

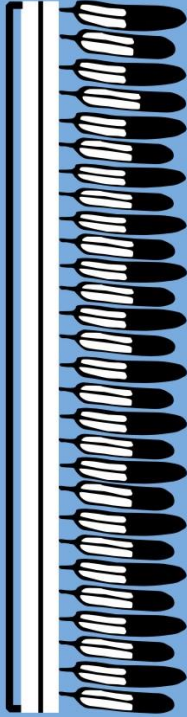
Blackfeet Nation Fisheries Program



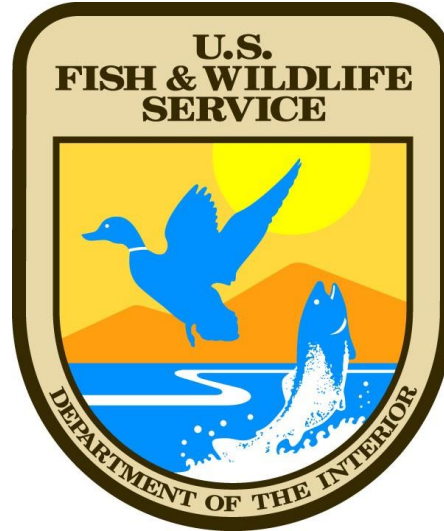
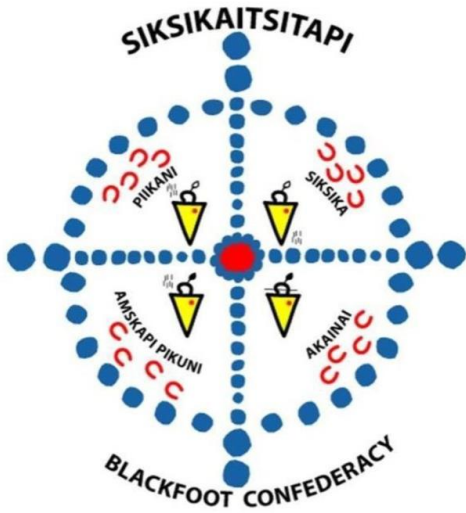
Jeremiah North Piegan - Blackfeet Fish and
Wildlife Department



