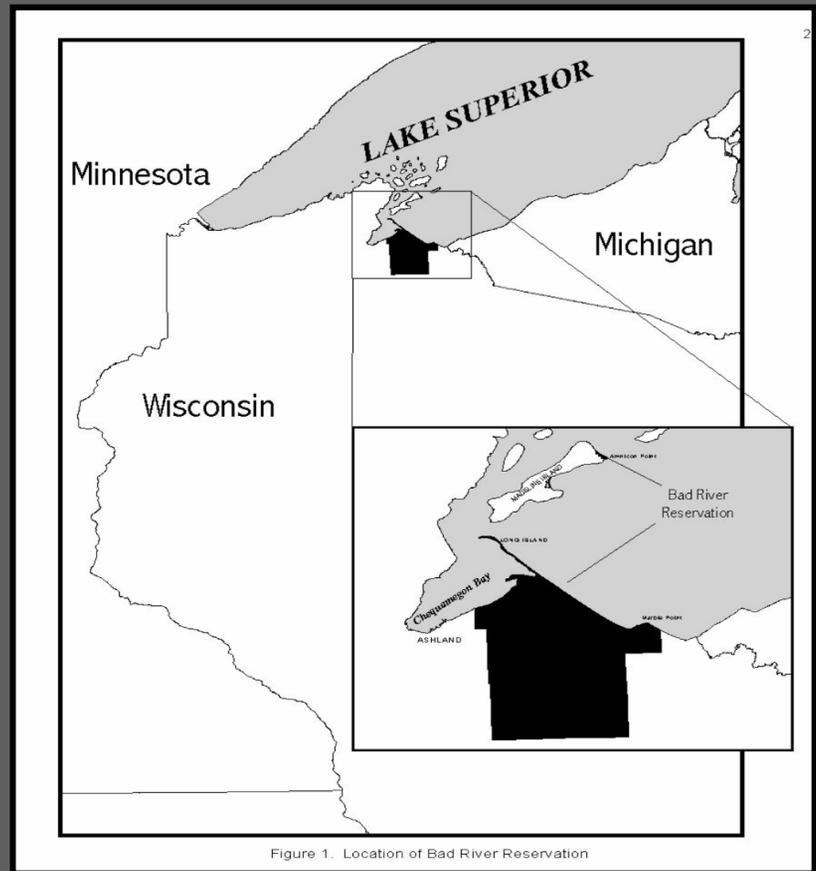


# Bad River Chippewa Emissions Inventory

Presented by  
Lynn Hall, Air Quality Specialist

# The Reservation

- ⇒ 124,000 acres
- ⇒ 2,738 people live on Reservation
- ⇒ Of that 1,200 are Tribal members
- ⇒ Agriculture on southern end
- ⇒ One major town-Odanah
  - Casino/lodge/convention center
  - 2 gas stations
  - Major highway (U.S. 2)
  - Numerous dirt roads
  - Burn barrels/wood stoves
  - Lots of non-road traffic
    - Boats, ATV's, snowmobiles



# Kakagon Sloughs



# Rice Beds



# Casino and Gas Station



# U.S. Highway 2



# Southern End of Reservation



Moooooooooooo



# Why Did We Want an EI?

- ⇒ For current baseline emissions data.
- ⇒ For future comparative use (residential & industrial growth).
- ⇒ To use in support of Redesignation to Class 1.
- ⇒ For educational purposes- showing tribal members exactly what sources are affecting the Reservation and in what amount.
- ⇒ To continue developing feasible air pollution prevention/control strategies to improve existing air quality.

