

Development of the 1999 NEI - HAP Emissions Data

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What is the NEI?

■ EPA's National Emission Inventory

- National Emission Inventory of Criteria Pollutants (and Precursors) and HAPs
- Replaces NTI (HAPs) and NET (criteria air pollutants)
- Published by EPA's Office of Air Quality Standards and Planning
- EPA's Database as Opposed to States Database (AIRS-AFS)

■ Geographic Coverage

- Entire US., VI, PR
- County Level Inventory for NonPoint and Mobile Sources
- Process Level Inventory for Point Sources

■ Pollutant Coverage

- Ozone Precursors
- VOC, NOX, CO (NET)
- Direct PM Emissions, PM Precursors, PM10 and PM2.5 (NET)
- SO2, NH3 (NET)
- 188 HAPs (NTI)

■ Temporal Coverage

- Highest Quality Data 1996 and forward
- Data for 1990, 1993, 1996, 1999 (NTI)
- Annual Emissions (NET and NTI)
- Operating Schedule & Temporal Factors to Create Emissions for Other Time Periods

EPA Needs the NEI HAP Emissions Data

- **National, Regional and Local Scale Air Quality & Human Exposure Modeling - NATA**
- **CAA Programs - PBT Strategies, Urban Air Toxics Strategy, 112c6**
- **Regulatory Impact Analysis**
- **Risk Assessment Studies - Residual Risk**
- **Emission Trends - Public Reports**
- **International Reporting**
- **GPRA Reporting**

HAP Inventory Source Categories

- **Point Sources (facility)**

 - Major Sources (>10/25 tpy)

 - MACT

 - Non-MACT

 - Area Sources (<10/25 tpy)

 - MACT

 - Non-MACT

- **Non-Point Stationary Sources (county)**

 - Area/Other Sources (<10/25 tpy)

