Joint Subcommittee Meeting
Boulder, CO
May 3, 1999

Attendees

John Gordon	Ellen Porter
Gary Lear	John Sherwell
Tamara Saltman	John Shimshock
Richard Artz	Karen Harlin
Van Bowersox	Rosemary Wolfe
Joel Frisch	Daniel Jones
Scott Dossett	Clyde Sweet
Luther Smith	Mark Nilles
Bob Larson	Kathy Tonnessen
Kemp Howell	Kristi Heuer
Mark Peden	Susan R. Johnson
Gary Stensland	Bob Brunette
Dennis Lamb	Jane Rothert

- **Individual and NADP Introductions**

Van Bowersox	Program Coordinator
John Gordon	Chair of Network Operations
Luther Smith	Chair of Data Management
Ellen Porter	Co-chair of Effects
John Sherwell	Co-chair of Effects

- **Overview of NADP Van Bowersox**

Van is writing a Strategic Plan for NADP to present to the Executive Committee for review and comment. See Attachment A for the report. The mission statement is "NADP is a part of the Department of Agriculture, State Agricultural Experiment Station System, NRSP-3, a National Research Support Project and authority given in the Farm Bill and provides the ability to pool of Fed, state and private money." Eight projects total in the country.

NADP consists of three networks, NTN, National Trends Network, 1978, 217 sites, Atmospheric Integrated Research Monitoring Network (AIRMoN), 1992, Mercury Deposition (MDN), 1996, 37 stations.

- **Bob Gilpin Update Luther Smith**

Bob and his wife, Susan Smith, used to work for the Program Office when it was in Colorado. They have since moved to Vermont. Their e-mail address is:

bobg@sover.net
smsmith@sover.net

- **QA Manager Update Van Bowersox**

Position was posted and almost filled but applicant turned down. It was reposted in November 1998 and 19 people applied, 16 qualified. The Illinois State Water Survey will review and interview 4 or 5 candidates in the next few months.

♦ **EPA News Gary Lear**

In general funding looks positive; the money for grants and contracts is stable. 19 CASTNet (Clean Air Status and Trends network) sites have joined NADP with collocated wet sites (NTN). The CASTNet warehouse, operated by Kemp Howell of QST Environmental, suffered a fire and damaged monitoring equipment. Some sites deployment was delayed but with the help of sister networks, the delay was shorter than expected. Dollar damage was 5-6 million with building and equipment, 1.2 of it EPA equipment. The EPA Division that coordinates tribal land had equipment in the fire, putting them on hold. Three are actively looking to get set up. Indian Island Maine, Grand Traverse, Michigan. Contact Rosemary Graves for additional information.

ORD is looking at other deposition monitoring such as monitoring for toxins. They are wondering what NADP can provide, if anything. 8 CASTNet sites are conducting test phase to test methodology and toxins (DDT and atrazine to name a few) concentrations. Funding looks promising for a wide range of toxic deposition collection. Scott asked if the Dioxin study is part of this effort, it is not.

Scott Dossett presented a brief update of the NDAMN Network, National Dioxin Ambient Monitoring Network. 15 possible sites with 9 currently in start up phase. The EPA is the contact David Cleverly. They should be invited to the meeting. James Buchert is managing the data and which could possibly be posted on a web site. NADP could provide a link to this site from the NADP site. Scott showed current site map, the next start up sites will be in the west. Some sites were thrown out because of lack of AC power. Rick asked, “Will the NDAMN sites be collocated with the EPA toxin sites?” No information available.

In April the CASTNet data set was looked at and calculation problems were found (500 data elements in database). The data set will under go a intense review and hopefully will be available in June. The CASTNet joined NADP on 1-26-99.

♦ **Clean Air Act implication Mary Ann Allen**

Did not attend meeting and item not discussed.

♦ **NEP/NERRS Tamara Saltman**

National Estuary Program is an EPA Program, which deals with pollution in coastal systems or estuaries. The program brings stakeholders together and aids in identifying pollution problems and strategizing solutions. There are 28 identified estuary regions of national significance. All estuaries are interested in looking at air deposition, especially nitrogen, into the coastal areas.
See the presentation, Attachment B.

