



NATIVE
FEWS
ALLIANCE

NEWSLETTER

The University of California at Berkeley, the University of Arizona and the American Indian Higher Education Consortium work with over 20 partners to significantly broaden the opportunities for participation in the ecosystem of research, practice, and training by and for Native Americans and other underrepresented student groups.



The Native FEWS (Food, Energy, Water Systems) Alliance is focused on innovative research and community partnerships linking and addressing two interconnected challenges: a crisis in access to food, energy, and water in Indigenous communities; and limited educational and career pathways available to Indigenous populations to address these needs.

WHAT'S NEW IN THE FEWS ALLIANCE?



Native FEWS Alliance 2023
Annual Gathering



save *the* date



NATIVE
FEWS
ALLIANCE

2023 Annual Gathering

Student projects!

Curriculum

Networking

Graduate Programs

March 22-25, 2023

University of Arizona

Tucson, AZ

Storytelling

More Info at: <https://nativefewsalliance.org>
Bernice Rodriguez at bernicer@arizona.edu

The vision is to build a diverse Native American workforce at the nexus of Food, Energy and Water systems (FEWS), and design curricula and mentoring that combine Indigenous ways of learning with physical sciences and engineering methodologies.



National
Science
Foundation

NSF Cooperative Agreement Award # 2120035 entitled "Collaborative Research: NSF INCLUDES Alliance: Broadening Career Pathways in Food, Energy, and Water Systems with and within Native American Communities (Native FEWS Alliance)"



WISE PRACTICES



By Cheryl J. Schwab, Ph.D.



Central to each project is the expansion of opportunities for Native Americans *to address urgent FEWS challenges in Indigenous communities*. Many of our projects highlight the opportunities and resources needed to address these challenges through the creation of transparent and accessible tools. The Red Bus Project will use resource mapping of the work being done at Tribal Colleges and Universities (TCUs) to assess and build capacity in environmental science, natural resources management, climate resilience research, education and adaptation planning. In addition, the alliance data management team is working with AIHEC to create resources that complement and expand tools for students to find FEWS courses and projects across the TCUs. Further, the proposed Network Opportunity Database will aid in matching students across educational pathways to

opportunities and knowledgeable mentors working with Native American communities.

Woven through the alliance are projects with the goal to *transform institutional STEM fields to be relevant and accessible to Indigenous communities*. Several projects are constructing and expanding spaces that alter the current institutional space to advance Indigenous ways of knowing and values. At University of California, Berkeley, faculty and students planted the seeds for an Indigenous FEWS Research Community of Practice. Beginning as a seminar to present and discuss Indigenous research methods in FEWS, the goal is to grow into an open space for alliance members to participate and support students' research endeavors across the alliance. Collaborating with Navajo Technical University in New Mexico, the established Development Engineering program at Berkeley is working to make the discipline more relevant to Native American students, faculty and communities and expand training to Tribal college at the graduate and undergraduate levels. The Environmental Stewardship of Indigenous Lands (ESIL) project that is currently run at University of Colorado, Denver, offers a model of engagement and recruitment into different pathways of STEM related careers. The project will expand their workshop and internship experiences for high school and undergraduate students into an alliance-wide opportunity that will lead to a certificate and increased visibility of FEWS careers. The newly established Indigenous Resilience Center at the University of Arizona provides a place where Indigenous ways of knowing and community stewardship of the land are used to co-design environmental solutions and training.

Across the alliance projects are *co-developing integrated, Indigenous, place-based FEWS curricula, mentoring, and practice experiences*. Projects are gathering existing wise practices and tools to integrate the practices and expand their reach. The Indigenous Ethics and Data Sovereignty project led by Western Washington University is working to create a framework to address the history of extractive research within Indigenous communities. The framework will be grounded in existing Indigenous community agreements, to help guide researchers as they build new relationships and continue existing ones. The Willow project will continue to build upon their proven approaches to enhancing the success of Native American faculty in STEM. Through the existing Indigenous Mentoring Program at Willow, strategies and tools will be shared and strengthened across the alliance. The Geoscience Alliance is a model for collaboration between organizations working to support and broaden the participation of minorities in STEM fields, specifically those related to the geosciences. The Geoscience Alliance proposes to build links between alliances to expand the mentor base and share wise practices for creating networks of leadership in FEWS.

