



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

JAN 3 2017

OFFICE OF  
SOLID WASTE AND  
EMERGENCY RESPONSE

NOW THE  
OFFICE OF LAND AND  
EMERGENCY MANAGEMENT

**MEMORANDUM**

**SUBJECT:** Considering Traditional Ecological Knowledge (TEK) During the Cleanup Process

**FROM:** Mathy Stanislaus  
Assistant Administrator  
Office of Land and Emergency Management

A handwritten signature in black ink that reads "Mathy Stanislaus".

**TO:** Office of Land and Emergency Management Office Directors  
Regional Superfund Division Directors  
Regional RCRA Division Directors  
Office of Emergency Management Removal Managers  
Regional Underground Storage Tanks Division Directors

**Background**

Together with our tribal partners, we value land as a natural, economic, and cultural resource. Cleaning up contaminated land, pursuant to our statutory authorities, protects human health and the environment, while enabling tribal communities and other stakeholders to pursue future beneficial use or reuse of resources for economic, environmental, and traditional purposes. A goal of the U.S. Environmental Protection Agency (EPA) Office of Land and Emergency Management (OLEM) is to restore land by promoting and implementing protective waste management practices and by assessing and cleaning up contaminated sites.

The agency's [\*Policy on the Administration of Environmental Programs on Indian Reservations\*](#) (1984), the cornerstone for the EPA's tribal program, "give special consideration to Tribal interests in making Agency policy, and to insure the close involvement of Tribal Governments in making decisions and managing environmental programs affecting reservation lands." The EPA's [\*Policy on Consultation and Coordination with Indian Tribes\*](#) (Consultation Policy) (2011), as well as the [\*2016 Guidance for Discussing Tribal Treaty Rights\*](#) (Treaty Rights Guidance) (2016), provide a framework for OLEM as we work in partnership with federally-recognized Indian tribes and tribal governments (tribes) during our response and cleanup actions and decisions.

The National Tribal Caucus's (NTC) *FY 2018 Budget Request and Priorities Document* requested the EPA to "support tribal ordinances, laws, and environmental knowledge [and] to improve collaboration on all levels of engagement by incorporating tribal environmental knowledge [and] tribal lifeway

models when considering cleanup standards.”<sup>1</sup> Furthermore, the EPA’s [\*Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous People\*](#) (2014) “encourages, as appropriate and to the extent practicable and permitted by law, the integration of Traditional Ecological Knowledge into the agency’s environmental science, and policy decision-making processes to address environmental justice concerns and facilitate program implementation.”

This memorandum provides direction to improve the decision-making process as it relates to site assessment, characterization, and cleanup activities, to ensure we are considering TEK when tribes willingly provide this information to the EPA. The consideration of TEK offers a way of bridging gaps in perspective and understanding, especially when used in conjunction with knowledge derived from the scientific method.<sup>2</sup>

Although the EPA will discuss and consider TEK received, the agency will make decisions based on multiple factors and considerations. EPA management and staff need to inform the tribe that the TEK will not be the sole determining factor in the decision.

### **Understanding Traditional Ecological Knowledge**

At this time, the EPA has not developed a working definition of traditional ecological knowledge. For the purposes of this memorandum OLEM is using the definition prepared by the U.S. Fish and Wildlife Service:<sup>3</sup>

*Also called by other names including Indigenous Knowledge or Native Science, (hereafter, TEK) refers to the evolving knowledge acquired by indigenous and local peoples over hundreds or thousands of years through direct contact with the environment. This knowledge is specific to a location and includes the relationships between plants, animals, natural phenomena, landscapes and timing of events that are used for lifeways, including but not limited to hunting, fishing, trapping, agriculture, and forestry. TEK is an accumulating body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (human and non-human) with one another and with the environment. It encompasses the world view of indigenous people which includes ecology, spirituality, human and animal relationships, and more.*

### **Implementation**

#### ***Identifying opportunities in which traditional ecological knowledge may be relevant***

OLEM’s cleanup programs (including national and regional programs) address contaminated soil, groundwater, surface water, sediments, air, and other environmental media. These programs include common elements such as an initial site assessment, initial site stabilization when needed to protect against imminent threats, site characterization, cleanup option evaluation, selection, and implementation, and long-term stewardship of the site. Cleanups may also involve interactions with responsible parties through enforcement actions and negotiations in an effort to have such parties carry out the cleanup. These

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<sup>1</sup> National Tribal Caucus. (2016). *Budget request and priorities FY 2018, environmental resource needs and recommendations* (pp. 1-20). Washington, D.C.

