

Training Agenda
Air Pollution Technology
March 2-6, 2015
Flagstaff, AZ

Training Team

Jim Biddle, MS, CIH, Northern Arizona University
Marti Blad, PhD, PE, Yavapai Apache Nation
Christy Nations, ITEP (support person)
James Payne, Morongo Band of Mission Indians
Lydia Scheer, ITEP (Lead Instructor)

Day One – March 2

8:00 a - 8:15 a	Check-in and Registration	
8:15 a - 8:30 a	Welcome and Introductions	Lydia
8:30 a - 8:45 a	Course Policies / Expectations	Christy
	Course objectives and course overview	Lydia
8:45 a - 9:15 a	Pre-Course Content Assessment (includes time for break afterwards)	
9:15 a - 9:45 a	Air Pollution Bingo	Lydia
9:45 a - 10:00 a	Break	
10:00 a - 11:45 a	Looking at a Typical Tribal Air Program	James
11:45 a - 12:45 p	Lunch (pay on your own)	
12:45 p - 1:30 p	Ambient Air Quality Monitoring Methods	Lydia
1:30 p - 2:30 p	Particulate Matter Monitoring Exercise (Part 1: Orientation to lab & overview of exercise)	All instructors
2:30 p - 2:45 p	Break	
2:45 p - 4:30 p	Math Review Activities (and Pre-Course Assignment Review) + break as needed	Marti
4:30 p - 4:45 p	Reimbursement Forms	Christy
4:45 p - 5:00 p	Reflective Writing	
	Homework Assignment: <i>Introduction to AP-42</i>	
	Math Review Session in Hotel Lobby (optional) - TBD	

Day Two – March 3

8:00 a - 8:15 a	Review of Day 1; Introduction to Day 2	Lydia
8:15 a - 9:30 a	Emissions Inventory (EI)	James
9:30 a - 9:40 a	Break	
9:40 a - 11:25 a	AP-42 Homework Review & Calculating emissions using AP-42	Marti
11:25 a - 12:25 p	Lunch (pay on your own)	
12:25 p - 1:25 p	Particulate Matter Monitoring Exercise (Part 2: Start equilibration)	All instructors
1:25 p - 2:25 p	Air Monitoring Data Management Concepts	James
2:25 p - 2:35 p	Break	
2:35 p - 3:20 p	Data Analysis Concepts – Basic Statistics	Marti
3:20 p - 3:30 p	Break (and free time to use computers for internet/email)	
3:30 p - 4:45 p	Activity: Manipulating and Graphing Data in Excel	Lydia

4:45 p - 5:00 p Reflective Writing
Homework Assignment: *Interpreting Ozone Data*

Day Three – March 4

8:00 a - 8:15 a	Review of Day 2; Introduction to Day 3	Lydia
8:15 a - 9:15 a	Area and Fugitive Emissions: Source Management	James
9:15 a - 9:25 a	Break	
9:25 a - 10:15 a	Stationary Source Controls & Source Sampling	Marti
10:15 a - 10:35 a	Activity: Carbon Adsorption	Marti
10:35 a - 11:20 a	Mobile Sources	Lydia
11:20 a - 12:20 p	Lunch (on your own)	
12:20 p - 12:50 p	Organize Groups for Monitoring Exercise	Lydia
12:50 p - 2:20 p	Particulate Matter Monitoring Exercise (Part 3: Pre-weigh filters & Start Monitors) Bring a sunhat and water!	All instructors
2:20 p - 2:30 p	Break	
2:30 p - 3:30 p	<u>GROUP A:</u> Activity: Measuring vehicle emissions using Draeger tubes (James & Marti)	<u>GROUP B:</u> Activity: Using the Internet for technical and regulatory information
3:30 p - 4:30 p	<u>GROUP A:</u> Activity: Using the Internet for technical and regulatory information (Lydia)	<u>GROUP B:</u> Activity: Measuring vehicle emissions using Draeger tubes (James & Marti)
4:30 p - 4:45 p	Discussion & Review of Activities	All instructors
4:45 p - 5:00 p	Reflective Writing Homework Assignment: <i>SCREEN3 User's Guide</i>	
6:00 p	Group Dinner (pay on your own)	

Day Four – March 5

8:00 a - 8:15 a	Review of Day 3; Introduction to Day 4	Lydia
8:15 a - 9:00 a	Volume, Temperature, Pressure	Marti
9:00 a - 9:15 a	Break	
9:15 a - 9:30 a	Activity: Create a Temperature Inversion	Marti
9:30 a - 10:15 a	Transport of Air Pollutants	Marti
10:15 a - 11:15 a	Activity: Creating and Interpreting a Wind Rose	James
11:15 a - 11:30 a	Break (and free time to use computers for internet/email)	
11:30 a - 12:15 p	Demonstration: Trajectory Modeling & GIS	James
12:15 p - 1:15 p	Lunch (pay on your own)	
1:15 p - 2:00 p	Particulate Matter Monitoring Exercise (Part 4: Collect filters & final equilibration) Bring a sunhat and water!	All instructors
2:00 p - 2:10 p	Break	
2:10 p - 2:55 p	Dispersion Modeling	Marti
2:55 p - 3:05 p	Break	
3:05 p - 4:45 p	Using a Simple Dispersion Model - Homework Review - Introduction to SCREEN3 Model - Computer Exercise: Estimation of downwind concentrations using SCREEN3	Marti
4:45 p - 5:00 p	Reflective Writing as Homework Homework Assignment: <i>Prep for Talking Circle</i>	

Day Five – March 6

8:00 a - 8:15 a	Review of Day 4; Introduction to Day 5	Lydia
8:15 a - 8:30 a	Tribal Air Quality "Tools of the Trade"	Lydia
8:30 a - 10:00 a	Talking Circle	James
10:00 a - 10:15 a	Break	
10:15 a - 11:30 a	Air Quality Permits at NAU	Jim Biddle
11:30 a - 12:30 p	Lunch (on your own)	
12:30 p - 1:45 p	Particulate Matter Monitoring Exercise (Part 5: Post-weigh filters, Calculate PM concentration & discuss)	Marti
1:45 p - 2:45 p	Post-Course Content Assessment	
2:45 p - 3:00 p	Evaluations & Closing Remarks	Lydia

Course Learning Objectives

After completing this course, participants will be able to:

1. Characterize the sources of air pollutants that are of primary concern to tribes.
2. Describe components of an emissions inventory (EI), including data types and procedures
3. Compare/contrast methods of assessing ambient air quality including monitoring and modeling.
4. Discuss concepts related to data management.
5. Use basic statistics as a tool for data analysis.
6. Associate meteorological conditions with air quality.
7. Use the internet as a resource for obtaining up-to-date information on technical and regulatory topics.

Download Course Resources from this site:

http://itepsrv1.itep.nau.edu/itep_course_downloads/Tech_Resources/

Download Additional General Air Quality Resources from this site:

http://itepsrv1.itep.nau.edu/itep_course_downloads/~GeneralAQInfo/