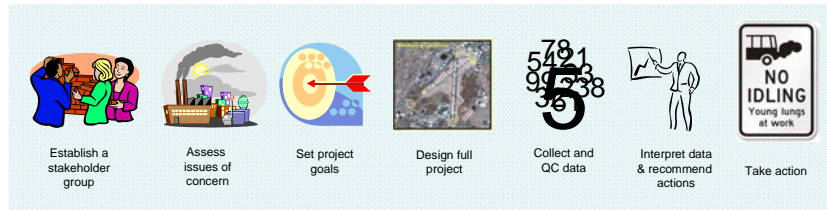# Getting Started

- Establishing a stakeholder group
- Identifying issues of concern
- Setting project goals
- Lessons learned in setting project goals
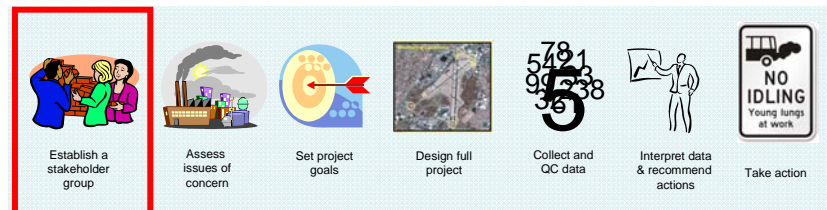


| Establish a stakeholder group | Assess issues of concern | Set project goals | Design full project | Collect and QC data | Interpret data & recommend actions | Take action |

# Establishing a Stakeholder Group

- Identify individuals and groups who hold some kind of "stake" or interest in the project and its outcome
- Include community, industry, government
- Discuss entire process up front (including stakeholder expectations of outcomes)



| Establish a stakeholder group | Assess issues of concern | Set project goals | Design full project | Collect and QC data | Interpret data & recommend actions | Take action |

# Fostering Community Participation

- Use established community groups
- Work with your communications groups to develop outreach material
- Plan how results and findings will be shared and what actions to take
- Think about how to deliver news the community may not be expecting to hear

# Examples of Projects

**Joint Air Toxics Assessment Project (JATAP)**

Phoenix area, Arizona

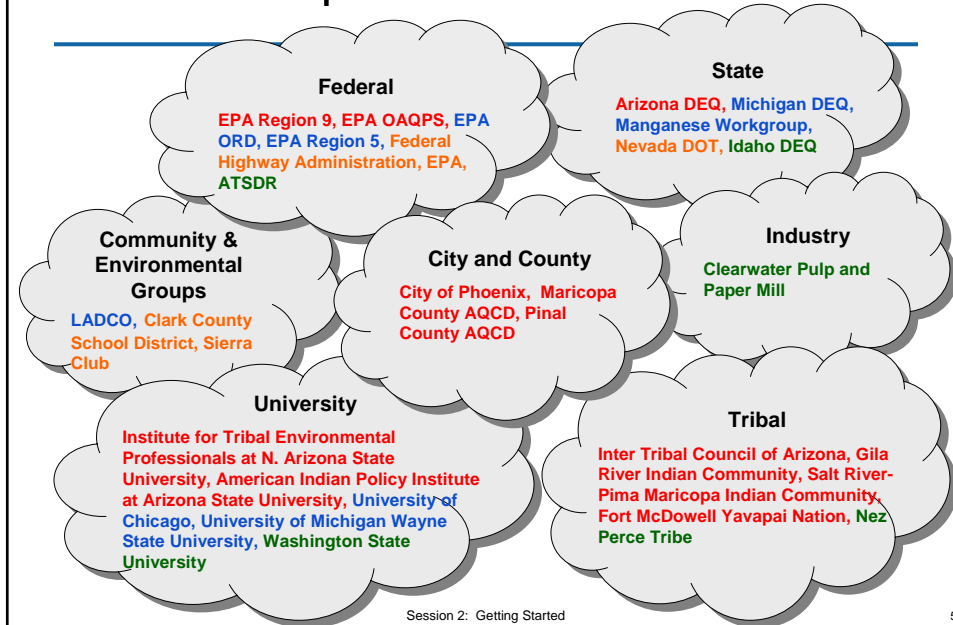**Michigan Analysis of Air Toxics Data**

Detroit area, Michigan

**US 95 MSAT Project (NDOT)**

Las Vegas, Nevada
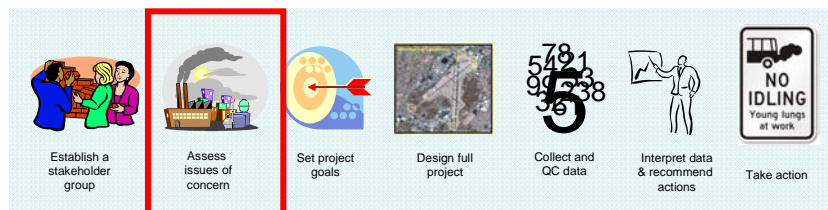
**Nez Perce Analysis of Air Toxics Data**

