EPA's Environmental Justice Webinar Series for Tribes and Indigenous Peoples:

Adapting to Climate Change Tribes and Indigenous Peoples Adaptation Plans

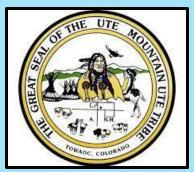
January 25, 2024

U.S. Environmental Protection Agency

Office of Environmental Justice and External Civil Rights

Webinar Agenda

- > Introductions
- > Webinar Logistics
- > Tribal and EPA Presentations
- > EPA OEJECR Updates
- > Q & A Remaining time till 4 pm ET



Margie Connolly

Tribal Presenters

Climate Adaptation Plan Team
Ute Mountain Ute Tribe



Kenneth Weitzel

Natural Resource Specialist
Central Council Tlingit
& Haida Indian Tribes of Alaska



Brett Ramey
Climate Resilience Planner
lowa Tribe of Kansas and
Nebraska

U.S. Environmental Protection Agency 3

EPA Presenters

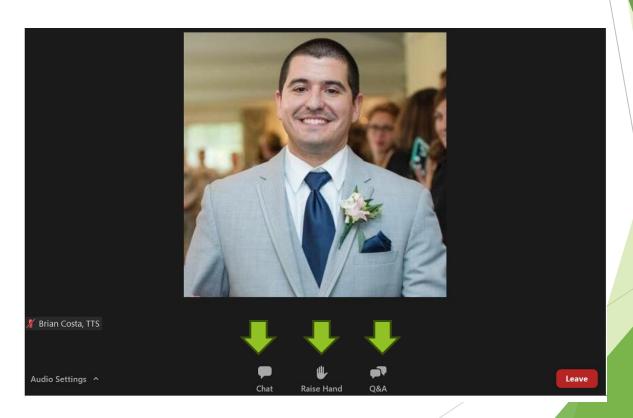


Viccy Salazar
Climate Adaptation Policy Advisor
U.S. EPA Office of Policy



Aren Wang
Intern
U.S. EPA Office of Environmental
Justice and External Civil Rights

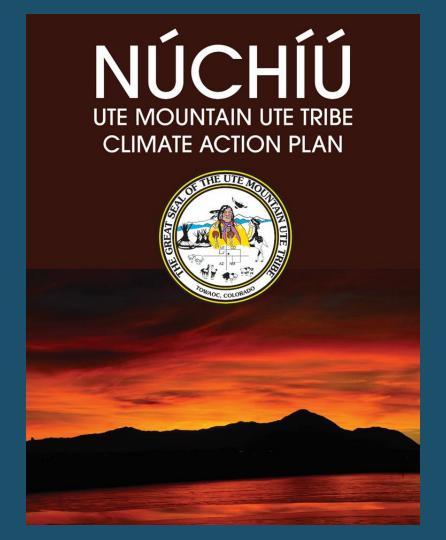
Webinar recording and slide deck will be posted to <u>EPA's EJ Webpage</u>



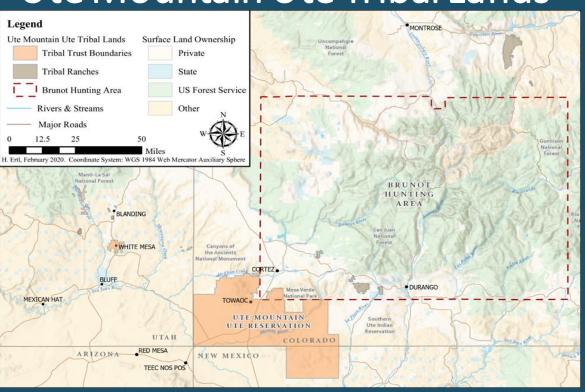
Margie Connolly

Climate Adaptation Plan Team

Ute Mountain Ute Tribe



Ute Mountain Ute Tribal Lands



Why did the Ute Mountain Ute (UMU) Tribe start a climate change program?

Elders asked natural resource managers questions like, "What happened to winter?" "How come it doesn't snow like it used to when we were kids?"

Community members were observing:

- Warming temperatures during all seasons
- Less precipitation
- Long-term drought conditions
- Changes in seasons
- Diminishing rangelands and increasing invasive species



Why Create a Climate Action Plan?





The Climate Action Plan addresses the health and livelihoods of the community members.

Summer is now "k'túrúchí" (too hot)!

