



Sandia  
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# Moving forward in Tribal renewable energy development with strategic and consensus-based planning



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# Outline

## Background

- Planning
- Food, Energy, & Water Nexus
- Climate Action Plans

## Strategic Energy Planning

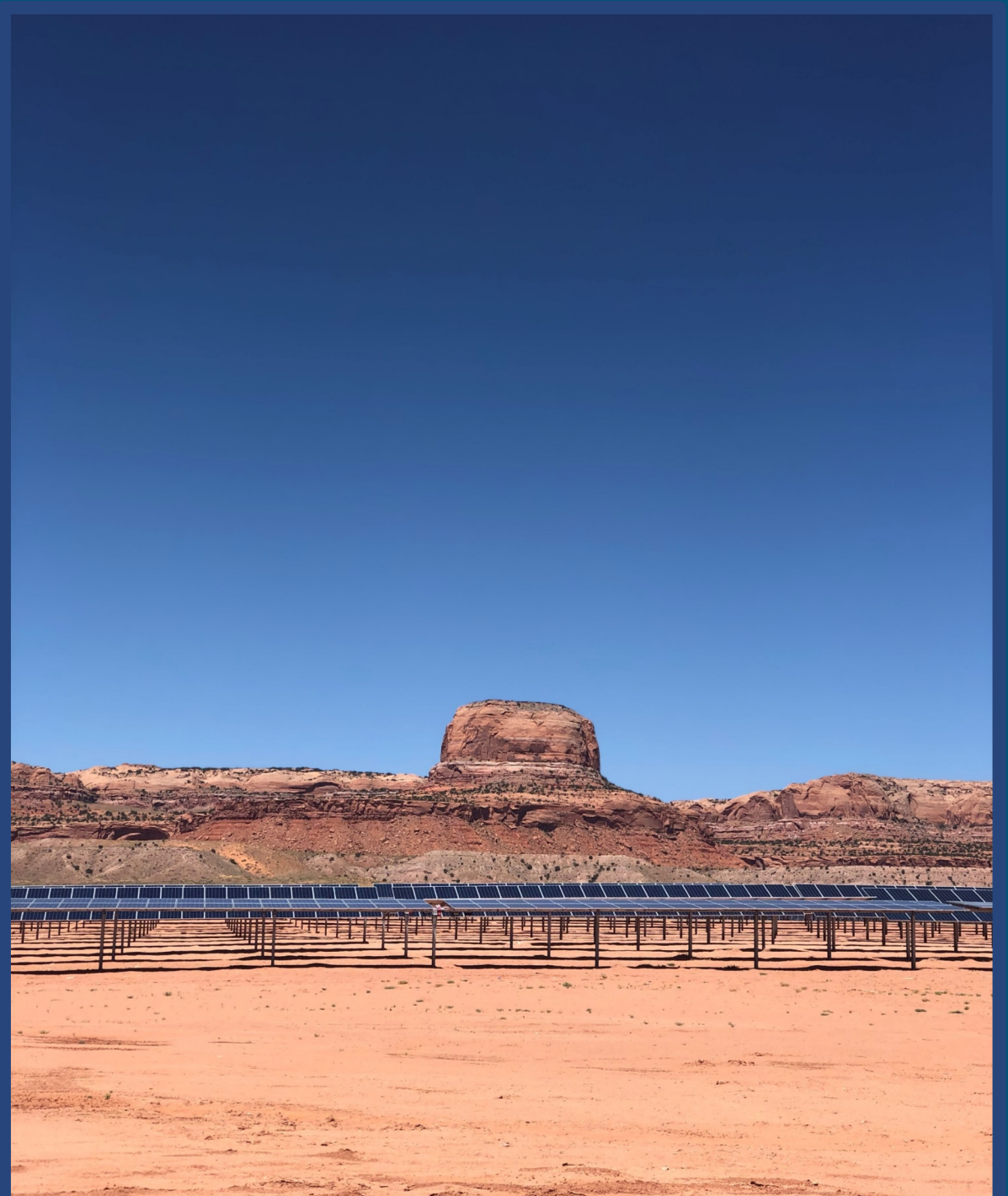
- Sandia National Laboratories & Indigenous Collaborations Inc.