 - MACT

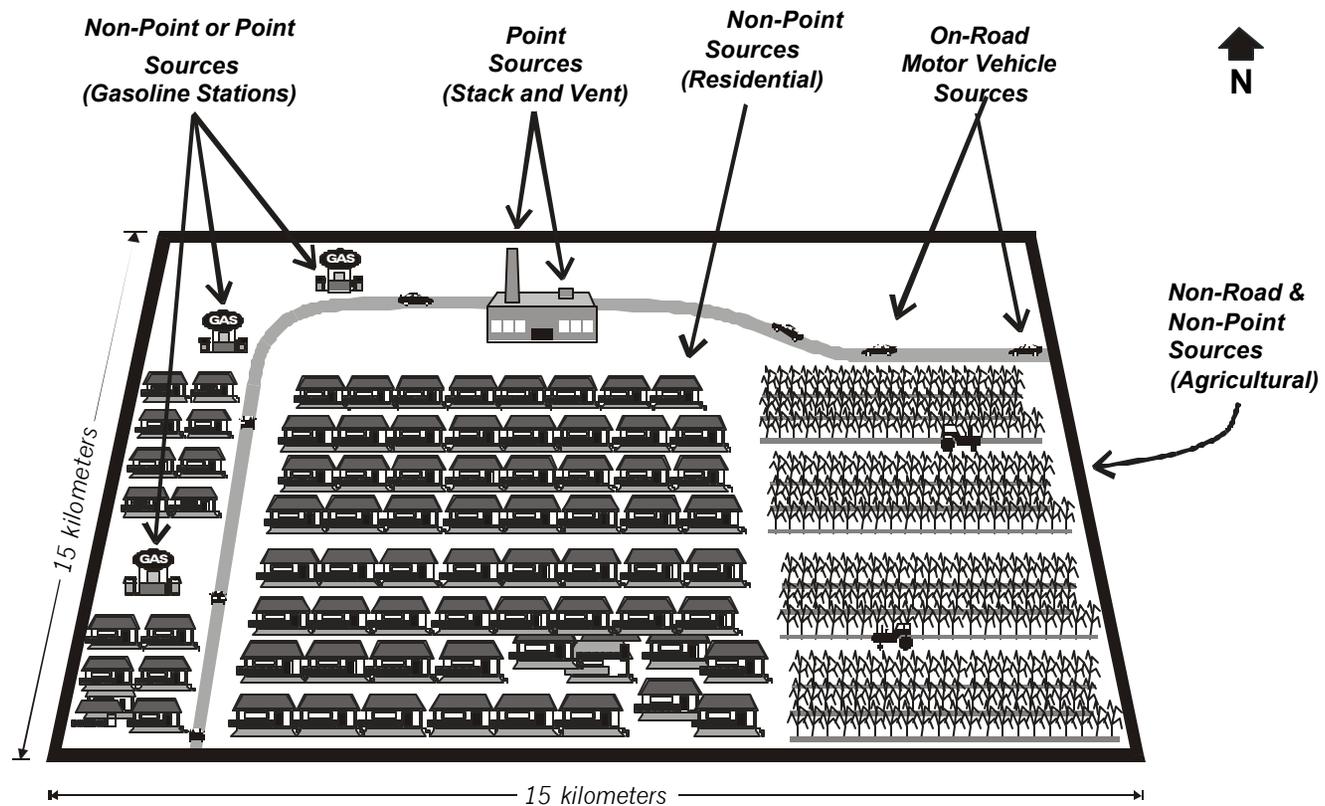
 - Non-MACT

- **Mobile Sources (county)**

 - On-road

 - Non-road

What Do I Include in an Inventory?



REPORTING OF HAP GROUPS

- **POM**
- **Dioxins/furans**
- **Metal and cyanide groups**
- **Glycol ethers**
- **Xylenes and cresols**

Goals for the 1999 NEI

- **Stick to schedule**
- **Use standardized format for data inputs and outputs**
 - NIF Version 2.0 to send in data
 - Outputs - NIF Version 2.0, summary data tables
- **Consistently use best data**
 - Hg from Utilities and MWC data - we will only use MACT data
 - Other sources - use State and Local agency and Tribal data if available
- **Improve QA/QC**
 - Reduce number of missing sources
 - Reduce errors in geographic coordinates
 - Reduce number of missing stack parameters
 - Improve consistency in non-point sources across nation
- **Reduce number of non-point source categories by increasing number of categories inventoried as point sources**
- **Integrate criteria and HAP emissions where feasible**

How We Are Improving 1999 NEI HAP Data?

■ Emissions

- 1999 NEI Data Incorporation Plan
- 1999 NTI Q's & A's - Reporting of HAP Compound Groups
- Enhanced Automated QC of 1999 NTI
- Standardized reporting of emissions and associated data by S/Ls and Increased number of mandatory data fields (annual emissions)
- 1999 NEI Training and Outreach to S/Ls, Industry and ROs

■ Geographic Distribution of Emissions

- Increased number of mandatory data fields including geographic coordinates and source category classification (used for spatial allocation)
- Reduced number of non-point source categories and disaggregate some non-road mobile categories
- Use of 2000 Census data and search for updated land use data for improved spatial allocation
- EIIP Modeling Committee comprised of 50 state/local agency, international, industry and EPA members

Developing project proposals to improve spatial profiles for ambient dispersion modeling
Projects to be funded by September 2001

How We Are Improving 1999 NTI and Emissions Processing

■ Vertical Distribution of Releases

- Increased number of mandatory data fields including source category classification (used to default missing stack parameters)

