



NARSTO News

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in Support of Air-Quality Management

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<http://www.cgenv.com/Narsto>

Annual Executive Assembly Meeting Scheduled for April 13-14 in Washington

The Annual Meeting of the combined NARSTO Executive Steering Committee and Executive Assembly will be held at the Jurys Washington Hotel, 1500 New Hampshire Avenue, NW. The hotel is located near the Dupont Circle Metro Station on the Washington DC subway. We have arranged for a room block under the name NARSTO, at the government rate of \$150. per night. The hotel's phone numbers are 877-587-9787 and 202-483-6000, and its their Web site is www.jurys.com/usa/washington_hotel.htm.

The Annual Meeting provides the primary forum for NARSTO's executive membership to consider and make major programmatic decisions, as well as to direct the Executive Steering Committee and Management Coordinators on activities for the coming year. As the topic list below indicates, we will present briefings on selected ongoing and planned NARSTO operations, to help facilitate these discussions.

Lunch will be served on April 13. We would appreciate RSVPs from those planning to attend, so we can get an approximate head-count for planning purposes. You can do this by e-mail to the NARSTO Management Coordinator's office at jake@cgenv.com or by phone at 509/546-9541. Further updates on the meeting, including a final agenda, will be made available on NARSTO's Web site. We hope you can attend, and look forward to seeing you there.

Agenda Items

1. State of NARSTO Summary for 2004
2. NARSTO Emission Inventory Assessment
3. Review of Recent NRC Report on Air-Quality Management
4. Review of Recently Published NRC Report on Suspended Particulate Matter (Report #4)
5. The DOE Aerosol/Climate-Forcing Initiative
6. Status Report on the US Fine-Particle Network
8. Review of the NARSTO Quality Systems and Data Management Operations
9. NARSTO Management Coordinator Selection

A detailed and updated agenda is available on the NARSTO Web site.

NARSTO PM Assessment to be Published as a Cambridge Press Edition

NARSTO's assessment, *Particulate Matter Science for Policy Makers*, was unveiled at last year's Executive Assembly meeting as a CD version accompanied by printed copies of associated overview material. Now, thanks to a special grant from the National Science Foundation, we will be able to publish the entire document as a book with Cambridge Press. This development will be especially important for archiving the assessment in libraries.

The document's original CD version was assembled under some time-pressure, resulting in several typographical errors in the text. As a consequence the new edition has been edited substantially to correct these deficiencies and to improve delivery style. In addition to providing the more convenient hard-copy medium, this edition will be much more readable than its predecessor. Our contract with Cambridge Press provides for several "free" document copies, which we intend mainly for distribution to libraries throughout the three NARSTO countries. Cambridge Press will market additional copies in book stores and through mail-order services. Our agreement also stipulates that we black out the document's Web posting for a six-month period following the publication date. Following that period we will re-post the document in its most recent form.

Currently the page-layout files are at Cambridge Press, who is addressing technical aspects of the publication process. We anticipate final publication sometime this summer.

NARSTO Data Archive Update



To Access NARSTO Data:

Link to the NARSTO Permanent Data Archive (PDA) (http://eosweb.larc.nasa.gov/project/narsto/table_narsto.html) at the NASA EOSDIS Distributed Active Archive Center at the Langley Research Center (<http://eosweb.larc.nasa.gov/>).

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The NARSTO News is published biannually for the purpose of communicating NARSTO activities and progress to members of the extended NARSTO community. Persons wishing to comment on the newsletter or submit material for publication are invited to do so by contacting either Diane Fleshman or Jake Hales in the NARSTO Management Coordinator's office, at the following address:

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Data Archive . . . , Continued

Why Does NARSTO Archive Data?

Data are the common currency that support NARSTO's coordinated research, modeling, and assessment efforts. Archived data products from local, regional, and international monitoring and research programs are valuable resources for future science-based decision-making and determination of effective strategies for air-pollution management. To support both current and future use, we archive not only the data, but also sufficient metadata to meet the needs of future users. Researchers, even after 10 or 20 years time, should be able to find data of interest and be able to understand and use the data solely with the aid of the documentation archived with the data.

The NARSTO Data Usage Policy encourages open data sharing and cooperation to ensure that potential data users have ready access to quality-assured data in a timely manner; intellectual property rights are respected; and co-authorship, acknowledgment, or credit is given to data originators, principal investigators (PIs), and funding agencies.

How Does the Archiving Process Work?

Data from NARSTO projects are formatted in the Data Exchange Standard (a spreadsheet-compatible layout, which uses a standardized terminology) and are sent to the Quality Systems Science Center (QSSC) (<http://cdiac.ornl.gov/programs/NARSTO>). The QSSC does some format and content checking, interacts with the data providers as needed, develops additional documentation, and sends the data to the PDA for public access.

Are the Data Sets Being Used?

Yes. The two following data collections are especially popular, and accessing them on the PDA serves as a good introduction for new users. Atlanta '99 is an all-inclusive data set with online documentation while Houston presents data for a particular study or measurement type as a separate data set.

- *NARSTO EPA_SS_ATLANTA 1999 Air Chemistry, Particulate Matter, and Met Data* with 38 data files of varied measurement data types.
- Ten representative data sets from the Houston Supersite / Texas Air Quality Study, 2000 (e.g., *NARSTO EPA_SS_HOUSTON TEXAQS2000 PM2.5 Organic Speciation Data*)

Can the Archive Post Specialized Data or Similar Data Across Sites?