"The old people went by the weather. The climate has really changed. You expect heat in summer; winter is cold. That's how I grew up. Winter was long back then. The snow no longer comes in October. Sometimes, we don't have snow in December. It used to snow into April. A long time ago it used to rain a lot and we played in the mud. The frogs would come out of nowhere. We don't see that rain anymore."

~Ute Mountain Ute Elder

The climate in this region has warmed 2 degrees Fahrenheit (°F) in the last century. By the middle of this century, the region is expected to warm an additional 3 to 8°F. Climate change is expected to worsen impacts and increase risks to our people and natural environment in this region. UMU people depend on natural resources to maintain our cultural practices, identity, and sovereignty as a people. These warmer temperatures have caused reduced precipitation, changes in seasonality, and exacerbated health concerns such as asthma and cardiovascular disease, among other things.

Ute Mountain Ute Climate Action Plan 2020

Climate Change Adaptation Planning Process

Source: Tribal Climate Adaptation Guidebook Framework



- Step One: Center the Tribe's adaptation effort:
- A. Tribal Council resolution
- B. Form partnerships: Colorado State University, UMU Natural Resources Interdisciplinary Team
- C. Seek funding: BIA Tribal Resilience Program grant funding, D. Establishment of climate change program

- Step Two: Identify concerns and gather information
- Step Three: Vulnerability
 Assessment in collaboration
 with Colorado State University
 Research Scientist Dr. Shannon
 McNeeley
- Step Four: Climate Change Adaptation Planning
- Step Five: Implement and Monitor Actions



Community-based Vulnerability Assessment

In-depth interviews

- 27 community members/elders
- **♦**6 natural resource managers

Interview questions:

- Community members
 - Changes in weather, climate
 - Impacts to target resources
- ❖ Natural resource managers
 - **❖** Local observations of change
 - Impacts to management targets
 - Responses, preparedness activities
 - Barriers to respond
 - ❖ Needs for adaptation



Vulnerability Interview Results

• Impacts to Vegetation and Wildlife
I've seen their [deer and elk] build, the way their — you know, the growth of their bodies and things like that have changed. The vegetation has a lot to do with it.



- Reduced Water Quantity and Quality
- Our mountain [Ute mountain] used to have water everywhere. Springs, everywhere. There's no water up in the mountain...we used to have lakes and ponds for the animals. And, now they're dry up on the mountain.

Traditional and Cultural Activities

Reduced abundance and distribution:

- Cottonwoods, willows
- Chokecherries, buffaloberries

Changes in seasonal timing and production:

- Oak trees
- **❖**Pinyon pine nut
- Chokecherries

Community members are going outside tribal lands to collect culturally important plants.

	Number of times
Plant Type	discussed
Changes in Abundance, Distribution	45
Chokecherries	25
Fruit	20
Potatoes	16
Onion	15
Changes in Phenology	14
Pinyons	13
Cedar	5
Late freeze/frost	5
Cottonwood	4
Indian Tea	4
Squawbush berries	4
Buffaloberries	3
Carrots	3
Sage	3
Strawberries	3
Willows	3
Acorns	2
Mint (Peppermint)	2
Cabbage	1
Cattails	1
Gooseberries	1

Socio-economic Impacts

Heat stress

- Elders spending less time outside
- ❖ Lack of air conditioning poses added health risk
- Impacts participation in traditional activities, ceremonies

Health

- ❖ Increase in respiratory conditions (e.g., asthma)
- Increase in allergies

Economic impacts

- ❖ Higher electric bills under extreme heat
- ❖ Higher price of produce during drought

Recreation impacts

- Reduced fishing and swimming opportunities
- Reduced gardening activities



Climate Adaptation Plan Process

Action One: Tribal Council resolution passed for Climate Change Adaptation Plan

Action Two: Secured funding from BIA Tribal Resilience Program and expertise from CSU research associate Dr. Shannon McNeeley

Action Three: Established a climate change adaptation planning working group

Action Four: The group selected planning areas from vulnerability assessment: human health and livelihoods, tourism, agriculture and food security, air quality, water resources, riparian and wetland systems, rangelands, forest health, terrestrial and aquatic wildlife, and energy



