Pacific Northwest Tribal Climate Change Network:
Draft Conference Call Notes – January 20, 2016

Call Participants:
• Dominique Bachelet, Oregon State University
• Lucas Bair, Spokane Tribe
• Arwen Bird, Northwest Climate Science Center
• Lexi Brewer, Future Wise
• Amanda Craig, Confederated Tribes of Coos, Lower Umpqua and Siuslaw Indians
• Oliver Grah, Nooksack Tribe
• Ciarra Greene, Wisdom of the Elders
• Keith Hatch, Bureau of Indian Affairs
• James Holt, Nez Perce Tribe
• Joe Hostler, Yurok Tribe
• Carolyn Kelly, Quinault Indian Nation
• Jennifer Lennon, Sauk Suattle Tribe
• Michael Levkowitz, WA Department of Ecology
• Mei Lin Lantz, Willamette National Forest
• Kathy Lynn, University of Oregon
• Austin Macy, University of Oregon
• Amelia Marchand, Confederated Tribes of the Colville Reservation
• Alicia Marrs, NOAA NIDIS
• Ryan Murphy, Point no Point Treaty Council
• Pah-tu Pitt, Confederated Tribes of Warm Springs
• David Redhorse, Bureau of Indian Affairs
• Cynthia Rossi, Point no Point Treaty Council
• Steven Spencer, Shoalwater Bay Tribe
• Jonalee Squeochs, Yakama Indian Nation
• Ann Wyatt, Klawock Tribe
• Kevin Zerbe, Cascadia Consulting

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Upcoming PNW Tribal Climate Change Network Conference Call Dates
• February 17, 2016
• March 16, 2016
• April 20, 2016
• May 18, 2016
• June 15, 2016

Call-in Information:
• Call Time: 10:00 am Pacific
• Call-in #: 1-888-844-9904
• Pass code: 5064716
• Adobe Connect web meeting: http://oregonstate.adobeconnect.com/tribalclimate/
Meeting Notes

Pacific Northwest Drought Early Warning System

Alicia Marrs with NOAA’s National Integrated Drought Information System (NIDIS) presented information about the launch of the Drought Early Warning System (DEWS) for the Pacific Northwest in February 2016. The Pacific Northwest DEWS is a collaborative federal, tribal, state and local interagency effort to enhance drought early warning capacity and resilience within the region. This is accomplished through local stakeholder-driven activities encompassing data collection and monitoring; research; planning for climate extreme events; and communication, education and outreach. Activities will focus on areas throughout the states encompassing the Columbia River Basin (Idaho, Montana, Oregon and Washington). Objectives include:

• Provide a forum for a diverse group of federal, tribal, state, and local stakeholders who represent all economic sectors, including water and land resource management, to strategize and develop appropriate, relevant, useful, and readily available drought, climate, weather, and water-related information.
• Develop an understanding of existing observation and monitoring networks, data, tools, research and other planning and mitigation resources available for a drought early warning system.
• Identify economic sector-specific and geographic needs for future

For more information, visit: https://joss.ucar.edu/sites/default/files/meetings/2016/documents/DEWSprocess_2pager_PNWFINAL.pdf. Alicia’s PPT presentation is also available here: http://tribalclimate.uoregon.edu/network/. Alicia’s presentation included information on tribal engagement in other Drought Early Warning Systems around the country, including the Four Corners region and the Missouri River Basin. Alicia emphasized their interest in engaging tribes in the Northwest and is eager to hear from people about tribal priorities for a drought early warning system.

The Pacific Northwest DEWS Kickoff Meeting

Alicia also shared that the Pacific Northwest DEWS Kickoff Meeting will be held February 2-3, 2016 in Portland, OR to formally launch the DEWS. This two-day event will bring together federal, tribal, state, local, and academic partners and stakeholders for an in-depth discussion on drought in the Pacific Northwest with attention to water, climate, land resources and emergency management. Specifically, the discussions will center on improving the capacity to meet the early warning information needs of decision makers in the region. Desired outcomes of the Pacific Northwest DEWS Kickoff Meeting include:

1. Increased knowledge and awareness of present decision-support tools and processes, including the National Integrated Drought Information System.
2. Identification of current knowledge and information gaps.
3. Development of recommendations for improved early warning, which would include better coordination of integrating, displaying, and disseminating climate, weather, and water data and information.
4. Development of recommendations for future actions, collaborative research, and decision support tools.
5. Identification of baseline evaluation metrics for drought and its associated impacts.

