

Emission Inventory Basics for Tribal Air Coordinators

October 2008

Regional Tribal Air Coordinators can work with tribes that want to start or improve air quality programs. Some tribes choose to create an emission inventory (EI), and tribes often contact the Tribal Air Coordinator for assistance with this important air quality tool.

An emission inventory serves a different purpose than air quality monitoring. An *emission inventory* tells a tribe what sources are emitting which pollutants into the air. *Air quality monitoring* samples the air to measure which pollutants are present and in what amounts. Emission inventories and air quality monitoring are both valuable tools for addressing air quality on tribal lands, and EPA Regional contacts can help tribes decide where to start.

Improving tribal use of emission inventories benefits both tribes and EPA. Tribes benefit because they can identify problem areas on their lands and see how their air quality compares to national trends. EPA benefits because the data can contribute to a more complete national picture of air quality.

Technical Resources Available in Regions

The EPA Regional Offices have technical staff that can work with tribes to help plan or review an emission inventory and do quality assurance (QA) checks. If a tribal environmental professional seeks assistance with creating an emission inventory, please put them in touch with available EPA Regional technical resources.

Emission Inventory Should Fit Tribal Needs

Creating an emission inventory is a process in which air quality managers collect information on the emissions for particular pollution sources within a specific area, such as a reservation, to use in making planning and policy decisions.

An emission inventory should serve a specific and clearly identified purpose. The emission inventory may cover any combination of criteria air pollutants, hazardous air pollutants and types of sources. Each tribal emission inventory should be tailored to the needs of the tribe that creates it.

A tribal emission inventory would include one year of emission data for sources associated with tribal land. Sources could include:

- **point sources** such as power plants or factories;
- **nonpoint sources** such as open burning or wood stoves; and
- **mobile sources** such as cars, trucks or tractors.

Technical Resources

Region 1 Bob McConnell
mcconnell.robert@epa.gov

Region 2 Raymond Forde
forde.raymond@epa.gov

Region 4 James Hou
hou.james@epa.gov

Region 5 Loretta Lehrman
lehrman.loretta@epa.gov

Region 6 Carl Young
young.carl@epa.gov

Region 7 Cody Brown
brown.steven@epa.gov

Region 8 Mark Komp
komp.mark@epa.gov

Region 9 Larry Biland
biland.larry@epa.gov

Region 10 Madonna Narvaez
narvaez.madonna@epa.gov

Tribes can use an emission inventory to identify sources of air pollution and problem areas; track trends in air quality; measure progress toward air quality goals; and establish a baseline for future planning for air quality management.

Submitting an Emission Inventory for the NEI

The EPA Office of Air Quality Planning and Standards (OAQPS) uses the data from individual emission inventories submitted by state, local and tribal governments to compile the National Emission Inventory (NEI).

Features of the NEI

- Lists sources and what was emitted for one year
- Covers the entire United States
- Includes criteria air pollutants and hazardous air pollutants
- Compiled every third year (2005, 2008, 2011, etc)
- Created from data submitted through the Emissions Inventory System (EIS)

Under the Tribal Authority Rule, tribes are not required to submit emission inventories to EPA OAQPS for the NEI; however, EPA would like more tribes to submit because the data can help improve EPA's and the tribe's knowledge about air quality and can potentially be included in the NEI.

Some tribes may have agreed to submit their completed emission inventory to the EPA Region, to EPA OAQPS for the NEI, or both under the terms and conditions of a grant. If there is no grant term, EPA still encourages tribes to submit emission inventories to EPA OAQPS for the NEI.

EPA Regions that collect emission inventories do not submit them to EPA OAQPS for tribes.

Tribes that choose to submit an emission inventory to EPA OAQPS for the NEI have two options. A tribe can submit an emission inventory to OAQPS for the NEI on its own, or a tribe can work with the Institute for Tribal Environmental (ITEP), which can submit the emission inventory on the tribe's behalf. Starting in 2009, all submissions for the NEI will need to be formatted in the Consolidated Emissions Reporting Schema (CERS) and submitted to OAQPS through the new Emissions Inventory System (EIS). TEISS will be updated to be compatible with EIS.

EPA Regions and ITEP both may be able to offer QA support and guidance for tribes that create an emission inventory. The EPA Regions and ITEP may also be able to help tribes with the process of submitting an emission inventory to OAQPS for the NEI. The following tables list responsibilities of the tribes, EPA Regions, ITEP and EPA OAQPS during this process. Table 1 groups responsibilities by role. Table 2 lists responsibilities in chronological order.

Table 1: Submitting a Tribal Emission Inventory for the NEI
 Actions listed by role