Analyzed current programs that lead to climate resilience 2010-2020

- 1mw community-scale solar farm
- Tribal Administration Building Solar Demonstration Project
- Commercial scale solar
- Hydroelectric project on Towaoc Highline Canal
- Adjudicate UMU water rights in New Mexico and Utah
- Farm and Ranch Irrigation System Improvements
- Mancos Creek Farm Ditch Improvement Project
- Mancos River Resilience
- Project Rangeland Inventory to develop recommended grazing densities
- Colorado River Basin Ten Tribes Partnership Tribal Water Study
- White Mesa Water Infrastructure Improvement

- Gunnison Sage Grouse Management Plan
- Water Quality Program
- Hazard Mitigation Plan
- Water Management Plan
- San Juan Basin Recovery Implementation Program (for endangered fish)
- Three Species Conservation Agreement and Strategy
- Invasive plant management/Native plant cultivation
- Forest restoration
- Forest thinning around residential homes

The Hard Work!

- Action Five: Set adaptation goals
- Action Six: Prioritized planning areas. They include: health and livelihoods, water resources, water ecosystems, rangelands and forests, terrestrial and aquatic wildlife, tourism, and energy.
- Action Seven: Each planning area section included: observed changes, timelines, and funding sources
- Action Eight: Plan Completion
- Action Nine: Tribal Council approval

Current Climate Resilience Actions

- Tri-Ute Climate Adaptation Workshop Series
- Mancos River Resilience Project
- Air, Water, and Wildlife Programs
- Water Resources Department
- Ute Mountain Community Water Survey
- Traditional Harvest Program
- Renewable Energy: Community and Commercial Solar Projects



What Worked?

- The UMU Tribal Council passed the document in July 2020.
- The Climate Action Plan is a usable planning document.
- It has raised community awareness about the warming climate.
- It is an important resource for grant writing.
- Sharing the Climate Action Plan on the UMU Environmental Programs webpage.

Thank you!

Contact information:
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Kenneth Weitzel

Natural Resource Specialist

Central Council Tlingit & Haida Indian Tribes of Alaska





RESILIENCY AND ADAPTATION THE NATIVE WAY OF LIFE

Kenneth Weitzel - Natural Resources Specialist Tlingit and Haida Indian Tribes of Alas ka



INTRODUCTION



Kenneth Weitzel

Natural Resources Specialist

- Tlingit Name: DaakOosti
- Hometown: Xuna Kaawu (The City of Hoonah)
- Clan: Chaak (Eagle) and Teikweidi (Brown Bear)
- House: Xoots Hit (Bear House)
- 11-year Navy Veteran
- Dad of happy 13-year-old daughter
- Pursuing B.S. in Environmental Science at University of Alaska Southeast



TLINGIT & HAIDA INDIAN TRIBES OF ALASKA

- Tlingit & Haida is a federally recognized tribe
 - Regional tribal government
 - Serves 21 communities in Alaska, Washington, and California
 - 18 of these are in Southeast Alaska





Natives in Alaska are the original and concurrent stewards of the land and water, with a deep knowledge and respect for the community of life.

TLINGIT & HAIDA TRIBAL CLIMATE RESILIENCE PLANS

- 2017-2019 Climate Change Adaptation Plan & Template
 - Created to highlight the lack of climate data in Southeast Alaska and our unique ecosystem – Bureau of Indian Affairs, Tribal Climate Resilience Program funding.
- 2021 Climate Change Action Plan
 - Originally a <u>Social Economic Impact Assessment</u> of Climate Change, but due to COVID, the assessment evolved into an Action Plan. A plan to address the issues of a changing climate, and COVID. Bureau of Indian Affairs, Tribal Climate Resilience Program funding.

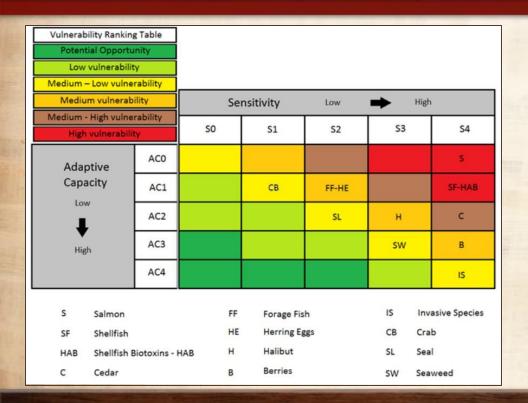
CLIMATE CHANGE ADAPTATION PLAN TEMPLATE

- Template created from Tlingit & Haida's regional adaptation plan
- Assists tribes with the development of their climate change adaptation plans
- Encourages common language and messaging about changing climate conditions and the most vulnerable resources in the region



www.ccthita.org

CLIMATE VULNERABILITY MATRIX



Climate Vulnerability
Rankings for Key Areas of
Concern

Rankings are based on sensitivity and adaptive capacity

CLIMATE CHANGE THREATENS FOOD SECURITY

- Rising temperatures are causing:
 - Increased frequency, duration, and severity of harmful algal blooms
 - Increased ocean acidification
 - Increased water temperature and decreased water levels of anadromous streams and rivers





