

# EPA Tribal Science Bulletin



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NATIONAL EPA-TRIBAL SCIENCE COUNCIL (TSC)

## Two-Eyed Seeing: Integrating Indigenous Research Frameworks

In December 2018, the TSC attended an Indigenous Research Frameworks Training Workshop presented at the TSC's face-to-face meeting in Pensacola, Florida. The meeting was held at EPA's Gulf Ecology Division (GED) Laboratory, which is part of the Office of Research and Development's National Health and Environmental Effects Research Laboratory. EPA staff, including the GED Director, also attended.

The training was originally developed as part of "Sowing Synergy," a graduate program of the State University of New York College of Environmental Science and Forestry (SUNY-ESF). SUNY-ESF was also the host site for the TSC's Traditional Ecological Knowledge (TEK) Workshop held in 2013. In many ways, the

Frameworks training is a follow-up to a key message shared at the TEK Workshop: "TEK can be described as an approach to knowledge generation and is as valid as western science for many purposes."

Understanding knowledge generation is a critical theme of the Frameworks training, which was created by four Native and four non-Native SUNY-ESF students. Two of these students, Annie Sorrell (Bitterroot Salish Tribe) and Brian Ratcliffe, agreed to deliver a version of the workshop for the TSC. Annie is a Master of Science candidate studying aromatic plants on the Flathead Reservation in Montana, and Brian is pursuing a dual-degree, a Master of Professional Studies in applied ecology at SUNY-ESF and a Master of Public Administration at the Maxwell School of Syracuse University. Both are interested in how TEK applies to their research. Unfortunately, Annie was unable to attend at the last minute, so Brian presented the training, beginning with an acknowledgement of the indigenous peoples of Pensacola. Land acknowledgment is an important introduction for

each gathering and serves to ground participants in the long-term history of the place they stand, physically and intellectually.

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The training covered terminology associated with TEK and western science, power and trauma dynamics, and indigenous metaphors for multiple "ways of knowing."

Brian used Onondaga Lake as a case example, a sacred site of the Haudenosaunee People in upstate New York that is undergoing a massive remedial and restorative effort today. This example reminds us that conflicting worldviews underlie perceptions of the natural world and can result in disagreements about what it means to protect human health and the environment.

Research in Indian country is currently experiencing a sea change, inspired partly by indigenous people making scientists aware of the mistakes of the past and charting a new course for the future. Past scientific research with Indigenous partners

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SUNY-ESF graduate student Brian Ratcliffe presents the concept of "two-eyed seeing" for TSC members and EPA staff. Photo courtesy of Neil Patterson.

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## SCIENCE UPDATE

### The “3Ts”: Addressing Potential Lead Exposures in Tribal Schools

In May 2018, EPA Region 6 invited tribal nations within the region to partner with EPA to conduct voluntary lead testing of drinking water in tribal schools, daycare centers and Head Start facilities served by tribal water systems regulated by Region 6.

Nine tribes responded and partnered with Region 6 to conduct sampling at 24 facilities in New Mexico, Oklahoma and Texas: Alabama-Coushatta Tribe of Texas, Choctaw Nation of Oklahoma, Pueblo of Cochiti, Pueblo of Jemez, Sac & Fox Nation, Pueblo of San Felipe, Pueblo of Santa Ana, Taos Pueblo, and Pueblo of Zia. On April 3, 2019, EPA Region 6 proudly recognized these tribes for their commitment to protecting children’s health at the 22nd Annual Tribal Environmental Summit in Dallas.

EPA has created a program highlighting the “3Ts” (Training, Testing and Taking Action) to bring awareness to potential lead exposures in schools. Region 6’s work decreases the number of tribal schools that have not conducted testing and assists tribes in initiating their own programs to regularly monitor lead in school drinking water. In support of the effort, EPA Region 6 provides sampling bottles, sample analysis and recommended follow-up actions based on sampling results. The sampling effort is ongoing, with a target completion date of December 2020.

To learn more about the 3Ts for Reducing Lead in Drinking Water, please visit

[www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit](http://www.epa.gov/ground-water-and-drinking-water/3ts-reducing-lead-drinking-water-toolkit).



EPA Acting Deputy Administrator Mr. Henry Darwin (far left), EPA Region 6 Acting Regional Administrator Mr. David Gray (far right), and EPA Region 6 Tribal Affairs Director Mr. Arturo Blanco (top center) recognizing the Pueblo of San Felipe, represented by Councilman Michael T. Sandoval and Environmental Specialist Ms. Lisa Hopinkah. Photo courtesy of EPA Region 6.



### Lead Awareness in Indian Country: Keeping Our Children Healthy

TSC members continue to collaborate with the National Tribal Toxics Committee and EPA’s Office of Chemical Safety and Pollution Prevention to take action to eliminate childhood lead exposures through a tribally driven approach and development of a tribally relevant lead curriculum, “Lead Awareness in Indian Country: Keeping Our

Children Healthy!” The curriculum’s intended audience is parents, grandparents, tribal leaders, teachers, daycare workers, health care providers, and youth ages 12 and up. The curriculum is designed to be taught by community leaders with experience educating and training members of their tribal communities. Before finalizing the lead curriculum and making

it publicly available, the curriculum will be tested through a pilot test at the Oneida Nation on July 9 and 10, 2019. The primary goal of the pilot test is to gather community feedback and then make any necessary revisions to ensure that the curriculum is ready to be published and distributed later this fall. ○

# SCIENCE UPDATE

## Integrating Tribal Science Needs Into EPA’s Research Priorities

In July 2018, the TSC engaged with EPA’s Office of Research and Development’s National Research Programs at the TSC’s face-to-face meeting in Cincinnati. The TSC shared information on tribal science needs that could inform the development of ORD’s six Strategic Research Action Plans for fiscal years 2019–2022.