The alliance *will use curricula and interventions to recruit, retain and graduate Indigenous students to pursue higher education and careers in FEWS and bring their knowledge back to their communities*. The Indigenous Curriculum Development project at the University of Arizona is collaborating with the STAR School to develop and implement place-based FEWS curriculum in K-12. The Tribal Climate Data Cube project led by AIHEC will assist in the development of curriculum for TCU faculty and students to use environmental data, analytic tools, and methods. The curriculum will support data-intensive research projects and Tribal data sovereignty. Work at University of California, Berkeley in the American Indian Graduate Program (AIGP) is encouraging the creation of a Student Enhancement initiative to support the recruitment and retention of

Native American students. Further, the Storytelling project led by the American Indian Science and Engineering Society (AISES) is working with the alliance to develop and infuse approaches to Native FEWS storytelling to bring the knowledge of the alliance back to the Native American community.

Although each project was described as addressing one goal, each project has multiple goals and is interconnected. The projects build on each other and contribute to the success of other projects. Tying the alliance together is the evaluation team led by Native Pathways which offers guidance for improving and connecting the goal areas and models an Indigenous approach to evaluation. Together the projects provide a web of wise practices and knowledge which will lead to the use of Indigenous approaches in FEWS and the increase in the number of Native Americans in FEWS careers.

AIHEC BACKBONE

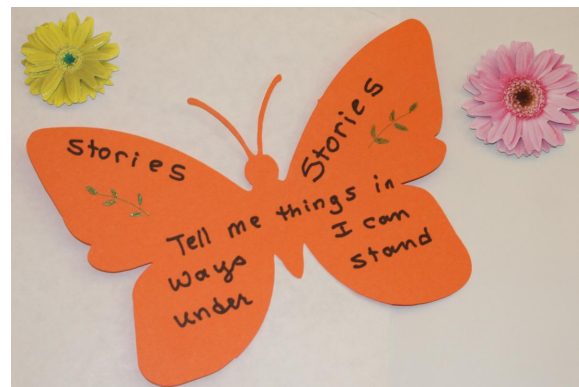


What is a Backbone Organization?

By Kathy Isaacson



The American Indian Higher Education Consortium (AIHEC) is honored to be selected as the Backbone organization for the Native FEWS Alliance. The projects and initiatives that address collaborative infrastructures are increasingly including backbone functions in their proposals and work plans. The National Science Foundation (NSF) asks that their



funded INCLUDES (Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science) projects utilize a backbone and operationalize five design elements of collaborative infrastructure -

(1) shared vision, (2) partnerships, (3) goals and metrics, (4) leadership and

communication, and (5) expansion, sustainability, and scale - to create systemic change that will lead to the substantially broadened participation of individuals from historically excluded and under-served groups in STEM.

As the backbone for the Native FEWS Alliance, AIHEC provides a framework for continuous communication, data management, capacity building, networking, expansion, sustainability, and visibility of the project network beyond a single city, state, or region. As this backbone function moves forward and learns how to best support the Alliance, here are some of the questions NSF asks and how the AIHEC Backbone responds:

- How the backbone organization will provide support for the broadening participation challenge(s) that will be addressed by the Alliance.
 - The Backbone sends a Monday Morning Message to the Alliance leadership, alerting them to announcements, convenings, Alliance publications, opportunities, and job openings that concern Native FEWS.
- How the backbone organization will leverage technology to facilitate connectivity among Alliance partners.
 - The Backbone has developed and hosts the Native FEWS Alliance website, as well as a variety of social media offerings, including a YouTube Channel.
- How the backbone organization will facilitate sustainability and long-term engagement of the Alliance partners.
 - The Backbone is creating a draft Sustainability Plan to be approved in the 2nd year of the 5-year grant.
- How the backbone organization will help the Alliance respond to changes over time as the project evolves and new partners join with different levels of experience in collaborative change strategies and broadening participation in STEM.
 - The Backbone helps develop the framework for the creation of the Networked Improvement Community. Based on the recommendations from our indigenous evaluation team in their Annual Evaluation Report, we are forming a process to address and measure our response to those recommendations.

