

2010 National Tribal Science Forum

Grand Traverse Resort and Spa • Traverse City, MI

June 6–10, 2010



Sponsored by the National EPA-Tribal Science Council and hosted by the Grand Traverse Band of Ottawa and Chippewa Indians.

CALL FOR PRESENTATIONS, POSTERS, AND EXHIBITS

Mother Earth: Indigenous Knowledge and Science to Promote Positive Change

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List of Subtopics

AIR

- **Deposition**
 - Coal fired power plants and permitting issues
 - Acid rain deposition and affect on tribes: resulting in habitat loss that affects cultural practices; examples of susceptibility of ecosystems
 - Impacts on ecological systems
 - pH levels: causes and impacts of decreased pH levels on water ecosystem, international persistent organic pollutants [POPs])
 - Fluoride contamination
 - Environmental Justice screening analysis
 - Green Chemistry ** include prevention emphasis under each subtopic where possible
- **Toxics**
 - Open burning effects and solutions to open burning
 - Cross-border transport: lindane, pesticides, toxics, and power plants
- **Pollution**
 - Particulate matter: effects on tribal health, regulatory changes (i.e., PM_{2.5-10} and PM₁₀ proposed EPA regulations)
 - Visibility: addressing visibility of air
- **Pollution Prevention**
 - Renewable energy: tribal initiatives examples (Wind, Wave, Solar)

WATER

- **Water Quality Standards**
 - Tribal issues and success stories
- **Persistent Bioaccumulative Toxics (PBTs)**
 - Overview of the science
 - Tribal examples: pesticides, Aleutian, Alaska, etc.
- **Dioxins and Dioxin-Like Compounds**
 - Update on US EPA reassessment
 - Specific tribal studies
- **Water Quantity**
 - Too much or contaminated; flooding conditions
 - Not enough; drought conditions/above sustained yield
- **Resource Extraction**
 - Coal bed methane
- **Habitat Loss/Restoration**
 - Channelization effects: Missouri River mainstream habitat loss as a result of channelization
 - Dams/reservoirs: impacts and success stories after removal restoration
 - Wetland removal and loss: impacts on water quality
 - SWANCC: direct tribal implications after SWANCC (Alaska Mining and impact to Alaska Native Villages)
 - Invasive Species: case studies and affect on tribal waters (Knot Weed, lamprey/gobies/zebra mussels in Great Lakes, green crab along Coastal Northwest)
- **Biological Stressors**
 - Algal blooms examples, impacts, and mitigation
 - Nutrient changes on water systems
 - Pesticides: addressing nonpoint source contamination
 - Water Temperature Changes: point source discharges and effects on vegetation, fish; dam affects on water temperature: salmon recovery in the Columbia River
- **Emerging Water-Related Issues**
 - State-of-the-science: What should tribes and EPA be doing?
 - EPA's approach to endocrine disrupting chemicals and specific related issues
 - Perchlorate
 - Tribal work related to endocrine disruptors: interlaboratory collaboration for EDC methods development survey
 - Pharmaceuticals and personal care products in the environment.
 - Effects on tribes: impact on tribal communities (feed lots and antibiotics, personal care products)
 - Bioassessments and multi-metric indices relating to aquatic life

EARTH

- **Mining**
 - Impacts on environment: mercury, arsenic
 - Energy deposits: uranium, Arctic drilling
 - Gravel/particulates
 - Gold mining effects on tribes
- **Contaminated Sites**
 - Superfund, Brownfields, remediation
 - Open dumps, contamination
- **Habitat Loss**
 - Endangered species: protecting culturally significant species
 - Global warming impacts: include water impacts
 - Urban sprawl
- **Ecological Restoration**
 - Agricultural science practices: allow nature to heal itself, best management practice, let nature alone and watch
 - Ecosystems services -- services that supply water, protect water quality, protect against floods, support wildlife habitats, sequester carbon dioxide etc. and impacts due to land use, stressors and climate change
- **Persistent Bioaccumulative Toxics (PBTs)**
 - PBTs
 - Pharmaceuticals in water
- **Invasive Species**
 - Plants, insects, and animals
- **New Pesticide Use**
 - Emerging detection, emerging risk assessment
 - Access to new technologies/laboratories
 - Post/notification
 - Not laboratory-based/tribal knowledge observations
 - Spraying/application on tribal lands
 - Endocrine disrupting compounds
- **Agriculture/Ranching/Forestry/ Fisheries, and CAFOs**
 - Confined animal feeding operations (CAFOs; e.g., poultry and hog farms)
 - Genetically modified crops: genetic drift, inserted gene impacts, environmental and human impact
 - Impacts of food: family-owned vs. big farms/waste water nutrients /case studies

COMMUNITY HEALTH

- **Methamphetamines**
 - Clean up of methamphetamine sites and environmental contamination
 - Exposure to methamphetamine manufacture residuals
- **Lifeways and Cultural Exposure Pathway**
 - Examples of traditional cultural practices
 - Tribal and community-based research under EPA's Science To Achieve Results (STAR) Program
 - Toxicity and susceptibility
 - Tribally protective water quality standards (e.g., fish consumption levels)
- **Indoor Issues**
 - Mold
 - Radon
 - Smoking/indoor smoke, including asthma impacts
- **Whole Community Health**
 - Tribal models
 - Healthy indicators
 - Disability Adjusted Life Years (DALY) in tribal context
 - Decision trees, tribal self-determination in risk assessment, communication context
- **Traditional Knowledge**
 - Wisdom of Elders (privacy philosophy/community norms regarding science interpretation)
 - Early observers/unique observers of environmental shift (e.g., species migration)
 - Cultural adaptations
 - Inclusions in planning/cycle observations
- **Risk Assessment Paradigms**
 - EPA tailoring versus tribally originating
 - Bridge between Tribal lifeways/whole health and standard EPA/state risk assessment methodologies

CROSS-THEME ISSUES

- **Mercury**
 - A look at sources and emissions (U.S. and International)
 - Fate, transport, and deposition
 - Media impacts (air, water, sediments, soil)
 - Impacts to plants, biota, fish, and wildlife (migratory food sources)
 - Human health impacts (indirect and direct)
 - Impacts on Tribal lifeways, advisories
- **New Science Priorities and Emerging Issues for Tribes**
 - Develop new priorities or ideas
 - Biofuels
 - Green Technology
 - Wind Solar Power