# How We Started

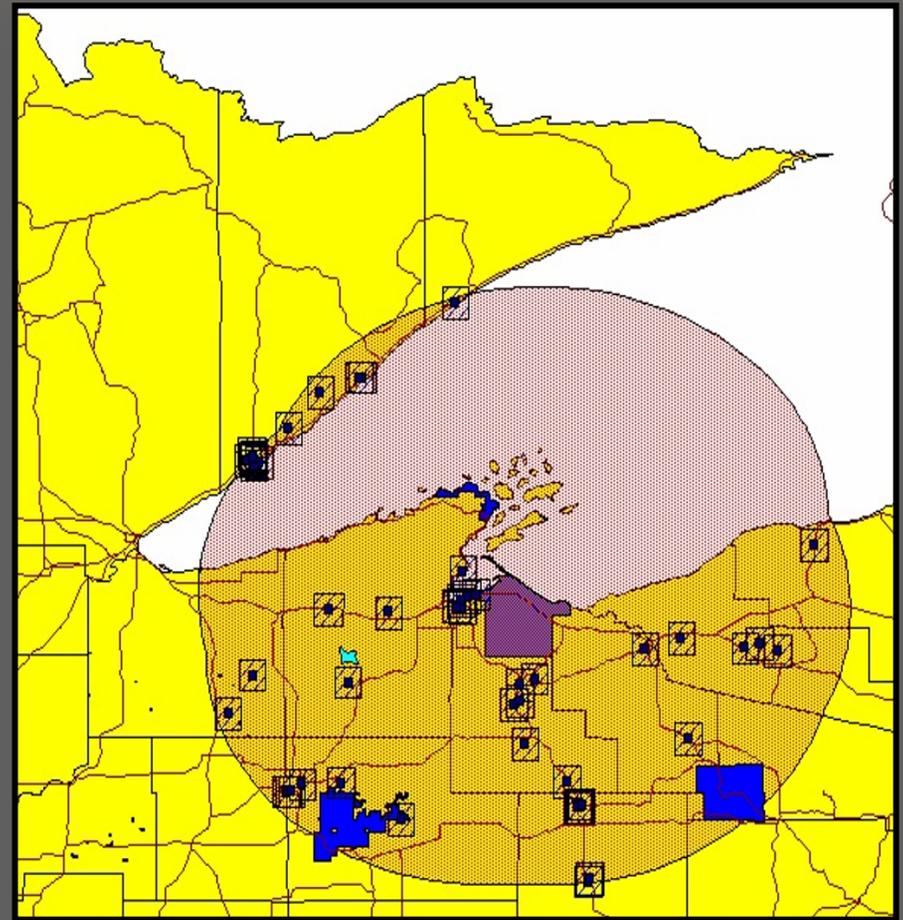
- ⇒ Took ITEP's Emissions Inventory training in May 2004
- ⇒ Took ITEP's TEISS training in July 2004
- ⇒ Included EI in EPA grant work plan for 2005
- ⇒ Decided geographic area to include
  - Point sources – all sources within a 50 mile radius
  - Area sources and non-road mobile sources – only within Reservation boundaries

# Collecting the Data

- ⇒ First completed an IPP using TEISS
- ⇒ Downloaded NEI data for point sources
- ⇒ Made lists of known point and area sources on reservation
- ⇒ Conducted a windshield survey
- ⇒ Searched TEISS calculators for possibilities
- ⇒ Collected information from community members, local businesses, Bad River Staff, WDNR, EPA, NOAA, LADCO, ITEP

# Point Sources

- ➔ Downloaded 2002 NEI point source data from <http://www.epa.gov/ttn/chief/net/2002inventory.html>
- ➔ Imported point sources into TEISS
- ➔ Only included sources that were within the 50-mile radius

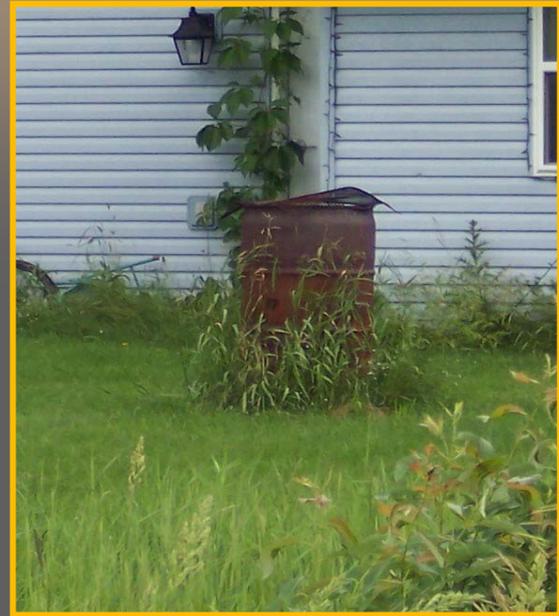


# Xcel Energy Coal Fired Power Plant Located 4 Miles from Reservation Border



# Area Sources

- ⇒ Burn barrels/wood stoves
- ⇒ Dirt roads
- ⇒ Paved roads
- ⇒ Agriculture-tilling
- ⇒ Gas stations
- ⇒ Boilers/generators
- ⇒ Residential natural gas usage