Welcome

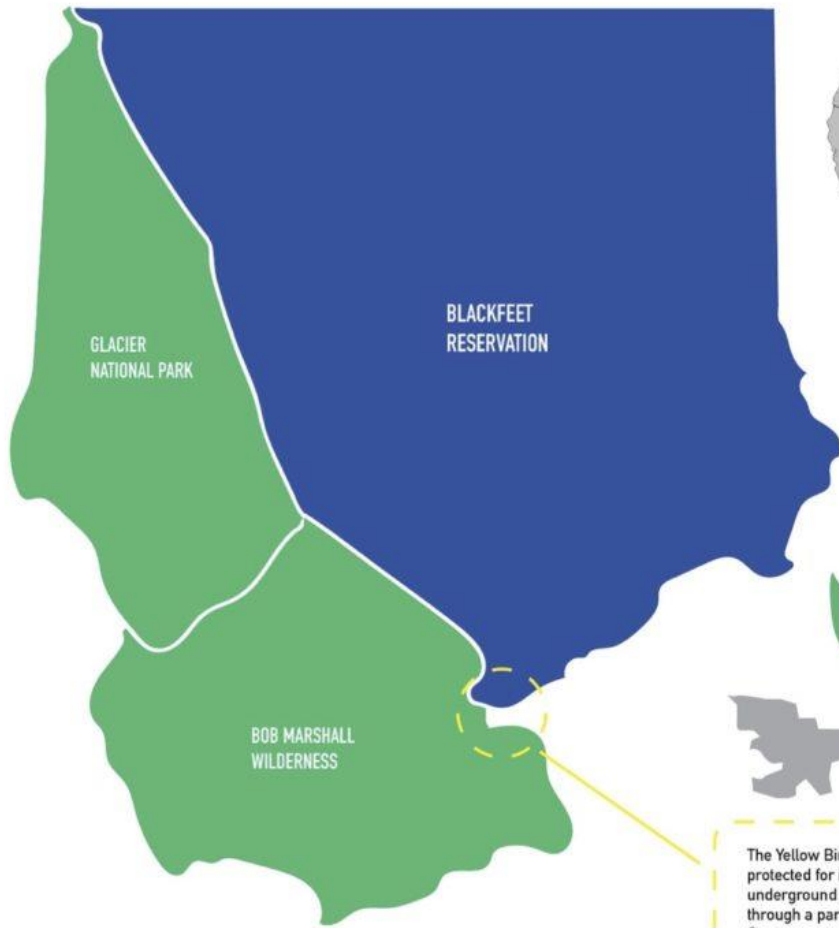


Collaborators



Collaborators

- USFWS
 - Jim Mogen
 - Andrew Gilham
 - Josh Milten
 - George Jordan
 - Glacier National Park
 - Chris Downs
 - Jonathan Mccubbins
 - USGS Northern Rocky Mountain Science Center
 - Clint Muhlfeld
 - Vin D'Angelo
 - Blackfoot Confederacy
 - Siksika Nation (CA)
 - Kainai Nation (CA)
 - Piikani Nation (CA)
 - Amskapi Pikuni
 - Elliot Fox
 - Montana FWP
 - Ryan Kovach
 - Alex Poole
 - Katie Vivian
 - University of Montana
 - Steve Amish
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The present reservation is bordered by Glacier National Park to the west and Canada to the north and spans 1.5 million acres.



Over 50% of all known native plants, amphibians, and reptiles within the state are present on the Blackfeet Reservation.

