

Minutes from the Data Management and Analysis Subcommittee Meetings

October, 1996 -- Williamsburg, Virginia
reported by Luther Smith

Meeting on Monday, Oct. 21:

Attendees: Mary Ann Allan (chair), Luther Smith, Gary Lear, Bob Gilpin, Gary Stensland, Van Bowersox, John Gordon

- Item 1: Minutes from the April interim meeting
The [minutes from the April interim meeting](#) held in New Orleans, Louisiana were approved as submitted by John Gordon.
- Item 2: Election of officers
The following slate of officers was elected for the 1996-97 year:
 - Chair -- Luther Smith
 - Vice-chair -- Bob Gilpin
 - Secretary -- Joe Tokos
- Item 3: Executive committee report
Mary Ann Allan brought back one item from the executive committee meeting (May, 1996 in Estes Park, Colorado) for discussion by DMAS. This was the question of the implications of the disbanding of the QA Steering Committee. The main topic of discussion was the revision of the QA plan. Particular concern was expressed about the possibility of site exceptions slipping through cracks created by the dissolution of the QA Steering Committee. It was suggested that a data base of siting exceptions be referenced in the annual data report and on the home page, so that interested users could avail themselves of this information. It was pointed out that over the last few years there had been a gradual melding of the issues dealt with by the QA Steering, DMAS, and NOS committees. The general consensus was that coordination between DMAS and NOS, particularly at the spring interim (joint) meeting, could prevent any untoward occurrences.
- Item 4: NADP QA data listing
Mary Ann Allan reported the disappointing news that she had received no response at all to her questionnaire concerning QA data bases. (e. g., Who's got them? What's in them? Should they be combined in some sense?) The sentiment of the group was that this was a worthwhile project to pursue. Mary Ann agreed to make one more attempt to solicit responses. It was felt that this would be useful input for the incoming QA manager; this person is currently envisioned as coming on board sometime after January 1, 1997 and could report on these results and suggest the next step in this process at the spring meeting.
- Item 5: Archiving and disposal of rain gage charts
The coordination office had begun to explore the issue of what to do with old rain gauge charts. The original, weekly paper charts from the Belfort gauge are currently filed (by site and date) in file boxes at the coordination office. After inquiring whether there was any interest in these charts, the office received several positive responses from state climatologists. One option was simply to donate the forms to anyone who desired them.

Concern was expressed about breaking up the combined data base that this collection represents and thus diminishing a valuable resource for the scientific community. While storage of the charts is not currently a problem (nor should it become one soon), the coordination office does not have the staff time to begin fulfilling individual requests for copies of charts; it also does not have the budget to provide them free of charge nor an adequate mechanism by which to charge for such a service. Scanning of the charts and storage in electronic format was suggested, but was thought to be cost-prohibitive.

Van Bowersox volunteered to store the entire rain gauge chart collection at the Central Analytical Lab. He felt that the CAL had a mechanism by which they could charge for copies of the charts to be made. The costs of transferring the collection from Colorado to Illinois were described as minimal.

The outcome of the discussion was that the coordination office should follow current practice. Meanwhile, Van would pursue making arrangements to have the collection housed at the CAL and made available to the larger scientific community. Mary Ann would take this topic to the executive committee for discussion, and progress on this topic will be discussed at the spring meeting.

- Item 6. Archiving and disposal of FORFs

The coordination office sought permission to dispose of old field observer report forms (FORFs). It is current practice to take all information (including handwritten field comments) from the forms and store it in electronic format at both the CAL and the coordination office. The following motion was approved for submission to the full technical committee: "With the proviso that electronic copies exist at both the CAL and the CO, field observer report forms may be discarded when the recorded 'date off' becomes more than two years old."

- Item 7. Coding and changeover to pH 4.9 check solution

Not all sites made the change from the 4.3 to 4.9 pH solution on the target date of January 7, 1996. However, this had been anticipated, and a window of December to March had been allowed to accomplish the switch. Appropriate programming changes for validation of the field chemistry data for both the transition period and the 4.9 era were made at the coordination office. All sites are now using the 4.9 solution.

- Item 8. Status of USGS collocated program

John Gordon, reporting for Mark Nilles, said that the two new USGS collocated sites at FL14 (Quincy) and OR09 (Silver Lake) were operating smoothly. The money that formerly would have been used for two additional collocated sites will now be used for the field blank program; this program was discussed in the NOS subcommittee.