Some have called the backbone an “orchestra conductor,” or a “cat herder,” and there are a variety of misconceptions that are important to consider for a backbone that is guiding vision and supporting aligned activities. For example, the backbone does NOT set the agenda for the group or drive strategy. The Native FEWS Alliance has a leadership group and a steering committee who collaboratively create and pursue the mission and vision of the Alliance. This group meets weekly to discuss decisions and plans and meets annually in person at our Native FEWS Alliance Annual Gathering. The leadership team consists of 46 members as of this writing, and are institutions and organizations aligned toward the common goal of broadening the participation of Native Americans in STEM, using the food, energy, water nexus as the catalyst. The Backbone guides their collaborations using a Communication Platform that connects their wise practices and highlights indigenous ways of knowing and communicating.



We piloted one of these processes, called *Rose, Thorn, Bud and Roots*, at the Native Storytellers session put on by Native FEWS Alliance members at the Geoscience Alliance Conference (July 28-30, 2022, Minneapolis, MN). The process is designed to create space for participants to reflect on strengths,

challenges, new learning, and connections to community and core values. Strengths are represented by the Rose; challenges and lessons learned are represented by the Thorn; opportunities and new ideas represented by the Bud; and the grounding to core values is represented by Roots. This method relates visually as well as metaphorically to Indigenous thinking and creates meaningful responses and dialogue. It is a fun and an interactive way of gathering data.

The *Rose, Thorn, Bud* technique is commonly used in Design Thinking projects and can flexibly be adapted to other contexts. The Native FEWS evaluation process was adopted from the Yakanal Youth Culture Exchange (yakanal.org), who aligned the process to Indigenous core values through [this protocol](#) (Yakanal, 2017, updated 2022). From an Indigenous worldview, the process reflects nature as our guide: “learning from our oldest teachers, the plants.” We recently added the concept of Roots based on the advice of an Elder, who suggested the importance of grounding the flowers and plants in community and cultural core values.

At the Geoscience Alliance Conference presentation, two evaluators from our team facilitated this process with participants who attended the Native Storytellers workshop. Overall, the tool worked well and elicited rich conversations around the value of Indigenous storytelling, the importance of stories in sharing knowledge and core values, and the need to decolonize western tools. One participant shared that the process was “better than SWOT,” which is a western-based strategic planning approach. The Native FEWS evaluation team will continue to utilize the *Rose, Thorn, Bud and Roots* process and we encourage you all to try out this process in your own programs. We are grateful to all who have participated and supported the evaluation processes. Your voices are key to a successful journey together.

Who We Are: Geanna Capitan (Native Pathways)

Geanna Capitan is a Laguna and Dine adzaan. She resides on Ka’waik’a (Laguna) Pueblo land - home to her ancestors and relatives. She works as a Native Pathways consultant to serve the research, evaluative and facilitation needs of Native people in Indigenous communities, Tribal and/or non-profit organizations, and Higher-Ed and Government institutions in a holistic, collaborative manner.

