

EPA Tribal Science Bulletin



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Welcome to the Inaugural Issue of the *EPA Tribal Science Bulletin*



As Natives, it is our sacred duty to be good environmental stewards.

We have been gifted with abilities to use our science knowledge to do just that.

Hello, my name is Curtis Munoz. I am pleased to share the inaugural bulletin of the [National EPA-Tribal Science Council](#) (TSC). I serve as the TSC Tribal Co-Chair and Environmental Director of the Kiowa Tribe. I am half Kiowa and half Muscogee

Creek. My educational background in biochemistry and molecular biology has helped me to perform research important to tribal communities, particularly on mold and mycotoxin effects on indoor air quality. I also focus on climate change and its effects on tribal communities, an issue that the TSC has elevated as a priority since 2007.

The TSC created this bulletin to bridge the gap between tribes and EPA and between Native science and Western science. It is a platform to give

Native science a voice from all over Indian Country.

The TSC will continue to identify priorities that promote our environmental values and help to address our land, air and water concerns. These efforts allow tribes to apply their unique science knowledge to address these issues. Our responsibility is to bring the environment back to its true balance. We invite you to participate by sharing your ideas and concerns with us. Aho.

Curtis can be reached at nethkuplega@yahoo.com. ○

TSC Member Spotlight: EPA Co-Chair, Dave Jewett



Dr. David Jewett is an EPA hydrogeologist who, as Chief of the Ground Water and Ecosystems

Restoration Division's Sub-surface Remediation Branch, leads a scientific team devoted to protecting and restoring ground and surface water and ecosystem resources. As the project lead for the Contaminated Sites Project in the Sustainable and Healthy

Communities Research Action Plan, Dave helps to provide scientific and technical support to EPA regional and program offices and to plan Agency research on ground water, sediments and vapor intrusion.

Late in 2015, Dave was appointed as the EPA Co-Chair of the TSC, working in concert with Curtis Munoz and Agency staff to support the beneficial role the TSC plays engaging with tribal environmental authorities and providing

the scientific foundation necessary to better understand environmental concerns on tribal lands.

Dave has more than 30 years of hydrology and hydrogeology experience, with research interests in subsurface site characterization, solute fate and transport, ground water/surface water interactions, and the water-energy nexus. Dave also serves as a member of EPA's National Remedy Review Board. He can be reached at jewett.david@epa.gov. ○

KEY DATES & EVENTS

- Region 5 Tribal Environmental Program Management Conference, April 4–8, Chicago, IL
- [Region 9 Spring RTOC Meeting](#), April 12–14, San Diego, CA
- Region 1 Tribal Leaders Summit, April 13, Boston, MA
- Region 6 RTOC Meeting and Tribal Summit, April 13–15, Dallas, TX
- Proposals for the [2016 Tribal Lands & Environment Forum](#) due May 6.
- [National Adaptation Forum](#), May 9–11, St. Paul, MN
- [2016 National Tribal Forum on Air Quality](#), May 17–19, Niagara Falls, NY
- [Special Tribal Superfund Training and Site Visit](#), May 24–26, Spokane, WA

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SCIENCE UPDATE

DURING ITS RECENT FACE-TO-FACE BUSINESS MEETING, HELD DECEMBER 2015 IN WASHINGTON, D.C., THE TSC DISCUSSED THE INCREASINGLY IMPORTANT TOPIC OF CITIZEN SCIENCE AND HEARD ABOUT TWO TRIBALLY FOCUSED CITIZEN SCIENCE PROJECTS UNDERWAY IN ALASKA AND MINNESOTA.

Southeast Alaska Tribal Toxins (SEATT) Partnership

The Southeast Alaska Tribal Ocean Research program created the unprecedented SEATT partnership in late 2013 to create an early warning system for increasingly prevalent harmful algal blooms (HABs) that affect subsistence clam resources. Paralytic shellfish poisoning (PSP) from HABs is caused by a toxin more lethal than sarin nerve gas, with coastal Alaskan Native populations being 12 times more likely to be affected by PSP than non-Native communities.

