Survey of Training Needs of NACAA Committees - 2011

In the past you all have asked your committees about their training needs, so we can feed this information back to the Training Committee and help inform decisions about which courses need to be developed and which courses should be given over the next year.

Could each of you survey your committees over the next 2 months (by May 15) on the next call of your committee and ask them the following about their training needs. Please let them know that training courses are listed by topic at http://www.epa.gov/apti/course_topic.html:

- On what subjects do you think you will need the most training on over the next year?
- Which courses need to be updated?
- Any suggestions on courses that need to be developed?

Thanks very much!

Amy Royden-Bloom
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Agriculture Committee April 2011

1) From: Erica Shuhler [mailto:erica@nwcleanair.org]
Sent: Tuesday, April 19, 2011 3:41 PM
To: Amy Royden-Bloom
Subject: RE: Agriculture Committee Training Needs; Date of Next Call

I notice that there are no courses currently listed under "Human Health". A course on the human health impact of odors, in particular CAFO odor, would be an interesting course.

Alternatively, how do we as air regulators address human health impacts given odor complaints, air monitoring data, and air quality standards (both local and national)? In general, we are not trained as human health impact experts, yet nuisance and odor regulations sometimes require us to make judgment calls.

Erica K. Shuhler, P.E.
Chemical Engineer
Northwest Clean Air Agency

2) We will need training on using the AFO emission factors methodology developed by EPA using the data collected during the National Air Emissions Monitoring Study. That way we can be prepared to review permit applications based on this methodology.

Shelley Schneider
Nebraska

3) Here are some training ideas from the WA State's AQP

- Air emissions from CAFOs
- Ammonia contributions from Agriculture.
- General course on Air emissions from the Ag Sector
- Ag and Biomass emissions

Regards.

4) **From:** Panofsky, David S - DNR [mailto:David.Panofsky@Wisconsin.gov]
Sent: Thursday, May 05, 2011 9:57 AM
To: Amy Royden-Bloom
Cc: Sponseller, Bart A - DNR; Voltz, Jeffrey R - DNR; Grande, David - DNR
Subject: RE: Agriculture Committee Training Needs; Date of Next Call

Hi Amy -

Sorry I am providing Ag Committee training ideas a few days later than you wanted. Bart had asked me to send you these thoughts last week and I just plain forgot... Anyway, here are a compilation of ideas from a few of us in Wisconsin.

In no particular order --

- Training on how emissions estimation methodologies might be developed using NAEMS data. In addition to understanding how these methodologies might be developed, it would be useful to check on these estimating methodologies using a mass balance approach.

- A review of existing state air quality regulations for AFOs

- Training on overview of typical animal agricultural operations, including model farms for each sector present in each state or region. For example dairy operations in Wisconsin might include grazing/low infrastructure operations; other small

confinement/mixed operations; "smaller-sized" operations with liquid manure systems; and large operations with liquid manure.

- Related to the above thought, perhaps some training in various common management practices so everyone can be on the same page as to what a typical scrape to alley flush system would include, for example. Perhaps NACAA could have a role in coordinating through university extension services, since air managers are going to need to become familiar with these different systems and their impacts on emissions.

- Overview of farm demographics by region or state, whichever is most relevant, Introduction to where emissions come from on typical AFOs. What are "fugitive" vs. non-fugitive emissions?

- Provide training on one pollutant at a time for individual sectors starting with nitrogen. Perhaps a training by a guy like Al Rotz (USDA, ARS) looking at mass balance of nitrogen, species, etc.

- Training into ag related monitoring methods -- area source measurement techniques such as the laser methods; and instruments like the photo-acoustic multigas monitors would be interesting. Again, whether that would be in the purview of NACAA or not, at least in a detailed sense, is a question.

- Training on where to find additional resources which can help address qualitative emissions questions such as what are the entire lifecycle effects of the differences between a deep small surface area storage pit, versus a shallower large surface area pit?

Thanks for considering the above. As always, feel free to contact me if you need any clarification.

Cheers, David

Air Toxics Committee April 2011

1) From: Evans, Craig [mailto:craevans@state.pa.us]

Regarding air toxics training opportunities: Here in Pennsylvania in any given year, we carry out several inhalation risk assessments on facilities burning alternative fuels. We also carry out multipathway risk assessments for facilities burning municipal solid waste, hazardous waste, etc. We also carry out risk assessments on air concentration data through a joint effort with our air toxics monitoring group.