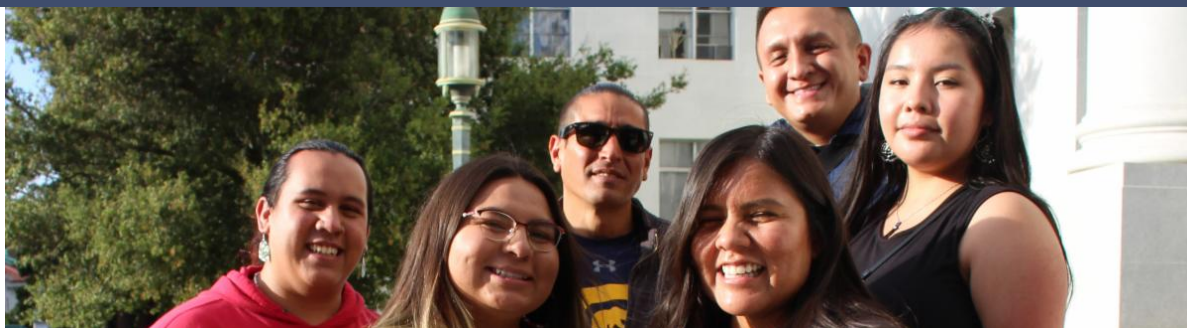


She has received her Masters of Public Health in Epidemiology from Columbia University Mailman School of Public Health. She is passionate about Indigenous knowledge systems, health research, and challenging the ways we examine data.



GeoScience Alliance Conference, Minneapolis, MN, July 2022
 From Left to Right: Thelma Antonio, Geanna Capitan, Sky Wildcat, McKalee Steen, and Genna Fudin

STUDENT HIGHLIGHTS



Sustainable Agriculture and Food Systems by James Jones, UTTC

Hello, I'm James Allen Jones, my Lakota name is Mahpiyatokeca which in English means Different Cloud, I come from the Standing Rock Tribe in South Dakota/ North Dakota and am a part of the Hunkpapa Lakota and Sante Dakota's. My passion is art, specifically cartoons and comic making but I also branch out into wood carving, painting, cold forging and many more areas of art, I also love to learn about art to

expand my knowledge and horizons.

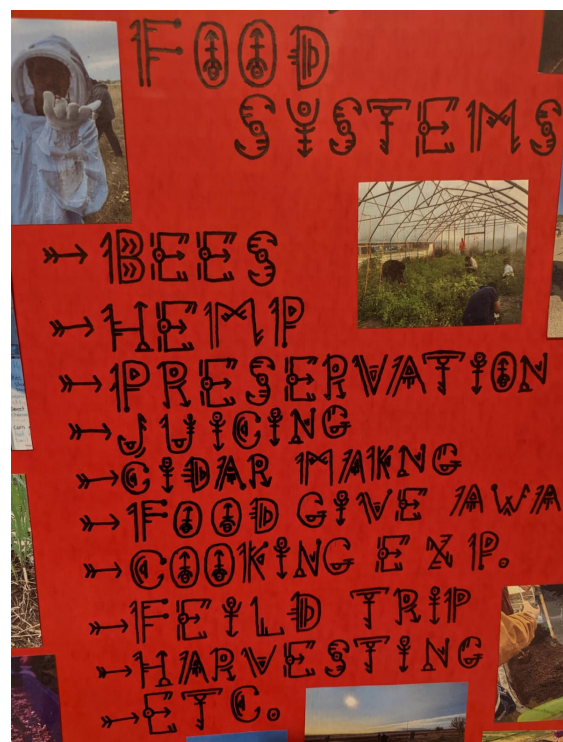
Originally, I was just going to go to United Tribes Technical College to just get my general studies out of the way but soon after I found myself being convinced of joining the Sustainable Agriculture and Food Systems program.



I've made designs for shirts, hats and all sorts of other things for the program and for the clubs as well. I even got chosen to put my artwork on the nature trail that we got going on here at United Tribes Technical College, I get to show people my Lakota deities and stories in my own artwork and put them on the trail.

I also experiment while preserving food and also cooking food as well, I'm experimenting with drying apples while adding all sorts of things on them while they dry, I also cook all sorts of foods without white flour, white and brown sugar and especially without dairy.

In the future I hope to one day take this knowledge and show everyone how simple such a task is and how everyone can do it for themselves, I also want to show people how to express themselves through art or through cooking.



JOBS & OPPORTUNITIES



Call for Applications

AIHEC Climate Resilience Summer Research Program

AIHEC is recruiting TCU students for the AIHEC Climate Resilience Summer Research Program, a 12-week summer opportunity in which undergraduate students participate in identifying and addressing climate change and energy issues in their respective American Indian and Alaska Native communities.