SUBSISTENCE SHELLFISH

Social cost of losing shellfish as a resource: IRREPLACEABLE

Economic cost of losing shellfish as a resource: **PRICELESS**

Potential of losing shellfish as a resource: **HIGH**

CLIMATE RESILIENCE IN ACTION: FOOD SECURITY AMID CLIMATE CHANGE











Traditional Harvest and greenhouse production can significantly offset the continually increasing food prices and shipping costs.

- Tlingit & Haida's Climate Change Action Plan



GUNALCHÉESH, HÁW'AA THANK YOU

If you have any questions or comments, you can reach us at:

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Kenneth Weitzel, Natural Resource Specialist kweitzel@tlingitandhaida.gov

Brett Ramey

Climate Resilience Planner

Iowa Tribe of Kansas and Nebraska

NÁWO WAPÁNAGUN HINMÁNYIWI

pathways to climate resilience

IOWA TRIBE OF KANSAS AND NEBRASKA





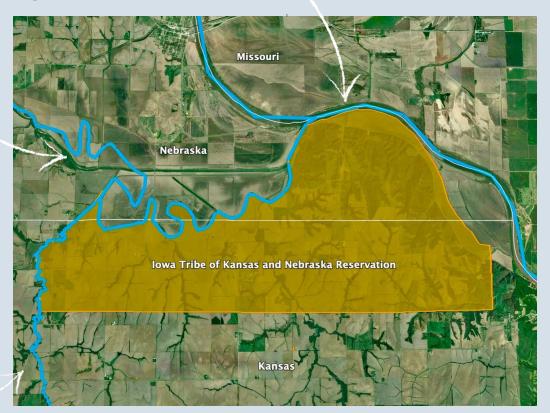
Missouri river

Nemaha river

The Iowa Reservation

sits at the southernmost extent of the Loess Hills in present day Northeast Kansas and Southeast Nebraska.

Nohart creek





The lowa Tribe of Kansas and Nebraska's climate adaptation planning efforts began with support from the Bureau of Indian Affairs (BIA)

Tribal Climate Resilience Program (TCRP)

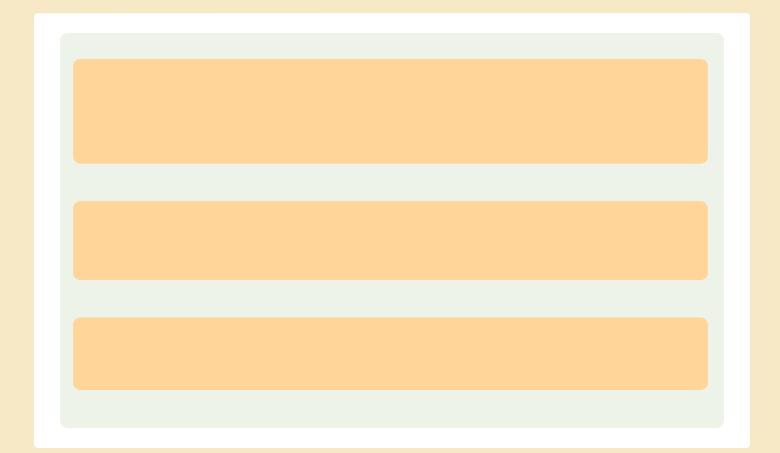
Two primary strategies and activities:



Develop a scoping process to identify the Iowa Tribe's climate resilience planning priorities, vulnerabilities, and opportunities.



Work with stakeholders to pilot activities and practices of the "climate resilience planning framework".



Climate resilience Scoping Activities and practices

Climate resilience Scoping Activities and practices priority Areas

Climate resilience Scoping Activities and practices

priority Areas

Climate resilience Strategies





Activities and practices relationship building and training

elder interviews

engagement with tribal departments

feeding our elders

land stewardship planning and implementation

community gathering

leadership development

relationship building and learning

community events

interviews

arts and collaborative design

ACTIVITIES ONE



feeding our elders

Harvested, processed, cooked, and delivered traditional foods to elders with the Senior Meal site

Taking care of our elders ensures a healthy, resilient community into the future. **Elders are also more vulnerable to food insecurity**, which may be made worse by climate change.

