

The National Atmospheric Deposition Program (NRSP-3)
Technical Committee Meeting
October 24 - 27, 1994, Annapolis, Maryland
Minutes

Tuesday, October 25, 1994

Opening, Introductions and Chair's Report —

The opening session of the 1994 NADP (NRSP-3) Technical Committee Meeting was convened at 8:00 a.m. on Tuesday, October 25, in Annapolis, Maryland, by Van Bowersox, Chair. Van commented briefly on the agricultural experiment station structure upon which NADP is based, referred to the AES Administrative Advisors and pointed out that the network, which started in 1977, has achieved 16 years of continuous operation.

Meeting attendees were asked to introduce themselves.

During Van's term as chair the following things were accomplished.

- Several papers from the 1993 Technical Meeting Symposium were submitted for publication to the journal, *Atmospheric Environment*. They are:
 - "The standard error of a weighted mean concentration: I. Bootstrapping versus other methods" by Gatz and Smith.
 - The standard error of a weighted mean concentration: II. Estimating confidence intervals" by Gatz and Smith.
 - Measurement of mercury deposition using passive samplers based on the Swedish (IVL) design" by Chazin et al.
 - The chemical composition of atmospheric deposition collected from six Louisiana sites from 1983 to 1992 by West and Feagley
 - Workshop on sampling mercury in precipitation for the National Atmospheric Deposition Program" by Lindberg and Vermette
 - Methodology for the sampling of metals in precipitation: Results of the National Atmospheric Deposition Program (NADP) Pilot Network' by Vermette et al.
 - Trends in precipitation chemistry in the United States: A national perspective, 1980-1992 by Lynch et al.
 - Field tests for a regional mercury deposition network: Sampling design and preliminary test results" by Vermette et al. AL-94-0021.

- Publication of a new NADP Brochure.
- Change in protocol from bucket to bottle.
- Changes in the Coordination Office.
- Integration of the AIRMoN subnetwork into NADP.
- Work proceeding on the Mercury Initiative.

Site Operator Recognition —

A number of years ago, NADP established a policy of formal acknowledgment for site operators who have served the network continuously for five years or more and who have attended the CAL-sponsored operator training during that time. Recognition was paid to the following operators for their years of service, and to the site supervisors.

FIFTEEN-YEAR PLAQUE			
CAL CODE	SITE NAME	SITE OPERATOR	SITE SUPERVISOR
MN27	Lamberton	Tony Strasser	Dave Huggins

TEN-YEAR PLAQUE			
CAL CODE	SITE NAME	SITE OPERATOR	SITE SUPERVISOR
CO02	Niwot Saddle	Mark Losleben	Mark Losleben
CO94	Sugarloaf	Mark Losleben	Mark Losleben
FL14	Quincy	Jerilyn Collins	Marvin Franklin
KY22	Lilley Cornett Woods	Michael Brotzge	Richard Artz
KY35	Clark State Fish Hatchery	Danice Nutter	Dennis McClain
MI98	Raco	Justin Carrick	Darrell deRouin
MN18	Fernberg	Christina Barton	Robert Berrisford
MN23	Camp Ripley	Mary McGuire	Greg Stratton
MS10	Clinton	William E. Morris	Darrell Wilson
NC36	Jordan Creek	Avery J. Dennis	Douglas Smith
ND08	Icelandic State Park	Karen Duray	Russell Harkness
SD99	Huron Well Field	Gerald Wisnieski	Steve Sando
WI99	Lake Geneva	Ted Peters	Bruce Rodger
WY02	Sinks Canyon	Greg Bautz	Al Riebau

FIVE-YEAR PLAQUE			
CAL CODE	SITE NAME	SITE OPERATOR	SITE SUPERVISOR
IN41	Purdue University Agricultural Farm	Kenneth Scheeringa	Richard Grant
ME98	Acadia National Park-McFarland Hill	Robert Breen	Leighton Carver
MT13	Give Out Morgan	Linda Connor	Linda Connor
OR18	Starkey Experimental Forest	Cheryl Borum	Matt Johnson
TX02	Mulshoe National Wildlife Refuge	Glenda Copley	Bill Hawthorne

WA 14	Olympic National Park-Hoh Ranger Station	Bill Rohde	Cat Hoffman
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Reports —

AIRMoN Subcommittee Report —

Jane Rothert, Chair, reported that the subnetwork now has seven sites, and chemical analysis is complete through the end of September. There is a one-month turnaround of data to the sites. The CAL has sent the first 1 1/2 years of data to the Coordination Office. Work is needed on codes for the final screening. Milestones over the past year include:

- Have received 2,100 samples.
- In-house QA is now being applied.