- Item 9. Status of tracking data base between CAL and CO

Hardware and software now exist at both locations so that a common site operational and QA data base can be established. A personal computer has been dedicated at the CAL to be used as a file server; it presently contains files dealing with field form data and general site information (e. g., personnel, equipment). Discussion centered around the future use of this set-up. It is envisioned that the site contacts at the CAL and CO (currently, Scott Dossett and Susan Smith) will jointly use this resource in an evolutionary manner to better define their respective roles, extract the information of most use to each, and avert potential problems in the future.

- Item 10. Are changes needed to the bucket/bottle advisory?

Bob Gilpin presented some [plots of annual precipitation-weighted means calculated both with and without an adjustment factor](#) for the weekly values; the plots were for nitrate, sulfate, ammonium, and pH at CO21 (Manitou). The adjustment factors were provided by Robin Shealy based on the bucket-bottle study. The plots were for 1979 through 1993. In each case, the

trends for the adjusted and unadjusted values appeared to be similar. For the hydrogen ion, the weighted mean pH levels for the adjusted data were noticeably lower than for the unadjusted data; for the other three ions, there was little difference.

Discussion revolved around the strength of the advisory and, to some extent, its nature. Of particular concern was the question of whether the advisory should recommend, either explicitly or implicitly, an adjustment to the data because of the O-ring problem or simply inform users of the existence of this consideration. In addition, the notion of also referencing the bias results from the USGS blind audit program was suggested.

A group consisting of Mary Ann Allan, Van Bowersox, and Gary Lear will prepare some language to revise the advisory. The revision will be discussed at the spring meeting.

- Item 11. [Trend plots on the web](#)

Bob Gilpin presented the results to date of the work of the trends plot subcommittee (Bob, Luther Smith, Van Bowersox, and John Gordon). The goal of the subcommittee was to come up with a product that could be easily automated for update, readily understandable with a minimum of explanation, and applied to every site as a "click on" option from the home page. The ions suggested for display were pH, sulfate, nitrate, ammonium, and the sum of calcium, magnesium, and potassium. The plots that were presented were four year moving averages of precipitation-weighted annual and seasonal means.

The discussion was supportive of what had been done to date. It was felt that the trends group should proceed with finalizing details of these plots and report again at the spring meeting. It was suggested that either sodium or chloride be added to the list of ions to be displayed. It was also suggested that the display of trends across geographic regions be considered, though this was viewed as a longer term project.

- Item 12. Differences between AIRMoN and NADP/NTN in the Annual Data Summary

A listing of differences between the AIRMoN and NADP networks that is provided to users was displayed. The list included: daily vs. weekly sampling, how below detection limit values are reported, no field chemistry validity checks for AIRMoN, different criteria for valid samples, the value used for the precipitation amount ("sub ppt."), and no maps available from the AIRMoN sites.

Gary Lear reported that the 1995 AIRMoN data summary was ready and presented an overhead of a sample page from it for one site. It was very similar to the existing NADP/NTN summary page. The suggestion was made to specify "Arithmetic mean" as opposed to "Mean". Van Bowersox and Gary Stensland raised the possibility that the below detection limit counts were too high for sulfate, chloride, and sodium on the page that was displayed; Gary Lear said he would check them.

Gary Lear brought up the question of differences between field validity codes and data completeness criteria for AIRMoN and NADP. The ensuing discussion revealed some uncertainty about exactly what was being done now and if there was a need for a change. The outcome of the discussion was that, for purposes of data summarization, the AIRMoN field chemistry validity codes and completeness criteria will be handled in a manner as consistent as possible with the NADP procedure. Furthermore, Gary will clarify the points surrounding this topic, and it will be discussed again at the spring meeting.

Gary Lear brought a proposal from Rick Artz suggesting the use of the National Weather Service stick gauge as the primary measurement device for precipitation amount at the AIRMoN sites and using the amount recorded by the Belfort gauge as a back-up. Gary Stensland and Van Bowersox stated that open literature reports had found the stick gauge to be a more accurate measure. The following motion was passed for consideration by the full technical committee:

"The AIRMoN network should adopt the NWS stick gauge as the primary measurement device for precipitation amount, utilize the Belfort recording rain gauge as the secondary device, and use the sample volume as the tertiary value."