One goal of the NEP is to improve quality and quantity of air deposition monitoring in coastal areas. These are looking at joining NADP in 1999 with wet deposition 6-8 sites, possibly MDN sites as well. Possibly the NEP will have 15 sites in all. The EPA (Office of Air and Office Water will fund the first year of monitoring and equipment, NEP will fund the subsequent four years.

Gary Stensland offered a discussion of data analysis. Will NADP data met NEP needs? Will the sites meets NADP criteria? Scott mentioned there is no specific bias against coastal or agricultural environments as written in the NADP siting criteria. There is a bias against urban environments and San Francisco is a potential NEP/NADP site. AIRMoN siting criteria excepts urban sites. Do the coastal sites require sea salt corrections? NADP not designed to measure sea salt concentrations. Would a coastal and/or an urban site be representative of the region? Gary mentioned sea salt gradient between wave breaking area and a few hundred meters inland. What is the intent of monitoring on the coast, loading to the watershed or surface water? Intent is to looking at different source categories of loading to the estuary. NEP is interested in both direct and indirect loading from deposition.

Van mentioned since coastal siting is not an issue, issue because the NADP has always had coastal sites and they have been a part of the network since its beginning. The real issue is source (anthropogenic) influenced sites. An additional urban site request was received from Phoenix, Arizona, located downtown. The site will be long term and geared toward urban sources. Joel suggested the creation of a separate urban network. Or should they be incorporated with different siting criteria? Other urban sites were turned down based on regional scale of current network. More urban sites would likely join if allowed. Luther suggested that maybe the data could have a coding column indicating rural, urban or coastal sites to sort out spiking urban data from data products.

Karen started a discussion on the maximum capacity of the laboratory. The end result of the discussion is that NADP can hire and additional lab if needed. Karen mentioned that lab could handle 40 more sites before reaching maximum sample load. She would provide a growth statement to the subcommittee. Scott pointed out that NADP will have a 15% growth rate this year. MDN would like more sites.

Location of NEP sites for 1999:	Location of AIRMoN sites for FY 2000
San Francisco NTN & MDN	Corps Christi
Mobile Bay NTN & MDN	Mobile Bay
San Juan NTN & MDN	S. Carolina
Indian River Lagoon NTN and dry, nutrients	N. Carolina
Maryland Coastal Base NTN	Maine
New Jersey -2 possible	

Motion A: Allow urban influenced sites into NADP.

Amendment 1: Approve up to 7 sites with potential urban influence, specifically proposed NEP and Phoenix sites.
Rick Artz, Scott Dossett second, motion passed with one opposing vote

Motion B: The data committee should design a classification scheme for existing sites and to decide method of incorporating different site types into data products.
Amendment 1: An ad-hoc committee with data, NOS and Environmental Effects representatives to decide on scheme. Report by fall meeting a scheme to class existing sites.
Rick Artz, Gary Stensland second, motion passed unanimously

The same committee is to recommend to Program Office the policy for presenting data products with urban influence. It was discussed that siting criteria variances are decided by e-mail rather than waiting for subcommittee meetings. A motion was presented and withdrawn recommending a cost analysis of updating the site directory. More information needed to decided scope of directory.

Motion C: Sites from Motion #1 (NEP and Phoenix) sites be exempted from regional requirements siting criteria but local requirements still apply.
Scott Dossett, Dennis Lamb seconds, motion passed unanimously

♦ **Siting Criteria John Gordon/Luther Smith**

It was inferred that this discussion was covered in the last agenda item and was not discussed further.

Joint Subcommittee Meeting
May 5, 1999

♦ **Network site design and policy issues Van Bowersox**

Agenda item from morning subcommittee session, Network site design and policy issues was deferred to this time for the Joint Committee to discuss. A thought was to form an ad-hoc committee to address what the network should ideally encompass and consider the growth NADP is experiencing. Questions that should be considered:

- what should be done with new sites (different siting criteria, etc.)?,
- do we need new sites?, how do we identify new sites?
- should we drop sites in favor of adding new sites?,
- how do we prioritize sites?,

John G. would like to start a planning process for future growth. Discussion ensued about what the network was designed for in the original charge (A10 document) and where it is now. Van pointed out that NRSP-3 proposal needs to be renewed every five years and is due 2002. Work on this document will begin in 18 months and to have a policy statement on the future network design would be ideal. John Gordon stated that these two items would be the charge for the ad-hoc committee.

