



Workshop for Building Drought Resilience in a Changing Climate with Upper Columbia and Missouri Basin Tribes

September 26-28, 2023

Kwataqnuq Resort & Casino | Polson, MT

Meeting Location:

Kwataqnuq Resort & Casino

49708 US HWY 93 E | Polson, Montana 59860

Workshop Objectives:

- Provide a forum for Tribal Nations and Tribal Colleges and Universities (TCUs) in the Upper Columbia and Missouri Basins to share successes, challenges, opportunities, and ideas for managing current and future drought in the context of a changing climate and associated climate extremes.
- Bring Tribal Nations, TCUs, and their partners together to discuss best practices for communicating and collaborating on projects and responding to funding opportunities that address current and future drought.
- Discuss high-priority data and information needs and gaps to inform NOAA-NIDIS's Tribal Drought Engagement Strategy and other efforts to support tribal drought resilience in the Upper Columbia and Missouri Basins.

Expected Outcomes:

- Strengthen communication networks among Tribal Nations and TCUs in the Upper Columbia and Missouri Basins to further information exchange and ideas on how to prepare for, mitigate, and respond to drought.
- Identify solutions for enhancing communication with Tribal Nations and TCUs to increase awareness of funding opportunities.
- Enumerate tangible, high-priority next steps to address pressing drought information needs.

Note: In the context of this workshop, “partners” refers to those who collaborate with or are interested in collaborating with Tribal Nations and/or TCUs on climate-related work: e.g., federal/state agencies, non-tribal academic institutions, NGOs, private sector organizations, etc.

Tuesday, September 26, 2023		
Time (MT)	Session	Who
7:30 AM	Registration + Continental Breakfast <i>(provided)</i>	
<p>Session I: Welcome! Session purpose: <i>To welcome participants, provide background on NIDIS and the workshop goals, and get to know each other.</i> Moderator: <i>Crystal Stiles, NOAA National Integrated Drought Information System (NIDIS)</i> Location: <i>Michel/Victor Room</i></p>		
8:30 AM	Opening Ceremony	Posting of Colors <i>Mission Valley Honor Guard</i> Drum <i>Eagle Pass Drum Group</i> Elder Opening <i>Stephen Small Salmon</i> Welcome from the Confederated Salish and Kootenai Tribes (CSKT) Tribal Council <i>Carole Lankford, CSKT Tribal Council Representative</i>
9:00 AM	Introduction from NIDIS and Workshop Goals	Crystal Stiles <i>Tribal Engagement Coordinator, NOAA NIDIS</i> Richard (Rick) Spinrad <i>Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator (recorded remarks)</i> Veva Deheza <i>Director, NOAA NIDIS (recorded remarks)</i> James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
9:30 AM	Icebreaker Activity	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
10:00 AM	Break <i>(snacks/drinks provided)</i>	

Session II: Drought in the Upper Columbia and Missouri Basins

Session purpose: *To share and discuss the latest science, information, and knowledge on past, current, and future drought episodes in these basins.*

Moderator: *Doug Kluck, NOAA National Centers for Environmental Information*

Location: *Michel/Victor Room*

10:30 AM	Drought at the Missouri and Columbia Headwaters: Forest, Fishery, and Water Resource Impacts on Drought on the Flathead Reservation	Michael Durglo, Jr. <i>Tribal Historic Preservation Department Head, CSKT</i> Brian Lipscomb <i>CEO, Energy Keepers, Inc.</i>
11:00 AM	First Foods First in a Columbia Basin Drought Early Warning System	Kate Ely <i>Umatilla Basin Hydrologist, Confederated Tribes of the Umatilla Indian Reservation</i>
11:30 AM	Native Waters in the Great Plains: Protecting and Preserving Tribal Water Rights to Enhance Drought Resilience	Doug Crow Ghost <i>Department of Water Resources Director, Standing Rock Sioux Tribe and Great Plains Tribal Water Alliance Board Member</i>
12:00 PM	Drought in a Changing World: The Past, Present, and Future of Drought Adaptation and Resilience in the Columbia and Missouri River Basins	Kyle Bocinsky <i>Director of Climate Extension, Montana Climate Office, University of Montana</i>
12:30 PM	Working Lunch (<i>provided</i>) Moderator and Speaker: <i>Maranda Compton, President, Lepwe</i> Discussion: <i>Legal and political barriers to progress on building drought resilience on tribal lands</i> Location: <i>Michel/Victor Room</i>	

Session III: Successes, Challenges, and Opportunities for Managing Drought on Tribal Lands in the Upper Columbia and Missouri Basins

Session purpose: *To have Tribal Nations share their knowledge and experiences with managing drought and associated climate extremes on their lands to promote learning and generate new ideas. Discussion will be included.*