Currently, only commercial shellfish are tested for

safety by Alaska state agencies, with no subsistence or recreational regulatory testing. This created a niche for SEATT, which monitors HABs and conditions affecting their development and provides equipment and training to citizen scientists. The reliable data collected by SEATT are provided to the National Oceanic and Atmospheric Administration and allow state agencies to make informed decisions. This real-time citizen monitoring allowed for the development of an early warning system and forecasting tools.

SEATT provides outreach to tribal and nontribal citizens about the health risk potentials related to the subsistence clam harvest and coordinates with state and local health departments about this issue. The group also is developing an interactive online mapping tool to help fisherman and clammers make informed decisions.

For more information, contact Chris Whitehead (chris.whitehead@sitkatriben-sns.gov). ○



PARALYTIC
SHELLFISH
POISONING
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BY A TOXIN
MORE LETHAL
THAN SARIN
NERVE GAS.



Leech Lake Air Monitoring Pilot Project

The goal of this project is to assist the Leech Lake Band of Ojibwe in understanding local-scale air quality issues and potential differences between local- and regional-scale particulate matter (PM). EPA has lent three PM sensor devices to the tribe to determine the potential benefits and limitations of the sensors. The co-location study began in October 2015 and will occur in two phases, with periodic co-location of the sensors with a Federal Reference Method (FRM) monitor and periodic mobile monitoring near

local sources to examine the affects of sources on local air quality. Staff make routine weekly visits to the area to manually download the data from the FRM monitor. The two sensors selected for the project have been evaluated by the Agency, and the instrument performance results are publicly available. The data quality objectives for the project were developed to determine whether the monitors can work outdoors and throughout the winter with the same precision and accuracy as the FRM monitor. The next

steps are to continue the field deployment of the sensors and collect data until the end of 2016. The final project report will document the study design, collected data, data analysis results, project challenges and lessons learned. Results will be presented at the 2016 National Tribal Forum on Air Quality.

For more information, contact Brandy Toft (air@lldrm.org) or Kristen Benedict (benedict.kristen@epa.gov). ○

CLIMATE CHANGE CONTACTS AND RESOURCES

AN IMPORTANT TOPIC DISCUSSED AT THE TSC'S DECEMBER 2015 BUSINESS MEETING WAS CLIMATE CHANGE. DURING A CLIMATE CHANGE ROUNDTABLE, FEDERAL AGENCY PARTNERS (BELOW) PRESENTED INFORMATION ABOUT THEIR AGENCIES' CLIMATE CHANGE ACTIVITIES AND EFFORTS THAT ARE OF INTEREST TO TRIBES.



Federal Climate Change Contacts

Bureau of Indian Affairs

Rachael Novak, rachael.novak@bia.gov

U.S. Department of the Interior Advisory Committee on Climate Change and Natural Resource Science

Gary Morishima, morikog@aol.com

U.S. Environmental Protection Agency

Office of Research and Development:

Andy Miller, miller.and@epa.gov

Office of Water:

Stephanie Santell, santell.stephanie@epa.gov

Felicia Wright, wright.felicia@epa.gov

U.S. Fish and Wildlife Service

Scott Aikin, scott_aikin@fws.gov

U.S. Forest Service

Alicia Bell-Sheetter, ambellsheetter@fs.fed.us

Chris Swanston, cswanston@fs.fed.us

U.S. Geological Survey

Eric Wood, woodec@usgs.gov

National Oceanic and Atmospheric Administration

Linda Belton, linda.belton@noaa.gov



Online Climate Change Resources

[University of Oregon Tribal Climate Change Guide](#)

The University of Oregon established the Pacific Northwest Tribal Climate Change Project, a collaboration of tribal, academic, federal and other groups. The project has developed an online database of tribally relevant climate change resources.

[Tribal Climate Change Adaptation Planning Toolkit](#)

This toolkit includes a collection of templates and other resources developed by the Institute for Tribal Environmental Professionals to assist tribes in their climate change adaptation planning process.