■ Chemical/Physical Characteristics

- EIIP Modeling Committee

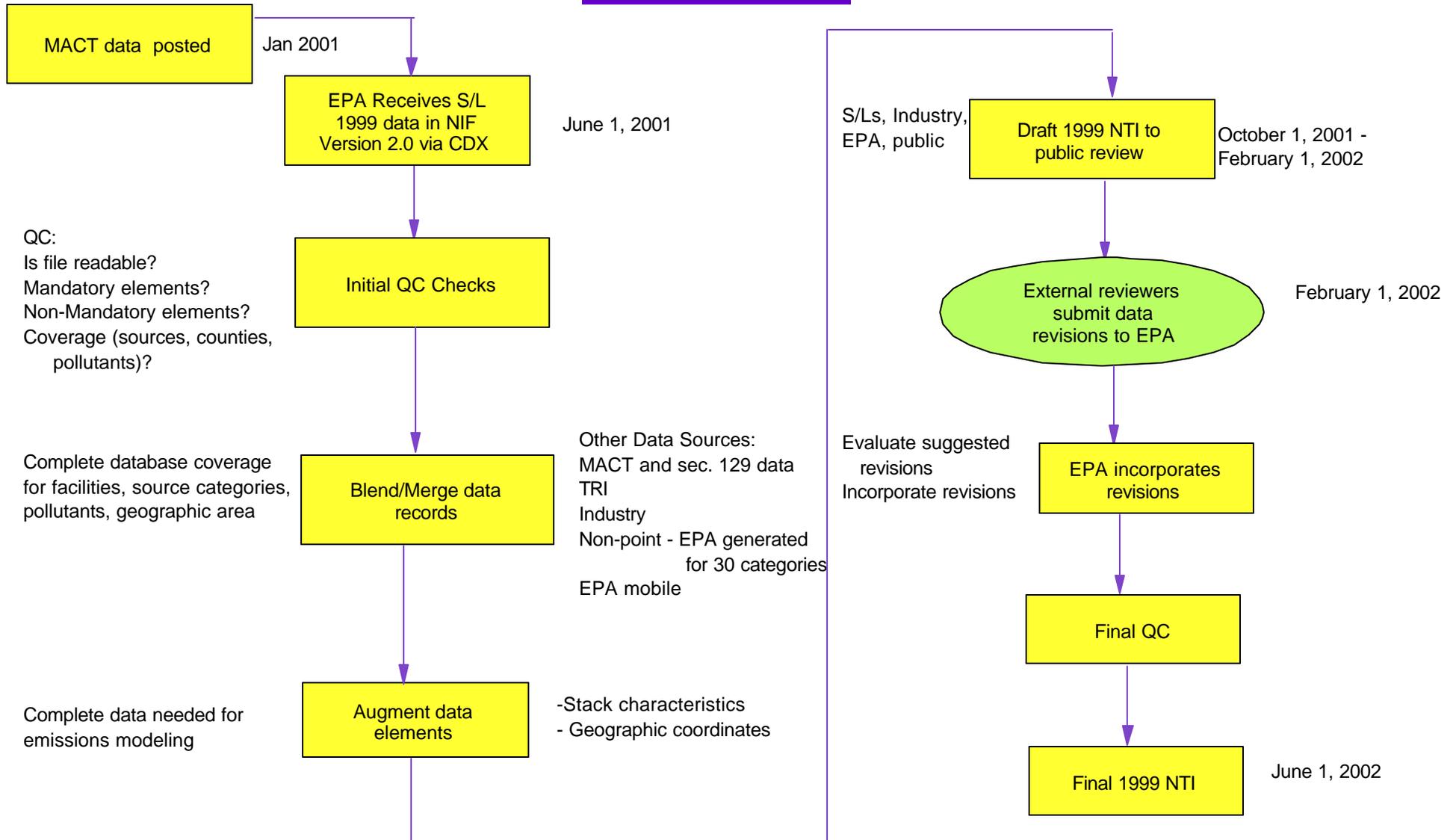
Developing project proposals to improve speciation profiles for ambient dispersion modeling
Projects to be funded by September 2001

■ Temporal Resolution

- EIIP Modeling Committee

Developing project proposals to improve temporal profiles for ambient dispersion modeling
Projects to be funded by September 2001