Moderator: *James Rattling Leaf, Sr., Wolakota Lab LLC*

Location: *Michel/Victor Room*

1:30 PM	Interweaving Traditional Knowledge and Mainstream Science to Enhance	Maureen McCarthy <i>Research Professor, Desert Research Institute and Montana Climate Office,</i>
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	Long-Term Climate and Drought Resilience on Tribal Lands	<i>University of Montana</i>
1:50 PM	Sicangu Climate Center	Paula Antoine <i>Director, Sicangu Oyate Land Office</i>
2:10 PM	Wetlands to Enhance Drought Resilience on the Coeur d'Alene Reservation	Mažeika Patricio Sulliván <i>Director and Professor, Baruch Institute of Coastal Ecology and Forest Science, Clemson University</i>
2:30 PM	Oglala Sioux Tribe's Drought Adaptation Plan	Reno Red Cloud <i>Director of Water Resources Department, Oglala Sioux Tribe</i>
2:50 PM	Break (<i>snacks/drinks provided</i>)	
3:20 PM	Drought Impacts to Cultural Sites and Resources	Michael Durglo, Jr. <i>Tribal Historic Preservation Department Head, CSKT</i>
3:40 PM	Blackfoot Confederacy Native Trout Recovery Project	Elliot Fox <i>Consultant, Blackfoot Confederacy Tribal Council and Member of the Kainai First Nation in Canada</i>
4:00 PM	Nueta Hidatsa Sahnish College's Food and Water Sovereignty Initiatives	Ruth Plenty Sweet Grass-She Kills <i>Director of Food Sovereignty, Nueta Hidatsa Sahnish College</i>
4:20 PM	The Missouri River and Indigenous Placemaking	Paige Johnson <i>Native Climate Data Fellow and Graduate Student, University of Montana</i>
4:40 PM	Closing Comments and Setting the Stage for Day 2	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
5:00 PM	Adjourn for the Day	
5:00 PM	Evening Reception (<i>light hors d'oeuvres & non-alcoholic drinks provided</i>) Location: <i>Michel/Victor Room</i>	

Wednesday, September 27, 2023		
Time (MT)	Session	Who
8:00 AM	Continental Breakfast <i>(provided)</i>	
8:30 AM	Welcome Day 2 and Charge for the Day Location: <i>Michel/Victor Room</i>	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
<p>Session IV: Support from Partners of Tribal Nations and TCUs: Drought and Climate-Related Programs, Tools and Resources, Funding Opportunities, and Technical Capacity</p> <p>Session purpose: <i>For current and future partners of Tribal Nations and TCUs to share information that supports tribes in their efforts to increase their resilience to drought and climate change, and to provide an opportunity for Tribal Nations to discuss their drought information needs with partners.</i></p> <p>Moderator: <i>Crystal Stiles, NOAA NIDIS</i></p> <p>Location: <i>Michel/Victor Room</i></p>		
9:00 AM	Federal Emergency Management Agency (FEMA) Grant Funding <i>(Recorded presentation)</i>	Nicole Edwards <i>Tribal Mitigation Specialist, FEMA Region VIII</i> Logan Sand <i>Senior Community Planner, FEMA Region VIII</i>
9:05 AM	Rapid Response to Extreme Weather Funding Opportunity through the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) <i>(Recorded presentation)</i>	Ashley Mueller <i>National Program Leader, Institute of Youth, Family, and Community, USDA NIFA</i> Amy Ganguli <i>National Program Leader, Institute of Bioenergy, Climate, and Environment, USDA NIFA</i>
9:10 AM	USDA Farm Services Agency (FSA) Drought Relief Programs	Les Rispens <i>Farm Programs Director in Montana, USDA FSA</i>
9:15 AM	Bureau of Indian Affairs (BIA) Tribal Climate Resilience Funding and Resources	Matt Laramie <i>Regional Coordinator, BIA Branch of Tribal Climate Resilience</i>
9:20 AM	U.S. Bureau of Reclamation (BOR) Drought Mitigation Funding	Jessica Asbill-Case <i>Native American Affairs Advisor, BOR</i>

