

**Joint Subcommittees Meeting Minutes**  
**2017 Fall NADP Meeting**  
**San Diego, California**  
**October 31, 2017**

08:20 Welcome and logistics – Greg Wetherbee, NOS Chair

08:22 Approval of Spring 2016 (Louisville, KY) Joint minutes – Greg Wetherbee

08:18 State of the NADP – David Gay

NTN has 263 sites. Since the last meeting, 7 sites shutdown (PA) and one site added (AK). AIRMON currently has 5 sites. DE02 site shut down in August 2017. MDN has 99 sites. Since the last meeting, 8 sites shut down (PA, NY and Canada); one site added (AK). Significant gaps in western mercury monitoring coverage remain. AMON has 101 sites. Seven sites lost (NY); three added. AMNet has 21 sites; one site was added and one lost since the last meeting. IL 11 GEM site started 3/30/17. It is going to full speciation now at Bondville; UT97 closed 9/13/17; they are moving to a new building and do not know if they can install at new location; NY20 (Dec), NY06, and NY43 converted to GEM only MN06 should start within a few months, GEM only. Litterfall Pilot Network- Marty Risch is retiring, and Doug Burns is taking over the network. Seven new litterfall sites added this year in NY, OH, and WI. Data are available through USGS - <https://doi.org/10.5066/F7KH0KHT>

08:45 Status of NADP Program Office Transition – Donna Schwede

Donna provided an update on the PO move. U of I Prairie Research Institute (in August 2017) notified NADP Exec that U of Illinois Water Survey no longer wished to host the program. PRI gave NADP “notice” that Feb 28, 2018 would be the end date for both the PO and CAL. The PO and CAL staff do an outstanding job, yet the U of I leadership decided NADP does not make business sense for them and is no longer a good fit. Leadership noted that without significant project overhead, the University can no longer afford to do “service” like NADP.

Members of the NADP Executive Committee undertook major efforts to try to keep the PO/CAL within U of I, including discussions with PRI/Vice Chancellor, Search for a new host department elsewhere of U of I, and obtaining support from the National Academy of Sciences. This, unfortunately, did not change the outcome. Donna, as NADP chair, assembled a diverse, ad hoc committee to identify a potential new host for the PO. The Committee put out a RFIQ document and received 10 excellent proposals. After considerable deliberation, the Committee identified the top three proposals. The EC in consultation with the BC (as described in the NADP Governance Handbook) and ad hoc committee unanimously selected the University of Wisconsin/Wisconsin State Lab of Hygiene as the next PO host institution. Donna reviewed some of the lab’s capabilities and highlighted why the UW and the WSLH are good fit for NADP.

09:05 CAL Review Findings – Richard Tanabe

Richard provided an update on the key findings from the CAL review conducted August 15-17, 2017. Richard lead the review team, which also included Greg Beachley (EPA), Eric Hebert (EEMS), Mark Rhodes (NADP PO), and Ted Struzeski (USGS). Eight findings were identified:

Databases - Absence of a qualified backup for the CAL Database Manager.

QA/QC - Training/competency records and instrument/method prove-out records not easily produced or well-organized.

FIA Lab - Volumetric flasks not always covered.

Bucket/Bottle/Lid Preparation - Clean and approved supplies should not be stored in the garage.

Site Support - The trouble ticket system should have the site ID as a required field and part of the primary key.

Health and Safety - Ventilation in the FIA lab is woefully inadequate.

Laboratory Management - Elevated levels of NH<sub>3</sub> in the extraction hood are an on-going concern. In addition, because of the programmatic changes, the CAL may encounter challenges to meet their deliverables due to the delays that will occur with: Telemetry of e-gage data; Initial review of the precipitation gage data; and Operator support for e-gage and PDA issues.

09:15 CAL Report – Chris Lehmann

A detailed CAL Report is available online at <http://go.illinois.edu/NADPCALReport>. Chris responded to the August 2017 CAL review findings.

