



# NARSTO News

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in Support of Air-Quality Management

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

## Bill Pennell Selected to Serve as New NARSTO Management Coordinator

On September 2 NARSTO's Executive Steering Committee finalized its decision to select Bill Pennell as NARSTO's new Management Coordinator. Bill will replace Jake Hales when Jake's term expires on March 1, 2005.

Bill's experience and other qualifications make him well suited for this position. A mechanical engineer, he obtained his undergraduate degree at the University of Florida and then proceeded through his Ph.D. at the University of Minnesota, where he did his thesis work in fluid mechanics and heat transfer. After doing a stint designing jet engines at Pratt and Whitney, Bill migrated to NCAR where he first became strongly associated with the atmospheric sciences field. Subsequently he moved to the Atmospheric Sciences Department of Battelle Pacific Northwest Laboratory (PNNL) in Richland, Washington, where he led groups in boundary-layer meteorology and wind energy, in addition to participating in programs involving acid-rain and climate-change research.

In 1995 Bill moved to Boulder to serve as Director of UCAR's Office of Programs, subsequently returning to Richland to lead PNNL's Atmospheric Sciences and Global Change Division, a position he has held for the past seven years. He will vacate that position in March, in order to devote full attention to his NARSTO responsibilities.

Bill is noted for his abilities as a quick study who can come up to speed rapidly on a wide variety of subjects, making him especially well suited to NARSTO's amalgamated research interests. He has substantial leadership skills and can be counted on to continue NARSTO's culture of consensus-based, proactive leadership. We're looking forward to working with him in this capacity.

Anyone interested in contacting Bill directly can do so at:  
509/372-6256  
[william.pennell@pnl.gov](mailto:william.pennell@pnl.gov)

## Emission Inventory Assessment Readied for NARSTO Review

Led by David Mobley and his fellow Co-Chairs<sup>1</sup> NARSTO's Emission Inventory Assessment has progressed through numerous preliminary drafts, and will be available soon for review by the NARSTO community.

Motivated by recommendations in NARSTO's PM and Ozone Assessments as well as by findings from the October 2003 Emission Inventory Workshop in Austin<sup>2</sup>, this Assessment's primary goals are to set the stage for future inventory development, as well to facilitate efficient and reliable inventory application for atmospheric-process evaluation and for pollution management. Intended for a diverse audience of planners, policy makers, and scientists, the Assessment provides a staged presentation, which:

- describes a "vision," in the form of a desired future state of emission-inventory science and applications;
- provides a location and access resource for all important, currently existing North American inventories;
- analyzes deficiencies and uncertainties in current inventories;
- establishes the foundations of a rigorous approach to quantifying and reporting uncertainties in emission estimates;
- describes evolving measurement and interpretive technologies, which are potentially applicable for future emission-inventory development and/or verification; and

<sup>1</sup>Co-Chairs:

David Mobley, US EPA  
Marc Deslauriers, Environment Canada  
Leonora Rojas Bracho, Mexico INE  
Susan Wierman, MARAMA  
Howard Feldman, API  
Chris Frey, NC State University

<sup>2</sup>Presentations from the Austin Workshop are available on the NARSTO Web site.

*(Continued on page 2)*



### In this edition...

NARSTO Management Coordinator	1
Emission Inventory Assessment	1
PM Assessment	2
RRWG Meeting Announcement	3

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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12507 Eagle Reach  
Pasco, WA 99301

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## Emission Inventory Assessment, Continued

- outlines findings and recommendations for advancing from the present state of emission-inventory development to the visionary state described above.

This Assessment's review schedule will be similar to those of the earlier NARSTO documents. The current draft is intended primarily for review by members of the NARSTO community; but comments are welcome from any interested individual, regardless of their NARSTO affiliation. These comments will be compiled and used to prepare a subsequent draft, which will be subjected to an extended review by a smaller number of selected, independent scientists. The resulting comments will be processed into a final draft, which will be published as a NARSTO document subsequent to approval by the Executive Assembly.

We anticipate that the current Assessment draft will be available for download on the NARSTO Web site by October 1. This version contains essentially all of the technical material intended by its authors; but in anticipation of downstream changes in response to reviewer comments it is currently in a reasonably "drafty" state, which does not include niceties such as executive summaries or tables of contents. Based on past experience with the PM and Ozone Assessments, we anticipate substantial modifications to occur as a result of the review process.

As noted above, we will welcome review comments by any and all interested individuals. Comments for this review stage are due by October 29.