Following the formal launch of the PNW DEWS during the February 2016 Kickoff Meeting, a two-year PNW DEWS Work Plan will be developed to provide a roadmap on how the DEWS will enhance drought
early warning throughout the Pacific Northwest. To register for the meeting, visit: https://joss.ucar.edu/meetings/2016/nidis pacific-nw-dews-meeting. For more information please contact Alicia Marrs, alicia.marrs@noaa.gov.

Alicia said that the meeting is open to a wide range of partners, including tribes, federal and state agencies, science organizations and non-governmental organizations. Another question focused on how the science that goes into the early warning system can be accessed. Alicia said that they are interested in hearing feedback about what the science and data accessibility needs are so that data and information can be organized and shared in an effective way.

Wisdom of the Elders
Ciarra Greene with Wisdom of the Elders presented on their Climate & Native Wisdom Documentary Film Series. Climate and Native Wisdom: The Peoples of the Oregon Coast is the third in Wisdom of the Elder’s documentary film and radio series being produced in 2016. For information about this film series, visit: https://www.generosity.com/education-fundraising/climate-native-wisdom-documentary-film-series. Wisdom of the Elders is reaching out to Oregon coastal tribes to find people who are interested in being interviewed for the documentary. They are also interested in engaging tribal youth in the communities they go to and will train tribal youth in filmmaking as they conduct interviews. If you know of someone who might want to be interviewed for the documentary, or tribal youth who would like to be part of their emerging film maker program, contact

Ciarra also presented on the Native Peer Mentorship Program. This is a paid Environmental Training Opportunity for Native American Youth from May – August 2015. Wisdom of the Elders is inviting Native American college-age students in the Portland area to serve as peer mentors for Discovering Yidong Xinag (means “The Old Wisdom” in the Athabascan language). This Native American youth leadership initiative is designed to engage Native youth in environmental and climate studies through service learning by serving as peer mentors to middle school youth. They will have opportunities to learn about their local ecosystem, explore higher education in STEAM (science, technology, engineering, arts and math) fields, and pursue STEAM career pathways. They will also learn how to produce a short video about a local environmental/climate issue. For an application, or if you have questions, youth and family members can contact Amanda Kelley Lopez at amanda@wisdomoftheelders.org or call 503-775-4014. Applications are accepted until March 31, 2016. Please visit our website www.wisdomoftheelders.org for more information on Discovering Yidong Xinag.

Finally, Ciarra shared information about the Wisdom Workforce Development Internship Program, which is providing environmental conservation and restoration training and career pathways for Portland’s Native adults. Wisdom Workforce Development will provide specialized environmental assessment and restoration workforce training, service learning in local natural areas, and a job pipeline to meaningful environmental career pathways. Connecting with the world of nature while assessing and restoring public natural areas benefits Portland’s Native community members. For more information about this program, contact ciarra@wisdomoftheelders.org and visit: http://www.wisdomoftheelders.org/wisdomworkforce/interns/.

Ciarra mentioned that one aspect of the Wisdom Workforce project has been related to working with Metro in Portland and testing camas for residual pesticides. Joe Hostler offered to talk further with Ciarra about that project and the potential for further research.
Updates:

**U.S. Fish and Wildlife Service Revised Native American Policy**

The revised Native American Policy guides broader, more open and collaborative dialogue and working relations between the Service and federally recognized tribes and Native Alaskans. The updated policy is designed to sustain effective partnerships that are crucial to meeting the Service’s and tribes’ joint responsibilities as stewards of the nation's natural and cultural resources. The revised policy provides a consistent, yet flexible national framework that encourages efficient and creative ways to maximize tribal resource conservation through improved federal-tribal working relationships. It puts stronger emphasis on co-management and collaborative management of natural and cultural resources; places added emphasis on implementation and accountability; promotes building tribal capacity, the use of tribal knowledge in the Service's decision-making, and greater Service and tribal training and education; and enhances collaborative Service-tribal law enforcement efforts where possible. To view the final revised policy, visit the Service’s website at http://www.fws.gov/policy/510fw1.html

