

Minutes of the NADP Network Operations Sub-Committee Meeting
Sheraton Waterside Hotel, Norfolk, VA
October 24, 2006

Mike Kolian, NOS Chair called the meeting to order at 10:44 a.m.

Karen Harlin moved to accept the minutes of the NOS meeting in Riverside, CA this spring. Tom Jones seconded the motion. Motion was unanimously approved.

1. New Site Approval Committee Update / New siting criteria document – Chris Lehmann

Three new sites that were approved by the new site approval committee (current NOS Chair, NOS Vice Chair, and QA Manager) were presented to NOS. Each new site had one or more local siting criteria issues. These sites and site status was discussed with the group:

CA28 – USDA Forest Service- Tree clearing from 45-deg cone and 30-meter distance may happen. This appears to be the main problem with the site.

NYXX –New York Department of Environmental Quality NY DEQ - Rochester site has lots of issues with collector in corner of fenced area. The site is elevated above a fence top on a platform. The site is approved, but the meteorological tower and fence line are shadowing the ACM collector and rain gage. The equipment should be arrange to minimize the effect from this as much as possible.

MD00 -Smithsonian site – On high tower above tree canopy. The site has too many siting criteria issues to be an ordinary MDN site. Therefore a new site category was created: “MDN Research Site”, which means the site will be subject to the same collection, analysis, and validation procedures, but the data will not be incorporated into the annual map. Joel Frisch strongly opposed including MD00 into the MDN. Many suggestions followed to segregate, qualify, or otherwise limit the use of the data from the proposed site.

Joel Frisch moved not to include non-standard sites (i.e. sites that do not meet NADP siting criteria) into the NADP networks. Dennis Lamb seconded the motion. Motion did not carry approval.

A new classification system will be made for non-standard sites. Perhaps new categories should be made, qualifiers created, or some other method(s) are needed to segregate the data from non-standard sites so that the data will not be misused to represent a standard site.

Tom Jones moved to accept non-standard sites so long as the site is designated as such and provided that the data from such sites are separated from standard MDN data. The motion was later withdrawn.

Marty Risch moved that a Special Purpose Site classification be added to NADP siting criteria and that the siting committee should be tasked to create guidelines

for such a classification. Data from such sites would be available on the NADP website, but annual isopleths maps will not include data from these sites. Motion was seconded by Mark Nilles. The motion was approved with one nay vote.

The NADP Siting Criteria Document will be modified to include another Site Classification. The NOS will defer to DMAS for database coding issues and other data modifications that may be necessary to accommodate this change.

Collector orientation specifications were discussed. Chris Lehmann pointed out that the wet bucket should be within 45-deg of magnetic west. Tom Jones said that ATS surveys for within 15 deg, but 45 is the standard. For a new N-CON collector, the sensor must face west with receiver on north.

2. Wind Shields – Chris Lehmann

Photographs from Marshall Field site were used to show different types of wind shields for rain gages and collectors. The presentation advocated using shields for both rain gages and collectors. Splash was mentioned a particular concern for the collectors – which is not a ‘new’ issue.

Marty Risch moved that when a new electronic rain gage is purchased for an NADP site, an NADP-approved wind shield must also be installed around the gage. Motion was seconded by Dennis Lamb. Discussion ensued. Chris Lehmann moved to table the motion until the spring meeting. Motion was seconded by Christy Smith. The motion passed with vote of: 14 ayes, 3 nays. The QA Manager will compile the literature on wind shields to appropriately support future decisions by NADP on equipment.

3. New Collector Engineering and Deployment Update - David Gay

The new NTN collector has a sensor/motorbox logic problem that causes it to cycle in light precipitation. In order to replace the motorbox with a linear actuator, electronics in the motor box have to be modified to turn the analog instrument into a digital instrument. Jim Osborn (PO/NED) is close to fixing the problem for driving the motorbox (30-45 days from now). They will build one, test in freezer, and incorporate the design into the new deep-bucket collectors. The LODA collector worked great until it was put in freezer. LODA is working on the problem. Eliminating the sensor as the decision maker for collector open/closed would be a great improvement.

4. Van Bowersox was scheduled to present on the Viasala precipitation gage, but did not.

The meeting adjourned for lunch at 12:15 p.m.

The meeting reconvened after lunch at approximately 1:40 p.m.

5. MDN Network Report – David Gay

New sites: 1 Idaho site and 2 NV sites will be started back up soon, and Savannah River Site is back up. FGS kept NV sites going on their own expense for no interruption in record. MDN now has 100 sites, 102 by month's end, and 7 sites are pending. One site in TX is shut down. Possible geographic holes to be filled in are:

Nebraska/Region 7 has 2 sites proposed and

Sioux Tribe in SD has funding for a site.

Digital gages are at 10 MDN sites so far: 2 OTT + 8 ETL.

The Long Island Sound site is attempting to use solar and propane heat to power equipment.

MeHg: 2002-05 data has been reviewed, is clean, and pending DMAS approval, it might be on the web by year's end.

Mercury 2006 was well attended, and MDN was mentioned everywhere.

Approximately 10-20% of papers/posters used or referenced MDN data.

Chris Lehmann – MDN Site Operations Manual needs critical review. Mike Kolian appointed Marty Risch and Bruce Rodger to do the review by the Spring Meeting of 2007.

6. USGS External QA Project – Greg Wetherbee

- Evaporation study at Arvada, CO showed that sample evaporation is small and has a negligible effect on concentration. Sample evaporation correlates with relative humidity, not air temperature, wind speed/direction, or sample volume.
- New instruments are being tested at Arvada, CO prior to deployment to co-located sites at VT99 and AZ03.
- 2006 Field Audit - SHIPPED TO 255 SITES with 130 sites participating (51%), which is a low participation rate. Remedial training videos are going out to sites that should have participated but did not; as well as sites that made mistakes in their field-audit sample processing.
- An NTN Blind Audit program was implemented in 2006. Samples were shipped to 20 sites, and 15 sites participated. Many site operators mistakenly disclosed to the CAL that their samples were QA samples. Results will be forthcoming at 2007 spring meeting.

- MDN System Blank program shipped samples to 90 sites with 43 sites participating so far (48%). A training video shot this summer at the PO will be edited and released in 2007.
- MDN System Blank spike samples were evaluated, and it appears that unpreserved spikes are not stable enough to use. System-blank spiking has been discontinued, and an alternative program will be developed to evaluate potential Hg loss due to sorption.
- After implementation of a MDN Blind-Audit program, it was determined that blind-audit samples could not be sent to sites running methyl mercury because the blind samples dilute the MeHg composite samples. Although several samples were affected, the MeHg concentrations can be recalculated to account for the accidental dilution. Outstanding Blind-Audit samples that were sent to MeHg sites were recalled from the field.
- Activities planned for FY07 include:
 - ✓ Investigation of site urbanization effects on trends
 - ✓ NADP/CAPMoN Co-located Site Comparison Results 1994-2005
 - ✓ DQO data assessment
 - ✓ 2005-06 External Quality Assurance Results Report
 - ✓ Altitude dependent precipitation mapping evaluation (PRISM)

7. Mike Kolian -USEPA intends to continue to fund a site surveys contract for the next 5 years.

The meeting adjourned at approximately 3:00 p.m.