Jane displayed sulfate for the first 6 months of 1994 and compared NADP bottle protocol with the AIRMoN protocol.

Rick Artz commented that funding for AIRMoN is stable for FY95, and they are hoping to modernize some of the hook-up data loggers. Rick is very pleased with the data.

Mercury Initiative Report —

Steve Lindberg, Mercury Initiative Advocate, commented that the dream began in 1978. Then in 1991, NADP began activities to bring mercury into the network. TVA funded a workshop on metals in precipitation and a list of those interested in the preliminary network was developed. Steve displayed a map of sites which have offered to support mercury monitoring. He also displayed a frequency distribution plot. The Mercury Advocates are now asking for NADP approval to move to the next stage in the new initiative process.

Van Bowersox explained the advocacy process. NADP had operated several years before, due to the addition of AIRMoN, they recognized the need to have a set of procedures to allow evaluation of whether a proposed project was consistent with the goals of NADP and the objectives of the program. A 12-point process that must be addressed by the new initiative advocates was developed and adopted. There are stages in the initiative process, and the mercury group now hopes to move the proposed mercury network from Stage C to Stage D. If successful, this will presumably result in the mercury network becoming part of the NADP.

Administrative Advisors —

AES Administrative Advisor Report —

William Brown, new Administrative Advisor from the Southern Region, addressed the group. Each Agricultural Experiment Station region has an administrative advisor to NRSP-3. He has been generally familiar with the project for the past 10 years and is glad to be present to learn what is going on and about the new initiatives.

The FY95 Off-the-Top budget request for NRSP-3 has been approved for the base level. In addition, one-time funding of \$12,000 has been approved for supplementary or additional data analysis. The way this budget develops from the ag experiment stations is that, as regional projects are discussed each spring, a vote is taken for support of a base level budget. It then goes to the Committee of Nine for final approval. Bill emphasized that it is important to communicate to the regional state directors what is happening with the project.

Bill talked briefly about the Southern agricultural meteorology regional projects with a similar focus. There is now an effort to put them all together in a national project. It would become a National Support Project which would involve a lot of climate stations around the country and would provide an opportunity to standardize those stations and put their data into a meaningful database. The proposed national project is close to being approved. Bill noted that many of the NADP sites are located at weather stations.

CSREES (formerly CSRS) Administrative Advisor Report —

Jack Barnes stated that his comments would have a dual focus—areas of hope and areas of concern.

- Open Coordinator position. A position description is being developed and an announcement will be made for a national search to fill the position.
- The NADP Brochure is a very fine effort. Thanks were expressed to Mike Kelly for his work. Jack feels more of this kind of “PR” is needed. After the election send the brochures to members of congress. He asked for any other suggestions for groups to whom it should be distributed.

Jack encouraged discussion of topic brochures such as trends, nitrate depositions, something which states the accomplishments of NADP in a one-page format. He feels “timely” is the key to the need and success of this kind of publication.

- Agency representatives are working very hard to hold the line on funding, and they have been fairly successful over the years. He hopes to continue through the next two to three years until it is known how the Science and Technology Policy will be structured.

Coordination Office Report —

Jim Gibson, Interim Coordinator, commented on the changes which have occurred in the Coordination Office over the last few months.

- Carol Simmons has stepped aside.
- Gwen Scott resigned to start a different career.
- Gary Lear has been promoted to Associate Coordinator.
- Bob Gilpin has taken over the Data Manager activities, and Cathy Copeland has also assumed some of these responsibilities.

The reason for the delay in moving forward to fill the Coordination position is that, due to the current funding situation, Colorado State University is in the process of evaluating the kinds of programs which it encourages and reviewing its position on specific programs. NADP has been identified because it generates no indirect cost and does not support graduate students or research. Jim felt some of these questions should be resolved before a long-term commitment is made for a Coordinator. The Vice President for Research is still reviewing the project, and Jim feels it is not appropriate at this time to advertise. He commented that he has seen many ups and downs over the years, and he doesn't believe the university will actually refuse the program. He also believes that we can go forward with an advertisement in the next month or so. The draft position description meets the University and Natural Resource Ecology Laboratory's requirements.