## Community Approaches

- Native Renewables

## Pueblo of Acoma Strategic Energy Plan

## Next Steps



# My Context



Acoma Pueblo,  
Kewa Pueblo and  
Plains

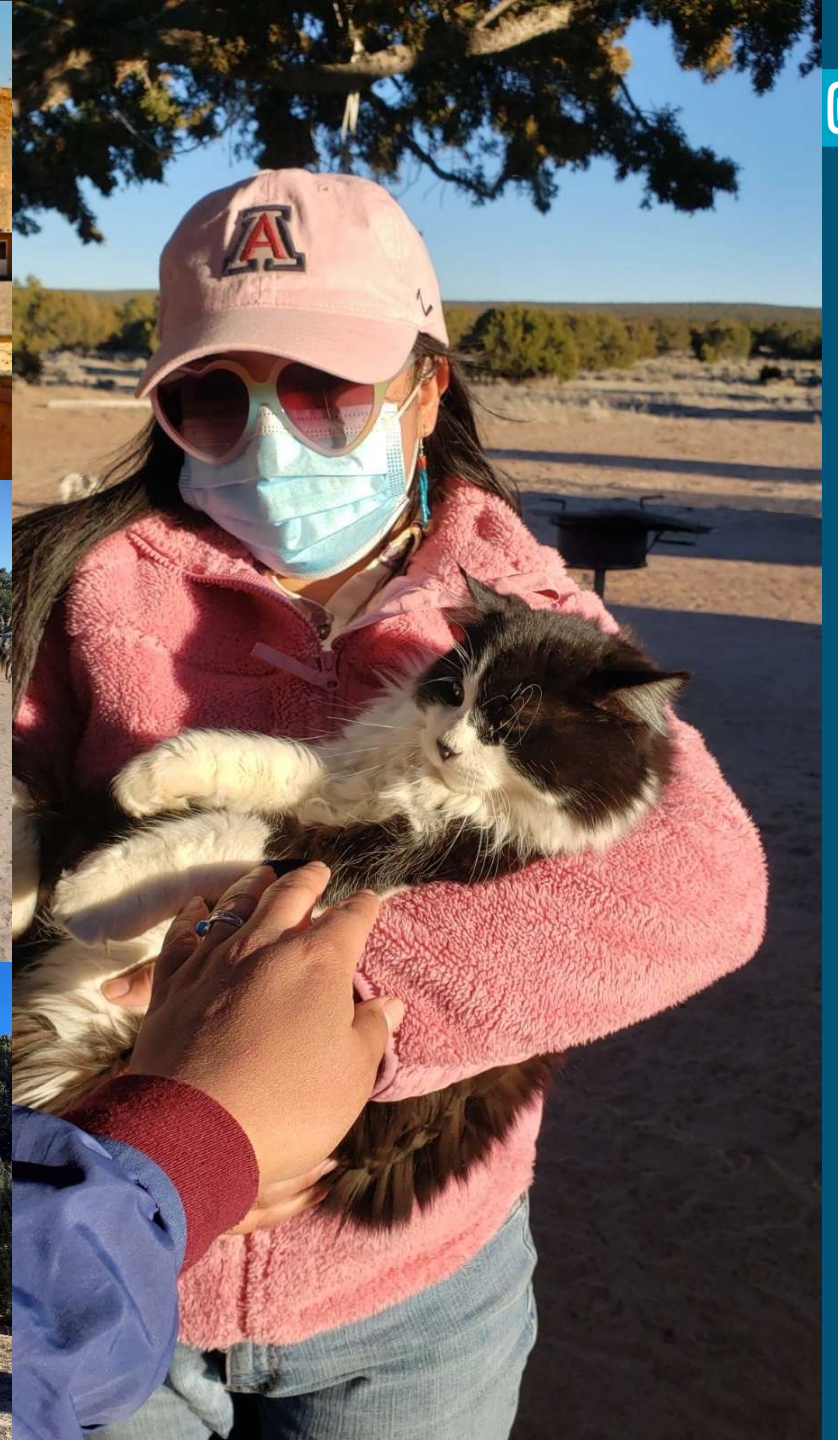


May 2020 - University  
of New Mexico

B.A. Environmental  
Planning and Design

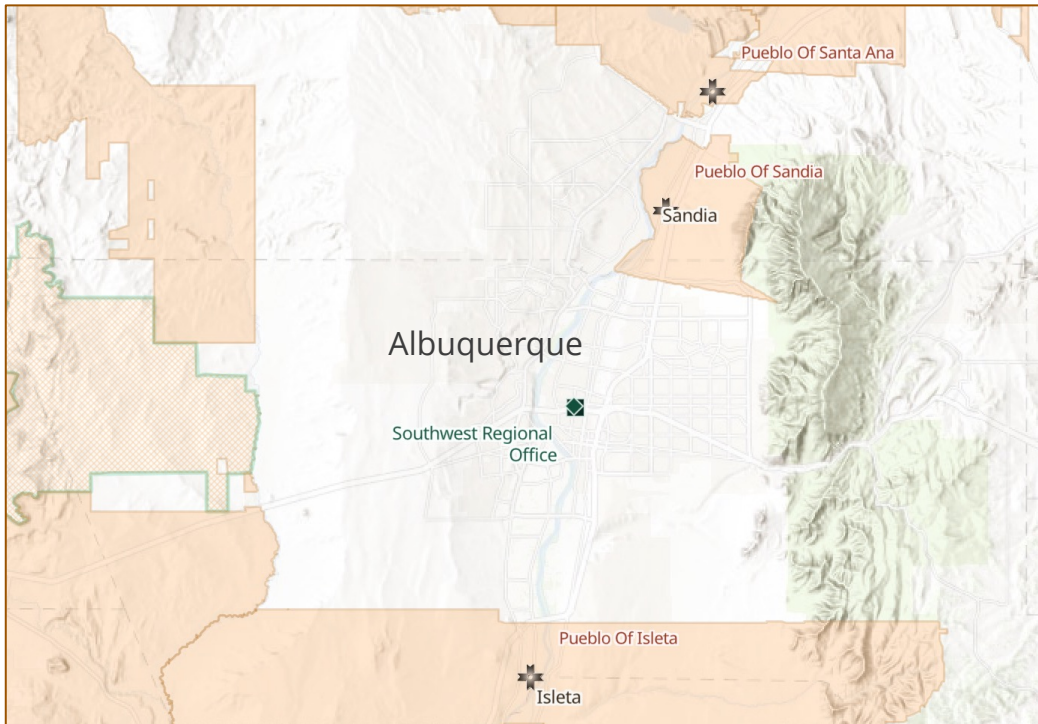


University of Arizona  
M.S. Urban Planning



# Importance

1980 Arizona  
Groundwater  
Management  
Act