Our team of risk assessors has pretty much been trained by way of "on the job training". Therefore, I would like to see the development of a risk assessment/risk management course for our team members to attend and formalize their training in the field of risk assessment. The course could be based on the same course content of APTI SI: 400 Introduction to Risk

Assessment/Risk Management. Also, a module in air toxics ambient air sampling and risk assessment could be included in the course content. These are our recommendations.

2) From: Glunn, John [mailto:John.Glunn@dep.state.fl.us]
Emissions Monitoring Section
850/717-9045

The FL DEP would like to see more training available on ambient air toxic monitoring systems--what instruments are currently in use, potential new methods, common measurement problems and how they can be resolved, lab analysis needs, data analysis techniques, etc. EPA has offered a course on this but it is no longer listed on their training courses. I believe the APTI course number was 401.

3) From: Schliesser, Steve [mailto:steve.schliesser@ncdenr.gov]
Phone: 919-715-2694

We have 2 suggestions:

- Training on the Industrial Boiler MACT and GACT for S/L/T agencies to implement the rules.
  Rather than each state develop separate training materials, does it make sense that one comprehensive training manual (covering notifications, compliance requirements, inspections, permit conditions, etc.) be developed by NACAA/EPA for S/L/T agencies.
- Provide a link to the NATA Data training videos from the EPA training courses website at http://www.epa.gov/apti/course_topic.html

Criteria Pollutants May 2011

1) New Source Review, specifically, a major update to APTI 461.
(Jac Cap, GA)

2) If EPA promulgates a secondary ozone standard that is different from the primary standard, such as W-126, we would need training on any differences in emissions inventory development or attainment demonstration modeling that would result.
(Diane Arnst, AZ)

3) Regarding question 1, over the next year the following training is most needed:
a) modeling related to SO2
b) near-roadway issues (NO2)
c) transport of criteria pollutants
d) a multi-pollutant course

Regarding question 3, it would be nice if the following courses were developed:
a) general conformity
b) transportation conformity
c) mobile sources.

(Tonalee Key, NJ)

4) We are pretty much restricted to SI courses for the next year or more, due to budgetary concerns (real or not). Our administration has pretty much curtailed travel. As new NAAQS are announced, we will need instruction on siting criteria and instruction in whatever direction EPA is going in GHG permitting.
(Lynne Liddington, Knoxville, TN)

5) I don't know exactly what to call the course: state program design/administration, delegation vs. SIPs, SIP writing, working with EPA. EPA has developed video classes (Marcia Spink, I believe) – how about hands on? I see there are more of these types of classes on EPA's website and I need to see if this meets our needs, but we're going to write more SIP revisions in the next few years than ever before.
(Miles Stotts, KS)

6) SIP development courses – for states and localities with experience in writing SIPS and for those that are first time nonattainment areas.
(MD, IA)

7) SO2 modeling for SO2 nonattainment designations

8) GHG inventories and GHG emissions reduction credits – Over the next 5 years this will be a significant issue. It's related to criteria pollutants in that numerous states are trying to integrate these efforts.

9) Training on how to make SIPs whole given the impacts of the transitioning I/M program and changes to the stage 2 vapor recovery program.

10) Training on general conformity – A hands-on, nuts and bolts course on how to do g-con, including how to determine whether or not g-con is triggered (including what's expected of a good investigation of a project to determine de minimis emissions) and what to do (and how to do it) if it is. This course should also be open to other federal agencies, so they can gain a better understanding of the program and what's required, so state and local air agencies don't have to teach them.
(Bob Wooten, NC)

Emissions and Modeling April 2011

Members of the NACAA Emissions & Modeling Committee provided the following feedback on training needs –

1) Need course on how to review an AERMET analysis
2) Need to update both AERMOD dispersion modeling courses to include techniques for PM2.5 and 1-hour NO2 and SO2
3) AERMINUTE should be included in the AERMET training course

4) Helpful to have webinars whenever possible

Enforcement March 2011

From: Misti Duvall
Sent: Monday, March 28, 2011 11:58 AM
To: Amy Royden-Bloom
Subject: RE: Training needs of committees

No feedback from Enforcement.