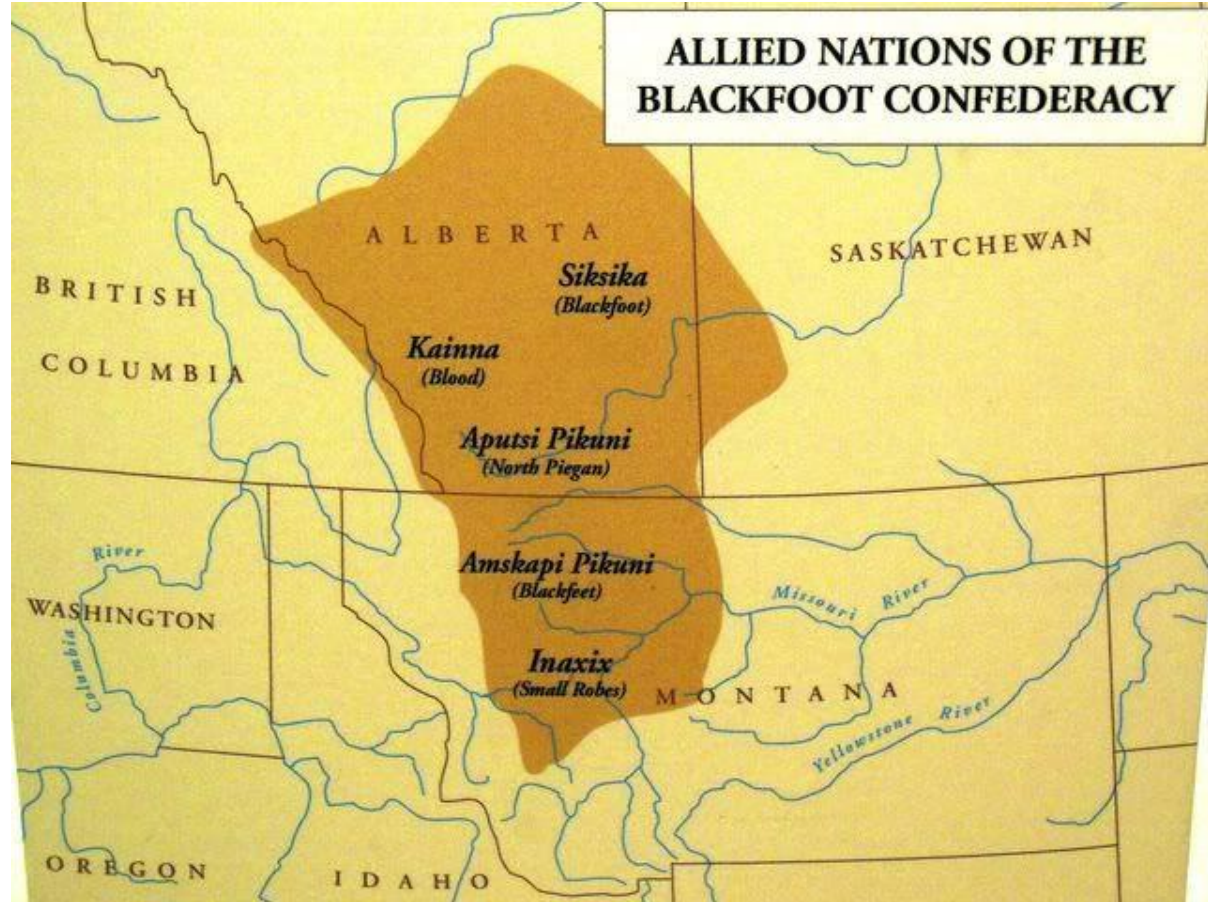


In 1895, the Tribe sold 800,000 acres west of the current reservation; lands that would form the eastern half of Glacier National Park in 1910.

The Yellow Bird Woman Sanctuary is an area protected for its biodiversity and unique underground water system. It was created through a partnership with the Nature Conservancy and is the first on-reservation land trust in the United States.

Blackfoot Confederacy

- Aboriginal Territory
 - Boundaryless
 - Deep Rooted Connection
 - Original “Scientist” and Stewards of this land
- Greatly value having A Tribal Led Project
 - In this for the right reason
 - Not looking for personal accolades
 - For the tribe and the environment



Blackfeet Waters/Fish

- Overlooked
 - Some of the best and unique fisheries in the world
 - 512 Miles of Streams
 - 182 lakes (11,102 surfaces acres)
 - Native Fish
 - Westslope Cutthroat
 - Bull Trout
 - Mountain Whitefish
 - Lake Whitefish
 - Lake Trout
 - Northern Pike
 - Burbot
 - White sucker
 - Continued
 - Longnose Sucker
 - Mountain sucker
 - Lake Chub
 - Trout-perch
 - Longnose dace
 - Pearl Dace
 - Sculpin
 - Non-Natives
 - Rainbow Trout
 - Brook Trout
 - Brown Trout
-

Introduction



Started Spring 2021

- Prospective
- Learn
- Revive the program (from early 2010s)
- What direction?

Progress

- Getting in contact
 - Internally within tribe and colleges
 - USFWS/GNP/MFWP/BFC
- Gathering/Ordering Equipment & Materials
- Funding

Introduction



Current

- Slow progress
- Attending meeting
- Value in our presence
 - Included in management decision
 - Collaboration
 - Training opportunities
- Many projects are on the horizon

Future

- Self-sufficiency
- Sustainable and strong program that will last _____ generations

Fixing damages of past mismanagement



- Fisheries managers of the past have caused a lot of the problems we have today.
- Ex. Dropping chemicals by the ton via airplanes
 - Killing native fish to benefit non-native fish introductions
- Introductions of non-natives
 - Competition
 - Hybridization
- Mismanagement of water
——resources

— Bull Trout

- Endangered Species
 - Since 1999
- Need the 4 C's in terms of habitat
 - Cold
 - Clean
 - Connected
 - Complex
- Threats
 - Climate change
 - Hybridization/non-Native Competition (Brook Trout)
 - Limited or poor habitat



St. Mary Bull Trout Studies 97'-Now

- St. Mary Bull Trout Population
 - Blackfoot Reservation
 - Glacier National Park
- 20 Plus years of studies and knowledge
 - Leader in Bull Trout Knowledge
- Little was known before
 - Population was thought to be extirpated with few individuals left