## Historical Oversight

Land and natural resource management has been difficult for Tribes to autonomously sustain.

## National Climate Assessment

*Ch 15 : Tribes and Indigenous Peoples*  
Land rights or not, Indigenous peoples are taking steps adapting to the impacts of climate change.

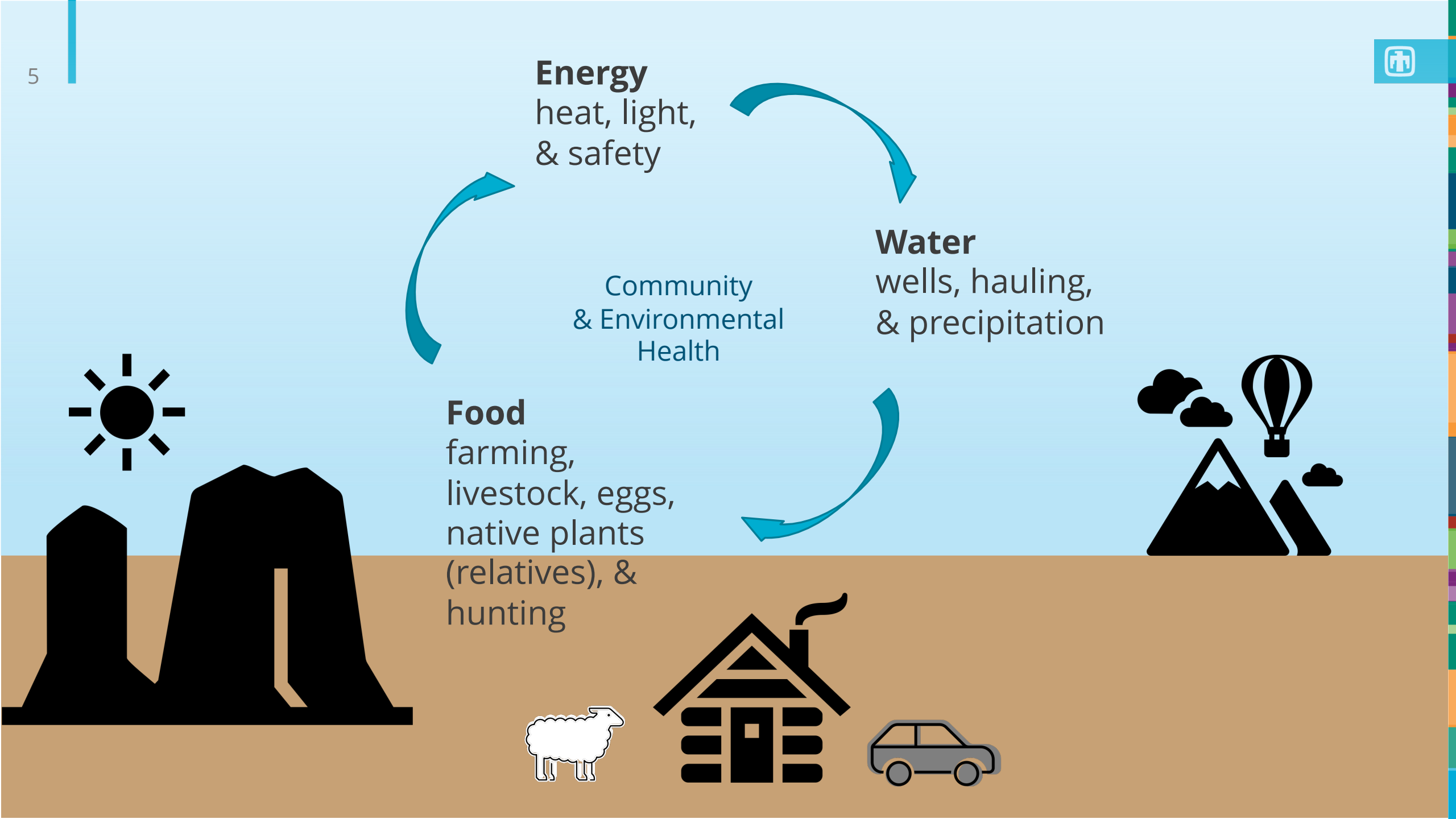
## Population and Development Sprawl

Tribal lands, sacred landscapes and federal boundaries border other governmental lands. Population and housing increasing.