1. Look at the networks original design and assess where it is now, and
2. Review NRSP-3 document, look at emerging issues and recommend where the network could go. Gary asked if this process would affect current sites or incoming sites? No, this is a planning stage. Currently NADP has an open door policy for new sites. Does NADP want to continue that policy? This will not be consider now but will be in the future planning process. MDN has done some of this design brainstorming in Florida. AIRMoN is addressing to policy issues, East and coastal sites coming on, which include NEP and Tribal sites. A NAPAP document just released could be another source of information for network design. To get a copy, e-mail Rick Artz at NOAA. It only covers acid deposition, not mercury.

An Ad-hoc committee with members from three networks and three subcommittees. Suggested members:

NTN	Mark Nilles
AIRMoN	Rick Artz
Hg	Bruce Rodger
	Mark Cohen
Data	Gary Stensland
Effects	John Sherwell
NOS	John Gordon

Rick suggested that the Executive Committee nominate members. John would take this issue to the Ex. Com. and they may take action or not. This issue will be brought back in the fall.

- **How to keep sponsoring agencies in touch with site operators/supervisors and Keeping field people engaged and interested in the use of the data.**

Both agenda items were deferred to the Executive Committee for discussion.

- **Scheduling Subcommittee Meetings Van Bowersox**

Van Bowersox reviewed the current process of selecting subcommittee meeting places and dates.

Currently the NOS chair has traditionally taken the lead on the place and then seeks endorsement from the other subcommittee chairs. In the last few years Data and NOS decided on location. The Program Office locates a hotel in the area and arranges a contract. The chairs suggest several locations and the PO looks into cost to narrow the list. The time is chosen in late spring to avoid weather problems along with locating in the southern half of the country. Scott suggested that locations also be based on the ability to finish the meeting and return on the same day from various locations across the country. Rick suggested that the PO check on Federal airfares for prospective locations, Rick will take this on.

Meeting Site Selection Process

The Joint Committee will nominate locations at the spring meeting for the subcommittee meeting. Via e-mail, the subcommittee chairs will vote on finalists, up to five, by June 1. The PO will investigate hotel and flight availability, Rick Artz will investigate Federal

airline prices. Downtown locations are preferred to airport locations. The PO will share this information with the three-subcommittee chairs to further narrow selection via e-mail. In short, as much work as possible will be done on the upcoming spring meeting site at the close of the current spring meeting, with email discussions immediately after the meeting as needed.

The call for a meeting will come from the Program Coordinator via e-mail after the Fall meeting. The meeting announcement will provide meeting dates and location It was decided that the best times to hold the meeting are mid-day Monday to mid-day Wednesday. Considerations can be taken to schedule meetings in conjunction with other scientific or related issue meetings.

A six-month and three-month e-mail-meeting announcement will be made prior to meeting to Technical Committee aliases to reach as many potential attendees as possible. All attendance sheets should go to Van to sign up new people on aliases. CAL will include a hard copy meeting announcement with the data products six months in advance to the operators and sponsors of NTN, MDN, and AIRMoN. The near final agenda should be sent to the Program Office for posting on the web page at least one month in advance of Spring meeting. Post Program Office will send an e-mail announcement will be made that the agenda is posted on the web.

Site Sponsor and Site Supervisor Duties
Van pointed out that Site Sponsors and Site Supervisors responsibilities are listed in the new Operator Manual, soon to be published. See Attachment C, an excerpt from the manual.

Possible locations for the spring 2000 interim meeting were then discussed. A list of the top 5 locations was determined by vote:

Spring Meeting Location Nominations
San Antonio
Tucson
Atlantic Coast -south
New Orleans
Asimolar

- **Closing Subcommittee Reports**

Network Operations Subcommittee Report John Gordon
John G. went through the 21 motions approved by NOS.