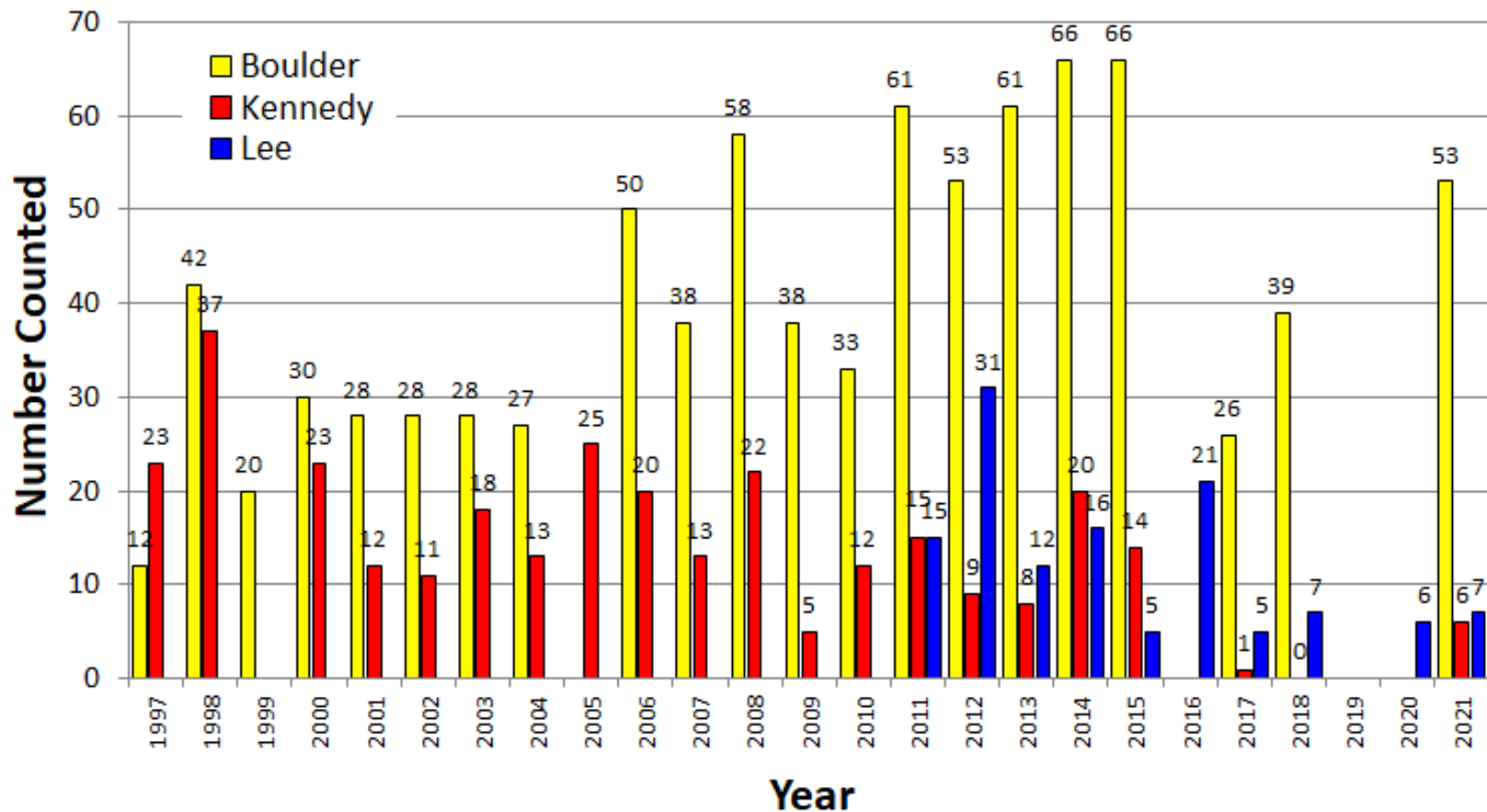


Redd Surveys

- Bull Trout “Nests”
 - Fall Spawners
 - Dig and Sort
 - Different Sizes to create upwelling
 - Provides aeration to eggs
- Used to get general population and distribution
 - Not full proof
 - Has to be done at the same stretch and at the same time each year

