

Research on Tribal Lands- Unique Examples



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Eastern Band of Cherokee Indians

Cherokee Fisheries and Wildlife Management

We adaptively manage >19 projects:

Conservation Target	Current Phase	Future Phase- Annual Plan
Bear	Inventory	Management
Bats	Monitoring & Management	Research
Stream Fish	Inventory	Monitoring
Wild Trout	Inventory	Continued Inventory
Redhorse Assemblages	Inventory	Research
Sicklefin Redhorse	Restoration & Research	Continued R&R
Hellbender	Inventory	Continued Inventory
Wild Turkey	Inventory	Continued Inventory
White-tailed Deer	Management, Research & Restoration	Continued M & R
Wild Hog	Management & Research	Continued M & R
Elk	Management & Research	Continued M & R
C. N. Flying Squirrel	Inventory & Management	Monitoring
Migratory Birds	Inventory	Monitoring
Amphibians	Inventory	Continued Inventory
Forest Management	Inventory & Management	Continued I & M
Early-successional Habitat	Management	Continued Management



Who Are Tribes?

Tribes Recognized by the United States Bureau of
Indian Affairs

574 **federally recognized** Native American tribes



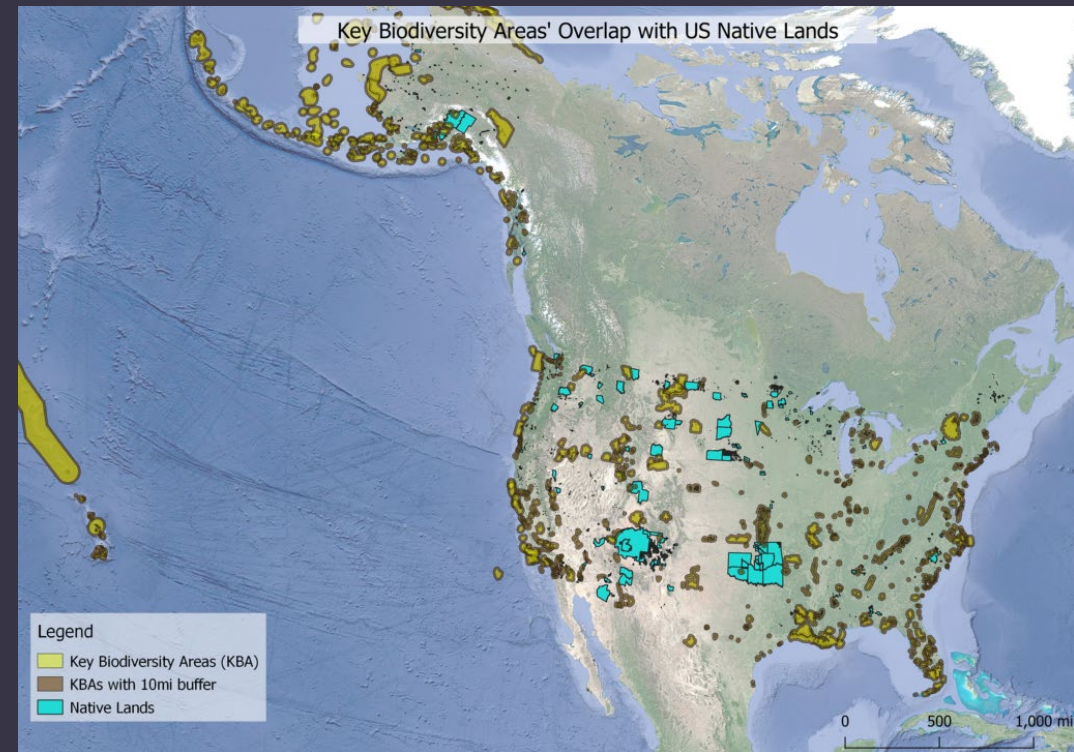
How Is Natural Resource Management Different for Tribes?

Sovereignty



*Native American Liaisons and National Conservation Training Center officials meet in 2017.
Credit: USFWS*

Land “Ownership”



“while tribal lands make up 2.6% of the United States, they overlap with 12% of Key Biological Areas.” Native Land Information System

Inequalities Exist



Financial

- **Internal Funds:** Some have great economies while others don't have the resources to generate funds. 25% poverty rate- 3 times that of Euro-Americans- attributed to geographic isolation and generational trauma.
- **Federal Conservation Funds:** Conservation related funding for management and research is limited to competitive Tribal Wildlife Grants and funding from BIA. States benefit from excise taxes and non-game funds from Wildlife Action Plans- both of which tribes often contribute to but do not benefit from.

Poor Representation

- **Academic:** 41 Tribal Colleges- only a few with biological degrees and none are research focused programs.
- **Research & Management Capacity:** nationally- 0.7% fish and wildlife biologists are tribal citizens and tribes have an average of 1 biologist and 2 technicians to manage all wildlife and fish. Contrast with states and federal parks that have an army of biologists- many focused on single species.

