



# Native Waters on Arid Lands

## DRAFT NWAL 2019 Tribal Summit Agenda Atlantis Hotel and Casino

### Monday October 21, 2019

Youth Day at Pyramid Lake High School

### Tuesday October 22, 2019

9:00 a.m. – 4:00 p.m. Team Meeting, Paradise A, Atlantis (Lunch provided)  
3:00 p.m. – 5:00 p.m. Nevada Tribal Advisory Committee, Grand Ballroom 3, Atlantis  
3:00 p.m. – 5:00 p.m. Registration Open: Atlantis Second Floor Registration Desk

### Wednesday October 23, 2019 - “Access to Quality Water in a Changing Climate”

7:30 – 8:30 **Registration:** Registration Desk

9:00 – 9:30 **Welcome and Opening Prayer**  
Walker River Paiute Honor Guard  
Victor Williams, Prayer

9:30 – 10:00 **Summit Overview, Themes, Goals**  
Maureen McCarthy, NWAL Project Director, University of Nevada, Reno  
Kelsey Fitzgerald, NWAL Communications Coordinator, introduction and demonstration of on-line interactive discussion tools

10:00 – 12:30 **Plenary Workshop: Native Climate Histories:** What western science and native wisdom about past climate events tells us about the future of water for traditional practices, farming, ranching, forestry, and natural resource management.

*Workshop Leaders:*

Kyle Bocinsky (DRI, Research Faculty DRI)  
Steph McAfee (UNR Assoc Prof and NV State Climatologist)  
Adam Csank ( UNR Research Faculty)  
Michael Dettinger (DRI, USGS, ret.)

This 2.5-hour plenary workshop focuses on social scales of climate resilience — families, communities, and environmental regions — and how traditional wisdom at each of these scales informs water and land use

in the past and future. What do native wisdom and western science about past climate events tell us about the future of traditional practices, farming, ranching, forestry, and natural resource management? In facilitated interactive group discussions, participants will engage oral histories and traditional practices to develop examples of resilience in their communities. (see attached Plenary Workshop description for more details)

12:30 – 2:00

**Lunch Provided**

**Keynote Speaker: Improved Irrigation Deliver Project for Gila River Indian Community**

David DeJong (Invited) Director Pima-Maricopa Irrigation Project, Gila River Indian Community

**2:00 – 5:00 Concurrent Sessions**

<p>Room: Paradise A  <b>Working Session: Weather, Climate and Carbon Data for Tribal Resource Managers and Educators</b>  <i>Facilitator:</i> Maureen McCarthy          Break – 3:00 p.m.</p>	<p>Room: Paradise B  <b>Research Results, Sharing Data and Building Capacity</b>  <i>Facilitator:</i> John Phillips          Break brought in at 3 p.m.</p>
<p><b>Tribal Nation Requirements for Drought and Flood Early Warning: Measurements, Analysis and Climate Trends</b>  <i>Discussion Leaders:</i> Kelsey Jensco (Montana State Climatologist) and (I) James Rattling Leaf (NOAA/NIDIS)  <i>Invited Discussants:</i> State Climatologists from the Western States          This 1.5-hour session will be structured to facilitate discussion between Western State climatologists and Tribal resource managers, climate, agriculture and forestry planners, farmers, ranchers, and educators with the goal of identifying needs for monitoring for early signatures of drought on tribal lands and assessing impacts of flood/drought cycles. Discussion will demonstrate access to existing data sources and focus on specific needs to enhance monitoring in support of traditional practices and climate resiliency planning on reservations.</p>	<p><b>Native Waters on Arid Lands Climate Information and Data Needs Assessment: Applications and Filling the Gaps with Indigenous Communities</b>  <i>Presenter:</i> Helen Fillmore (Research Associate, M.S. Hydrology, University of Nevada, Reno)          This 1.5-hour session summarizes results from a two-year needs assessment conducted during the 2016 and 2017 Native Waters on Arid Lands Summits. Real world examples are provided to demonstrate ethical engagement with Indigenous communities and traditional knowledge holders. This includes implications for tribal data sovereignty and protecting traditional knowledge. Facilitated discussion with session participants aims to explore the roles of Indigenous community youth, leaders and elders in adapting their lands and water to climate change.</p>