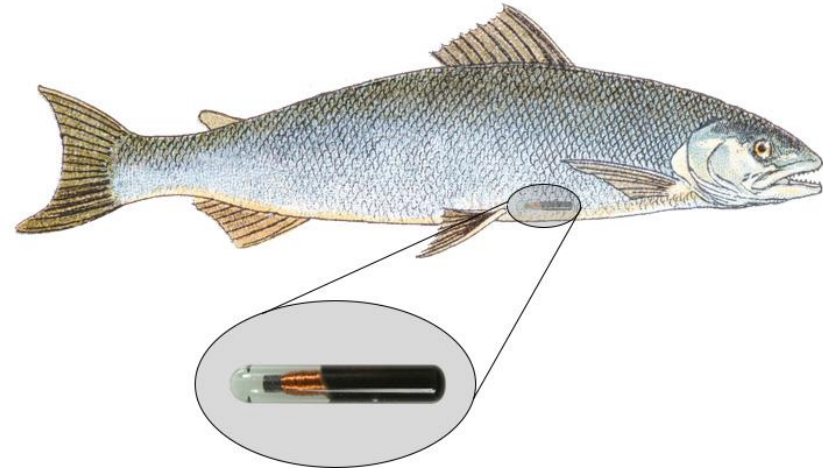
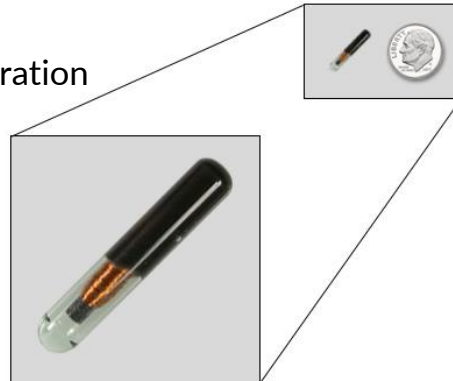


Red Counts



Pit tagging

- Electrofishing
 - Mark/Recapture
 - All species abundance and distribution
 - Cull out non-native species
 - Pit tagging
 - Negative effects
- Tell what specific fish that was
 - General age
 - Genetics
- Pit Array
 - Movement and migration



Pit array

- Antenna is laid across stream
 - Connected to a control box
 - Battery
 - Solar panels
- Show tagged fish that swim past
- Upstream and Downstream sites



Biggest Threats

- Management of water control structures
 - St. Mary Diversion Dam
 - Sherburne Dam
- Over 100 years the St. Mary Diversion dam has been in place
 - During the irrigation season native fish are sent down the canal with no way to re-enter the system
 - Thousands of fish are lost every year including hundreds of bull trout at times
- Considering the state of many native fish
 - Alarming
- A new diversion dam with a fish screen to divert fish back into the St. Mary River is being built in 2025
 - Long road to get to that point
 - Look at cumulative impacts
- Swiftcurrent Mitigation
 - Outlet of Sherburne Dam
 - During non-irrigation season the creek is left dry

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Swiftcurrent and St. Mary Diversion Canal Fish Salvage