## DOE Funding Opportunity Announcement

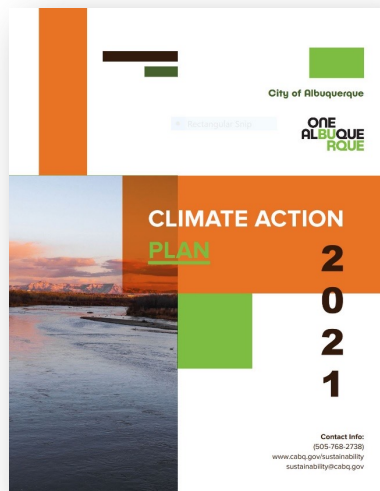
Awards federal Tribes federal funds for energy development. & projects. Addresses barriers for energy on Native Country.





## Comprehensive Planning

is a way to incorporating project stakeholders to plan for long-term spatial planning for community resources and population density.



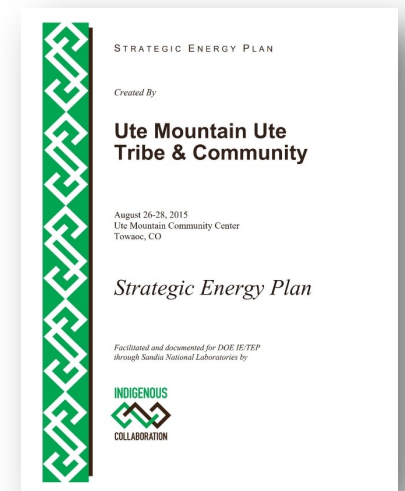
## Consensus-Based Planning

is a way to incorporate community leaders and knowledge keepers in planning for priorities and community visions in future development.