Jim touched on additional items of interest.

- The number of active sites in the network is 192, making a total including collocated and two-week sites of 207.
- The Coordination Office has made some changes in priorities on the data side of the office. There is an effort to automate data and develop a GIS format. Data has been processed through May, but there is some delay due to concerns raised by the switch from bucket to bottle protocol.
- The Coordination Office is working on a Mosaic page which will allow access to program information and data through the Internet.

The CAL Report —

Kenni James presented the CAL report.

- pH Electrode Update: They are continuing to use the Broadley James Electrode.
- AIRMoN: Everything that is done for NADP is being done for the AIRMoN samples.
- Bucket/Bottle Switch
- Two-week sample study: Seven sites are continuing to collect two-week samples.

- QA Reports: The 1992 report is awaiting publication; the 1993 report is ready for review.
- CAL performance in interlaboratory studies
- Long-range transport of atmospheric pollutants study participation
- Training video. Should be ready for shipping in early 1995
- Aerochem Metrics decal: Camera-ready maintenance decal is ready for review by the Network Operations subcommittee.
- Raingage refurbishment: Replacements are currently being refurbished by Doug Jones, retired ISWS meteorologist.
- Foam pad change in the collector: Changed in 1994; must be replaced annually.
- Fax service is now available for sites in an effort to solve site problems immediately.
- Checklist for site operators: A laminated one-page sheet has been developed to provide concise instructions to site operators.

Quality Assurance Steering Committee Report —

John Robertson, Chair, reported that the committee met twice during the last year—in May and since arriving in Annapolis. The committee is exploring its role and appropriate activities.

- Reviewed current QA plan to see how the Committee role was defined.
- QA plan must be updated, which is a major task.
- Program QA is handled by a different contract from EPA to the QA Manager's office at Colorado State University.
- Reviewed prioritized list from the QA Coordinator. There are a number of items which need to be accomplished to improve the quality of the data.

Subcommittee Meeting Agenda Announcements —

Network Operations Subcommittee —

Rick Artz, Chair, outlined the planned agenda

- Where to go with Aerochem Metrics motor boxes
- Site issues
- QA check solution
- Updates
- Election of officers

Data Management and Analysis Subcommittee —

Gary Stensland reported that Bill Parkhurst, Chair of the data subcommittee, had been forced to cancel his trip to this meeting. The subcommittee will meet jointly with the Effects subcommittee for approximately 90 minutes. In addition they will address the following topics.

- Ideas for revising the annual report
- Mosaic page for NADP
- How to communicate the bucket/bottle change to users, and changes in the level of constituents
- Discussion on the GIS way of recognizing and presenting results
- Discussion on how to better use PC products
- Issue of data screening: Suggestions for new ways to screen.

AIRMoN Subcommittee —

Jane Rothert, Chair, outlined major topics for the AIRMoN group.

- QA plan for AIRMoN: Will review draft plan and look for details which are needed.
- Screening codes

Environmental Effects Subcommittee —

Evelyn Orr, Vice Chair, reported on the planned agenda.

- Strategic planning issues: Role and analysis of effectiveness; communication of results.
- Joint meeting with Data Management will include four agenda items.
- Ways of analyzing and looking at data
- Topic brochures
- Revised annual report format
- Looking at various PC and data products

Mercury Advocates —

Steve Lindberg commented that there is no official mercury subcommittee but the advocates and anyone interested in the mercury network will meet.

The opening session was adjourned for subcommittee meetings.

Technical Session I: Changes and Additions In Atmospheric Monitoring and NADP/NTN —

A general session was convened at 3:15 p.m. by Moderator Jim Lynch for presentation of technical papers.

Bucket to Bottle Conversion: What are the Implications? — Van C. Bowersox and Andrea Morden-Moore, Illinois State Water Survey.

AIRMoN: Event Versus Weekly Sampling — Rick Artz, NOAA.

Event Collection of Precipitation Mercury and Other Trace Metals — Gerald Keeler, University of Michigan.

Mercury Deposition Network: Field Test Results for Total and Methyl Mercury — Stephen Vermette, Buffalo State College; Steve Lindberg, Oak Ridge National Laboratory; and Nick Bloom, Frontier Geosciences.