# Other Sources We Didn't Think Of Right Away

- ⇒ Railroads
- ⇒ Mining/quarrying
- ⇒ Wastewater treatment plants, lagoons, septic
- ⇒ Ammonia emissions from cattle
- ⇒ Fluorescent light breakage
- ⇒ Consumer and commercial personal care/household products



# Other Area Sources

- ⇒ Biogenic-Soils
- ⇒ TEISS has calculator
- ⇒ Used GIS for cover types and determining acreages
- ⇒ Biogenic-Vegetation
- ⇒ TEISS has no calculator
- ⇒ Used PCBEIS
- ⇒ Downloaded from EPA website
- ⇒ Information needed: percent cloud cover (NOAA), hourly temperature data (we used tribal met station)



# Other Area Sources Con't.

- ⇒ Landfills
- ⇒ Used LANDGEM from TEISS
- ⇒ Information needed:
  - Year opened and closed if applicable
  - Dimensions of landfill
  - Amount of refuse dumped/yr

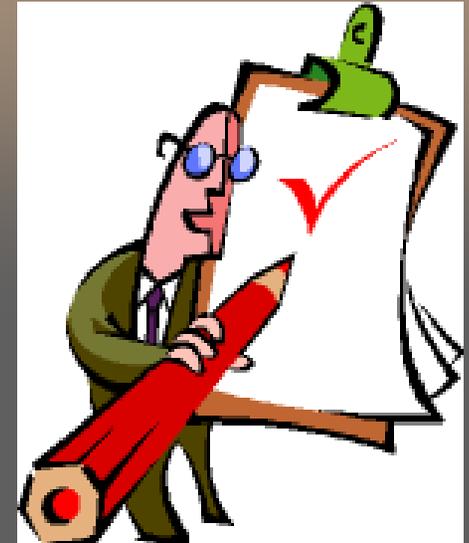


# Problems Encountered

- ⇒ Not using TEISS immediately (forgot a lot!)
- ⇒ TEISS "glitches":
  - Disappearing and cut off text within the program
  - Problems inserting shape files into TEISS
- ⇒ Didn't realize LANDGEM manual (and others) were on TEISS disk

# Status of Our EI

- ⇒ Complete with:
- ⇒ Point sources within 50 miles
- ⇒ Area sources and Non-Road Mobile sources within Reservation boundaries
- ⇒ Submitted to ITEP for QA/QC review in October, 2005
- ⇒ Submitted to NEI on March 24<sup>th</sup>, 2006



# Helpful Hints

- ⇒ Make a list of sources and print off “print blank forms” from TEISS calculators
- ⇒ Do a windshield survey to add to your list
- ⇒ Contact your state/county agency, tribal staff, others
- ⇒ Make a “road map” with all data collected, calculators used, how you entered it, QA/QC, who you spoke with and their contact info, etc. on separate document.
- ⇒ Don't hesitate to contact ITEP and Lakes Environmental if problems occur

# Reduction of Pollutants Through the Use of an EI

- ➔ Identified burn barrels as a major on- Reservation source
- ➔ Accurately assessed number of barrels on Reservation and amount of pollutants released
- ➔ Used EI as educational tool and implemented a Burn Barrel Buy-Back Program
- ➔ As a result, pollutants from burn barrels and total barrels on Reservation were reduced by 25%.



# Contact Information

Lynn Hall, Air Quality Specialist

Bad River Natural Resources

1 Maple Street

Odanah, WI 54861

Phone: 715-682-7123

E-mail: [cleanair@badriver.com](mailto:cleanair@badriver.com)