## Cambridge Press Edition of NARSTO PM Assessment Available Soon

As reported in the Winter-Spring *NARSTO News*, Cambridge University Press is publishing a full hard-copy version of the NARSTO Assessment, *Particulate Matter Science for Policy Makers*. This will essentially replace the previous February 2003 publication, which contains hard-copy text of summary material, with the main report body on CD ROM. It has the same title as the original document and lists the Assessment's Co-Chairs Pete McMurry, Marjorie Shepherd, and Jim Vickery as editors. Its ISBN is 0521842875.

The Cambridge edition is a thoroughly re-edited version of the original document. While the technical content remains the same, this new version is much more readable than its CD predecessor, and is a highly recommended alternative.

Our contract with Cambridge Press requires us to remove the PM Assessment files from NARSTO's Web site for a six-month blackout period subsequent to initial publication. We plan to re-post the document after that blackout period is complete. It also provides for delivery of a number of copies to NARSTO, which we intend primarily for delivery to technical libraries throughout the three NARSTO countries. NARSTO's Associate Management Coordinator, Jeff West, will assume chief responsibility for this distribution.

Pre-publication copies are expected to arrive imminently at NARSTO Management Coordinator's office, and will be followed by document availability shortly thereafter - possibly as soon as early October. As noted previously this publication was made possible by a grant by the National Science Foundation, a NARSTO member. We appreciate NSF's good efforts in this regard!



## Reactivity Research Working Group Meeting Scheduled for November

The next Reactivity Research Working Group (RRWG) meeting will be held on November 3-4, 2004 in Research Triangle Park, NC. This is the first RRWG meeting that has been held in some time, and will discuss the significant progress that has been made on the reactivity front since the previous meeting, including:

1. a report on additional analysis of reactivity matrices and metrics by Georgia Tech,
2. external reviews of the RRWG photochemical modeling effort,
3. an update on low NO<sub>x</sub> reactivity studies at UC Riverside,
4. a progress report by the RRWG Policy Team

As indicated by item 1, above, "metrics" are an important focal point of the RRWG effort. Simply stated, these are consolidated ways of expressing VOC reactivity, particularly in terms of reactivity scales. These can be formulated using different pollutant measures, for example, regionally averaged ozone, which weighs the effect of the VOCs on ozone formation in all grids equally. A somewhat different approach is to consider averages of concentrations obtained only from locations where ozone exceeds the air-quality standard. Previous Reactivity Research Work Group (RRWG) studies have identified eight different metrics, which are currently under consideration.

Ted Russell at Georgia Tech has been performing much of the chemical-transport modeling under the RRWG effort, and currently is revising previous modeling work to show area-wide effects on ozone induced by relative changes in the reactivity of VOC emissions. His latest work will express his previous findings in terms of the metrics used by Bill Carter of the University of California at Riverside, who had done similar modeling. Having the two studies expressed in terms of common metrics will aid in the comparison of results.

Dick Derwent of the UK Met Office and Praveen Amar from NESCAUM are performing independent reviews of the selected metrics, with special emphasis on their applicability for regulatory purposes. Item 2, above addresses status reports on these efforts.

The meeting will also review the status of several other RRWG projects underway, such as a modeling study of the environmental fate of chemicals and a development of an emission-processing module (SMOKE) that is compatible with the newest chemical-transport model.

Finally, the meeting will provide a policy-oriented status report on a number of reactivity-related rulemaking measures. These include special exemptions for t-butyl acetate, methyl formate, and several fluorocarbons, as well as SIP approval for the CARB-based aerosol paint rule. The meeting will also discuss EPA's anticipated Advance Notice of Proposed rulemaking (ANPR) for VOC Control/Reactivity, which is an announcement that is intended to solicit comments on a number of issues that would be key provisions in any future reactivity policy update or revision. Basically the ANPR notifies the public that EPA is considering revising its VOC control policy and asks for comment on several possible approaches regarding:

- criteria for compound-specific exemptions
- use of reactivity scales (such as in the CARB aerosol coating rule)
- reporting and inventory requirements
- consideration of non-ozone adverse impacts, such as toxicity.

The ANPR does not actually propose or change any policies, but is expected to lay the foundation for future policy modifications.

The RRWG meeting location is at the US EPA laboratories in Research Triangle Park, in Classroom C114 Wednesday PM and Classroom C112 Thursday AM. The meeting will start at 1 PM on Wednesday, November 2 and conclude by 1 PM on the following day.





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