**New Publications and Resources**

**Climate change could cut First Nations fisheries’ catch in half. University of British Columbia Media Release.**


**Projected Scenarios for Coastal First Nations’ Fisheries Catch Potential under Climate Change: Management Challenges and Opportunities**


**Abstract:** Studies have demonstrated ways in which climate-related shifts in the distributions and relative abundances of marine species are expected to alter the dynamics and catch potential of global fisheries. While these studies assess impacts on large-scale commercial fisheries, few efforts have been made to quantitatively project impacts on small-scale subsistence and commercial fisheries that are economically, socially and culturally important to many coastal communities. This study uses a dynamic bioclimatic envelope model to project scenarios of climate-related changes in the relative abundance, distribution and richness of 98 exploited marine fishes and invertebrates of commercial and cultural importance to First Nations in coastal British Columbia, Canada. Declines in abundance are projected for most of the sampled species under both the lower (Representative Concentration Pathway [RCP] 2.6) and higher (RCP 8.5) emission scenarios (-15.0% to -20.8%, respectively), with poleward range shifts occurring at a median rate of 10.3 to 18.0 km decade-1 by 2050 relative to 2000. While a cumulative decline in catch potential is projected coastwide (-4.5 to -10.7%), estimates suggest a strong positive correlation between the change in relative catch potential and latitude, with First Nations’ territories along the northern and central coasts of British Columbia likely to experience less severe declines than those to the south. Furthermore, a strong negative correlation is projected between latitude and the number of species exhibiting declining abundance. These trends are shown to be robust to alternative species distribution models. This study concludes by discussing corresponding management challenges that are likely to be encountered under climate change, and by highlighting the value of joint-management frameworks and traditional fisheries.
management approaches that could aid in offsetting impacts and developing site specific mitigation and adaptation strategies derived from local fishers’ knowledge.

**Climate change through an intersectional lens: gendered vulnerability and resilience in indigenous communities in the United States.**

Vinyeta K, Whyte KP, Lynn K. 2015. *Climate change through an intersectional lens: gendered vulnerability and resilience in indigenous communities in the United States.* Gen. Tech. Rep. PNW-GTR-923. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. Abstract: The scientific and policy literature on climate change increasingly recognizes the vulnerabilities of indigenous communities and their capacities for resilience. The role of gender in defining how indigenous peoples experience climate change in the United States is a research area that deserves more attention. Advancing climate change threatens the continuance of many indigenous cultural systems that are based on reciprocal relationships with local plants, animals, and ecosystems. These reciprocal relationships, and the responsibilities associated with them, are gendered in many indigenous communities. American Indians, Alaska Natives, and Native Hawaiians experience colonization based on intersecting layers of oppression in which race and gender are major determinants. The coupling of climate change with settler colonialism is the source of unique vulnerabilities. At the same time, gendered knowledge and gender-based activism and initiatives may foster climate change resilience. In this literature synthesis, we cross-reference international literature on gender and climate change, literature on indigenous peoples and climate change, and literature describing gender roles in Native America, in order to build an understanding of how gendered indigeneity may influence climate change vulnerability and resilience in indigenous communities in the United States. [http://www.treesearch.fs.fed.us/pubs/49888](http://www.treesearch.fs.fed.us/pubs/49888)

**ANNOUNCEMENTS**

**For additional climate change resources, news and information, sign up for the Institute for Tribal Environmental Professionals monthly newsletter:**