The Status of the USDA UVB Monitoring Program — Jim Gibson, Colorado State University.

Poster Presentations —

Posters listed below were introduced and presented by their authors.

pH Past and Present— Kathryn Douglas, Illinois State Water Survey.

Rain Induced Desorption of Organochlorines from Soil to Atmosphere — Kelly M. Monahan and Stephen J. Vermette, State University of New York College at Buffalo.

A GIS Watershed/Wetland Characterization of the Oswegatchie/Black River Drainage Basin in the Adirondack Park— Karen M. Roy, Adirondack Park Agency.

Mercury Deposition Network: Field Tests Results and Plans for the 1995 Interim Network — Stephen Vermette, Buffalo State College; Steve Lindberg, Oak Ridge National Laboratory; and Nick Bloom, Frontier Geosciences.

Stability of Major Inorganic Ions in Rain Samples in Central Illinois: A Case Study — Sue Bachman and Leon Olszewski, Illinois State Water Survey.

Aerochem Metrics Lid Seal Changes: Do They Cause "System Blank" Aberrations? — Scott Dossett, Illinois State Water Survey.

Statistical Distributions of Airborne PCB and Pesticide Concentrations Measured at Regional Sites on the Great Lakes — Don F. Gatz, Clyde W. Sweet, Ilora Basu, and Karen S. Harlin, Illinois State Water Survey.

Long-Term Changes in the Acidity of a DeKalb Forest Soil in the Mid-Region of the Susquehanna River Watershed— Joy A. Robert and William E. Sharpe, Penn State University.

Early Indicator. of Acidification: A Whole Watershed Approach to Studying Forest Response — Callie J. Pickens and William E. Sharpe, Penn State University; and Pamela J. Edwards, USDA Forest Service.

Wednesday, October 26, 1994

Technical Session 2: Clean Air Act Amendments of 1990, Title IV: The Process of Assessment —

A general session was convened at 8:00 a.m. by Moderator Jim Lynch for presentation of technical papers. .

EPA CAAA-90, Title IV Assessment Process— Johnnie Pearson, US EPA.

NAPAP Assessment Process — Mike Uhart, NOAA.

Canadian Atmospheric Deposition Assessment Approach — Keith Puckett, Environment Canada.

Title IV, CAAA-90: Phase / Implementation and Compliance — Dennis Leaf, US EPA.

Continuous Emissions Monitoring Program — Sharon Faile, US EPA.

Status of CASThIET Deposition Exposure Network— Ralph Baumgardner, US EPA.

Technical Session 3: CAAA-90, Title IV: Measuring and Modelling Atmospheric Response to Changing Emissions — Following break, a general session was reconvened by Moderator Dennis Lamb *Dry Deposition Monitoring/Measurements* — Bruce Hicks, NOAA.

Lagrangian Modeling Approaches and Measurements to Confirm an Improvement in Environmental Quality due to Reductions in SO₂ Emissions — Roland Draxler, NOAA.

Topographic Modeling —

What's New With ADOM— Don Mckay, Environment Canada.

Technical Session 4: Temporal Analyses of NADP/NTN Precipitation Chemistry Data —

An afternoon session was convened at 1:00 p.m. by Moderator Evelyn Orr. Technical papers listed below were presented.

NADP/EPA Trends Workshop— Steven E. Lindberg, Oak Ridge National Laboratory, and Carol Simmons, Colorado State University.

Bias Correction Factors Determined from External Blind Audit Results for Sulfate and Calcium — John D. Gordon, Mark Nilles, and LeRoy J. Schroder, USGS.

Trends in NADP/NTN Laboratory Bias Determined from an Examination of Certified Reference Sample Analyses, 1986-1994 — Mark Nilles and John D. Gordon, USGS.

Where has All the Dust Gone?— Gary Stensland, Van C. Bowersox, Illinois State Water Survey.

The Ability of Wet DeDosition Networks to Detect Temporal Trends — Gary W Oehlert, University of Minnesota

Trends in Precipitation Chemistry in the United States: 1980-93, 1983-93, 1985-93 — Jim Lynch and Jeff Grimm, Penn State University; Van Bowersox, Illinois State Water Survey; Carol Simmons, Colorado State University.