## Strategic Planning

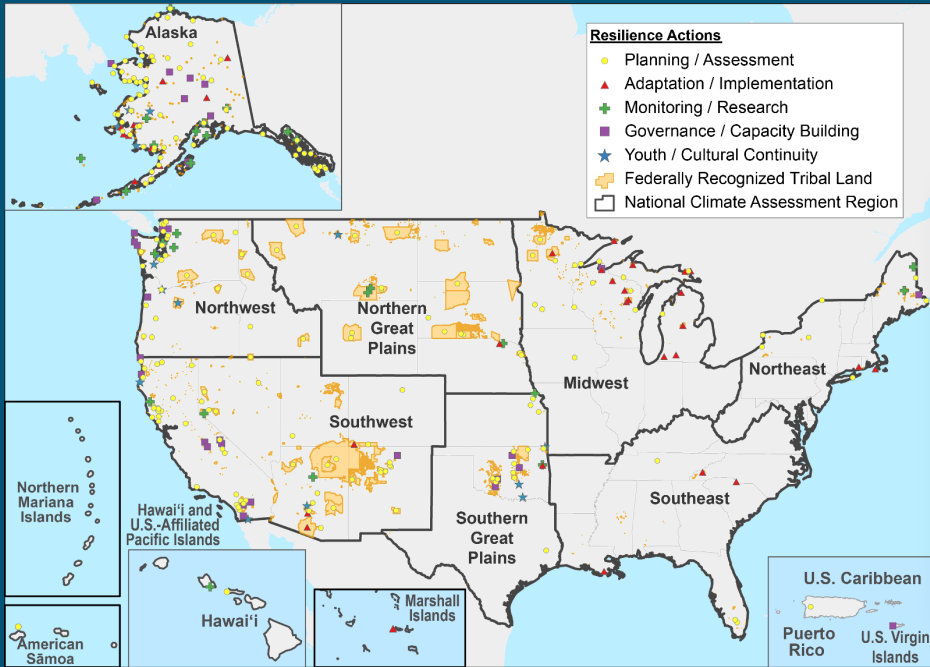
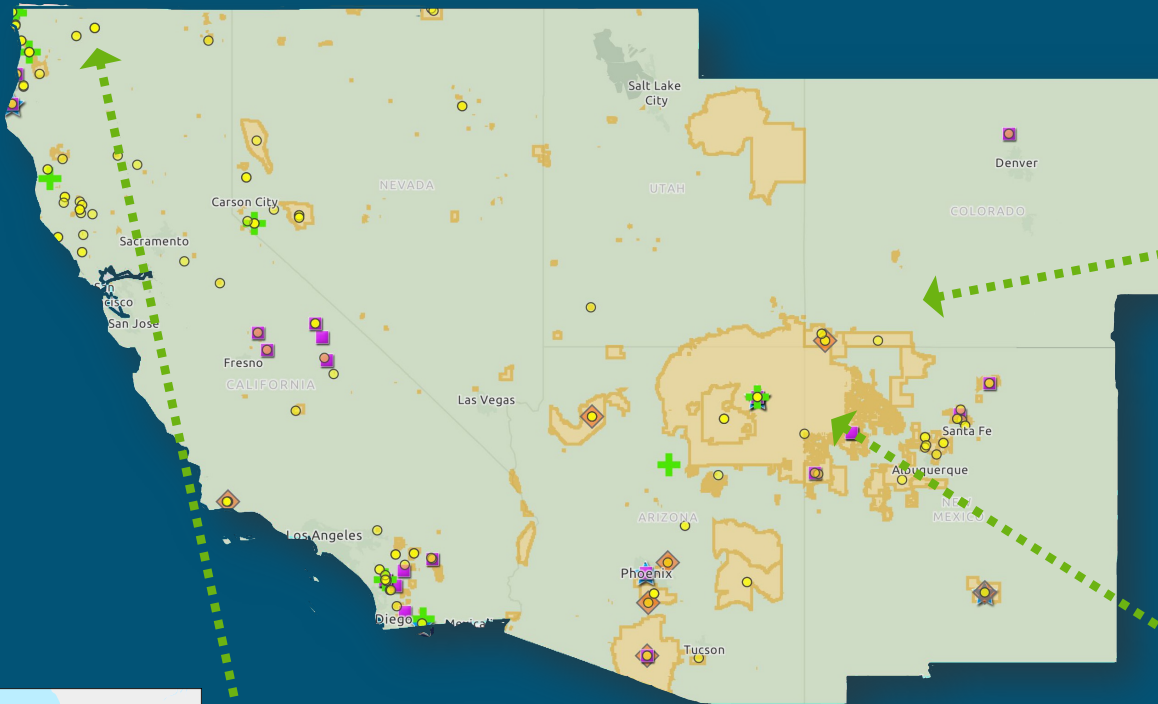
is a way to ensure community resource development for a community (in this case, Tribe/Nation) by using cohesive strategies in policymaking and planning.



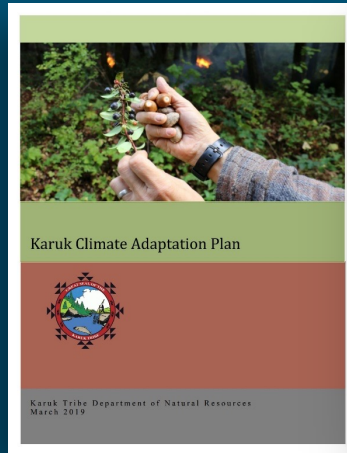
# 7 Climate Action

Coordinate projects and long-range plans to guide the conservation of resources for future generations of people in the southwest.

Preserve the environment by changing habits and polices.

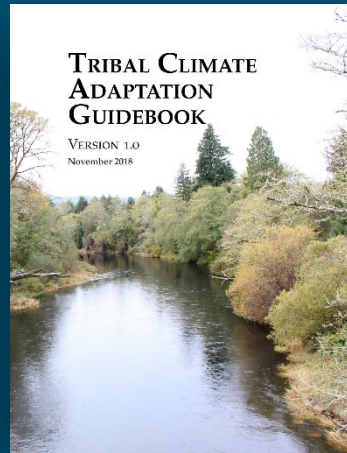


## Karuk

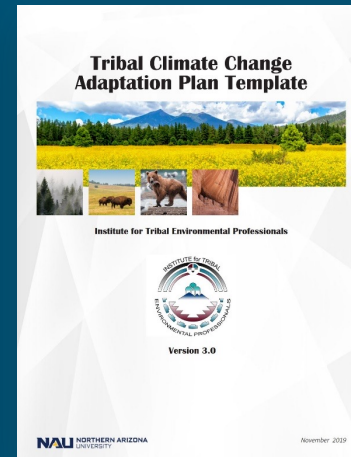


2019

## Tribal Climate Change and Adaption Guidance

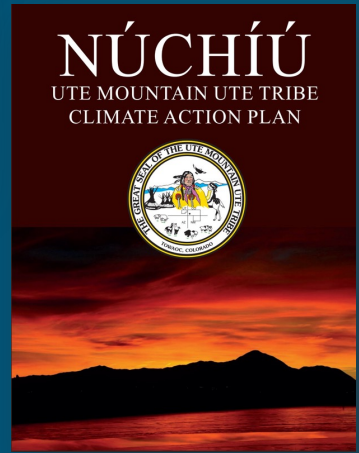


2018



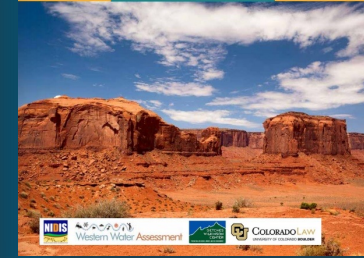
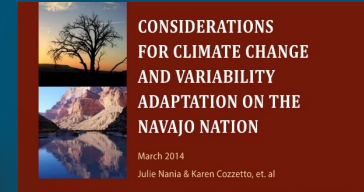
2019