The result-- Beholden to Partnerships or risk mismanaged resources under federal restrictions

Scenarios

A Tale of Two Martens

1. Survey for impacts based on federal protections.
2. Researching a species on tribal lands.



Pacific marten (*Martes caurina*)

Role of The BIA



BIA is responsible for 68.5 million acres of trust lands

- NEPA Processes
 - ESA
 - Clean Air Act
 - Clean Water Act
- Federal Agencies must consult tribes prior to actions- i.e. timber removal, construction, and provide consultation to tribes
 - On trust lands, tribes must work through the federal process for actions that might influence federally listed species. Regulatory Processes

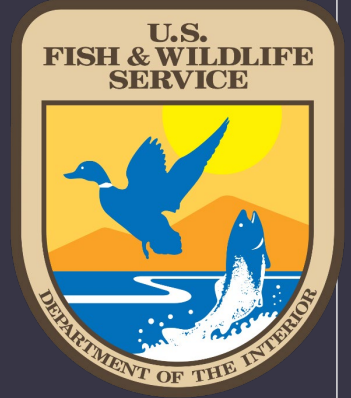
More than Management and Research-- Tribal Lands end up managed like Federal Lands except People are trying to live there.

BACKGROUND

Section 7(a)(1) ENDANGERED SPECIES ACT

“ensure that **federal agencies** act out programs for the conservation of endangered species.”

Section 7 of the Act, called "Interagency Cooperation," is the mechanism by which Federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species.



Extinct Endangered Threatened Delisted



Secretarial Order 3206

“Strives to ensure that Indian tribes do not bear a disproportionate burden for the conservation of listed species, so as to avoid or minimize the potential for conflict and confrontation.”



HOW DO WE ENSURE THIS?

How do we alleviate the burden of regulatory compliance costs on tribal citizens?



Secure
funding



Hire a
specialist



Stakeholder
input



Plan

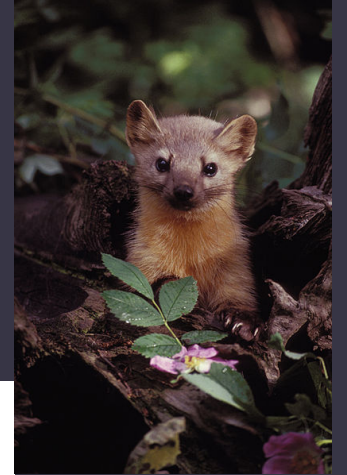


Execute
plan

Programmatic Process

Research on Tribal Lands

Traditional Perspectives



Traditional knowledge (TK)	Scientific ecological knowledge (SEK)
Abstract	Concrete
Qualitative	Quantitative
Inclusive	Exclusive
Intuitive	Intellectual
Holistic	Reductionist
Spiritual (social values)	Clinical ("value free")
Coexistence	Control
Diachronic (long time series and place oriented)	Synchronic (short time series and broad generalities)
People are part of nature (reciprocity)	People apart from nature (competition)
Communal knowledge based on insights collected by practitioners (transferred generation to generation)	Individual knowledge data collected by specialists/ researchers (shared by publication)

Adapted from Berkes 1993.

Problems of Research on Tribal Lands

Western Science Or “Settler Colonial Science”?

Invasive

Paternalistic

Extractive



Pandering for
Broader Impacts



How do you combat settler colonial scientific processes?

Co-production of Knowledge

Contribution of multiple knowledge sources and capacities from different stakeholders, based on respect and working on an equal footing, with the goal of co-creating information to inform environmental understanding and decision-making (adapted from Lemos and Morehouse 2005).

Animal Care and Use Process is expensive \$\$

*Native American Liaisons and National Conservation Training Center officials meet in 2017.
Credit: USFWS*



Co-production ≠ Collaboration: higher level of transparency. Locus of power, knowledge, project decision-making, project benefits, and project finances are shared equally from the outset of a project.

STATEMENT FROM CULTURAL IRB OF THE EASTERN BAND OF CHEROKEE INDIANS

January 18, 2012

Things to Consider before proposing a research project on the Cherokee Qualla Boundary:

Before initiating a research project on the Qualla Boundary, please be mindful that it needs to be performed with an attitude of respect toward the community. It must come from a sense of integrity due to the community and its members regarding their lives and history. Not all inquiry is unwelcomed, only that which disregards the following guidelines.

The EBCI Cultural Research Committee does not accept any research projects dealing with traditional medicine or religious practices. Such information is not deemed appropriate for dissemination outside of the tribe.

Acquisition of traditional knowledge is not considered a right, but a privilege. An attitude of entitlement will not benefit a researcher and may appear to constitute exploitation.

Are you providing a desired service? The Cherokee concept of *duyuktai* is about balance. Any research project requires the taking of informant's time, knowledge, and experience. It is imperative that the researcher's project is of benefit not only to the informant, but to the tribe as a whole.

Few tribal members are impressed by titles or degrees. Tribal members will judge a researcher on their character, and especially their motives for conducting research.

The success of any research conducted with tribal members is dependent on the relationships built with people within the community. Please keep in mind that some tribal members are not receptive to any form of research or researchers.

Reference Materials

Mason L, White G, Morishima G, Alvarado E, Andrew L, Clark F, Durglo Sr M, Durglo J, Eneas J, Erickson J, Friedlander M. Listening and learning from traditional knowledge and Western science: A dialogue on contemporary challenges of forest health and wildfire. *Journal of Forestry*. 2012 Jun 29;110(4):187-93

Statutes, A., State and Tribal Wildlife Grants. 2021

U.S. Fish and Wildlife Service Tribal Wildlife Grants Provide Opportunities for Partnerships in Conservation of Shared Natural Heritage, Cultural Priorities. Press Release. Oct. 2021. U.S. Fish & Wildlife Service- Conserving the Nature of America.

Lemos MC, Morehouse BJ. The co-production of science and policy in integrated climate assessments. *Global environmental change*. 2005 Apr 1;15(1):57-68.

Durose C, Richardson L. Designing public policy for co-production: Theory, practice and change. Policy Press; 2015 Nov 11.