Lewiston, Idaho

## Examples of Stakeholders

**Federal**

EPA Region 9, EPA OAQPS, EPA ORD, EPA Region 5, Federal Highway Administration, EPA, ATSDR

**State**

Arizona DEQ, Michigan DEQ, Manganese Workgroup, Nevada DOT, Idaho DEQ

**Community & Environmental Groups**

LADCO, Clark County School District, Sierra Club

**City and County**

City of Phoenix, Maricopa County AQCD, Pinal County AQCD

**Industry**

Clearwater Pulp and Paper Mill

**University**

Institute for Tribal Environmental Professionals at N. Arizona State University, American Indian Policy Institute at Arizona State University, University of Chicago, University of Michigan Wayne State University, Washington State University

**Tribal**

Inter Tribal Council of Arizona, Gila River Indian Community, Salt River-Pima Maricopa Indian Community, Fort McDowell Yavapai Nation, Nez Perce Tribe
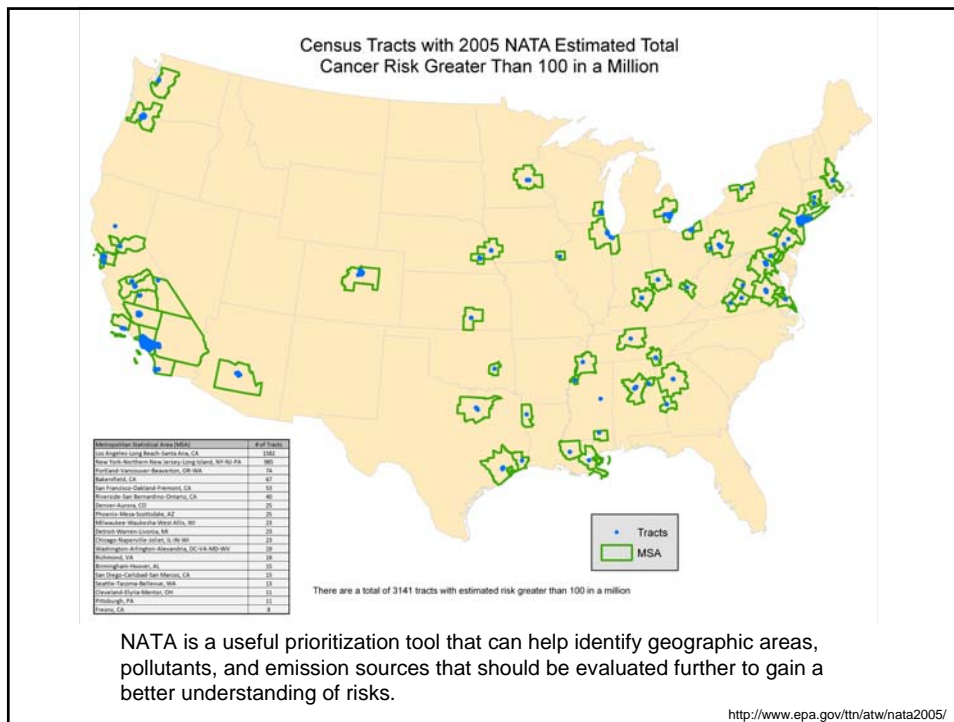
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## Identifying Issues of Concern

Investigate available information

- NATA, which shows modeled ambient concentrations, human exposure, and risk characterization to the census tract level
- Health data (e.g., cancer rates) from CDC's national and state data
- National (and local, if available) emissions inventory

| Establish a stakeholder group | Assess issues of concern | Set project goals | Design full project | Collect and QC data | Interpret data & recommend actions | Take action |

Census Tracts with 2005 NATA Estimated Total Cancer Risk Greater Than 100 in a Million

There are a total of 3141 tracts with estimated risk greater than 100 in a million
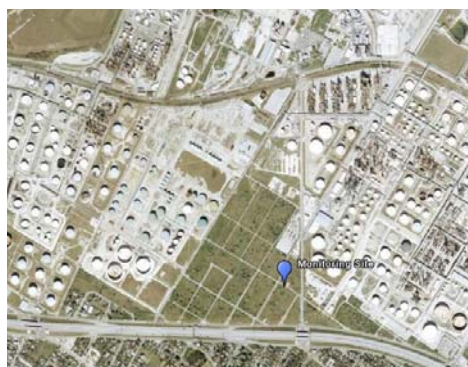
NATA is a useful prioritization tool that can help identify geographic areas, pollutants, and emission sources that should be evaluated further to gain a better understanding of risks.

http://www.epa.gov/ttn/atw/nata2005/

# Issues of Concern to Your Community

- Emissions sources
- Pollutants
- Pollution transport
- Vulnerable populations
- Proximity to sources

4

## Example Issues: JATAP

| Chemicals of Interest | |
|---|---|
| 1,3-butadiene | Dichloromethane |
| Benzene | Tetrachloroethylene |
| Formaldehyde | Ethylene dibromide |
| Arsenic compounds | Acrylonitrile |
| Cadmium compounds | Benzo(a)pyrene |
| Chloroform | Vinyl chloride |
| Nickel compounds | Carbon tetrachloride |
| p-dichlorobenzene | Acrolein |
| Chromium (VI) | Manganese compounds |
| Ethylene oxide | Barium |
| Trichloroethylene | Trimethylbenzene |
| Acetaldehyde | Lead compounds |