- Experience the roles and impacts of research in supporting Tribal Nations and Indigenous peoples in their adaptive responses to climate change challenges.
- Work on environmental science projects in collaboration with local and national research scientists.
- Receive training in the tools and instrumentation necessary to monitor and address climate issues, especially food security, energy independence, and water resources management.
- Work with a diverse set of teachers and mentors supporting student researchers' understanding of climate change, with a strong focus on Indigenous and local knowledge and perspectives.
- Career and personal development workshops supporting student work toward a professional career in climate change work.

The program is designed for TCU students passionate about taking action to address climate change affecting Tribal lands and supporting Tribal leadership in areas of Nation-building affected by climate challenges.

Program Dates:
May 30 - August 18, 2023

Students receive a monthly stipend, for a total of \$6,000.

Priority consideration to applications received by February 24, 2023, and accepted afterward until full.

The application can be found at:
<https://tinyurl.com/yuwcuae7>

For a fillable PDF application, or questions, contact:
Frank Brannon, fbrannon@aihec.org



AIHEC is recruiting TCU students for the **Climate Resilience Student Research Program**, a 12-week summer opportunity in which undergraduate students participate in identifying and addressing climate change and energy issues in their respective American Indian and Alaska Native communities. The program is designed for TCU students passionate about taking action to address climate change affecting Tribal lands and supporting Tribal leadership in areas of Nation building affected by climate challenges. The program dates are May 30 - August 18, 2023, and students receive a monthly stipend for a total of \$6,000. The priority application deadline for this program is February 24, 2023.

Tenure/Tenure-Track Faculty Search in the Architecture of Extreme Environments and Building (Innovation) Resiliency

Arizona State University

FT Pre-Engineering Faculty (full-time, exempt, salaried position)

Nebraska Indian Community College

Range or Natural Resource Management/ Agriculture Instructor

Sinte Gleska University

Vice President for Agriculture and Dean of the College of Agriculture

Louisiana State University

Agroforestry Program Manager

The Nature Conservancy

Engineering Technician - Student Trainee

Positions available across the U.S.

Desired majors: Civil, Agricultural, & Environmental Engineering or related field.

Academic Level: Students with at least six credit hours completed.

Photos courtesy of USDA/NRCS



The U.S. Department of Agriculture provides undergraduate and graduate level students with challenging internship opportunities. The program is designed to promote public service and create access to higher education for students attending one of the 1994 Land-Grant Institutions, the accredited Tribal Colleges and Universities.

Apply Now! Applications accepted on a rolling basis.

Required Materials: Completed Application, unofficial transcript, and letter of recommendation.
(Note your interest in any and all positions.)



For more information contact:
Frank Brannon
fbrannon@aihec.org



AIHEC, in collaboration with the US Department of Agriculture's Natural Resources Conservation Service (NRCS), is recruiting TCU students for **internships as soil conservation and engineering trainees**. There are 30 work positions throughout the country at NRCS field offices, and AIHEC also works with the NRCS to determine work locations close to applicants' homes so that they can potentially commute to an internship. There is a housing allowance if the student can't work from their home community. The current internship pay is \$17 per hour, and the intern gains experience toward a potential job application with the NRCS. This program has a rolling application deadline.

Soil Conservationist Technician - Student Trainee

Positions available across the U.S.

Desired majors: Agriculture, Natural Resource Management, Agronomy, Environmental Science or related field.

Academic Level: Students with at least six credit hours completed.

Photos courtesy of USDA/NRCS



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(Note your interest in any and all positions.)



For more information contact:
Frank Brannon
fbrannon@aihec.org



CONFERENCES & MEETINGS



Loftcinema.org



3233 E Speedway



FREE SCREENINGS!

SUNDAY, NOVEMBER 20

2:00PM

Finding Nemo in Navajo

Co-Presented By the
University of Arizona Native
American Law Students
Association and Indigenous
Strategies

Enjoy delicious fry bread,
available for sale courtesy of
HONOR Collective!