Global Warming May 2011

1) Major focus for us would be training on ghg BACT. Also might be useful to have some kind of conference on the black carbon issue once the final report comes out and how to best maximize/integrate health, nonattainment and ghg solutions around BC.

Stu Clark
Washington

2) I would suggest training on:

- GHG BACT
- Forecasting GHG Emissions
- Improved training on EPA's State Greenhouse Gas Inventory Tool, specifically on the calculations within it and where they get the activity data. EPA has been giving the same basic training for a long time.

Marnie Stein
Environmental Specialist Senior
Iowa Department of Natural Resources

3) Amy, thanks for soliciting input on training needs. I'd like to see some structured training to improve how we all communicate about the science of climate change and persuade the public of the need to act in sustainable ways.

I'm actually not an air quality person – my background is in journalism/public affairs – so I tend to see problems in terms of communications solutions. The attached perspective, published in Nature Climate Change, reached my desk this morning. The authors make a compelling case for applying communications science with interdisciplinary expertise to counter skeptics and achieve more effective communication results.

It's more than just being able to explain the science in ways ordinary people will understand. The authors contend a scientific approach is needed to understand what will convince people that a) the science is real and b) what the science tells us about the risk to the planet should matter to people personally. It is not sufficient to simply hire a p.r. firm to dumb down the science to the

lowest common denominator. The approach the authors suggest is to bring together teams of subject matter specialists (climatologists, ecologists, economists, engineers, etc.) who can represent the best available science on topics that matter to audiences, as well as social and communications scientists who can assess the public's beliefs and values, and then propose and implement communication strategies to explain solutions to climate change in ways people can identify with, internalize and, hopefully, act upon.

My suggestion may not fall under training, per se, but I really think we'd all benefit from getting state and local climate change policy types to approach climate change communications in more effective ways. Training may be a place to start.

Kurt

Kurt Maurer
Deputy Director
Office of Policy, Planning and Operations
Arizona Department of Environmental Quality

4) SUGGESTIONS FOR NEW COURSES

1. Well to wheel Analyses For Alternate Fuel Technologies: Provide the latest data/results, what is on the horizon (will new life cycle data from hydraulic fracturing be included in the models), modeling (what are the best models to use; training in the models and the data input), etc.

2. Evaluating Electric Vehicles and the Potential Impacts on the Grid: What technology is available now for vehicle to grid services; what works and doesn't (or limitations), frequency regulation.

3. Reducing Emissions from Goods Movement: Latest thinking and strategies for reducing emissions related to goods movement, local and regional approaches.

4. Regional climate models: Latest developments in downscaling global climate models to evaluate regional/local impacts.

5. Climate Adaptation Planning: How to integrate adaptation planning into updating/reconstruction of current infrastructure and for future infrastructure (roads, wastewater treatment plants, water supply systems, etc.).

Andrea Friedman
Office of Climate and Energy
Economic Growth and Green Energy
NJ Department of Environmental Protection

Mobile Sources and Fuels May 2011

1) Working with NESCAUM's Heavy Duty Work Group, I recently had a request from one of my work group members to look into training for heavy duty OBD for states that ultimately want to include this as a component to their I/M programs.
(Eric Skelton, NESCAUM)

2) MOVES model – Advanced training on looking at new data sets and putting more "robustness" and clarity in the data. Also, there is a need for more guidance on interstate cooperation in the development of interstate data sets and quantification (for purposes of transportation conformity). In addition, with respect to regional SIP development, there is a need for training on how to do projections in MOVES.
(NY, MA, NH)

3) There is a need for training on the tools available for developing the next set of SIPs relative to mobile sources and fuels (most information and guidance is geared toward other sources) – including, but not limited to the next generation of fuels and vehicle standards (onroad and offroad).
(Bob Lopez, WI)

4) Training on the array of current and emerging mobile source technologies and fuels – ethanol, biodiesel, alternative fuel vehicles, hybrid electric, diesel particulate filters, heavy-duty diesel retrofits, onboard diagnostics. In essence, a generic training course on mobile sources and fuels, covering all the significant components of the program and providing the latest updates, similar to what CARB and NESCAUM used to offer.
(numerous people)

5) Training on general conformity – A hands-on, nuts and bolts course on how to do g-con, including how to determine whether or not g-con is triggered (including what's expected of a good investigation of a project to determine de minimis emissions) and what to do, and how to do it, if it is triggered. This course should also be open to other federal agencies, so they can gain a better understanding of the program and what's required, so state and local air agencies don't have to teach them.
(Bob Wooten, NC)

6) How to make SIPs whole given the impacts of the transitioning I/M program and changes to the stage 2 vapor recovery program.