Role	Action
Tribe	<p>Develops Quality Assurance Project Plan (QAPP)</p> <p>Gathers data about one year of emissions</p> <p>Quality checks the data</p> <p>Creates draft emission inventory</p> <p>Works with EPA Regional Office and/or ITEP on quality assurance (QA)</p> <p>Finalizes emission inventory</p> <p>Uses EIS to submit emission inventory to EPA OAQPS for the NEI* <i>*ITEP can submit for tribe if preferred</i></p>
EPA Region	<p>Administers grant for tribe to create an emission inventory* <i>*Grant should include term about the appropriate submission of the final product to EPA</i></p> <p>Notes tribe's commitment to create an emission inventory in the OAR Tribal System database</p> <p>Guides tribe to resources such as TEISS</p> <p>Provides technical expertise on emission inventory development</p> <p>Facilitates discussion among states and tribe about potential data duplication</p> <p>Checks tribal emission inventory for QA</p>
ITEP	<p>Provides online and/or in-person training and technical support on TEISS</p> <p>Checks tribal emission inventory for QA</p> <p>Uses EIS to submit emission inventory to EPA OAQPS for the NEI <i>with permission*</i> <i>*Tribe can submit on its own if preferred</i></p>
EPA OAQPS	<p>Receives tribal emission inventory (submitted through EIS by tribe or ITEP)</p> <p>Accepts tribal emission inventory as submitted to the NEI</p> <p>Updates status of tribe's emission inventory in the OAR Tribal System database</p> <p>Checks emission inventory for format, QA, timeliness and potential data duplication</p> <p>Includes tribal emission inventory data in the NEI</p> <p>Issues the NEI for an inventory year</p>

Table 2: Submitting a Tribal Emission Inventory for the NEI
 Actions listed in chronological order

Role	Action
EPA Region	Administers grant for tribe to create an emission inventory* <i>*Grant should include term about the appropriate submission of the final product to EPA</i>
EPA Region	Notes tribe's commitment to create an emission inventory in the OAR Tribal System database
EPA Region	Guides tribe to resources such as TEISS
Tribe	Develops Quality Assurance Project Plan (QAPP)
ITEP	Provides online and/or in-person training and technical support on TEISS
Tribe	Gathers data about one year of emissions
EPA Region	Provides technical expertise on emission inventory development
Tribe	Quality checks the data
EPA Region	Facilitates discussion among states and tribe about potential data duplication
Tribe	Creates draft emission inventory
Tribe	Works with EPA Regional Office and/or ITEP on quality assurance (QA)
EPA Region	Checks tribal emission inventory for QA
ITEP	Checks tribal emission inventory for QA
Tribe	Finalizes emission inventory
Tribe	Uses EIS to submit emission inventory to EPA OAQPS for the NEI* <i>*ITEP can submit for tribe if preferred.</i>
ITEP	Uses EIS to submit emission inventory to EPA OAQPS for the NEI <i>with permission*</i> <i>*Tribe can submit on its own if preferred.</i>
EPA OAQPS	Receives tribal emission inventory (submitted through EIS by tribe or ITEP)
EPA OAQPS	Accepts tribal emission inventory as submitted to the NEI
EPA OAQPS	Updates status of tribe's emission inventory in the OAR Tribal System database
EPA OAQPS	Checks emission inventory for format, QA, timeliness and potential data duplication
EPA OAQPS	Includes tribal emission inventory data in the NEI
EPA OAQPS	Issues the NEI for an inventory year

Including Tribal Data in the NEI

EPA OAQPS welcomes all submissions of tribal emission inventories. OAQPS will accept and store the data then evaluate it for inclusion in the NEI. To be included in the NEI, tribal emission inventories must comply with the same requirements as state and local governments. EPA OAQPS is committed to including as many tribal emission inventories as possible in the NEI.

State and local emission inventories are due to EPA OAQPS 17 months after the end of the inventory year. For example, states must submit data for the 2008 inventory year by June 1, 2010. State and local emission inventories must also pass quality assurance checks. EPA plans to transition to the Emissions Inventory System (EIS) in 2009 which should make meeting these requirements easier for tribes. The EIS is the system state, local and tribal governments will use to submit emission inventories to EPA OAQPS for the NEI. EPA expects to update TEISS and training courses to reflect the transition to EIS in 2009.

The EIS also includes technology that will allow EPA OAQPS to map emissions within tribal boundaries. In the past some emission inventory data from tribes may not have been used in the NEI because EPA OAQPS used county boundaries to compile the national picture for emissions. Tribal boundaries can cross several counties and states, and EPA was unable to account for the overlap. EIS will allow EPA OAQPS to adjust for the overlap.

The due date and quality assurance requirements should not deter tribes from creating an emission inventory. The emission inventory will help tribes identify and address local air pollution concerns and build the foundation for future inventories whether or not the data is included in the NEI.

Other Resources

Please consult these resources for additional information on emission inventories.

For technical information

- EPA Clearinghouse for Inventories and Emission Factors (CHIEF)
<http://www.epa.gov/ttn/chief/>
- EPA NEI User Group Listserv
<http://www.epa.gov/ttn/chief/listserv.html#nei>
- ITEP resource page
http://www4.nau.edu/itep/Resources/terc_air_emission.asp

For grant information

- Tribal Air Grants: A Menu of Options
<http://yosemite.epa.gov/R10/airpage.nsf/webpage/Tribal+Air+Grants:+A+Menu+of+Options>
- Menu item for conducting an emission inventory
<http://yosemite.epa.gov/R10/AIRPAGE.NSF/283d45bd5bb068e68825650f0064c>

[dc2/e34950b285534aa988256dfe0063be55/\\$FILE/Emissions%20Inventory%20v05.pdf](https://www.epa.gov/e34950b285534aa988256dfe0063be55/$FILE/Emissions%20Inventory%20v05.pdf)

For questions about tribal emission inventories and the NEI

- Roy Huntley
Emissions Inventory and Analysis Group, OAQPS
huntley.roy@epa.gov