5:00PM

Inhabitants: An Indigenous Perspective

Presented By Science on
Screen; Co-Presented By the
UofA Indigenous Resilience
Center

**With expert from the
film, Dr. Michael
Kotutwa Johnson in
person for a Q&A!**

**4:00PM: LIVE MUSIC BY
Gertie and the
T.O. Boyz**

[S] Science on Screen



THE UNIVERSITY OF ARIZONA
ARIZONA INSTITUTE FOR RESILIENT
ENVIRONMENTS & SOCIETIES
**Indigenous
Resilience Center**



Call for applications

Rising Voices Changing Coasts

Summer Internship

RVCC is recruiting TCU students for a 8-week summer internship opportunity in which undergraduates and graduate students participate in understanding and addressing climate impacts in one of RVCC hub sites; Hawaii, Alaska, Louisiana, and Puerto Rico.

- Introduction to the roles and impacts of research in supporting Indigenous Peoples in their adaptive responses to climate challenges
- Learn about the research interests and responsibilities of scientists in their climate research capacities in the classroom and on site
- Receive introductions to climate science projects from indigenous and non-indigenous research scientists
- Work with a diverse set of teachers and mentors supporting participants understanding of climate change centering Indigenous knowledge and perspectives.
- Potential to participate in more than one summer to participate in all sites and publish with faculty of the program
- Career and professional development opportunities supporting students interests towards a professional career in climate change work.



Program dates are July 1 – Aug 26, 2023

Priority consideration to applications received by Feb. 24, 2023, and accepted afterward until full.

Application can be found at <https://forms.gle/9J8MB5kME6YWSSJT8>

Four weeks at Haskell Indian Nations University, 10 days on site in Hawaii and two days in Boulder Co at NCAR with two weeks at home finishing writing projects

Students will receive Biweekly stipends \$960 over eight weeks.

Limited opportunity for a select few to do multiple years and coauthor on publication.

For a fillable PDF application, or questions, contact

Paulette Blanchard, PhD,
p.l.blanchard@outlook.com

RVCC is a NSF Coasts and People Grants #2103843 and in partnership



ERN 2023
Emerging Researchers National Conference in STEM
February 9-11, 2023 | Washington, D.C.

Preparing Diverse STEM Researchers to Address Global Challenges

Co-sponsored by the American Association for the Advancement of Science,

Inclusive STEM Ecosystems for Equity & Diversity, and the National Science Foundation, the conference is for undergraduate and graduate students who participate in research or education projects funded by the Tribal Colleges and Universities Program (TCUP), the Historically Black Colleges and Universities Undergraduate Program (HBCU-UP), Research Experiences for Undergraduates (REUs), or another eligible program. Registration closes December 3.

[Registration and More Info, Click Here](#)



RENEWABLE ENERGY SCHOLARSHIP FOUNDATION

The Renewable Energy Scholarship Foundation board just agreed to raise the amount of our 2023 scholarships from \$2000 to \$2500. The deadline is Feb 15, all information is available on our website.

Of special interest to you, we now have two scholarships targeted for Native American or Alaskan Native students. Any Native student, graduate or undergraduate, studying any aspect of renewable energy, anywhere in the US, is eligible.

[Learn More](#)



The Rural Educator and Journal of American Indian Education
Joint Special Issues on Indigenous Perspectives in Rural Education
Call for Abstracts

Special Issue Theme - (Re)Centering Intellectual, Cultural, and Political Sovereignties: Indigenous Education in Rural Spaces

The Rural Educator (TRE) and *Journal of American Indian Education (JAIE)* are collaboratively seeking manuscripts focused on Indigenous peoples survivance and ongoing resilience in rural contexts, with a particular emphasis on work that (re)centers Indigenous intellectual, cultural, and political sovereignties around rural education. There is minimal visibility of Indigenous peoples in the field of rural education (RedCorn, Johnson, Bergeron & Hayman, 2021), and while Indigenous education has strong ties to rural communities, there is also a lack of visibility for rural education scholarship within Indigenous education. This special issue moves us towards resolving that gap by bridging the fields of Indigenous education and rural education. We welcome research manuscripts, essays, *Promising Practices* (as identified in TRE), *Reflections from the Field* (as identified in JAIE), and theoretical/conceptual pieces that help scholars and practitioners better understand educational experiences of Indigenous peoples in rural contexts. Additionally, we also welcome creative, narrative, and arts-based manuscripts, as well as submissions which prioritize Indigenous ways of knowing over the traditions of western academia.