<sup>2</sup> Rinkevich, S., Greenwood, K., and Leonetti, C. U.S. Fish and Wildlife Service, Native American Program. (2011). *Traditional ecological knowledge for application by service scientists fact sheet*.

<sup>3</sup> Rinkevich, S., Greenwood, K., and Leonetti, C. U.S. Fish and Wildlife Service, Native American Program. (2011). *Traditional ecological knowledge for application by service scientists fact sheet*.

cleanup programs not only protect the health of tribal communities, but also promote beneficial and protective future uses of tribal lands.

The attachment to this memorandum identifies a list of program decision points where TEK may be relevant (i.e. discussed, considered, and/or analyzed). Depending on the program and processes employed, OLEM can consider TEK during various phases of program implementation.

Consistent with existing law and regulations, it is OLEM's intention to acknowledge and consider TEK during our cleanup processes when the information is freely provided by the tribe. It is important to stress, OLEM is *not* requiring that tribes provide TEK to inform a decision, rather that we are willing to receive this information, should a tribe want the EPA to incorporate it into our assessments and decisions. Information discussed in this memorandum applies *only* to those tribes who willingly provide relevant TEK, in accordance with their tribal officials, governments, and/or policies.

### ***Utilizing the consultation and coordination process to receive traditional ecological knowledge***

There are various forms of community engagement and outreach activities with our tribal partners during the cleanup processes. EPA's consultation and coordination process offers tribal officials an opportunity to provide information, including TEK, for the agency to consider in our decision-making. For more information on *EPA's Consultation Policy*, specifically, the four phases we employ, please visit the following website, <https://www.epa.gov/tribal/forms/consultation-and-coordination-tribes>.

Consultation and coordination is an iterative process, and at times the EPA may undertake multiple rounds of consultation if there are changes in the proposed activity or a new issue arises that may affect the tribe(s).

The following questions may be a useful starting point for EPA staff to ask when a tribe chooses to discuss TEK with the agency:

- 1) What TEK, if any, does a tribe want to share?
- 2) Should we be aware of any tribal laws or policies established regarding the use of TEK?
- 3) How will the tribal government or their duly designated representative(s) transmit the information?
- 4) Have you informed the tribes that there are limitations on the agency's ability to protect TEK from public disclosure, which is a potential risks of sharing TEK with the agency?
- 5) What implications can TEK have on the decision?

Staff should employ caution and prudence when undertaking these discussions as they are likely to touch on issues of unique tribal sensitivity such as cultural practices, environmental resource use, and locations of cultural resources. EPA staff should coordinate with management, as well as the [OLEM Tribal Program Coordinators](#) and/or [Regional Tribal Program Coordinator](#)<sup>4</sup> if they have any questions about TEK, how to discuss this topic with tribes, and/or how it can be considered during the cleanup process, including that TEK is not the only factor the EPA will utilize in the decision-making. Additionally, tribes may elect to provide select, not all, TEK relevant to the decision.

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<sup>4</sup> For a list of OLEM Tribal Coordinators, refer to EPA's Cleaning up, Protecting and Preserving Tribal Lands website: <https://www.epa.gov/tribal-lands/forms/contact-us-about-tribal-lands> and for EPA Tribal Coordinators, refer to EPA's Environmental Protection in Indian Country website: <https://www.epa.gov/tribal/tribal-program-managers>

### ***Being transparent in our use of traditional ecological knowledge***

Information, including TEK, used to assist OLEM in a decision may be documented in various locations, including the administrative record, docket, response-to-comments documents, and/or documents that support administrative decisions. Once received, the agency cannot guarantee TEK can be kept confidential, even if the EPA's decision is not based on TEK, because it may be subject to disclosure through the discovery process during related litigation and/or under the Freedom of Information Act (FOIA).<sup>5</sup> Exemptions to disclosure under FOIA exist, but may not apply in all circumstances; therefore, it is recommended that management and staff work with a FOIA expert and the Office of General Counsel (OGC) and/or Office of Regional Counsel (ORC). It is crucial that we clearly identify the potential risk of disclosure to the tribe *before* TEK is received.