**Post-Doctoral Research Fellow with Michigan State University (MSU) and the College of Menominee Nation (CMN). Position Open Until Filled-Review of Applications begins 2/1/2016:** Michigan State University (MSU) and the College of Menominee Nation (CMN) invite applicants for a research associate (postdoctoral research fellow) under a National Science Foundation grant. This project seeks to understand the range of practices that U.S. climate science organizations employ to prepare their staff for ethical issues that will occur when engaging with Indigenous peoples and to evaluate the perceptions of the effectiveness of these practices from organizational and Indigenous perspectives. This fellow will have an unparalleled opportunity to work at the nexus of Indigenous peoples and scientific research on climate change. This is a one year twelve month appointment with option for renewal for an additional year. Applications should be submitted electronically to the Michigan State University Human Resources website ([www.jobs.msu.edu](http://www.jobs.msu.edu)). Applicants are required to submit a letter of interest, curriculum vitae, and names and contact information for three references. **The position will start August 16 2016.** Review of applications will begin on February 1st, 2016 and continue until position has been filled. Queries may be directed to Professor Kyle Whyte, Chair of the Search Committee, kwhyte@msu.edu. For more information, visit: [https://jobs.msu.edu/applicants/jsp/shared/frameset/Frameset.jsp?time=1451973302578](https://jobs.msu.edu/applicants/jsp/shared/frameset/Frameset.jsp?time=1451973302578)

2016 Science to Action Fellowship for Graduate Research: Open for Applications! The National Climate Change and Wildlife Science Center, in partnership with Michigan State University, is accepting applications for the 2016 Science to Action Fellowship. Two fellowships of $10,000 will be awarded to policy-relevant research projects that investigate climate change impacts on fisheries and/or wildlife. Graduate students in Michigan State’s Department of Fisheries and Wildlife or at any Climate Science Center consortium institution are invited to apply. The application deadline is March 15, 2016.

Public Input on the Triennial Update to the USGCRP Strategic Plan. The U.S. Global Change Research Program is three years into the implementation of its National Global Change Research Plan 2012-2021 (http://www.globalchange.gov стратегический план) hereafter called the Strategic Plan. That decadal Strategic Plan remains the continuing blueprint for USGCRP, with its strategic directions guiding the Program. There are areas, however, where the landscape has changed by virtue of significant progress, changing scientific or societal urgencies, or challenges. This Triennial Update to the Strategic Plan (hereafter simply “Update”) addresses these areas and their implications for USGCRP. In accordance with the Global Change Research Act of 1990 (Sec 104, P.L. 101-606), this public comment period invites the public to provide comments and feedback on the Update. Public comments will be accepted through January 30, 2016. https://federalregister.gov/a/2015-30292

UPCOMING EVENTS

January 28, 2016. 11:00 am Pacific. Webinar: Renewable Energy - Clean Power Plan Informational Webinar: EPA will explain how renewable energy was used in the Best System of Emission Reduction, and how states can use renewable energy to reduce emissions as part of a state plan. To Register, click here: https://attendee.gotowebinar.com/register/5504011543920678914.

January 31, 2016. 1:00 pm. Film: “This Changes Everything” Confront the Climate Crisis. Olympia, WA. Koval Performing Arts Center—North Thurston HS, 600 Sleater Kinney Rd. NE, Lacey, WA 98516. http://www.meaningfulmovies.org/


February 2-4, 2016. River Restoration Northwest, Annual River Restoration Symposium. Stevenson, Washington. The intent of the Symposium is to convene, share information, and foster dialogue on a multi-disciplinary approach to stream restoration and related watershed and river sciences, hence a broad range of speakers and topics is encouraged. Our participants typically include restoration planners, designers, engineers, biologists, hydrologists, geomorphologists, regulators, scientists and land/resource managers. http://www.rrnw.org/Call. Themes include:

- Adapting to Climate Change
- Aquatic and Riparian Invasive Species
- Columbia River Treaty Implications
- Floodplain Functions and Values
• Tribal Restoration Interests, Issues and Efforts

February 4, 2016. Department of Energy Minorities in Energy Regional Climate Change Impacts Webinars - Northwest. DOE will host a series of webinars highlighting the impacts and opportunities of climate change and responses for minority communities, using information from Quadrennial Energy Review and the National Climate Assessment. Participants may register at anytime for the webinars, and the webinars will be recorded for those interested who aren't able to attend. The presenter for the Northwest webinar is TBD. For more information and to register, visit: http://www.energy.gov/diversity/mie-webinar.