These tribal science needs were collated from engagements with each of the EPA-Tribal Partnership Groups and Regional Tribal Operations Committees. Plans have been developed by each of the six programs: Air and Energy, Chemical Safety for Sustainability, Homeland Security, Human Health Risk

Assessment, Safe and Sustainable Water Resources, and Sustainable and Healthy Communities. The TSC looks forward to re-engaging with the ORD’s National Research Programs to discuss ORD research that is relevant to those identified needs and provide a forum for continuing engagement with tribes. ○



## Indigenous Research Frameworks Training Workshop (cont)

*(Continued from page 1)*

usually meant that the scientist designed the research goals and methodologies independent from the community. As Brian reminded the TSC and EPA, “Institutions never remember...and communities never forget.”

The workshop ended with references to several scholars who are illuminating the new indigenous research paradigm

of “knowing where you stand,” which includes following cultural protocols, identifying research goals in partnership with indigenous communities, developing relationships for long-term knowledge-sharing, providing useful research results, and ensuring that community members understand how their words are being represented before publishing them.

Many thanks to the Center for Native Peoples and the Environment at SUNY-ESF and the students who developed the original Two-Eyed Seeing Workshop: Cynthia Coleman, Kaya Deer-In-Water, Loga Fixico, Johanna Lumsden, Tom Mackey, Annabel Roberts-McMichael, Brian Ratcliffe, Annie Sorrel and Tusha Yakovleva. ○

### KEY DATES & EVENTS

- Region 7 Quarterly Regional Tribal Operations Committee Meeting, July 16–18, Reserve, KS
- Region 6 Regional Tribal Operations Committee Meeting, July 17, TBD, NM
- Region 9 Summer Regional Tribal Operations Committee Meeting, July 23–25, Fort Bragg, CA
- Tribal Lands and Environment Forum, August 19–22, Palm Springs, CA
- Region 7 Regional Tribal Operations Committee Monthly Call, August 22
- Region 1 Tribal Leaders Summit, September 4, Uncasville, CT
- Region 1 Tribal Environmental Summit, September 5–6, Uncasville, CT
- Environmental Council of the States Meeting, September 24–26, Seattle, WA
- Region 9 Annual Tribal/EPA Conference, October 21–24, Maricopa, AZ
- Region 7 Quarterly Regional Tribal Operations Committee Meeting, October 22–24, TBD
- E-Enterprise for the Environment Leadership Council Meeting, October 23–24, Washington, D.C.

## SPOTLIGHT ON: REGION 1

**William Longfellow, TSC Region 1 Tribal Representative**

My name is William Longfellow. I am member of the Passamaquoddy Tribe of the coastal community of Pleasant Point, Maine. Pleasant Point is also known by the Passamaquoddy People as Sipayik. Sipayik translates to “by the edge” in the Passamaquoddy language. I work for the Sipayik Environmental Department as the Water Quality Programs Manager and Water Quality Technician. I am also involved with the department’s Climate Change Program and the Environmental Science and Fisheries Program. I have worked for the department since June 2012. I am also actively working toward the future of the program and setting goals, such as using more remote monitoring technology so that the Water Resource Program can continuously monitor sites on Passamaquoddy lands located far away from Pleasant Point.

Photo courtesy of William Longfellow.

Outside of my job in the Sipayik Environmental Department, I take part in the commercial fishery of Elvering. I am also very interested in culture and history. In my free time, I enjoy learning about other cultures and the history of other people from around the world. I also like to take part in community and cultural events in Pleasant Point. Outside of my community, one of my favorite annual festivals is the Eastport Pirates Festival, which takes place in Eastport, Maine. I am a huge *Star Wars* fan and enjoy the original trilogy the most. One of my favorite things to do is attend metal and rock music shows. I enjoy grilling food in the summer time, and my favorite type of seasoning when I grill or cook is Cajun.

**Robert Hillger, Retired TSC Region 1 EPA Representative**

The TSC congratulates Robert (Bob) Hillger on his retirement after a 33-year career with EPA. Bob served on the TSC since its inception in 1999 and was instrumental in shaping many of the TSC’s activities and outputs. Bob began his EPA career in 1985 with the Office of Research and Development in Edison, New Jersey, and eventually served a 1-year detail with the Region 9 tribal program, working with the Navajo Nation environmental program. Ultimately, he became the Region 1 Senior Science Advisor, working with states, tribes, academia and communities. Bob enjoyed working on many projects with tribal nations, including working with the Penobscot Nation on river ecological human health risk assessment involving cultural practices and on an air quality monitoring station with the Micmac Nation. Bob met his future wife while vacationing on the Cape and settled back into his hometown of Newburyport, Massachusetts. He is enjoying spending time with her and their family after leaving EPA in late 2018. The TSC wishes Bob a wonderful retirement!



Photo courtesy of Bob Hillger.

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.