Thursday, October 27, 1994

Technical Session 5: CAAA-90, Title IV: Atmospheric and Ecosystem Responses to Changing Emissions —

A technical session was convened at 8:00 a.m. by Moderator Gary Stensland, to hear papers on the following topics.

Nitrate Acidification of Streams in the Catskills — Pete Murdoch, USGS WAD.

The Atmospheric Connection Between SO₂ Emissions and Acidic Wet Deposition — Dennis Lamb, Penn State University.

Watershed Acidification Project: Femow Experimental Watersheds — Beth Adams, US Forest Service.

Biogeochemical Cycling of Mercury in Forest Ecosystems — Steve Lindberg, K. Kim, and Dale W. Johnson, Oak Ridge National Laboratory.

A Call for Caution: The need for Finer, Long-term Measurements in Assessing Forest Response to Atmospheric Deposition — John Skelly, Penn State University

Technical Session 6: The Chesapeake Bay Program —

The last technical session was convened at 10:30 a.m. by Moderator Edward Corbett to hear papers from the Chesapeake Bay Program.

An Overview of the Chesapeake Bay Project— Kent Mountford, US EPA.

Critical Loads: A Management Tool for the Chesapeake Basin — Michael L. Bowman, Tetra Tech, Inc.

The Acid Deposition Component of Maryland's Power Plant Research Program — Ron Klauda and Paul E. Miller, Maryland Department of Natural Resources.

Chesapeake Bay Modelling Program: The Role of Atmospheric Deposition — Lewis Linker, US EPA.

Source Apportionment of Major Ions and Trace Elements in Precipitation at the Mid-Atlantic Coast— Joe Scudlark, University of Delaware.

Final Business Session —

Van Bowersox called the final session of the 1994 NADP Technical Committee Meeting to order at 1:30 p.m.

USGS Administrative Advisor Report —

Paul Kapinos reported:

- FY 95 funding is level, but additional dollars have been added for restoration of the training course.
- Production of the new training film has been funded
- The number of sites will remain the same.
- The USGS Quality Assurance program will remain the same and in place.

Subcommittee Reports —**Environmental Effects Subcommittee —**

Evelyn Orr reported.

- Strategic Plan: Interpret results for policy makers
- Joint meeting with data subcommittee: Agreed that NADP should provide a product, possibly interpretation of analysis of NADP data, targeted toward a broader audience, especially policy makers.
- One-page fact sheets: Formed an *ad hoc* committee to study this topic. They met over breakfast and developed the following recommendations.
 - Target educated public
 - Edited and produced through the Coordination Office
 - Written in conjunction with a peer-review-group person
 - Periodic, such as quarterly
 - Associate with current related work

Motion: That the *Ad Hoc* Committee and the Coordination Office produce four draft fact sheets for the spring interim meeting — 1) trends, 2) mercury initiative, 3) pesticide study, and 4) something tying the Clean Air Act Assessment to monitoring — was made and seconded.

The Coordination Office will coordinate writing, editing and reviewing these fact sheets. Timing would be that the trends and pesticide sheets, and possibly mercury, would be written and available at the interim meetings. Question was called; motion carried.

- Revision of Annual Summary Report. The *ad hoc* committee reviewed and discussed proposed revisions. Conclusions were:
 - More figures are needed.
 - Should reduce the amount of raw data included in the annual report and make it available in an electronic format instead.
 - Broaden the audience; target educated lay-person.

These changes would result in a much shorter report, with a probably wider distribution.

Motion that the Coordination Office prepare one or more alternative formats for a revised annual report and present those at the spring meeting made, seconded and carried.

- Election of Officers. The subcommittee elected the following officers:
 - Chair - Evelyn Or
 - Vice Chair - Dan Orr

AIRMoN Subcommittee —

Dennis Lamb reported for the subcommittee. They discussed:

- Sample storage space at the CAL
- Site visitations
- External audit
- Screening codes
- QA Plan

Election of Officers. The subcommittee officers will remain:

Chair — Jane Rothert
Secretary — Dennis Lamb

Motion: That the proposals of the AIRMoN Subcommittee be accepted. Motion seconded and carried.

Data Management and Analysis Subcommittee —

Gary Stensland reported subcommittee discussions regarding the following items.

- Releasing 1994 data (first bottle data). Subcommittee recommendation is that the Coordination Office release the data as soon as possible, accompanied by a written qualification of the 0-ring bias. Some data screening issues need to be finalized, and these screening issues must first be resolved.