Monitoring April 2011

Members of the NACA A Monitoring Committee provided the following feedback on training needs –

1) Need air quality forecasting training
2) Helpful to have webinars due to travel restrictions

3) Misti, concerning ambient monitoring courses, decades ago APTI had an excellent (but difficult) course on meteorological monitoring (possibly in Seattle). I believe this would be useful. Also, if it were possible to offer the APTI 464, Analytical Methods for Air Quality Standards, in the Western US as well as New Brunswick, NJ, that would help students with tight travel budgets.
4) The area that my District needs training on most next year is data editing. There is a lot of training on how to run a monitor and produce raw data. There is a lot of training on how to upload quality controlled data into EPA's AQS database. But I have not been able to find any training on how to take raw data and covert it to quality controlled data. We have some fundamental questions on what is exactly required, what is optional, what is considered best practices, etc.

   I am sure someone will say all that is in EPA's Red Book. But I find that the Red Book is vague and every thing it says to do is preceded with a 'may' or 'can' or 'should' or 'it's a good idea to'. It does not have any firm instructions.

   In talking to other agencies in California, I have found that there is no consistency in data editing procedures. Even among staff at the same agency.
5) FYI – upon looking at the training description for the APTI 446 course, I now see that the course is more closely geared toward individuals inspection sites such as industrial plants/regulated sources.

   We are actually dealing with the operation of air monitoring stations. I think that was clear in my email, but it may be that this would be a different course altogether versus amending the existing one. OK, just wanted to touch base on that…thanks Misti!

Ceresa Stewart, ARM
QA/QC Lead
Air Quality
Data Management & Quality Assurance
602-771-2297

Regarding the training question, we are in the process of evaluating safety issues involved with accessing meteorological or air monitoring instruments placed on met towers, roofs, and platforms. We are reviewing our monitoring sites to ensure they meet applicable OSHA regulations. However, the access to the met towers has been more challenging because from what I can tell, the use of fall arrest systems such as body harnesses appears to be covered under OSHA Construction Industry standard rather than the General Industry standard. I am currently working with Arizona OSHA to figure out what we need to do regarding this issue.

I noted the following class is available through APTI: **APTI 446 Inspection Safety Procedures (1994)** (self-instructional course APTI SI-422 as a prerequisite).

APTI 446 is a course that would be a benefit to us. However, I noted fall safety, which I think is an item to address with the met towers and roof mounted equipment, is not included on the course outline (although it may be covered in the class materials). Since travel is reduced, I think this course would be of value if offered by webinar where a knowledgeable instructor is available to the students for questions. Self-instruction may also be a reasonable alternative, but probably more so for people needing to refresh their knowledge rather than a first time training.

6) We work through LADCO to obtain most of our hands-on monitoring training. As Mike Koerber mentioned on the call, Region 5 states often have the instrument manufacturers come directly to us or on occasion, Region 5 state/locals send monitoring staff to the manufacturer for more specialized training. This approach works very well, and this type of continued training is a very high priority.

Some of wisconsin monitoring staff did express interest in the broader web-based trainings offered through APTI.

As was expressed on the latest NACAA monitoring call, most state and locals are unable to travel, so interest in certain courses may not precipitate into participation, unless courses could be offered at an EPA Regional office, allowing day trips and/or the class room courses can be created as webinars/self-instruction. One of my staff said that,"if there were more self-instruction ones, I would be more inclined to actually do them."

Specific Interest Expressed:

1) Quality Assurance for Air Pollution Measurement Systems (470).
2) CEMS courses (SI-476B and 474) .
3) SI-433. "Network Design and Site Selection for PM2.5 and PM10." This may need to be updated depending on what EPA proposes, and it was asked whether SI-433 could also be expanded to encompass other criteria pollutants.
4) 464 "Analytical Methods for AQ Standards." Could the course be adjusted to focus more on SO2, NO2 and O3 rather than CO?