<p><b>Carbon Stocks and Fluxes on Tribal Lands</b>  <i>Discussion Leaders:</i> Maureen McCarthy (UNR/DRI), Virgil Dupuis (SKC)  This 1.0-hour session will review findings from the Second State of the Carbon Cycle (released in Dec 2018) with a focus on key findings from the Tribal Lands Chapter. This working session is intended to identify areas to support tribal planning for potential future carbon credit trading initiatives. Participants will discuss issues and challenges for carbon credit trading concepts and exchange ideas for assessing carbon stocks and fluxes on tribal lands.</p>	<p><b>Farmer and Rancher Response to Drought in the West</b>  <i>Presenter:</i> Kynda Curtis (Professor, Utah State University)  This 1.5-hour session will discuss the results of a study using behavioral and experimental economics methods to examine agricultural producer behavioral changes (crop choice, fallowing, etc.) under various drought levels and water policy scenarios. Data were collected through choice experiments conducted with onion, hay, and fresh produce growers as well as livestock producers at agricultural meetings held in spring 2019. Growers were provided with four drought scenarios and four policy response options and were asked to select the most preferred option for each drought scenario. Seventy-eight producers participated in the experiments and data were analyzed using standard econometric methods.</p>
<p><b>Lessons Learned: Teacher Professional Development Workshop</b>  <i>Presenter:</i> Meghan Collins, Education Coordinator (DRI)  This 30-min session will review the outcomes from the NWAL September 2019 place-based education and lesson planning workshop with high-school teachers in Arizona. This workshop is focused on translating the science of solar energy, water for agriculture and people, and drought and climate connections into STEM education modules structured to comply with national and state standards.</p>	

**Thursday October 24, 2019 – Summit Day 2 “Celebrating Tribal Food Sovereignty”**

- 0730 – 0830            **Breakfast and General Session** in Paradise CD
- 08:30 – 9:30            **Robust Reservation and Regional Economies: What Are the Key Components?**  
*Exercise Leader:* Bonnie Colby, Professor of Agricultural Resource Economics, University of Arizona
- 9:30 – 10:30            **Panel: Tribal Food Sovereignty: Making it work on reservations lands**  
*Facilitator:* Trent Teegerstrom, Associate Director for Tribal Extension Programs, University of Arizona  
 Panelists:
- Gabriel Mendoza, Sr., Food Production Supervisor, San Xavier Co-op Farm, Tucson, AZ
  - Stacey Jensen, Director, North Leupp Family Farms
  - Nathan Notah, Extension Agent, Window Rock, New Mexico
- 10:30 – 10:50            Break
- 10:50 – 11:00            **Anne Nolin, Director**, UNR Graduate Program in Hydrologic Sciences, Opportunities for Tribal Students
- 11:00 – 12:00            **Tribal Water Right Adjudication for Agricultural Use**  
*Discussion Leaders:*  
 Eric Edwards, Assistant Professor Dept. of Agricultural and Resource Economics, North Carolina State University  
 Leslie Sanchez, PhD Candidate, Tufts University
- 12:00 – 1:30            **Lunch Provided**
- Keynote Speaker: Serving Others and Feeding People: A Food Sovereignty Success Story in Indian Country**  
 Chris Roper, Director, Quapaw Nation

**1:30 p.m. – 4:30 p.m.            Concurrent Sessions**

Room: Paradise A <b>Hands-on training for Water Quality and Solar Energy</b> <i>Facilitator:</i> Maureen McCarthy Break brought in at 3 p.m.	Room: Paradise B <b>Working Session: Impact of Hemp Production on Reservations</b> <i>Facilitators:</i> Staci Emm (UNCE), Kynda Curtis (USU) Break – 3:00 p.m.
<b>Water Quality: Measuring and Mitigating Salinity in Water for Agriculture</b>	This 3-hour session will provide an overview of potential Hemp production on Reservations. “Hemp” a hot topic for

*Presenter:* Alex Lutz, Associate Research Professor Hydrogeology, Desert Research Institute

This 1.5-hour session will engage participants in a discussion about the challenges of managing salinity (and total dissolved solids) in water for crops, livestock, and fisheries. The fundamentals of water salinity sources in different environments will be reviewed and discussed in light of climate impacts in the southwest, Great Basin, and Northern Rockies region. Basic methods for testing salinity in soils and water sources in the field will be demonstrated and participants will have hands-on training on field testing equipment. Discussion will include mitigation measures for different crops, soil types, and climatic zones.

**Solar Energy Systems and Education on Reservation**

*Presenter:* Ed Franklin (Assoc Prof, Dept Agricultural Education, University of Arizona)

This 1.5-hour session will open with an interactive solar education and professional development presentation that covers the basics on reservation solar energy generation concepts and technologies. Participants will be encouraged to discuss their community energy needs and identify opportunities for implementation of renewable energy generation on tribal lands. Training will include demonstration of solar energy components, model systems, and energy measurement technologies.

specialty crops was legalized in the 2018 Farm Bill. This session will give a snap shot of Hemp production to include federal regulations, state regulations, 2018 Farm Bill regulations with tribal plans, and real life examples of crop and water management for Hemp production.

Specific topics include:

Hemp Production and Water Quality

- How Hemp is Grown in Nevada and other states
- Testing and Impacts of water quality in Hemp Production

Hemp Regulation and Tribal Plans

- Tribal Plans for Regulatory Authority over Hemp Production
- Hemp Producer Discussing Operation