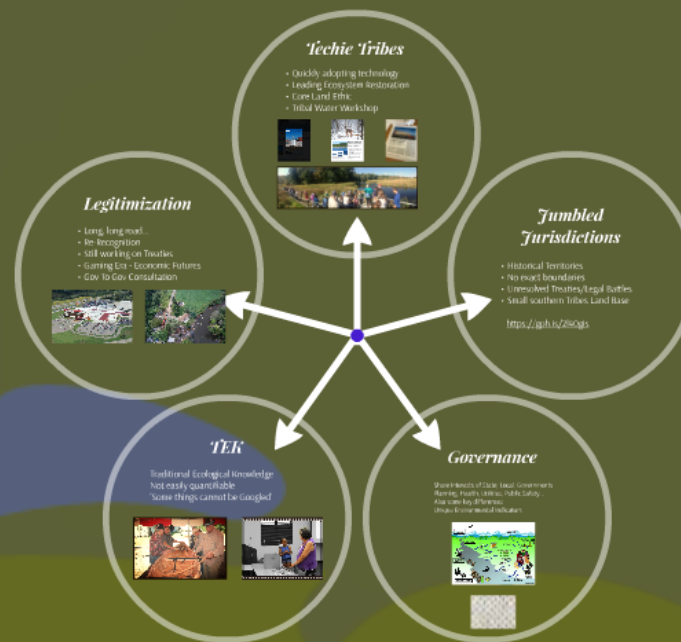
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N'HBP GIS



TEK & TECH





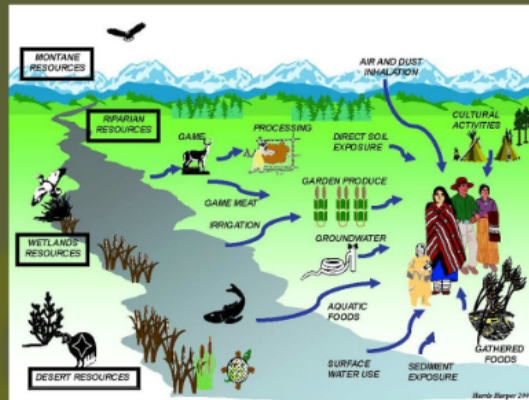
Fumbled Jurisdictions

- Historical Territories
- No exact boundaries
- Unresolved Treaties/Legal Battles
- Small southern Tribes Land Base

<https://gph.is/2l40gis>

Governance

Share interests of State, Local, Governments
Planning, Health, Utilities, Public Safety...
Also some key differences
Unique Environmental Indicators



TEK

Traditional Ecological Knowledge
Not easily quantifiable
'Some things cannot be Googled'



Legitimization

- Long, long road...
- Re-Recognition
- Still working on Treaties
- Gaming Era - Economic Futures
- Gov To Gov Consultation



Techie Tribes

- Quickly adopting technology
- Leading Ecosystem Restoration
- Core Land Ethic
- Tribal Water Workshop



Improving Analysis

Four years of aerial imagery since 2011
Partner with local County GIS
Four band imagery vegetation sensing
Contracted drone images
<https://gph.is/2MjDgbA>



NIBI WATER



<https://bit.ly/2ISQTRG>
WQAR

NIBP, NIBI WATER MAP

- Accessible Maps and Info
 - Outreach to Community
 - Non-GIS Staff Users
- <http://nhbpi.com/members/environment/>



Mnomen (aka wild rice)

- State threatened *Zizania aquatica*
- Driving component of GIS/GPS
- Annual Plant - Annual Surveys
- Funded aerial imagery acquisition



Rice Restoration

- Know before it can grow
- Test site Proof-of-Concept
- Low/High Tech
- Watershed specific
- Genetic Survey
- Wild Rice Collection App



GIS

Applications

- Began as very basic GIS
- BIA ESRI License Agreement(!)
- Leadership Utilization
- Consumer grade to Pro



GIS

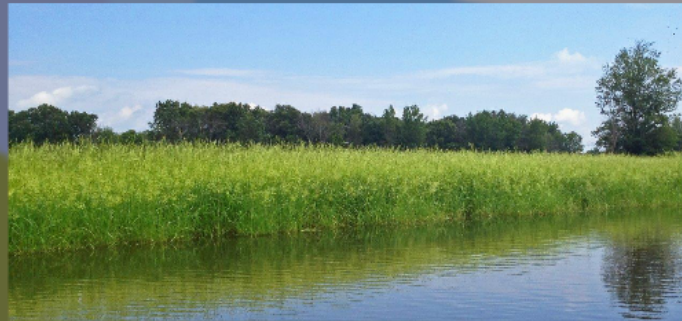
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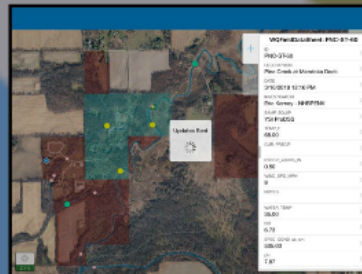
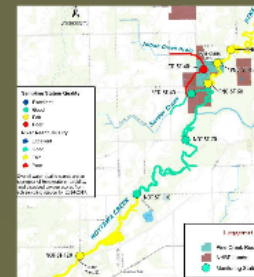
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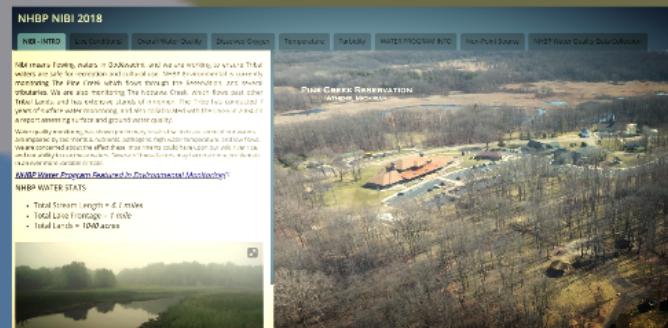


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Telling Our Story

Long-Term Monitoring

Continuous Water and Weather Data
Interconnected Sensors, Live Data
Current conditions mapping

DRONES!!!