Compilation of 1999 NEI HAP Data



1999 NEI Schedule

Date	Activity	Expected Result
June 1, 2001	State, local and tribal data submitted to EPA, Version 2.0	Prescribed data transfer format used
June/July 2001	Initial QC review of submitted data	Confirmation that data file can be read; required minimal data included
October 1, 2001	Draft NEI Version 2.0 published	Draft databases available for external review
February 1, 2002	Comments on draft 1999 NTI Version 2.0 submitted to EPA	Revisions submitted in prescribed format
June 1, 2002	1999 NEI Version 2.0 published	Files available to support CAA and GPRA needs
June 1, 2002	State, local and tribal data submitted to EPA, Version 3.0	Prescribed data transfer format used
October 1, 2002	Draft NEI Version 3.0 published	Draft databases available for external review
February 1, 2003	Comments on draft 1999 NEI Version 3.0 submitted to EPA	Revisions submitted in prescribed format
June 1, 2003	1999 NEI Version 3.0 published	Files available to support CAA and GPRA needs

EPA Role in 1999 NEI Development

■ EMAD, OAQPS

- QC data files and provide reports back to data submitters
- Merge data files and gap fill emissions for non-point and mobile sources
- Augment merged data - stack parameters and geographic coordinates
- Produce draft 1999 NEI for external review
- Evaluate and Incorporate proposed revisions to the draft
- Produce final 1999 NEI - make files accessible (full modeling files and public summary files)

■ ESD, OAQPS

- Submit 1999 MACT/Residual Risk Data to EMAD
- QA/QC data files prior to submitting files to EMAD
- Assist in MACT code assignment
- Review draft 1999 NEI
- Provide revisions in specified format to EMAD
- Assist in evaluating proposed revisions to the 1999 NEI
- Be available to answer state and local agency and tribal questions on MACT/Residual Risk Data
- Provide better documentation of MACT/Residual Risk Data

EPA Role in 1999 NEI Development

■ EPA Regional Offices

- Receive Inventory Preparation Plans from State and Local Agencies and Tribes
- Provide assistance to State and Local Agencies and Tribes
- Encourage State and Local Agencies and Tribes to submit data on time
- QC state data submittals if possible - Regional QC of data should not delay June 1, 2001 submittal date
- Review draft 1999 NEI and provide revisions to EMAD