Visiting with them during meal deliveries also makes many of them happy.

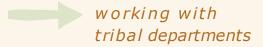
role in planning

 Helps identify ways tribal departments can work together to



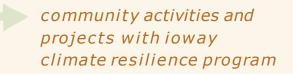
leadership development: Máya Wapána Internship program

the Máya Wapána team contributed to climate adaptation and resilience planning through:











What I narrowed my whole summer down to, is you can't force nature out, nor can you put it aside. You have to work with it. And that's the thing we had to do here was work with nature. I believe we have to protect nature just like they're our own children.

-SahBI potts Máya Wapána Intern

Priority Areas



Priority Areas

Eight Priority Areas emerged from 'Climate Resilience Scoping Activities and Practices'.



^{*}Determined through observation and conversations with loway Tribal departments, community members, and partner engagement.

Arts

Extreme weather and climate disruptions can impact these relationships. Strengthening connections to loway culture, arts, and language reminds us of our connection to land, and our responsibilities as loway people to protect them.





TRIBAL STRENGTHS

The lowa and Sac & Fox
Mission is now under loway
leadership. In 2022 the Mission
hosted loway: Here to Stay
featuring loway artists. The
Arts and Culture Committee
is creating opportunities for
tribal members to deepen their
connections to land, culture,
and language through art.



Climate Resilience strategies

Climate Resilience

strategies

Six examples of Climate Resilience Strategies help address the eight Priority Areas and can minimize adverse climate impacts by building resilience.

Climate Resilience

strategies

Six examples of Climate Resilience Strategies help address the eight Priority Areas and can minimize adverse climate impacts by building resilience.

The project examples in each strategy build on tribal strengths and existing work occurring on the reservation.

Each strategy offers
ways they can be
expanded through
partnerships with
other tribal entities
or external partners.

Each strategy can occur whether or not the tribe conducts a full climate adaptation planning process.

Climate resilience

strategies



Revitalize Indigenous land stewardship

Provide Traditional Foods to Elders and Youth

Createoutdoor Community Spaces

Riparian Buffer restoration

Develop regional Food Economy

Riparian Buffer Restoration

Agricultural activities have removed riparian areas throughout the reservation. Re-establishing them can enhance surface water quality, increase infiltration rates that recharge aquifers, and mitigate against flooding. They also increase habitat for wildlife and traditional foods. I would love to be able to drink the water out of that creek like my great grandparents did.

- Olivia Brien Ioway Tribal Member

project example

INTER-TRIBAL RIPARIAN CORRIDOR PARTNERSHIP

ioway tribal entities

FISH AND WILDLIFE, ENVIRONMENTAL OFFICE, IOWAY FARMS

potential partners

SAC AND FOX EPA, THE NATURE CONSERVANCY

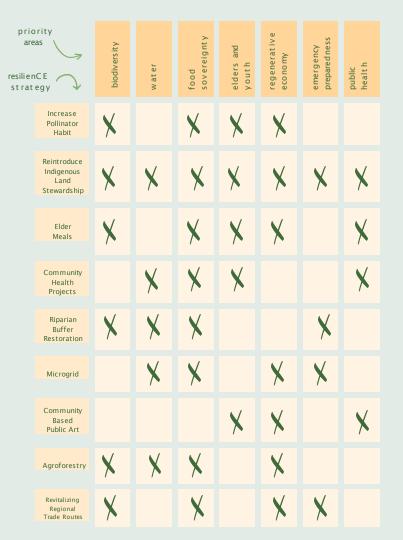


Cross Cutting Strategies

Climate adaptation planning is an opportunity to communicate and coordinate efforts among tribal entities.

It can help illustrate connections within and across tribal departments, which can help maximize tribal resources and increase collective capacity to meet multiple goals simultaneously.

This table lists Resilience Strategies and the multiple Priority Areas they meet.