The PDA Data Exchange Standard (DES) format is highly versatile. In addition to data from more conventional sources it can handle information from path measurements and aircraft observations as well as a variety of high-volume multispecies measurements. Examples include:

- Operating as a component of the Baltimore Supersite Project, Johns Hopkins University (JHU), Department of Geography and Environmental Engineering operated a miniature elastic backscatter LIDAR at several Baltimore locations. Mixing heights were determined from profile data. The large ASCII files of aerosol and molecular backscatter data and color images of the LIDAR profiles are archived. See *NARSTO EPA_SS_BALTIMORE JHU LIDAR Backscatter and Mixing Height Data*



NARSTO/CEC Emission-Inventory Workshop Held in Austin



- Data from Wexler and Johnston's Rapid Single-Particle Mass Spectrometer (RSMS) in three EPA Supersite projects — Atlanta, Houston, and Pittsburgh — have been archived, illustrating the ability of the DES format to deal with high-volume data sources. See, for example, *NARSTO EPA_SS_PITTSBURGH Rapid Single-Particle Mass Spectrometer Data*.

Who's Archiving Data?

The most active group sending data and documentation to the QSSC for archiving recently has been the **U.S. EPA Particulate Matter (PM) Supersites Program**, in particular, Los Angeles (Partisol and MOUDI sample results) and Fresno (PAH, BAM, and meteorological data) projects. These data sets will soon be added to the archive.

Bill Sukloff, Environment Canada, is actively processing two data collections for archiving:

- The ground and aircraft measurement data from Pacific 2001 Air Quality Study of the Lower Fraser Valley, British Columbia, will be organized into approximately seven site and aircraft data sets containing a total of 200-plus data files.
- And, the Supersite Transboundary Intensive Field Study (STIFS), also called the Toronto Supersite, will archive 20-plus air chemistry and aerosol data files.

Soon to be publicly available:

- Northeast Oxidant and Particle Study (NEOPS) LIDAR, atmospheric chemistry, and meteorological data collected at Philadelphia in 1998, 1999, 2001, and 2002.
- Atmospheric chemistry, aerosol, and meteorological data collected near Nashville in 1999 from TVA's Helicopter platform will soon join the other archived Southern Oxidants Study's Nashville 1999 Field Study data.

Need Assistance?

Quality Assurance and Data Management assistance and guidelines are available to all NARSTO research planners, project managers, and principal investigators through the NARSTO Quality Systems Science Center located at the Department of Energy's Oak Ridge National Laboratory (<http://cdiac.ornl.gov/programs/NARSTO>).



Last October NARSTO joined ranks with the Commission on Environmental Cooperation to hold a workshop at the University of Texas in Austin, addressing advanced technologies for emission-inventory development and verification. As advertised, the Workshop focused on new and innovative methodologies related to the development of emission inventories and emission factors, the evaluation and assessment of the adequacy and quality of emission inventories, the application of emission inventories in air-quality management activities, and the development of real time emission inventories for field studies and air quality forecasting. Although most emission-inventory methodologies are applicable to characterization of any species, the Workshop focused on criteria air pollutants and their precursors. Priority was placed on current controversial issues, including but not limited to, emissions of multicomponent volatile organic compounds, ammonia, and primary organic particulate matter as well as transient and fugitive releases. In keeping with the NARSTO charter, the Workshop addressed emission-inventory issues related to the United States, Canada, and Mexico.

Some 220 scientists from Europe and North America participated in the conference, which included 87 papers and 26 poster presentations. Viewgraphs of the presentations are now posted on the NARSTO Web site, and we are currently preparing a "synthesis paper" to be published in *JAWMA*, and a shorter summary which is slated for *EM*.

A major objective of this Workshop was to provide a technical background for preparation of NARSTO's Assessment of Emission Inventories, which is slated for publication in 2005. Further details concerning the Assessment appear in the article immediately below.

NARSTO Emission-Inventory Assessment Launched

Under the leadership of Emission Team Co-Chairs David Mobley and Steve Cadle, the Emission Inventory Assessment is now off and running. Meeting in RTP during mid-March, a core team discussed the Assessment's proposed outline, authors, proposed writing assignments, and schedules.

Guidelines for the Assessment are formalized in a Charge from NARSTO's Executive Steering Committee, which emphasizes that "this document is to take a

(Continued on page 4)



Assessment, . . . , Continued

forward-looking perspective, and should not be duplicative of currently available documents in the emission-inventory field. In particular, it should not attempt to be a methods manual (such, for example, as AP-42). Although it should provide a valuable user's guide to locating current emission-inventory data, it should not attempt to be a compendium of these data. Rather, this Assessment should provide a scientifically credible examination of uncertainties in current emission inventories, identify critically important aspects of these uncertainties, and indicate future pathways for resolution. The application of evolving and anticipated future technology, as well as measurement and data-base quality are particularly important aspects of this resolution process".

The complete ESC Charge is posted on the NARSTO Web site. Activities for the next several weeks will include fleshing out the Assessment's outline and writing initial chapter drafts. We hope to have a reasonably complete rough draft available when the writing team meets in Clearwater, Florida during early June. David Mobley will present further details on the Assessment at the Aril EA/ESC meeting.

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NARSTO Management Coordinator: Position Opening

NARSTO is currently seeking statements of interest from potential candidates for the Management Coordinator position. As the title implies, NARSTO's Management Coordinator has prime responsibility for NARSTO's mission to plan, coordinate, and facilitate comprehensive, long term, policy-relevant scientific research and assessment of tropospheric air-pollution behavior over the North American continent. This includes providing and implementing a cross-organization planning process that determines the most effective strategies for scientific investigation, and establishes and maintains effective communication channels with the policy, control technology, and health and ecological effects communities.

Submission deadline is April 2, 2004. Interested individuals should consult the NARSTO Web site for full details of the application process.

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