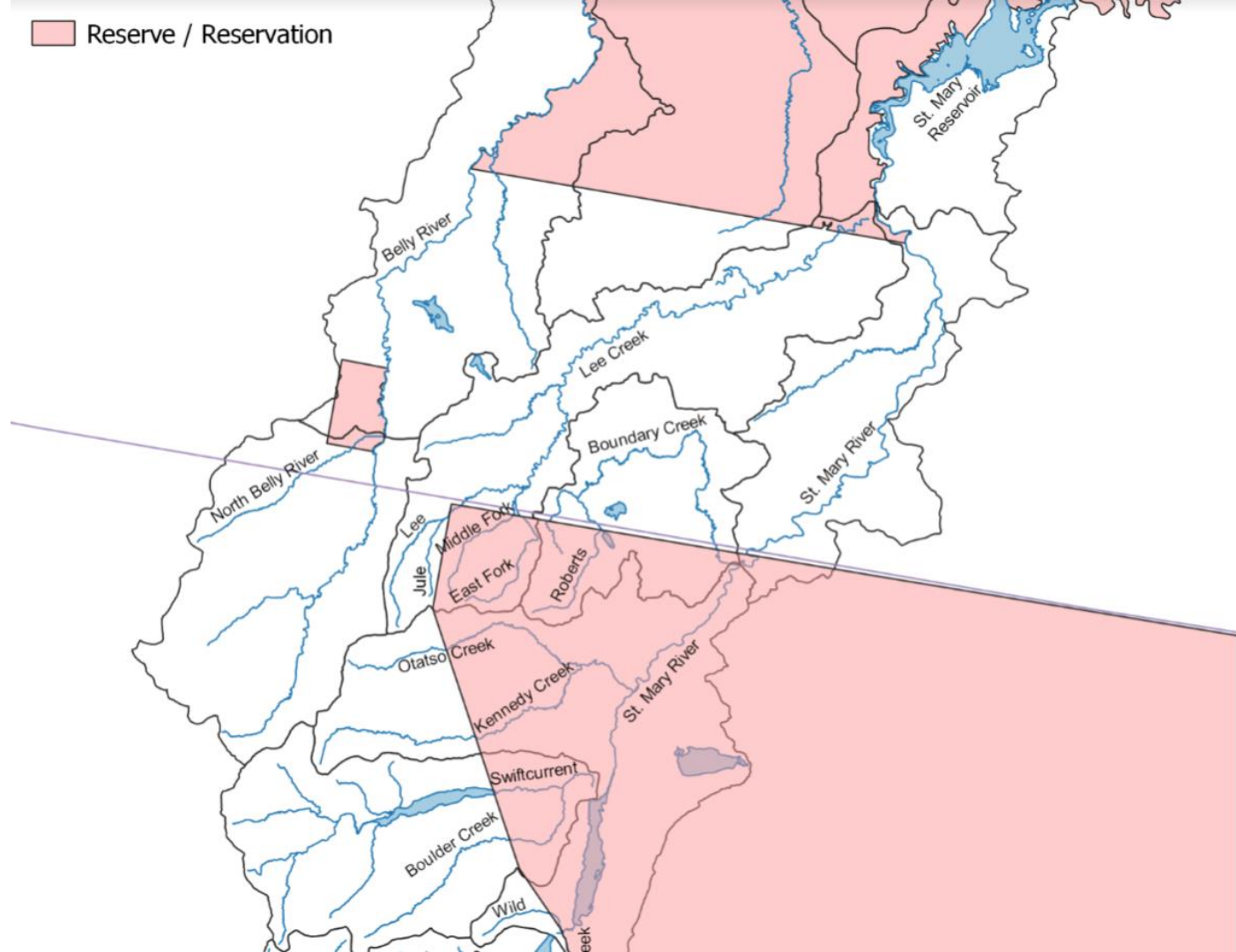
— West Slope Cutthroat

- Sensitive Species
 - Not listed in the US but are a Montana Species of Concern
 - Listed as threatened in Canada
- Dealing with small fragmented population
- Some of the last know pure populations of WCT
 - East side of the divide
 - Rare situations
 - Each population is unique