Guiding Principles

"rebuild the Spirits of the people"

Everything is connected (to climate change)

Native leadership builds resilience

Healthy Lands, Healthy people

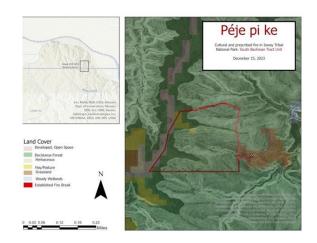
Next Steps: Options



Implementation:

Revitalize Indigenous Land Stewardship

COMMUNITY-LED PRAIRIE AND WOODLAND
RESTORATION IN IOWAY TRIBAL NATIONAL PARK









CONTACT

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WEBSITE

iowatribeofkansasandnebraska.com/ culture/climate-resilience/



Viccy Salazar

Climate Adaptation Policy Advisor

U.S. EPA Office of Policy



Climate Change is Having Direct Impacts on Air, Land, Water, and People





EPA 2022-2026 STRATEGIC GOAL

- Goal 1: Tackle the Climate Crisis
- ➤ **Objective 1.2:** Accelerate Resilience and Adaptation to Climate Change Impacts
- ➤ **Commitment:** To provide targeted assistance to increase the resilience of states, tribes, territories, communities, and businesses to the impacts of climate change, with a particular focus on advancing environmental justice.
 - 1. By September 30, 2026, implement all priority actions in EPA's Climate Adaptation Action Plan and the 20 National Program and Regional Climate Adaptation Implementation Plans to account for the impacts of the changing climate on human health and the environment.
 - 2. By September 30, 2026, assist at least 400 federally recognized Tribes to take action to anticipate, prepare for, adapt to, or recover from the impacts of climate change.







Building Blocks for Action

Knowledge building to increase capacity to act

Financial support/grants

Tools and templates

Technical assistance

In the chat – share your priorities.



CONTACT

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- CLIMATE ADAPTATION ADVISOR
- NTC CLIMATE SUBGROUP CO-CHAIR AND EPA TRIBAL CLIMATE LEAD

AREN WANG

EPA INTERN

Aren Wang

Intern

U.S. EPA OEJECR

Resources for Climate Change Adaptation

Aren Wang – Intern

Office of Environmental Justice and External Civil Rights, U.S. EPA



Source: Yale E360



Inflation Reduction Act

- Funds for enacting climate plans
- <u>Tax credits</u> for clean energy plans
- Full list of IRA-related programs available here

Programs

US Fish & Wildlife Service: Tribal Wildlife Grants (link):

Funds initiatives that benefit fish or wildlife

Bureau of Indian Affairs: Tribal Climate Resilience (link):

- Projects that slow existing climate effects
- <u>Tribal advice</u>: Emphasize traditional ecological knowledge

Programs

EPA: Climate Pollution Reduction Grants (link):

Grants for Tribes to reduce GHG emissions

DOE: Loan Guarantee Program (link):

- Funds Tribal clean energy projects
- <u>Tribal Advice</u>: emphasize resiliency

Tips for Receiving Funding

More Resources:

- 1. Programs such as <u>Institute for Tribal</u> <u>Environmental Professionals</u>
- 2. For grant writing: Grant Writing 101
- 3. For general funding: <u>Federal Funding Assistance</u> for Tribal Governments

Links

- IRA tax credits: https://www.whitehouse.gov/wp-content/uploads/2023/04/Inflation-Reduction-Act-Tribal-Guidebook.pdf
- IRA programs: https://www.evergreenaction.com/fact-sheets/IRA-Opportunities-for-Tribes-and-Indigenous-Communities.pdf
- Tribal Wildlife Grants: https://www.fws.gov/service/tribal-wildlife-grants
- Tribal Climate Resilience Program: https://www.bia.gov/service/tcr-annual-awards-program
- Tribal Experience: https://www.youtube.com/watch?v=8iO2gVQq-ws
- Climate Pollution Reduction Grants: https://www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants
- Loan Guarantee Grants: https://www.energy.gov/lpo/loan-programs-office
 - Tribal Experience: https://www.youtube.com/watch?v=jdbEfUD9tR4
- Grant Writing Tips: https://www.youtube.com/watch?v=GUBz0AJI3f8
- Funding Tips: https://www.youtube.com/watch?v=FWqm40MRvlw
- ITEP: https://www7.nau.edu/itep/main/Home/
- KSU Funding: https://www.epa.gov/newsreleases/epa-selects-kansas-state-university-receive-4m-grant-funding-provide-technical
- https://www.epa.gov/innovation/small-communities-big-challenges

EPA's Historic Funding & Technical Assistance <u>Opportunities here</u>. All federal funding for Tribes can be found from the White House Tribal Access to Capital Clearinghouse <u>via this link</u>.







Q&A