9:25 AM	NIDIS Coping with Drought: Building Tribal Drought Resilience Funding	Britt Parker <i>Regional Drought Information Coordinator, NOAA NIDIS</i>
9:30 AM	U.S. Environmental Protection Agency (EPA) Bipartisan Infrastructure Law/Inflation Reduction Act Programs The Environmental Justice Thriving Communities Technical Assistance Centers (TCTAC) Program	Andrew Wynne <i>Senior Advisor for Climate Change, U.S. EPA Region 7</i>
9:40 AM	Impact of Multidecadal Wet and Dry Climate Cycles on Forest Disturbances across the Conterminous U.S., 2000-2022	Joel Egan <i>Forest Health Monitoring Coordinator, R1/R4 State, Private and Tribal Forestry, U.S. Forest Service</i>
9:45 AM	Tribal Drought Planning	Mary Baker <i>Resiliency Strategist, JEO Consulting Group</i>
9:50 AM	National Drought Mitigation Center (NDMC) Tribal Assistance	Cody Knutson <i>Planning Coordinator, NDMC, University of Nebraska-Lincoln</i>
9:55 AM	Upper Missouri River Basin Soil Moisture and Plains Snow Monitoring Build-Out	Catherine Wiechmann <i>UMRB Network Program Coordinator, University of Montana</i>
10:00 AM	Upper Missouri River Basin Soil Moisture and Plains Snow Monitoring Data Value Study	Marina Skumanich <i>National Coordinated Soil Moisture Monitoring Network Program Specialist, NOAA NIDIS</i>
10:05 AM	Climate-Smart Tools for Tribal Soil Climate Analysis Network (TSCAN) and SCAN	Natalie Umphlett <i>Climatologist, Northeast Regional Climate Center, Cornell University</i>
10:10 AM	Community Collaborative Rain, Hail and Snow (CoCoRaHS) Network	Noah Newman <i>Education Coordinator, CoCoRaHS, Colorado State University</i>
10:15 AM	Partners Fair Overview	Crystal Stiles <i>Tribal Engagement Coordinator, NOAA NIDIS</i>
10:20 AM	Break (<i>snacks/drinks provided</i>)	
10:50 AM	Partners Fair and Tools Cafe	

	<p>Location: <i>Banquet Foyer and Alexander Room</i></p> <p>Participating Partners:</p> <p><i>Intertribal Agriculture Council</i></p> <p><i>Bureau of Indian Affairs</i></p> <p><i>National Aeronautics and Space Administration</i></p> <p><i>NOAA National Integrated Drought Information System</i></p> <p><i>NOAA National Weather Service</i></p> <p><i>U.S. Army Corps of Engineers</i></p> <p><i>U.S. Bureau of Reclamation</i></p> <p><i>U.S. Department of Agriculture</i></p> <p><i>U.S. Environmental Protection Agency</i></p> <p><i>U.S. Forest Service</i></p> <p><i>U.S. Geological Survey</i></p> <p><i>High Plains Regional Climate Center</i></p> <p><i>Northeast Regional Climate Center</i></p> <p><i>Western Regional Climate Center</i></p> <p><i>National Drought Mitigation Center</i></p> <p><i>JEO Consulting Group</i></p> <p><i>Community Collaborative Rain, Hail and Snow (CoCoRaHS) Network</i></p> <p><i>State Mesonets</i></p> <p><i>University Corporation for Atmospheric Research COMET</i></p>	
12:15 PM	<p>Working Lunch (<i>provided</i>)</p> <p>Moderator: <i>Vicki Hebb, Native Climate Tribal Ag Fellow, University of Nevada, Reno</i></p> <p>Location: <i>Michel/Victor Room</i></p>	
	<p>Discussion: <i>Tribal farmers and ranchers talk drought - what's happening, how they are responding, and what they need to be more resilient</i></p>	<p>Thomas Peters <i>Technical Services Assistant, Intertribal Buffalo Council</i></p> <p>Ehakela Cummings <i>Buffalo SeedKeepers Crew Member, Intertribal Buffalo Council</i></p> <p>Marlene Werk <i>Technical Assistance Specialist, Intertribal Agriculture Council Rocky Mountain Region</i></p> <p>Beau LaSalle <i>Natural Resources Program Specialist, Intertribal Agriculture Council</i></p>

		Kole Fitzpatrick <i>Loan Officer, Akiptan</i>
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Session V: Finding Solutions: Addressing Challenges and Opportunities to Increase Tribal Resilience to Drought across the Upper Columbia and Missouri Basins

Session purpose: *To hold solution- and topic-oriented working sessions with Tribal Nations, TCUs, and their partners that integrate Indigenous and Western knowledge systems to address the greatest challenges Tribal Nations face as they continue to strengthen drought resilience. Discussions on data sovereignty and Indigenous Knowledge/Traditional Ecological Knowledge will be integrated throughout the working sessions. These working sessions will be tribally-led and participants will develop a road map that identifies the specific short-term and long-term actions and resources needed to take meaningful steps toward addressing these challenges.*

Location: *Two working sessions will be held in the Michel/Victor Room, while the other three sessions will be held in the Alexander, Koostahtah, and Charlo Rooms. Working session locations will be determined the day before.*