Also, it would be helpful to know when each course was last updated to include new requirements and/or methodologies.

Suggestions for Courses that Need to be Developed:

1) A person requested that a course providing an overview for toxics monitoring methods, which focuses on design approach (how to select and modify methods to suit actual study conditions) would be beneficial. This would be a theory oriented course, with information and links to what methodologies are available and being developed for different classes of toxic compounds. Things move fast, and the current state of the art is WAY beyond the Toxics Compendium methods. There could be overviews of how to use micrometeorological measurements combined with laser technology for emissions estimates from area sources; there could be overviews of the principle of operation for

photoacoustic instruments; advances in FTIR and real time GCs (including BTEX analyzers), etc etc etc. Comparisons of some of the different passive devices and their applications. Could have a section on how to EVALUATE studies using some of the newer methods.

The purpose of the training would be to get up to date on what is possible and what application the different methods have, so we are in a better space to say whether something makes sense or not when we requested to perform or evaluate a study and someone wants to know what it means.

2) There should be formal introductory overviews of some of the different programs, like NATTS, NCORE and CASTNET, etc. Just keeping up with all the acronyms and what they are supposed to be doing can be a challenge.

Sorry I didn't include this suggestion in the previous email.

A thorough web-based training on the use of EPA's AQS database would be very valuable. Topics would include the following, (based on an AQS presentation from EPA):

  - Components of the AQS System
  - The hierarchical model of AQS data
  - AQS Data types
  - Help
  - Getting started
- Forms tools
  - Terminology
  - Editing data
  - Browse/Modify Site Monitor and Raw data
- Batch load
  - CDX
  - Load process
  - Data format
  - Fixing errors
  - Correct forms
-
- Batch load
  - Error Process Review
- Maintain
  - Site/Monitor Add/Modify Data
  - Inserting/Deleting/Updating Raw Data
- Extract Reports
- Standard Reports
  - Create standard reports
  - Report Criteria Set
  - Report formats (rtf, pdf, etc)

A webinar would be helpful for people new to AQS as well as serve as a refresher for current AQS users.

7) Misti – one training request we have is on Air Quality Forecasting. Yes, there is training provided at the National Air Quality Conference, but we are more interested in the basics of forecasting due to new staff combined with the fact we don't have a meteorologist on staff. This training would be geared mostly towards the smaller agencies.

   Some "training" the monitoring personnel has been doing within the region is to have the vendor come to a state or area and deliver specific training on instrumentation. We have been fortunate enough to have LADCO pay for this training, but the individual states have coordinated and finalized logistics, etc. This has been well received.

   Also within the state or region we are developing specific training that people need within the state. One example is the upcoming class on Stack Test Overview and Stack test report review. Started out as the latter and has increased to include an entire overview of stack testing. Several people have been instrumental in developing and will be teaching the class: region 5, Ohio EPA, and local. The is class and resulted from local agencies request for training. It will be a one day training with reference for more information to attend the APTI related training. Statewide there are 90 people signed up for the class on April 20th in Columbus, Ohio. The people instructing have experience in this area and will be able to answer most if not all questions relating to the topic. So in short, there are areas developing their own training based on need.

   If I receive any more specific requests, I will let you know.

Permitting/NSR April 2011

Members of the NACAA NSR and Permitting Committees expressed the following training needs -

1) In answer to your request regarding feedback on training –

Updating courses on permit writing, or developing a new one, to focus on writing enforceable permit conditions – particularly given what we've learned over the last several years of writing and enforcing permits, would be useful.

2) I would propose a new course (or maybe two) to cover review processes for "modification" and "reconstruction" under Part 60 and/or Part 63.

I brought this up to the region when we were asked about suggesting courses. They agreed it would be helpful and mentioned that nobody at the region has ever had any type of training to make these type of determinations.

3) Our training needs are in best practices to regulate or permit Controlled Burns. In Puerto Rico, the open burning is prohibited by the Regulations, except for specific agricultural burns. We are working to permit some types of burns: ex. for ecosystem management.