Meeting on Tuesday, October 22:

Attendees: Mary Ann Allan (chair), Luther Smith, Richard Cline, Gary Lear, Stephen Vermette, Bob Gilpin, Richard Artz, Joseph Tokos, Stan Coloff, Wayne Cornelius, Mark Nilles, Rona Birnbaum, Ralph Baumgardner, Gary Stensland

- Item 13. Conversion of MAP3S data base
The question of NADP furnishing a location for the MAP3S data base was raised. Since MAP3S was not a part of NADP, it was felt that this might not be the most appropriate solution. It was decided that the best location for the data base would be on the NOAA web site, and the NADP home page could contain a pointer to it.

- Item 14. Status of the annual data summary
It was reported that there was a minor problem with the AIRMoN summary, but the 1995 report should be released soon. The mercury deposition network will not be incorporated into this report, but will be included in the 1996 report.

Mark Nilles suggested dropping the paper copy of the annual report altogether. Gary Lear said that approval for this had been given, but there does remain a desire to keep distributing it.

- Item 15. Status of the NADP "map product"
A copy of the document was available for perusal, and reaction to it was very favorable. However, it was generally agreed that a better name than "map product" was desirable. Gary Lear said that this was envisioned as an annual product and production is essentially automated at this point; currently, 2000 copies have been printed.

The suggestion was made to include a photograph of the sampler. Gary mentioned that cost considerations forced the "map product" to be an integral multiple of twelve pages in length. Thus, if additional material was to be added, something else would need to be sacrificed.

- Item 16. Next step for the "Inside Rain" brochure
Since only a few people had actually seen the brochure, the discussion centered mainly around what the nature and utility of the brochure would be, if it were desired at all. After a copy was passed around the table, it was felt that in its current form the document might be most useful as a general information device, particularly for program managers in various agencies. It was generally felt that it would need considerable revision to be useful for students, even through the high school level. However, the possibility was raised that it might be useful as a reference document for teachers, particularly in conjunction with some other materials.

Mary Ann Allan was able to read the brochure before the meeting; she felt that it needed a thorough editing. She offered to send copies to everyone and solicited their comments; she asked that responses be returned to her within approximately a month. Rona Birnbaum offered to furnish some educational materials developed by EPA's Acid Rain Division, so that people could see if the brochure might be useful as a supplement. Steve Vermette offered to show a revised document to people, particularly teachers, concerned with precollege education and obtain their comments on the brochure's usefulness.

- Item 17. Future data product needs
The suggestion was made that annual maps for all ions for the entire history of the network

would be useful; this could even take the form of a "movie" on the web site. The earlier day's discussion of trend plots on both a site by site and regional basis was revisited.

Bob Gilpin mentioned that he was seeking suggestions for related web sites that would be referenced on a home page registry. This would involve some description of the other site and would be more than just a "hot button."

Rona Birnbaum and Rick Artz expressed concern that data from other, particularly older, deposition networks might be lost if an effort is not made to seek it out; Luther Smith offered to assist such an effort. Mary Ann Allan mentioned that old data from EPRI projects is archived.

Gary Lear expressed concern that there are considerable demands being placed on the Coordination Office, and resources are limited. He sought guidance from the group in terms of a priority list for various endeavors.

- Item 18. MDN status report

Steve Vermette reported that the Mercury Deposition Network was operating smoothly, and they are looking forward to expanding the number of sites. He presented the results of some preliminary analyses. He raised the question of what should be done with the data that were collected when the network was still in "demonstration mode" or its "transition" phase. No decision was made, but three possibilities were suggested. The first was simply to include the data as part of the data base, but with a note to users that the data were collected before the network was officially sanctioned as part of NADP; the second was to have the data available, but sequester it from the rest of the MDN data base in a similar fashion to the way the special 1987 Park service data is treated; the third option was simply to exclude the data from the NADP data base.

Steve also related that the network had some problems during the transition period in getting all the rain gauges operating properly. As a result, he recommended utilizing the sample volume for deposition calculations.

Joe Tokos sought guidance on whether data should be corrected for the small amount of stabilizing solution present in each sample. While no formal decision was reached, it was generally felt that application of a correction factor would be appropriate since each sample would be subjected to a known effect from the added solution.

Steve and Joe both said that the issues they raised still needed to be reviewed by those most directly involved with the MDN. A meeting of that group was scheduled for that night.

- Item 19. Spring meeting and minutes

Pacific Grove, California has been proposed as the site of the spring NOS/DMAS joint meeting. Details will be distributed later.

The minutes for this meeting are to be posted on the NADP home page.