Industry, State/Local Agency & Tribal Roles

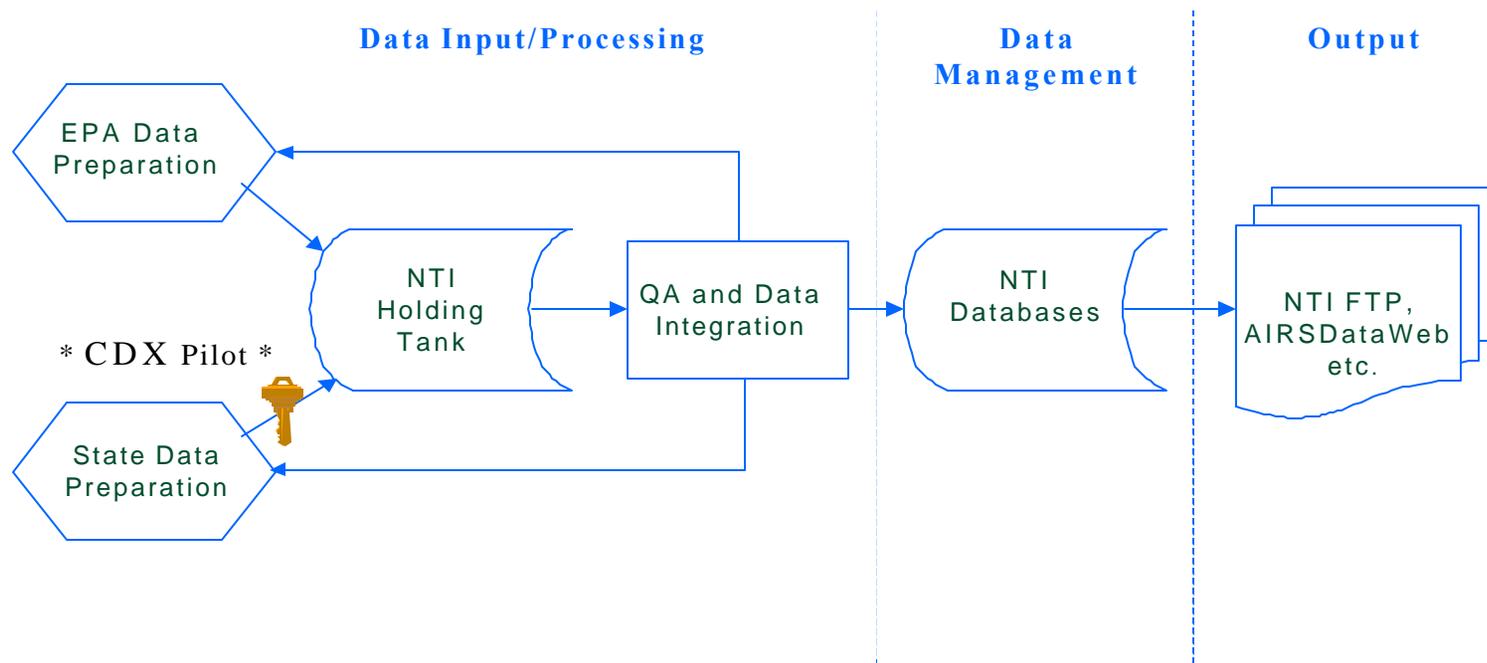
■ State and Local Agencies and Tribes

- Correct any errors discovered in 1996 in State/Local/Tribal databases
- Develop emission estimates at a minimum for point sources
- QA/QC data files prior to submitting files to EPA
- Add missing data elements such as geographic coordinates and stack parameters
- Convert data to NIF, Version 2.0 and submit to EPA
- Review draft 1999 NEI
- Provide revisions in specified format to OAQPS

■ Industry

- Submit 1999 Point Source Data and Documentation to EMAD
- QA/QC data files prior to submitting files to EMAD
- Review draft 1999 NEI
- Provide revisions in specified format to State/Local Agencies and Tribes

Data Transfer - To / From EPA Emission Inventory Database



1999 NEI HAP Resources

- **1999 NEI Data Incorporation Plan,**
www.epa.gov/ttn/chief/net/nei_plan.pdf
- **1999 NTI Q's & A's - preferences on how to report pollutant compound groups such as Cr,**
www.epa.gov/ttn/chief/nti/ntiq&a.pdf
- **NIF Version 2.0,**
www.epa.gov/ttn/chief/eidocs
- **1999 MACT and Industry data - 1999 NTI ftp site,**
ftp://ftp.epa.gov/EmisInventory/nti_99/
- **1996 NTI Modeling Files in NIF Version 2.0 format - 1996 NTI ftp site**
ftp://ftp.epa.gov/EmisInventory/nti_96/
- **1996 NTI Documentation**
www.epa.gov/ttn/chief/nti/
- **1996 Data Summary on AIRData**
www.epa.gov.airdata
- **NEI Users Group and Listserve**
 - <http://www.epa.gov/ttn/chief/listserv.html#nei>

EMISSIONS INVENTORY SUMMARY

- **The NTI is a comprehensive national air toxics emissions inventory developed to support EPA's Air Toxics Program.**
- **The NTI uses the best available data.**
- **In order to use the NATA results, you need to understand emission uncertainties associated with ambient model concentrations.**
- **We are taking steps to improve the 1999 emissions inventory data.**