Summary of Motions

NOS Subcommittee Meeting May 4 and 5, 1999

Motion #1: Accept minutes from 1998 Tampa fall meeting as corrected.

Joel Frisch moved, Rick Artz second, passed unanimously

Motion #2: Persistent field measurement problems discovered by USGS Intersite Comparison results be passed on to external site auditors(ATS).

Amendment A: External site auditors (ATS) notify Scott of any site problems with intent of coordinating future site visits.

Mark Niles moved, Dennis Lamb second, passed unanimously

Motion #3: NOS accept sub-sampling protocol as modified by Scott Dossett.
Changes are with minimum amounts needed by NADP lab and field parameters, 300 mL and descriptive wording added.

Amendment A, Gary Lear: 200 mL becomes the minimum needed by NADP instead of 300 mL.

Amendment B, Karen Harlin: Subsampling is indicated on field form and documentation added to protocol.

Special note that currently sub-sampling is allowed on case-by-case basis and this protocol does not change the policy.
Scott Dossett moved, John Gordon second, passed unanimously

Motion #4: Follow up study by CAL is presented at fall meeting on the effects of 200 mL sub-sampling criteria on NADP sample volume adequateness.
Jane Rothert moved, Scott Dossett second, passed unanimously

Motion #5: NOS recommends that inclusion in the FY2000 Program Office(?) budget items to fund a Aerochem equivalent collector prototype be built.
Joel Frisch moved, Mark Peden second, passed unanimously

Motion #6: The Program Office is requested to present information to CAL audit team prior to 9/1/99 regarding ways to deal with capacity and function changes associated with network growth. Specifically including a strategy to separate AIRMoN and NTN analysis and NTN and AIRMoN network growth ramifications.
Scott Dossett moved, Rick Artz seconded, passed with one opposing vote

Motion #7: NOS requests USGS to pursue a plan to change collocated sampler protocol to 2 stationary stations and 2 mobile stations instead of 2 mobile stations only.
Scott Dossett moved, Dennis Lamb second, passes with one opposing vote

Motion #8: Except final report on sodium bias hence the bias problem has been solved, (for now).
Joel Frisch moved, Scott Dossett second, passed unanimously

Motion #9: NOS accepts and affirms presentation of concept of the need for new equipment (and technology) for the network.
Scott Dossett moved, Dennis Lamb, passed unanimously

Motion #10: Rick Artz of NOAA will proceed with application to SBIR (Small Business Innovative Research) and the Dept. Of Commerce proposal for a next generation precipitation collector.
Scott Dossett moved, Dennis Lamb, passed unanimously

Motion #11: NOS requests the Program Office to provide web site discussion area to post and discuss collector and gage specifications. Also announce by e-mail opening and closing of discussion area and call for a vote with date to be determined by NOS chair as advised by NOAA representative.
Amendment A; Collector and gage specifications posted by May 25, 1999.
Mark Nilles moved, Scott Dossett seconds, passed unanimously

Motion #12: NOS accepts accuracy goals for ATS field pH measurement challenges.
John Shimshock moved, Mark Niles second, passed unanimously

Motion #13: NOS accepts accuracy goals for ATS field conductance measurement challenges.
John Shimshock moved, Scott Dossett second, passed unanimously

Motion #14: NOS accepts ATS audits schedule with two year time frame starting 1/1/2000 and maintains the audit schedule at 100 site audits per year. Additional sites to network will expand time between audits proportionately.
John Shimshock moved, Joel Frisch second, passed unanimously

Motion #15: Executive Committee alias should include the NOS immediate past chair, current chair, and vice chair on mailing lists, e-mail lists, etc.
Joel Frisch moved, Jan Rothert second, passed with one opposing vote