## Ute Mountain Ute



2020

## Navajo Nation



2014

# Strategic Energy Planning



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Collaborations Inc.

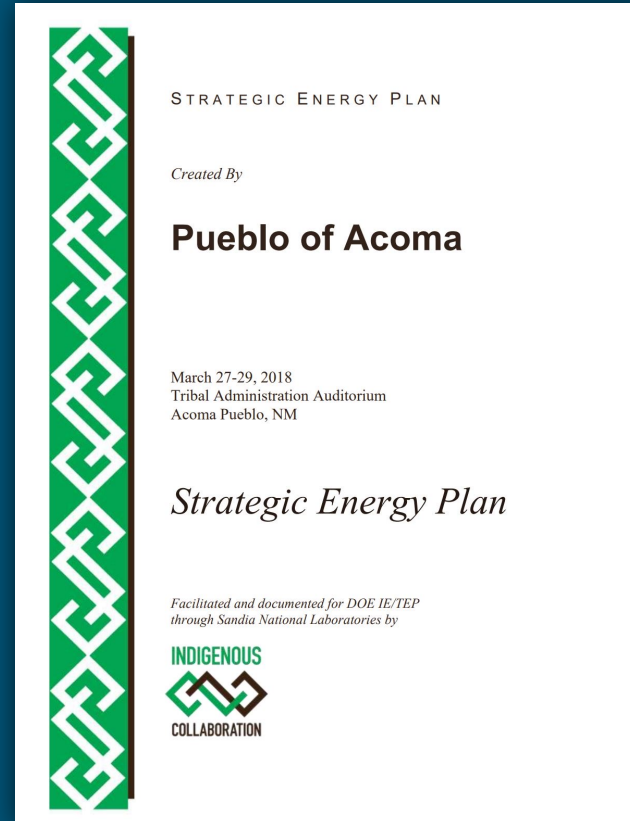


Tribal  
Leaders and  
Community  
Members



3 full days of  
thoughtful  
road mapping  
and visioning  
with  
participants

planning session

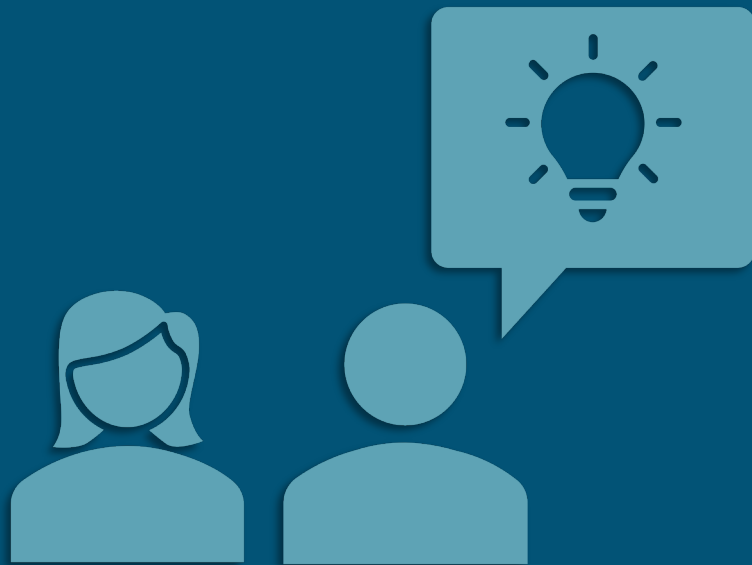


- ✓ Historical Context and Visions
- ✓ Environmental Scan & Assessments
- ✓ Tribe's Strategic Energy Vision for Future
- ✓ Challenges and Barriers
- Next Steps



## Participant and Community Feedback:

- ✓ Practical and relevant education on Tribal utilities and energy
- ✓ Expand engagement and participation to all ages: youth, elders, families
- ✓ Stay persistent



Political : Tribal government & leadership

Cultural : Sacred places, land, & traditional priorities

Economic : Tribal capacities for enterprises

Environment : Natural resource management,

Social: Trends, community thoughts' and behaviors'



## Community Outreach

- Building trust and transparency
- Having the desire to educate and learn
- Communicating future visits and meetings