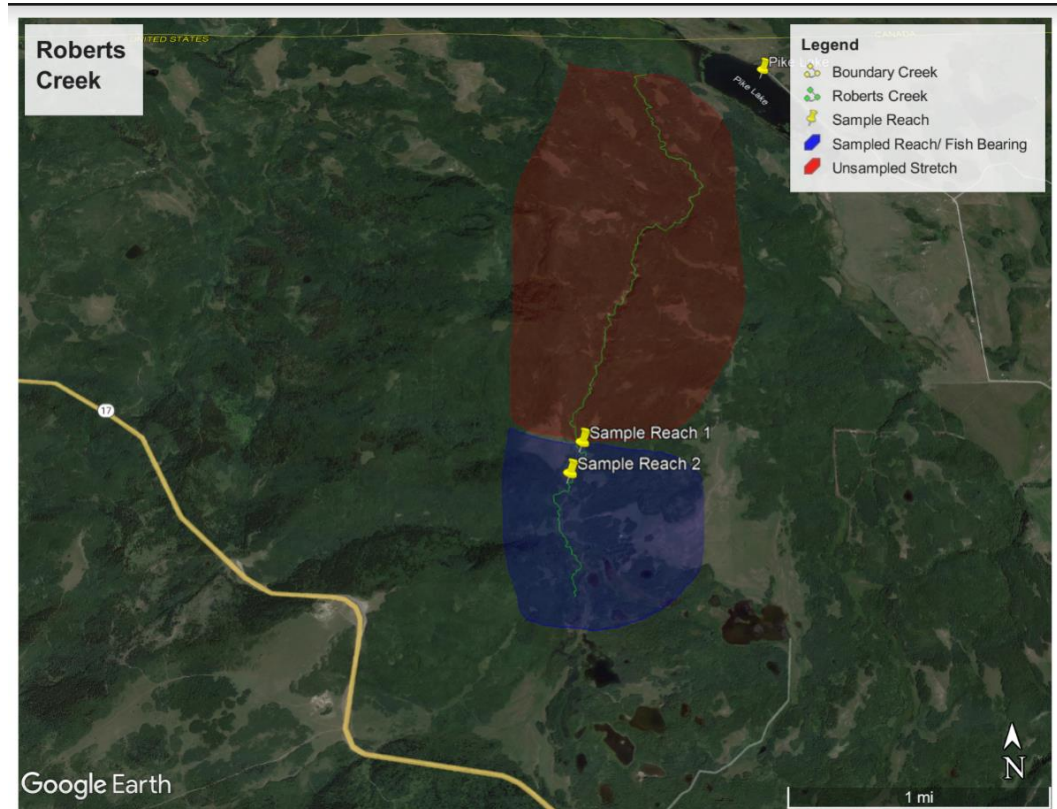


Reserve / Reservation



Roberts Creek

- One of last known non-hybridized populations
- More in depth study
 - Better understanding
- Secure and protect population
 - Restoration
 - Fencing
- Increase Pop Size
 - Genetic exchange
 - Translocation



Environmental DNA Sampling

- North End of Roberts Creek
 - Looking for rainbow trout eDNA
- Coldwind Creek
 - Trib to Boundary Creek
 - Close as you can get before entering canada
 - Took a samples on the CA side
 - Previously unnamed
 - Local Name (trout creek)



Blackfoot Led Transboundary Native Trout & Habitat Recovery Supporting Bison Reintroduction

- Goals
 - Improve knowledge of population genetics
 - Study feasibility of recovering population
 - Population monitoring
 - Limit spread of non-natives
 - Restore populations