February 4-5, 2016. Renewable Energy Development on Tribal Lands. Anaheim, CA
This conference will engage attendees in discussions with multiple governmental and tribal organizations, as well as tribal and Indian country project developers, to try to understand and learn from these unique challenges. Case studies of practitioners who have been involved in these types of projects—both in large utility-scale and smaller, distributed generation—will be showcased to highlight the considerable range in variety, scale and application these projects have, and to demonstrate how each tribal community has unique needs and visions for the project that must be mindfully addressed prior to, during, and throughout the entire development life cycle. http://www.euci.com/pdf/0216-renewable-developemnt-tribal.pdf


February 9–11, 2016. Community-Scale Tribal Renewable Energy Workshop. Tribal leaders and staff are invited to attend DOE Office of Indian Energy's community-scale tribal renewable energy workshop at the Agua Caliente Resort and Casino in Rancho Mirage, California, Feb. 9–11, 2016. The workshop will walk participants through the process for developing community-scale renewable energy projects on tribal lands. The workshop offers a unique opportunity for participants to learn from renewable energy project experts, get hands-on experience using technology resource assessment tools, explore project case studies, and hear from other tribes about lessons learned. The workshop is limited to elected tribal leaders, tribal executives, and tribal staff. There is no cost to attend, but registration is required. Participants are responsible for their own lodging, dinner, and travel costs. Register now to secure your spot by emailing tribalworkshops@nrel.gov or calling 303-275-3005.

February 10, 2016. 11:00 am Pacific. Webinar: Growing Safe Routes to School in Indian Country. Tribal communities have much to gain from increasing active transportation. But they can experience particular challenges to making policy and on-the-ground changes necessary to support active transportation and Safe Routes to School. This webinar builds on the recent publication, Walking and Bicycling in Indian Country: Safe Routes to School in Tribal Communities. The webinar provides an overview of some of the considerations unique to implementing Safe Routes to School in tribal communities, and highlights successful strategies that can assist in overcoming the challenges. It will feature representatives from two Tribes that have improved opportunities for safe walking and bicycling to school through education and encouragement programs, infrastructure improvements, and strong partnerships with outside organizations and agencies. Register here:
February 12, 2016. 12 pm Pacific. **Evaluating Scenario Planning to Understand Climate Change**
Our world is changing – but it can be hard to predict the exact timing and extent of the impacts. One way to deal with the uncertainty associated with shifting climate and varied human responses is to explore a range of possible futures via scenarios planning, based on input and participation from a diverse group comprised of the people most affected. How and when can this method be used as a tool for long-term planning? A case study from the National Park Service and the Scenarios Network for Alaska and Arctic Planning offers some insights into what works, how we can improve communication, and how we can move forward. [Register here](https://attendee.gotowebinar.com/register/6685144314417503745).

February 17, 2016. 11 am Pacific. **Water Policy & Climate Change for Alaska Natives**. Presentation by Robert Anderson, Oneida Indian Nation Visiting Professor Harvard Law School. Provides environmental professionals and Alaska Native communities with an overall understanding of how water policies, regulation, and laws apply to Alaska Native communities and can be utilized to find solutions to environmental challenges. This webinar is part of the [Alaska Policy & Climate Adaptation Webinar Series](http://sagebrushconference2016.org/index.cfm).


**Conference: March 8, 2016. 11 am Pacific. **Human Rights & Climate Change**. Governing individual and collective behavior, including the conduct of state and federal governments, is central to addressing both the causes and the impacts of climate change. A critical understanding of the complexities, challenges and opportunities raised by the policy regime for mitigating and adapting to climate change will be highly relevant for tribal government’s and communities who seeks to play a role in moving Alaska towards mitigating and adapting to change. This webinar is part of the [Alaska Policy & Climate Adaptation Webinar Series](http://sagebrushconference2016.org/index.cfm).