[Institute for Tribal Environmental Professionals \(ITEP\) Tribes and Climate Change Website](#)

ITEP has developed this website as a comprehensive, go-to resource tailored to help Native peoples gain a better understanding of climate change impacts and adaptation. Included is a monthly newsletter and information about funding opportunities and upcoming events.



LET YOUR VOICE BE HEARD!

CALL FOR TRIBAL WATER PROGRAMS ADDRESSING CLIMATE IMPACTS ON WATER RESOURCES

EPA's Office of Water (OW) currently is developing a paper to identify the approaches that tribes have taken to address climate change concerns. A particular focus is on water quality/water resources across North America. The paper describes tribal vulnerability assessments and climate adaptation plans involving water resources, building community resilience to climate change impacts on water resources, and potential funding mechanisms to support tribal climate adaptation efforts for water resources.

OW would like tribes' input on: (1) the key climate change issues tribes are facing and (2) examples of specific actions tribes are taking to address these issues. Answers to the following four questions will guide development of the paper:

- Would you be able to share concrete examples of what other tribes are currently working on related to climate adaptation that could be useful models for helping other tribal communities?
- From your perspective, what are some key climate change impacts on tribes and water resources?
- Do you have any recommendations on how to structure the report to better meet tribal needs?
- Does this paper duplicate any current efforts that you are aware of?

Please contact Stephanie Santell at santell.stephanie@epa.gov to participate in this important effort and let your voice be heard. ○



TSC MEMBERSHIP

Tribal Caucus

Region 1: Theo Willis (Passamaquoddy Tribe at Pleasant Point)
 Region 1 *Alternate*: Trevor White (Passamaquoddy Tribe of Indian Township)
 Region 2: Neil Patterson (Tuscarora Nation)
 Region 4: Katie Tiger (Eastern Band of Cherokee Indians)
 Region 5: Jeffrey Mears (Oneida Tribe of Indians of Wisconsin)
 Region 6: Curtis Munoz (Kiowa Tribe)
 Region 7: Carol Kriebs (Sac and Fox Nation of Missouri in Kansas and Nebraska)
 Region 8: Mike Durglo (Confederated Salish and Kootenai Tribes)
 Region 8 *Alternate*: Scott Clow (Ute Mountain Ute Tribe)
 Region 9: Carley Whitecrane (Karuk Tribe)
 Region 9 *Alternate*: Javier Silva (Sherwood Valley Tribal Environmental Program)
 Region 10: Lee Juan Tyler (Shoshone Bannock Tribes)
 Region 10 *Alternate*: Ladd Edmo (Shoshone Bannock Tribes)
 Region 10 (Alaska): Orville Huntington (Tanana Chiefs Conference)

EPA Caucus

Region 1: Robert Hillger
 Region 2: Kai Tang
 Region 4: Tom Baugh
 Region 5: Kathy Mayo
 Region 5 *Alternate*: Carole Braverman
 Region 6: Mark Allen
 Region 7: Brenda Groskinsky
 Region 7 *Alternate*: Amber Tucker
 Region 8: Patti Tyler
 Region 9: Destinee Cooper
 Region 10: Lon Kissinger
 American Indian Environmental Office: Mary Powell
 Office of Air and Radiation: Lesley Jantarasami
 Office of Children's Health Protection: Ted Coopwood
 Office of Environmental Information: Beth Jackson
 Office of Chemical Safety and Pollution Prevention: Karen Hamernik
 Office of Land and Emergency Management: David Charters
 Office of Research and Development: David Jewett
 Office of Research and Development: John McKernan
 Office of Water: Felicia Wright



DO YOU HAVE QUESTIONS ABOUT THE TSC OR THE NEWSLETTER? CONTACT MONICA RODIA, TSC EXECUTIVE SECRETARY, EPA OFFICE OF SCIENCE POLICY, AT RODIA.MONICA@EPA.GOV OR (202) 564-8322.