

APTI 419B: Preparation of Fine Particulate Emissions Inventories

Summary of Course Content

Lesson 1: PM_{2.5} Overview

- General composition of fine particulate matter in the atmosphere
- How fine particulate matter are formed
- Typical composition of ambient air in two western areas
- Sources that contribute to the formation of fine particulate matter

Lesson 2: National Emissions Inventory System (EIS) and Emission Inventory (EI) Tools

- Overview of the NEI and Development Schedule
- Key Source Categories for PM_{2.5}
- EI Development Tools
- Process-based Emission Models
- Opportunities for State/Local/Tribal Agency Input

Lesson 3: Onroad Mobile Sources

- MOBILE6
- National Mobile Inventory Model (NMIM)
- MOVES

Lesson 4: Nonroad Mobile Sources

- NONROAD Model Overview
- Engines included in EPA's NONROAD model
- Aircraft
- Commercial Marine Vessels
- Locomotives

Lesson 5: Point Source Inventory Development & Reporting

- Define terms and authorities
- NEI Input Format (NIF), state needs (e.g., permits, fees, compliance etc.), SIPs and interfaces
- Major point sources that contribute to PM_{2.5}
- Factoring other pollutants that cause secondary particles to form into the PM_{2.5} inventory
- Experiences in other states and how they can provide guidance

Lesson 6: Nonpoint Sources

- Basics of Emissions Estimation
- Uncertainty
- Tools to identify nonpoint PM_{2.5} and NH₃ sources and to pick sources to emphasize
- EI Development Options
- Special Considerations for Crustal Matter and Fugitive Dust

Lesson 7: Fugitive Dust Area Sources

- Agricultural Tilling
- Paved Roads
- Unpaved Roads
- Construction

Lesson 8: Ammonia Emissions from Animal Husbandry

- Factors related to ammonia from animal operations
- Data sources and differences in presentation
- How emission factors are/were determined
- Models and procedures available to estimate emissions
- Variances by state, animal types, and husbandry practices

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Lesson 9: Combustion Nonpoint Sources

- Residential Wood Combustion
- Residential Open Burning
- Land Clearing Debris Burning
- Agricultural Burning
- Wildland Fire Emissions