The theme of this issue encourages manuscripts that center Indigenous intellectual, cultural, and political sovereignties, which could also be interpreted as (re)centering on Native lands/waters, languages, governance, and/or cultural worldviews. This can be done from methodological decisions which invoke culturally centered modes of narrative, storytelling, and/or creative expression; yet, this can also be done through Indigenous education policy analyses that show the complexities of education when working across various tribal, federal, state, and local bureaucracies.

Overall, we hope to highlight research, scholarship, and practitioner experiences which consider the following:

- Manuscripts which (re)center intellectual, cultural, linguistic, and political sovereignties in rural spaces (as described above).
- Indigenous educational experiences from all ages and levels of education as it relates to students, families, community members, elders, teachers, and leaders as found in rural settings.
- Indigenous peoples have unique teaching and learning experiences that are beyond Eurocentric brick-and-mortar schools. Authors should feel free to interpret the concept of "education" more

broadly, from traditions and ceremonies (when appropriate) to adult and intergenerational learning programs, as well as community language or culture classes.

- Indigenous peoples often move between urban and rural spaces as they negotiate their entangled relationship with settler-colonialism, and in doing so defy oversimplified urban-rural/town-country dichotomies (John & Ford, 2017). Manuscripts highlighting this ongoing movement between rural and urban spaces are welcome.
- When (re)centering sovereignty of Native nations, manuscripts which connect political and economic developments across Indian Country to education related topics are also welcome (For example, Landback efforts and/or tribal enterprise which translate to educational program development).
- As we work to bridge scholarly and practitioner perspectives, we invite *Promising Practice* (as described by TRE) and *Reports from the Field* (as described by JAIE) manuscripts which profile unique programs and innovations found in Native nations and communities, and articulate how they were developed, as well as how they are improving the educational experiences for Native peoples. Policy themed manuscripts are also welcome. More information on manuscript styles can be found on each journal's website:
 - The Rural Educator: <https://journals.library.msstate.edu/index.php/ruraled/about>
 - The Journal of American Indian Education: <https://jaie.asu.edu/about>

Depending on the quality, quantity, and content of manuscripts, we intend to publish separate special issues in *The Rural Educator* and *The Journal of American Indian Education*, with the intentionality that these manuscripts will highlight potential synergies between these two fields.

Please submit abstracts to TRE.JAIE.Specialissue@gmail.com by December 15, 2022. Abstracts should be approximately 250 words, with up to 10 key references (not included in the 250 words). Additionally, abstracts should communicate the style of manuscript (research, essay, Promising Practice, Reports from the Field, creative or arts-based, storytelling, etc.), and show a connection to both rural and Indigenous educational contexts. Authors will be contacted by January 15, 2023 with reviewed decisions. Full manuscripts will be due for review May 2023.

Anticipated Publications in Fall 2023 and/or Spring 2024.

Guest Editorial Team (to work in collaboration with both journals):

- Alex Red Corn, Kansas State University
- Anna Lees, Western Washington
- Daniella Sutherland, Clemson University
- Kelly Berry, Kansas State University

References

- John, K. D., & Ford, D. R. (2017). The rural is nowhere: Bringing Indigeneity and urbanism into educational research. In Reynolds, W.M. (Ed.), *Forgotten Places: Critical Studies in Rural Education* (pp. 3–15). Peter Lang Publishing.
- RedCorn, A., Johnson, J., Bergeron, L., Hayman, J. (2021). Critical Indigenous perspectives in rural education. In Azano, A., Eppley K., and Biddle C. *The Bloomsbury Handbook of Rural Education in the USA* (pp. 235-246). Bloomsbury.



We look forward to answering your questions, sharing stories
and finding ways to inspire you.

<https://nativefewsalliance.org/>

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