- Habitat Life Program
- Duckwater Restoration
- Duckwater Conditions
- Program Capacity Building
- Data - GIS
- Data Creation to create possibilities



Long-Term Monitoring

Continuous Water and Weather Data
Interconnected Sensors, Live Data
Current conditions mapping

DRONES!!!

Mapping A Living History



- NHBP UAV Program
- Document Restorations/
Environmental Conditions
- Program Capacity Building
- Drone -> GIS
- New Drones & sensor possibilities



Contin
Interco
Curren

DRONES!!!

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Mapping A Living History

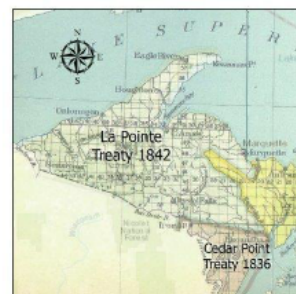
Tribal History & Culture Incorporation

and Century
Identity



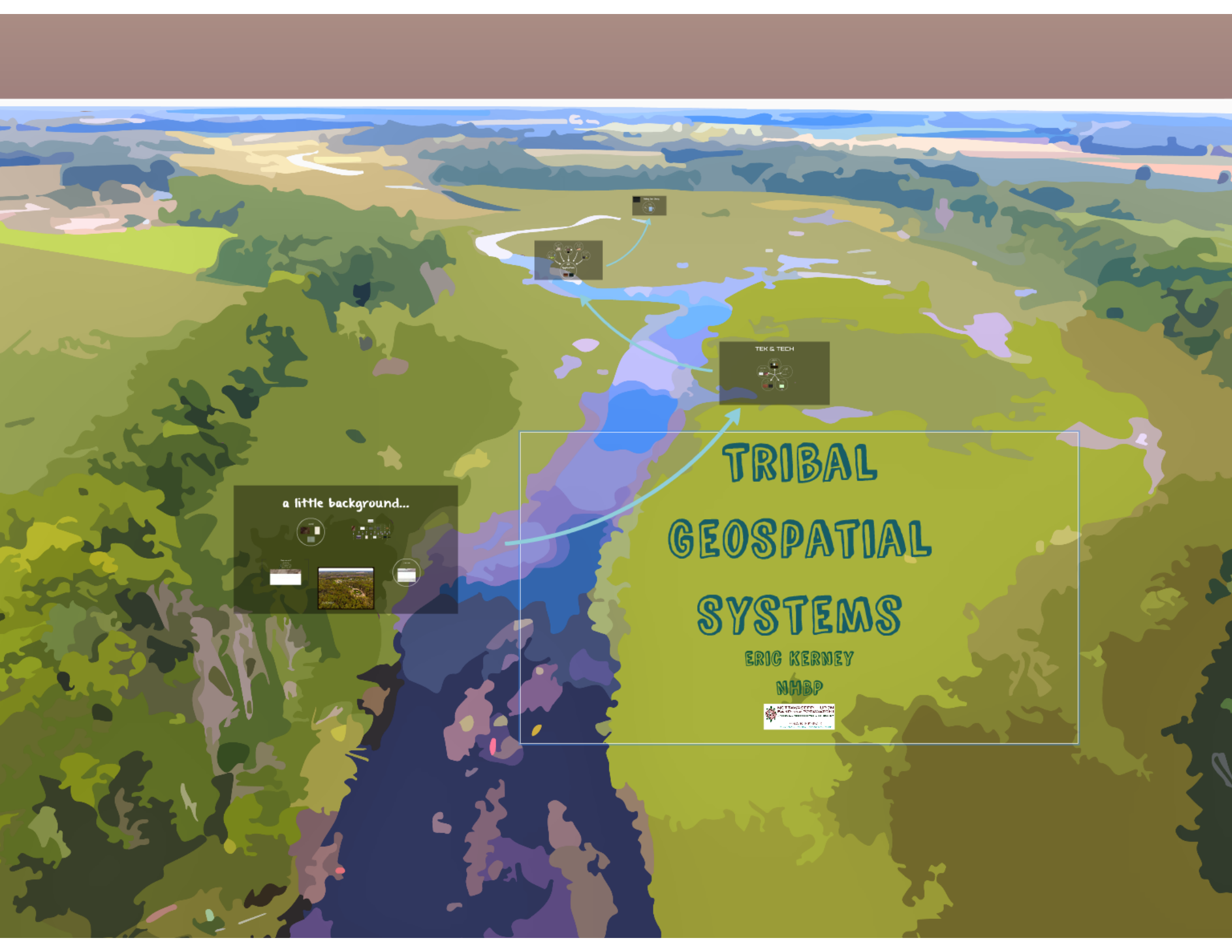
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21st Century
Identity



21st Century Identity





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