1:15 PM	Working Session Topics	Facilitators
	Increasing drought and climate change research and capacity with Tribal Colleges and Universities Notetaker: Britt Parker <i>Regional Drought Information Coordinator, NOAA NIDIS</i>	Ruth Plenty Sweet Grass-She Kills <i>Director of Food Sovereignty, Nueta Hidatsa Sahnish College</i> Virgil Dupuis <i>Extension Director, Salish Kootenai College</i>
	Building capacity and identifying technical assistance to apply for drought and climate-related funding opportunities Notetaker: Marina Skumanich <i>National Coordinated Soil Moisture Monitoring Network Program Specialist, NOAA NIDIS</i>	Matt Laramie <i>Regional Coordinator, BIA Branch of Tribal Climate Resilience</i> Kynser Wahwahsuck <i>Tribal Climate Resilience Liaison, Great Plains Tribal Water Alliance</i>
	Enhancing drought monitoring Notetaker: Natalie Umphlett <i>Climatologist, Northeast Regional Climate Center, Cornell University</i>	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i> Kyle Bocinsky <i>Director of Climate Extension, Montana Climate Office, University of Montana</i>
	Streamlining drought and	Paula Antoine

	climate-related planning efforts and managing water during drought Notetaker: Molly Woloszyn <i>Regional Drought Information Coordinator, NOAA NIDIS</i>	<i>Director, Sicangu Oyate Land Office</i> Cody Knutson <i>Planning Coordinator, NDMC, University of Nebraska-Lincoln</i>
	Determining best practices for collecting and documenting drought impacts Notetaker: Crystal Stiles <i>Tribal Engagement Coordinator, NOAA NIDIS</i>	Vicki Hebb <i>Native Climate Tribal Ag Fellow, University of Nevada, Reno</i> Termaine Edmo <i>Climate Change Coordinator, Blackfeet Nation</i>
2:45 PM	Break (<i>snacks/drinks provided</i>)	
3:15 PM	Working sessions continued	
4:15 PM	Closing Comments and Setting the Stage for Day 3 Location: <i>Michel/Victor Room</i>	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
4:30 PM	Adjourn for the Day	

Thursday, September 28, 2023		
Time (MT)	Session	Who
8:00 AM	Continental Breakfast (<i>provided</i>)	
8:30 AM	Welcome Day 3 and Charge for the Day Location: <i>Michel/Victor Room</i>	James Rattling Leaf, Sr. <i>Principal, Wolakota Lab LLC</i>
<p>Session VI: Final Discussion and Next Steps</p> <p>Session purpose: <i>To have leaders report out from their working sessions, facilitate discussion as a whole group on working session outcomes, and identify tangible next steps for NIDIS and partners on how to best support the solutions identified during these working sessions.</i></p> <p>Moderator: <i>Molly Woloszyn, NOAA NIDIS</i></p> <p>Location: <i>Michel/Victor Room</i></p>		
9:00 AM	TCU Session Report Out & Discussion	Working session designee

9:20 AM	Technical Assistance Session Report Out & Discussion	Working session designee
9:40 AM	Monitoring Session Report Out & Discussion	Working session designee
10:00 AM	Break (<i>snacks/drinks provided</i>) - Fill out workshop evaluations	
10:30 AM	Planning Session Report Out & Discussion	Working session designee
10:50 AM	Impacts Session Report Out & Discussion	Working session designee
11:10 AM	Discussion and Next Steps	Crystal Stiles <i>Tribal Engagement Coordinator, NOAA NIDIS</i> Natalie Umphlett <i>Climatologist, Northeast Regional Climate Center, Cornell University</i>
12:00 PM	Workshop Adjourns - Lunch (<i>provided - boxed lunches</i>)	
1:30 PM	Field Trip: Tour of Confederated Salish and Kootenai Tribes Bison Range, Visitor Center, and Mesonet Station 58355 Bison Range Road Moiese, MT <i>The formal portion of the tour will end at 3:00 PM but attendees can stay longer if desired.</i>	

A big thank you from NIDIS to the meeting planning team!

Confederated Salish and Kootenai Tribes; Wolakota Lab LLC; Montana Climate Office; Desert Research Institute; NOAA National Centers for Environmental Information; Northeast Regional Climate Center; Bureau of Indian Affairs; North Central Climate Adaptation Science Center/Great Plains Tribal Water Alliance; Nueta Hidatsa Sahnish College; Oglala Sioux Tribe; National Drought Mitigation Center

We would also like to thank the University Corporation for Atmospheric Research (UCAR)/Cooperative Programs for the Advancement of Earth System Science (CPAESS) for coordinating logistical and travel support for the workshop.