*What is the nature and extent of air toxics transport into Tribal communities?*



Legend

| | | | |
|---|---|---|---|
| ADEQ Site | Interstate/Freeway | Tribal Land | |
| JATAP Site | Highway | Airport | |
| Gila Site | Major Arterial | City Boundary | |
| | Parks | | |

0  5  10    20     30  Kilometers

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## Examples of Toxics Monitoring Project Topic Areas

- Supporting health effects assessments
- Evaluating and improving air quality models (that, in turn, are useful to exposure assessments)
- Establishing/understanding baseline concentrations
- Characterizing specific pollutants of concern
- Understanding spatial variation in concentrations (e.g., gradients)
- Characterizing specific emissions sources of concern
- Developing new measurement methods and techniques
- Analyzing existing data sets

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# Sources and Pollutants Previously Studied

- Sources studied
  - bus depot, port, rail yard, auto repair shops, mobile sources, chrome plating facility, coke smelter, refinery, metallurgical-coke facility, dry cleaners, oil and gas, pulp and paper mill, pesticide application, smelter, industrial point sources, airport, woodsmoke
- Specific pollutants targeted
  - diesel particulate matter (DPM), benzene, hexavalent chromium, styrene, carbonyl compounds, chlorobenzene, metals (e.g., Mn), acrolein
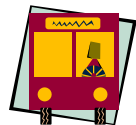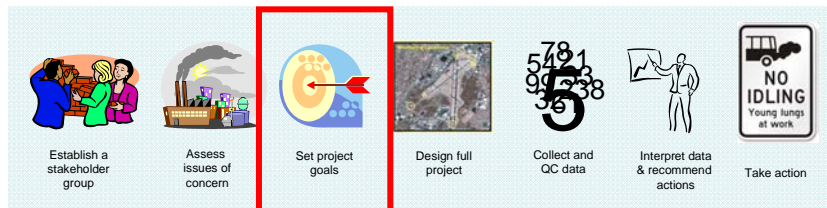
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# Setting Project Goals

- Examples of goals
- Lessons learned in project goal setting

| Establish a stakeholder group | Assess issues of concern | Set project goals | Design full project | Collect and QC data | Interpret data & recommend actions | Take action |

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## Examples of Goals

- Characterize community air toxics concentrations to assist with development of risk reduction strategies
- Identify and quantify the impact of a specific emissions source on a community
- Test a new method of measuring an air toxic of concern
- Obtain ambient measurements to support exposure modeling and emissions inventory and model evaluation efforts
- Establish baseline concentrations for future studies

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## Project Goals: JATAP

- Determine the most important contributors to risk from air toxics

- Identify the likely sources of air toxics in the study area

- Assess how concentrations of air toxics in this area compare to other areas and to important health benchmarks



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## Project Goals: Michigan

- Create a comprehensive, quality-assured database to support subsequent data analysis projects
- Place more recent air toxics measurements into historical and national perspective
- Quantify the impact of loss of sources or emissions reductions on ambient air concentrations (i.e., accountability)
- Determine how risk levels have changed in the Detroit area and compare to Grand Rapids area
- Understand comparability and certainty in source apportionment model results
- Effectively communicate findings



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## Project Goals: Nez Perce

- Characterize air toxics concentrations in the Lewiston, Idaho, area of the Clearwater River Valley including a significant portion of the Nez Perce Reservation.  Specifically:
  - characterize emissions from the Potlatch Pulp and Paper Mill in east Lewiston
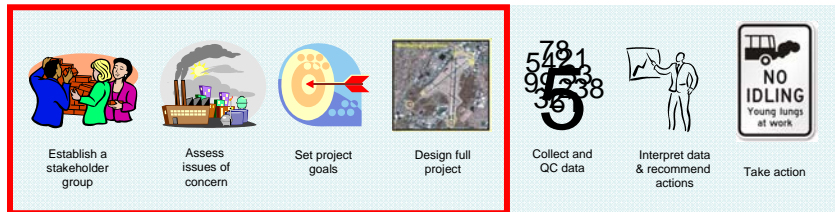  - determine (VOC) spatial pattern and gradient profiles



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## Initial Goals Are Set

- Now what?
  - Given the initial goals, what can you actually accomplish given the study realities?
- This process is likely iterative.
  - You may need to revisit the initial goals with your stakeholder group.



| Establish a stakeholder group | Assess issues of concern | Set project goals | Design full project | Collect and QC data | Interpret data & recommend actions | Take action |

## Lessons Learned in Project Goal Setting

- Be specific
- Goals should not be too broad
- It is hard to meet everyone's expectations (i.e., you need to manage expectations from the beginning)

## Lessons Learned in Project Goal Setting

- "Watch how large your project is, it's always more work than you envision."
- "Working with collaborators can be tricky."
- "These grants are a good way to get software and training in tight budget climate."