March 8-10, 2016. Conference: **Tribal Green Summit 2016. Snoqualmie Casino.** All are invited who are involved with resource management, community planning, housing, landscapes and on-the-ground projects who want to gain and share a greater understanding for sustainable built environments. **Call for Presenters:** We are seeking presenters, posters and/or displays in the field of tribal green building, waste reduction and recycling, habitat restoration and sustainability. We are especially seeking examples of projects in tribal communities. Hosted by the Snoqualmie Indian Tribe with support from Tribal Solid Waste Advisory Network (TSWAN) and funded by the Environmental Protection Agency (EPA). For more information, contact: Cindy Spiry [cindy@snoqualmietribe.us](mailto:cindy@snoqualmietribe.us) or Kami Snowden [ksnowden@tswan.org](mailto:ksnowden@tswan.org).

March 22-24, 2016. **14th Annual Climate Prediction Applications Science Workshop.** Burlington, VT. The 14th Annual Climate Prediction Applications Science Workshop (CPASW) will bring together a diverse group of climate researchers, information producers, and users to share developments in the research and applications of climate predictions for societal decision-making. The 2016 CPASW is hosted by the NOAA National Weather Service Climate Services Branch, University of Vermont, and other climate services partners. [http://www.uvm.edu/~cpasw/](http://www.uvm.edu/~cpasw/)

April 13, 2016. 11 am Pacific. **Environmental Code Development for Alaska Natives**
Presentation by Toby Thaler, Policy Director, Model Forest Policy Program/Climate Solutions University. Presentation focusing on policy tools available to Tribal communities in Alaska to further their goals of long term resilience to climate and other stressors, while at the same time promoting Tribal sovereignty and strengthening their ability to participate in government to government relationships with state and local agencies. One such tool—adoption of environmental and resource codes—will be explored in some depth including use of examples from communities around the country. Presentation by Toby Anungazuk, IGAP Program Manager, Chinik Eskimo Community. Presentation will focus on the risks presented to local communities from the transshipment and storage of hazardous waste. In rural Alaska there are often no alternative to the use of Native village marine transshipment facilities. With increasing risks of storm surges causing flooding and spills, it is incumbent on Tribal governments to develop their own environmental laws to protect their communities. These laws must be developed in collaboration with affected state and federal agencies, and the owners of transshipped hazardous materials. This webinar is part of the Alaska Policy & Climate Adaptation Webinar Series.

April 19-21, 2016. Tribal Climate Change Adaptation Training. Anchorage, AK. Hosted by the Institute for Tribal Environmental Professionals and in collaboration with the Alaska Native Tribal Health Consortium. This course provides an introduction to planning for climate change impacts, with examples of tribes that have been going through the adaptation planning process. The course is intended for tribal environmental and natural resource professionals who expect to be involved in climate change adaptation planning. Since the course will focus on climate change impacts in the region, we especially encourage people from the region to attend. More information about the course is available here: http://www7.nau.edu/itep/main/docs/training/cc/Ancmt-CCAdaptAK-1604.pdf.

May 17-19, 2016. National Tribal Forum on Air Quality (NTF). Niagara Falls, NY. The purpose of the NTF is to provide environmental professionals from tribes, EPA, and other organizations an opportunity to meet and discuss current policies, regulatory initiatives, funding, and technical topics in air quality. The NTF is a cooperative endeavor co-sponsored by The Institute for Tribal Environmental Professionals (ITEP) and the National Tribal Air Association (NTAA), made possible by funding from US EPA and sponsorships from the entities listed below. For information on giving a presentation or a poster, or being part of the Eco-Café Exhibit and Networking Session, visit: http://www7.nau.edu/itep/main/Conferences/confr_ntf and click on “presenters.”

June 7-9, 2016. Tribal Climate Change Adaptation Training. Pala, CA. Hosted by the Institute for Tribal Environmental Professionals. This course provides an introduction to planning for climate change impacts, with examples of tribes that have been going through the adaptation planning process. The course is intended for tribal environmental and natural resource professionals who expect to be involved in climate change adaptation planning. More information this training and how to register will be made available on the ITEP website soon: http://www7.nau.edu/itep/main/Training/training_cc.