Motion #16: NOS endorses the addition of two laboratories to the USGS Intercomparison Program (QST is discontinuing). The new laboratories are the Norwegian Institute for Air Research (NILU), precipitation chemistry coordination laboratory for the European Monitoring and Evaluation program (EMEP) and the Japanese Acid deposition and Oxidant Research Center (ADORC), precipitation chemistry coordination laboratory for the Acid Deposition monitoring Network in East Asia (EANET).
Rick Artz moved, Scott Dossett second, passed unanimously
QST has dropped out of the Intercomparison Audit Program and notified John G. Gary Lear will check with QST again to try and keep them in the Audit Program. It was mentioned that seven labs would be better statistically for the Audit Program. John G. is to write letter to QST encouraging them to stay in the Program. Gary Lear is to be copied on this letter and EPA will pay the difference. One more American is wanted to the Program.

Motion #17: NOS allows HAL to proceed with preservative experiment changing to new preservative scheme as proposed by HAL (lessen HCl to 0.1% and add

KCl) to satisfy Dept. Of Transportation shipping requirements. A 10-day storage requirement instead of 7 day was added by NOS. HAL will report statistical results to NOS via e-mail and NOS will vote to accept or reject new preservative scheme via e-mail.
Bob Brunette moved, Scott Dossett seconds, passed unanimously

Motion #18: The NTN sites will change the dry side bucket and clean foam pad the every first Tuesday of the month starting January 4, 2000.
Scott Dossett moved, Mark Peden second, passed unanimously

Motion #19: That CAL is allowed to use the HOP (High Output Motor) Pittman's motor as a replacement for the standard ACM design.
Amendment A., Mark Nilles: Opening time is measured before the motor box is deployed into the field.
Scott Dossett moved, Rick Artz second, passed unanimously

Motion #20: Don't deploy any motor boxes that exceed the 14-second opening time.
Amendment A: Provisionally accepted pending statistical analysis to reveal a more accurate opening time limit to be presented next fall.
Rick Artz moved, Mark Nilles second, passed unanimously

Motion #21: That the LODA build-up sensor and the ACM Standard be considered equivalent for use on NADP.
Amendment A: Look at sensor statistics and revisit via e-mail this summer and present at fall meeting.
Scott Dossett moved, Jane Rothert, passed unanimously

Environmental Effects Subcommittee (EES) Report Ellen Porter
NADP Spring Meeting, 1999

Minutes of the fall meeting were approved.

OLD BUSINESS

Brochures
Nitrogen Brochure: Editor's copy is done and will need content review. John Sherwell, Kathy Tonnessen, and Ellen Porter will review and forward comments to Van. Design and layout still needs to be done. Van will have this done either by the ISWS or the University of Illinois in the next 4-6 weeks. The completed product should be available for the Fall Technical Meeting in Sacramento.

Other Brochures: It was agreed that the next product from the EES would be a brochure on the Mercury Deposition Network (MDN). Clyde Sweet has already developed information on MDN that can be used for a brochure. At the Fall Meeting, the EES will work with Clyde to develop an outline for the brochure.

The EES welcomes suggestions for other brochures, products, etc.

Proposals

At the spring 99 meeting, Bob Bachman, USDA-Forest Service, expressed concern regarding the lack of information on deposition from cloudwater, fog, etc. At this meeting, Gary Lear reported that EPA is discontinuing support of its current cloudwater study program. Many meeting participants expressed concern about EPA's decision. Although many felt that the program had problems, they also recognized that if the program is cancelled, it would be very difficult to re-start cloudwater studies in the future. The EES volunteered to pass on this information to the Federal Land Managers, including the National Park Service and the USDA-Forest Service. Gary Lear will provide any information needed to those wanting to comment to EPA.

Coordination with other programs/groups

The EES discussed the benefits of coordinating with other organizations and entities involved in atmospheric deposition monitoring and research, including CASTNet, NDAMN, EMAP, and NEP. John Sherwell will establish contact with NDAMN and NEP to determine if anyone associated with those programs could report at the Fall Technical Meeting. Van Bowersox will contact archive sample users to see if they can report results of their studies at the Fall Meeting.

Van noted that the NADP homepage has links to the WebPages of many of these organizations.