Motion: B based on subcommittee recommendation was made and seconded.

Clarification was made that the purpose of the recommendation is to provide the Coordination Office with the ability to proceed with releasing the data without need to get further approval at the spring meeting.

During discussion, the question of how soon bottle data in electronic form could be provided was raised. Dave Bigelow requested adequate time to make sure application of codes is correct, and all implications are understood. This might be two months after the data is received by the Quality Assurance Manager. There is one new code "sample not poured."

Amendment that Gary Stensland stand as the editor and arbiter and decide when all issues are final. Amendment seconded and **carried**.

Amendment that data screening issues be removed from this criteria was made and seconded. Following discussion, the amendment was **defeated**.

Motion failed.

Motion that the CAL get the information to the Coordination Office within two weeks, that the report be completed within 60 days, and that the data be released within 90 days (all from today). Motion seconded and **carried**.

- Contour maps in annual data summary reports.

Motion to adopt the ArcInfo algorithm to produce contour maps. Motion seconded and **carried**.

- Audit of Coordination Office. The Subcommittee recommended that an audit be performed prior the 1995 interim meeting.

Motion to accept the subcommittee recommendation for an audit was made, seconded, and **carried**. Mary Ann Allan, John Robertson and Gary Stensland will perform the audit.

- Herbicide data. When will 1990 data be available and should NADP pursue getting the data?
- Selected a few abstracts as suggestions for one-page fact sheets.
- Election of Officers. The subcommittee elected:
Chair — Gary Stensland
Vice Chair — Mary Ann Allan
Secretary — Bob Gilpin

Network Operations Subcommittee –

Rick Artz reported on subcommittee activities.

- The Coordination Office will track all replacement parts, including foam seals.
- Ten percent of failed motor boxes will be repaired at Air Resources Specialists, Inc. in Fort Collins unless their work proves to be unsatisfactory.

Motion to accept this recommendation made, seconded and carried.

- Subcommittee requests allocation of funds to build two new prototype motor boxes at Air Resources Specialists, Inc. Cost would be approximately \$5,000.

Motion to accept the recommendation made and seconded.

Amendment to increase prototype motor boxes to four was made and seconded. Amendment adding the following provisions was made and seconded.

1. Fixed price for either two or four motorboxes.
2. After delivery, the new boxes would be tested for a period of 12 months and brought to

specs at the same price.

3. Contract must specify that up to 225 production units can be purchased at the price agreed upon in the contract.

Amendments and motion carried.

- A system of classifying sites with on-going performance problems of over 6 months will be identified by the Coordination Office. The CAL will institute a plan for a real-time identification of problems to solve solutions.
- Recommendation that ME00 be kept alive at whichever location is possible.
- The CAL was asked to verify the downward trend seen in the pH 4.9 solution by USGS and report at the spring meeting.
- Kellogg Biological Station (MI26) can remove 50 g. of their weekly sample if the total volume exceeds 350 g.
- The CAL will send raingage pens to sites.
- Election of Officers. Officer for 1995 are:
Chair — Mark Nilles
Vice Chair — Kenni James
Secretary — Sandy Pletschet
- The Coordination Office and the CAL. will present a proposal for electronic storage of held forms and raingage charts. A plan, cost and budget will be presented at the spring meeting.
- Authorized preparation and printing of condensed, one-page operator instructions.
- Recommended that the network adopt the new accuracy criteria for the USGS intersite comparison, after fine-tuning for bounds, and that it continue to use the 4.3 check solution.
- Site Liaisons at the Coordination Office and the CAL will explore working from a common data base.

Motion that the Site Operation Manual be revised by fall of 1995, made and seconded.

Amendment that target date be moved to spring 1996, for final completion, made and seconded.

Amendment and motion carried.

Mercury Initiative —

Movement of the mercury new initiative to the next step was approved by the Executive Committee.

Election of Officers —

The Nominating Committee recommended Stan Coloff as candidate for Secretary of the NADP Technical Committee for 1995. Stan was elected by acclamation. Following the established rotation of offices, NADP Technical Committee officers for 1995 are:

Chair — Jim Lynch

Vice Chair — Rich Grant

Secretary — Stan Coloff.

A complete list of subcommittee officers is attached.