## Community Engagement

- Plan to be prepared and open-minded
- Make time to reflect thoughts, ideas, and experiences
- Work comprehensively



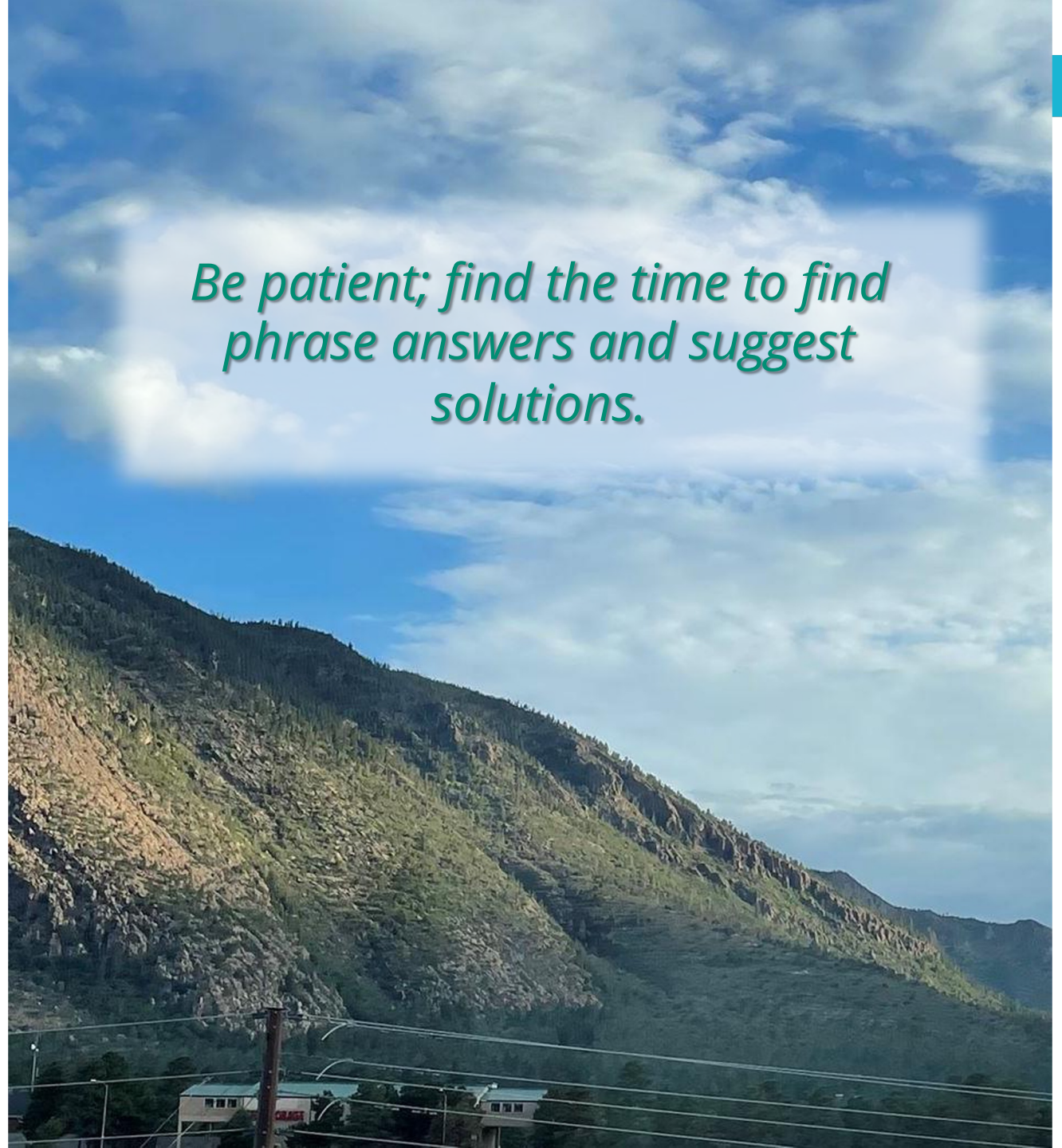
# Renewable Energy



Workforce Training Cohorts: education on solar PV and DC solar energy systems, preparedness, critical thinking, and safety.

- Workforce & education manager, Deb Tewa, emphasizes the need and purpose on homeowners understanding their energy systems and loads.
- Valuing the operations, labor, equipment, and planning processes of renewables.