New Business

Coastal and Urban NADP Sites

The EES discussed the summary that Ellis Cowling presented at the '98 Fall meeting on nitrogen effects. Ellis emphasized the need to increase the understanding of N deposition and its many effects. The EES discussed the relevance of establishing additional NADP sites in coastal and urban areas in order to better understand N deposition and encourages NADP to include such sites.

State networks

John Sherwell reported that Mid-Atlantic data is now on the web:
http://esm.versar.com/pprp/FEATURES/ACIDDEP/aciddep.htm

How can Effects be more effective?

The EES discussed how they can be more effective (and how NADP can be more effective). It was concluded that it is important to identify "market drivers", such as the EPA and USGS and identify where interactions between NADP and these organizations can be useful. Also discussed was the possibility for spin-offs from the current networks (e.g., MDN). The EES identified trace metals as the obvious addition to the analyte list. A need for expansion of the MDN was also recognized. Better spatial

coverage of Hg deposition is needed, as well as the ability to differentiate local versus regional impacts.

Data Management Subcommittee Report Luther Smith
Luther Smith reporting for the first half of the DMAS report.

DMAS charged an ad hoc committee made up of six members; Luther Smith, Bob Larson, John Sherwell, Bob Brunette, Susan Johnson, and Scott Dossett; to work on site classification.

There would be no additional data products sent to the sites. The preliminary data reports would not be changed.

There is a need to get the trends data up on the web page. This will be implemented and shown to the Executive Committee in July.

The "WA" code in the NTN "VALCODE" system will be dropped. That designation will remain in the "LABTYPE" NTN code. The current definition of "W", which is "a valid wet sample", will be changed to include "WA" samples as well as "W" samples in the VALCODE column of the database.

Currently NTN is 8 months behind with data. AIRMoN is 3 months behind and the last data available on the web for MDN is 12/31/97.

The Program Office is adding GIS maps to the web page. Watershed maps have been added. Visit the web site for more information.

The CAL audit was discussed and a series of questions was raised:
1. What is the QA Plan for data management?
2. The audit should include the full data stream, from the labs to the Web page
3. The CAL and PO data sets should be looked at and compared
4. Are the CAL and PO Y2K compliant?
5. Recommendations for improving data flow
6. 2 people on the audit team should look at data specifically: Mary Ann Allen and Luther Smith

At this point in the DMAS report, a heated discussion ensued about what the audit should be about. Was this a CAL audit? A CAL/PO audit? Or something in between? DMAS strongly felt that there needs to be more emphasis on data review than there has been in the past. The QA Plan as now written doesn't include auditing the data from the Program Office as part of the biannual QA review.

MOTION: The Chair of the Technical Committee (Dennis Lamb) with input from the NOS and DMAS chairman would define the scope of the audit taking into consideration the discussion in the joint committee session and report back to the joint committee

within 30 days. Moved:Mark Nilles, Seconded: John Gordon Passed: unanimously

The DMAS report continued with Clyde Sweet reporting:
There needs to be a universal NADP coding system to make it easier for data users to understand. Now each subnetwork is different which unnecessarily complicates data usage. There are several layers to this change. There will be a default screen which would be a synopsis of what data is the same for which networks, e.g., all networks have a SITE ID, all have a DATE ON, but MDN does not have pH/cond and only MDN has Deposition Data. Another layer of the coding system would be more detailed explanation of the Quality Assessment codes used for each network. Right now several different letters are used to refer to the exact same sample description code, depending on the network. These would be made universal for all 3 networks. Examples would be that "B" would mean a "bulk" sample for all 3 networks or "E" extended sampling period (sampling period longer than protocol allows). NTN would also have to devise and add a Quality Rating code consistent with AIRMoN and MDN. (The details of these codes were given on an overhead and best gotten from Clyde.) The new coding system would be applied to AIRMoN and MDN right away with no visible changes on the web. Suggestions were made on how to apply the coding system to NTN, which currently does not have a quality rating code system. The coding system would make sure that all of the codes were well documented on the Web so as to be easily available to data users. This section of the web would also include a methodologies section or links to the methods if found elsewhere on the web.