OLEM should work in close coordination with the tribe to determine whether there are any tribal protocols, such as review by a tribal council, tribal institutional review board, or cultural committee for receiving and documenting TEK, given some information is restricted for use outside of a tribal community. Specifically, tribes may have their own approaches that determine how facets of TEK are treated and used.<sup>6</sup>

Although the EPA will discuss and consider TEK received, the agency makes decisions based on multiple factors and considerations. They agency must inform the tribe(s) that the TEK provided to the agency will not be the sole determining factor in the decision.

### **Conclusion**

This memorandum serves as a starting point as we continue to strengthen our commitment to work in partnership with tribes to better understand TEK and operationalize it in our decisions. As we gain experience and build on best practices, OLEM may modify our approach. OLEM, the Office of International and Tribal Affairs (OITA), OGC, and ORC will continue to collaborate to better understand how TEK can be used in our cleanup decision-making processes. OLEM will share information and tools to management and staff as they become available. Furthermore, to better implement this memorandum, OLEM program offices may develop additional resources to refine how to incorporate TEK into their analysis and decision-making process.

This memorandum is not comprehensive, and is intended to be applied consistently with the EPA's consultation and federal trust responsibilities to federally-recognized tribes. This memorandum is intended to improve the EPA's decision-making and is not intended to create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law by a party against the United States, its agencies, or any person. As we refine or adjust our approach for how TEK is considered during our cleanup processes, OLEM is committed to coordinate with our tribal partners.

Attachment

cc: Gina McCarthy, Administrator  
Regional Administrators

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<sup>5</sup> For more information about FOIA and the nine exceptions, please refer to the U.S. Department of Justice, Office of Information Policy's website: <https://www.justice.gov/oip/doj-guide-freedom-information-act>

<sup>6</sup>Climate and Traditional Knowledge Workgroup. (2014). *Guidelines for considering traditional knowledge in climate change initiatives*. Retrieved from <http://climatetkw.wordpress.com>

Deputy Regional Administrators

Jane Nishida, Principal Deputy Assistant Administrator, OITA

Joann Chase, Director, American Indian Environmental Office, OITA

Cynthia Giles, Assistant Administrator, Office of Enforcement and Compliance Assurance

Avi Garbow, General Counsel

Regional Counsels

OLEM Program and Regional Tribal Coordinators

## **Attachment**

### Considering TEK During the Cleanup Process

The list that follows identifies the points where in OLEM processes TEK may be discussed, incorporated, or considered:

#### *Superfund Program*

- Petitions for Preliminary Assessments
- Formulation of Hazard Ranking System Packages
- Consideration of sites for the proposal to the NPL
- Notification and Coordination with Natural Resource Trustees
- Formulation of:
  1. Conceptual Site Model
  2. Human Health Risk Assessment
  3. Ecological Risk Assessment
  4. Remedial Action Objectives
  5. PRGs and final remedial goals
  6. Remedial alternatives
  7. Remedial alternative analysis
  8. Remedy selection
  9. Institutional controls

#### *Underground Storage Tanks*

- Identifying abandoned tanks
- Site assessment/site conceptual model
- Remedy selection
- Institutional controls

#### *Brownfields Program*

- Regional brownfields leads (working with tribes) can include relevant TEK in the scope of the assessment activities under the Targeted Brownfields Assessment (TBA) program.

#### *Emergency Response and Preparedness Efforts*

- Clean-up efforts/determining cleanup levels
- As part of the Unified Command

#### *RCRA Corrective Action Process*

- TEK is a factor in the RCRA corrective action process.
- EPA uses the RCRA Public Participation Manual as a tool for incorporating TEK into decision-making in appropriate circumstances.