Transfer of Gavel —

Thanks were expressed to Jim Lynch for his efforts in planning the current meeting, and the gavel was passed to Jim as incoming Chair.

1995 Technical Meeting —

Don McKay of Environment Canada has suggested that the 1995 technical meeting be held in Toronto, Canada. Steve Vermette has also offered to host the meeting in Buffalo, New York. There will be discussion regarding potential problems for federal employees with travel to Canada prior to a final decision.

NOTE: The 1995 meeting has been scheduled for Toronto the week of October 16th.

Closing —

Following unanimous motion, the 1994 NADP Technical Meeting was adjourned.

Participation List

<u>Name</u>	<u>Affiliation</u>
Beth Adams	USDA Forest Service
Mary Ann Allan	Electric Power Research Institute
Thomas Ames	Baltimore Gas & Electric Company
Richard Artz	NOAA Air Resources Laboratory
Sue Bachman	Illinois State Water Survey
Linda Bandhauer	NADP/NTN Coordination Office
John Barnes	USDA CSREES
Ralph Baumgardner	US Environmental Protection Agency
Van Bowersox	Illinois State Water Survey
Michael Bowman	Tetra Tech, Inc.
William Brown	Louisiana State University
Richard Cline	USDA Forest Service
Stan Coloff	USGS - National Biological Survey
Cathy Copeland	NADP/NTN Coordination Office
Edward Corbett	USDA Forest Service
Christina Costakis	Environmental Science & Engineering, Inc
Robin Dennis	US Environmental Protection Agency
Scott Dossett	Illinois State Water Survey
Kathryn Douglas	Illinois State Water Survey
Roland Draxler	NOAA Air Resources Laboratory
Cary Eaton	Research Triangle Institute
Sharon Faile	US Environmental Protection Agency
Marie Freeman	University of Delaware
Joel Frisch	US Geological Survey
Bob Gilpin	NADP/NTN Coordination Office
John Gordon	US Geological Survey
Bruce Hicks	NOAA Air Resources Laboratory
David Holland	US Environmental Protection Agency
Selma Isil	Environmental Science & Engineering, Inc

Kenni James	Illinois State Water Survey
Gerald Keeler	University of Michigan
Paul Kapinos	US Geological Survey
J.M. Kelly	Tennessee Valley Authority
Ron Klauda	Maryland Department of Natural Resources
Dennis Lamb	Penn State University
Douglas Lantagne	Michigan State University
Dennis Leaf	US Environmental Protection Agency
Gary Lear	NADP/NTN Coordination Office
Steven Lindberg	Oak Ridge National Laboratory
Lewis Linker	US Environmental Protection Agency
Richard Livingston	Federal Highway Administration
James Lynch	Penn State University
Robert McCollum	USDA Forest Service
William McFee	Purdue University
Donald McKay	Environment Canada
Mark Mesarch	University of Nebraska - Lincoln
Paul Miller	Maryland Department of Natural Resources
Kelly Monahan	Buffalo State College
Andrea Morden-Moore	Illinois State Water Survey
Kent Mountford	US Environmental Protection Agency
Pete Murdock	US Geological Survey - WRD
Mark Nilles	US Geological Survey
Gary Oehlert	University of Minnesota
Dan Orr	Ontario Ministry of Environment & Energy
Evelyn Orr	Minnesota Pollution Control Agency
Johnnie Pearson	US Environmental Protection Agency
Mark Peden	Illinois State Water Survey
Sandra Pletschet	NADP/NTN Coordination Office
Keith Puckett	Environment Canada
Michael Reddy	US Geological Survey
Col. John Robertson	US Military Academy

Jane Rothert	Illinois State Water Survey
Selina Ryals	Environmental Science & Engineering, Inc
Ralph Scanlan	Pennsylvania Department of Environmental Resources
Joseph Scudlark	University of Delaware
John Skelly	Penn State University
John Sherwell	Maryland Department of Natural Resources
Gary Stensland	Illinois State Water Survey
Donald Torsello	Pennsylvania Department of Environmental Resources
Mike Uhart	NAPAP
David Velinsky	Interstate Commission on the Potomac River Basin
Stephen Vermette	Buffalo State College
Elon (Sandy) Verry	USDA Forest Service
Molly Welker	NADP/NTN Coordination Office
Mark Wotowa	NADP/NTN Coordination Office