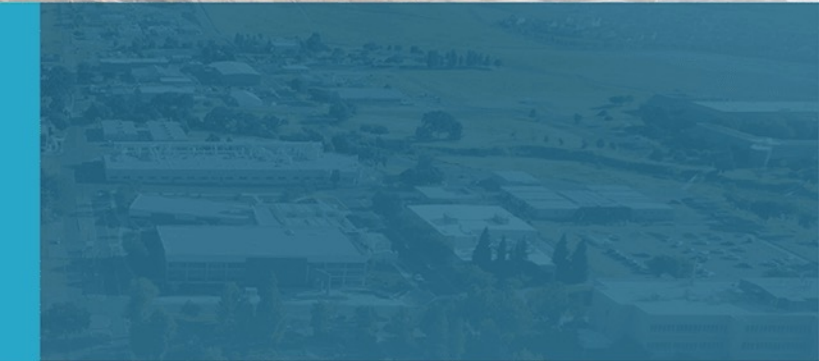
*Be patient; find the time to find phrase answers and suggest solutions.*





# 2019 SNL Indian Energy Program

Design Consideration for Solar Powered Wastewater Treatment Facility for Agriculture and Potable Usage on Acoma Pueblo Reservation



# Circling Back



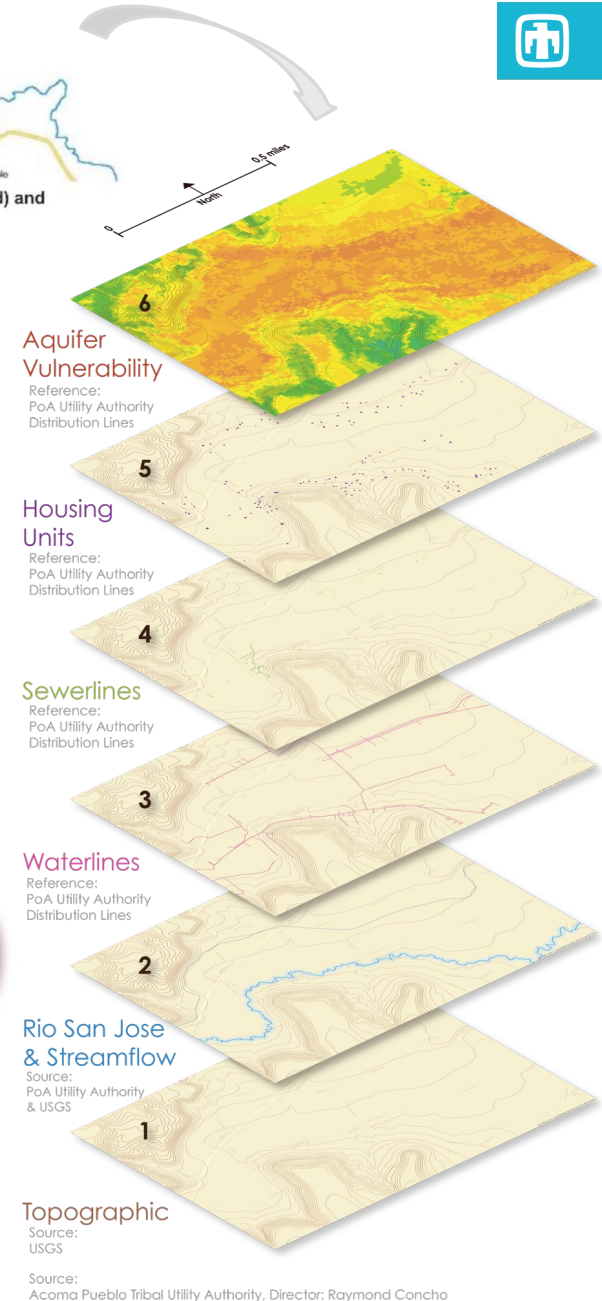
**Food:** agriculture, traditional farming, and public health programming

**Energy:** electric service and “Old Acoma” infrastructure

**Water:** water summit, water supply plan, and quality report



Figure 1. Relative location of Acoma communities (labelled) and Water Treatment Facility (red dot)



Towards Preservation of a Traditional & Productive Lifestyle for Acoma		Towards Economic Freedom as a Pueblo		Towards a Safe and Healthy Quality of Life For All	
Diverse Learning and Training Opportunities That Create and Strengthen Acoma’s Success	Multiple Pathways for Learning to Speak and Understand Keres	Sustainable and Diverse Acoma Energy Portfolio That Meets & Exceeds Our Current & Future Needs	Thriving Economic Enterprises, Capital Sustainability and Revenue Generation for Individuals and the Pueblo	State of the Art Technology & Resources That Enhance Our Community’s Quality of Life	Every Family Has Energy Efficient, Affordable, Sustainable Housing That Reflects Our Pueblo Lifestyle

Source: Acoma Pueblo Tribal Utility Authority, Director: Raymond Concho

# Next Steps

Native Country has capacity to lead in clean energy;

Strategic planning tools can provide community and strategic-based solutions for current and future food, energy, and water sources.

- ✓ Acknowledging history, cultural, political, and economic realities
- ✓ Establishing respectable relations with community
- ✓ Listening to input and making time to reevaluate

- Interviews with professional planners
- Year-round (part-time) internship
- Indige-FEWSS, Native Alliance, BRACE, & American Planners Association



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**Dawaa'eh!**

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Questions or Comments?