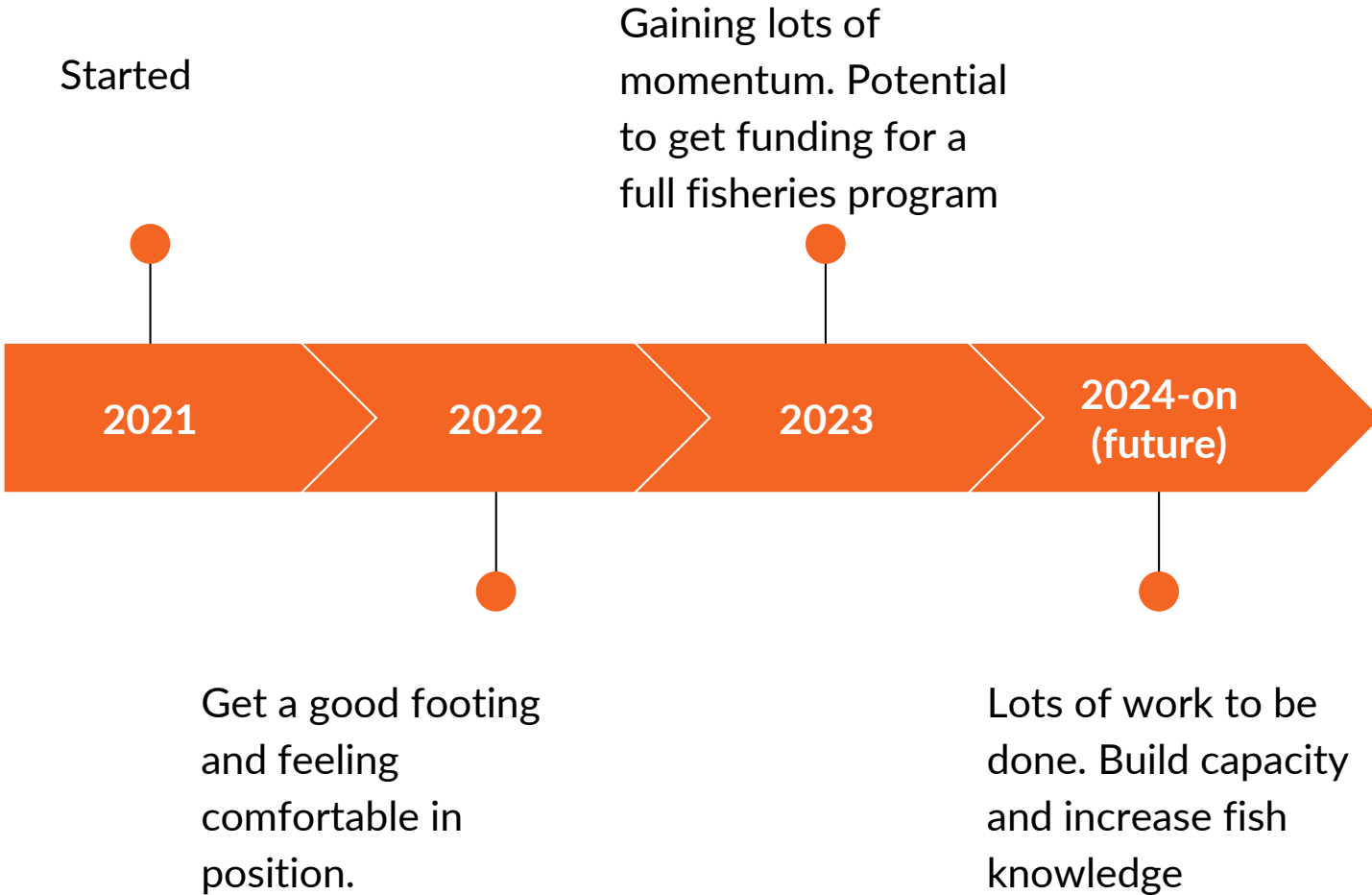
Habitat/Fish Passage & Connectivity

- Start with the Basics
- Learn & Adapt a Plan
- Beaver Dams
 - Non-lethal management
 - Beaver have great cultural significance
- Culverts
 - Fish Passage
 - Cutthroat/Bull Trout in pools



Recreational Fisheries





Pre/Post Bison Fish Monitoring

- Rare and Unique Situation
 - Return Bison Relatively Soon
 - Moving away from cattle.
 - Have baseline data on cattle grazing
 - *“Relationship Between Intensity of Livestock Grazing and Trout Biomass in Headwaters of East Front Rocky Mountain Streams, Montana” - Andrew Gilham*
 - Look into what we want to know?
 - Lots of Unknown
 - 100 plus years since buffalo have been here
 - Play a key role in the system
 - Impacts
 - Mitigation
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Overall Goals

- Use these projects to build a fisheries infrastructure
 - Establish long term goals
 - Build capacity
 - Education and training opportunities
 - Continue to work and co-manage with neighboring agencies
 - Technical Working Groups
 - Collaborating
 - Meetings
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