1. CAL's resolution of elevated levels of NH<sub>3</sub> in the extraction hood is approaching 10 months...Increasing the frequency of the hood sampling once a problem was detected. This was proposed for quicker troubleshooting. A number of actions were taken over the course of the year that have minimized the problem: Replaced carbon bed (twice); recoated inlet filters with citric acid, measured hood air flow and reduced velocity, added additional citric-acid coated inlet filters (and later replaced), and retrofitted bench with a second set of carbon filters before inlet.
2. CAL management team concurs with the finding the review team identified with the elimination of the site support position and impacts to telemetry, review and support for e-gage data. The issue remains unresolved.
3. Volumetric flasks not always covered... The problem was investigated, and determined that no active QC standards were stored uncovered. Corrective action taken immediately to instruct staff members to cover/stopper all flasks, and label those containing DI soak solutions. No further action is required.
4. Odor in FIA laboratory... The problem was investigated; it was determined that FIA instrument waste line was improperly installed. Also verified operation of laboratory ventilation system. No further action is required.
5. Training/competency records and instrument/method prove-out records were not easily produced... The CAL QC Chemist implemented corrective action to thoroughly document training records and verification of new instruments and methods. Information also incorporated into online electronic logbook system.
6. Bags and other media supplies approved for use should be stored in climate controlled lab... Problem investigated, and determined that no approved supplies were being stored in the garage. Corrective action underway to ensure that all approved supplies are tracked, labeled, and stored in a manner that is clear to everyone, including external parties.

7. Trouble ticket system lacks a Site ID field...relies on the user to add the Site ID as one of the keywords...could result in an orphaned ticket. Trouble tickets originating from CAL sample entry are automatically tagged with Site ID and sample ID. Keywords allow flexibility for problem to apply to multiple sites. Current system has safeguards to ensure no "orphan tickets" are created.
8. Absence of a qualified backup for the CAL Database Manager.... The CAL Management Team concurs that adequate backup of the CAL Database Manager remains a concern. Brian Kerschner has shown interest and has the ability to backup Tom Bergerhouse as necessary.

Lab Operations: pH/Conductivity Instrument EasyPREP TitrEC System commissioned January 2017 NTN Sample TQ4118SW; AIRMoN Sample AD1608L

Hach Lachat QuikChem 8500 Series 2, with conductivity module. Could not accurately measure conductivity below 8  $\mu\text{S}/\text{cm}$ . CAL continues to make manual conductivity measurements.

Quality Assurance: QA Reports: 2016 report on website; QA Plan: 2017 version in revision; Standard Operating Procedures: Currently 53, available upon request, directory at <http://go.illinois.edu/NADPCALSOP>

434,418 NTN samples analyzed; 32,294 AIRMON samples analyzed; 14,295 AMoN samples analyzed

Data are being validated faster allowing for better data turnaround.

Pictures of enhancements to the Bondville site were shown.

09:30 AMon Update – Greg Beachley

Network has remained fairly stable over the past year. 96 sites are currently active. Five new sites were added in 2017. Eight sites closed.

Quality Assurance/Quality Control: Blanks are run at the CAL for quality control – include room blanks, hood blanks, water blanks. The past year they saw an increase in hood blank concentrations after replacing the filter. Retrofitted a new carbon filter and blanks have improved.

Precision estimated as standard deviation of replicates/average of replicates (coefficient of variation). Triplicates are sent to 5% of network sites each sampling period for network-wide precision estimates. Consistently acceptable annual precision results for passive samplers.

Uncertainty in ambient measurements calculated as a range using previous 3-years of data. Quartiles are calculated and the uncertainty for that range is calculated as the median of 2-sigma for the triplicates. Results are reported in the CAL's QA report. Data users can bracket their data with uncertainty values.

Travel Blanks: Travel blanks are shipped to sites every 1:4 sample periods. Limit of detection is calculated as the Currie method. Ambient concentrations below limit of detection are considered valid but within the noise of the blanks. Slight increase in LOD in 2017 (incomplete year). Concentrations below 0.3  $\mu\text{g}/\text{m}^3$  in 2017 would be flagged.

Median travel blank concentration slightly higher in 2017 than 2016 (box and whisker plot). Variability is low compared to results we were seeing in 2013-2014 (good news!). 2017 median blank concentration may be lower once fall/winter data are included – typically lower concentrations.

A number of publications featuring AMoN data were noted. Researchers are using the data to look at trends, nitrogen deposition, ammonia variability in select regions.

09:35 HAL Report – Bob Brunette

MDN has been operating for 20 years, beginning in 1996. Currently, 99 sites operate in the network. Ten sites recently shut down; one site added in 2016, with four additional sites in the pipeline. The loss of sites in the west are problematic. National maps are incomplete.

Site Liaison Activities: Belforts are nearly gone with 6 left in MDN. The HAL had 319 phone/email requests for support. Hurricane Irma did not affect MDN site equipment, but access was limited for a short period of time at FL97, FL95, and FL11. Sites also experienced power outages. Storm did not affect PR20. The site was undamaged and sampling continued (generator)

HAL 2015 Review – 63% of 19 findings closed out with 7 open.

HAL has a new server with Promium-Element (LIMS) system and new SQL database. Last meeting, Bob reported the HAL is moving the database over in Jan. 2017. That has not been completed yet.

Data delivery schedule will be shortened because internal review is not finding many transcription errors (0.1%). HAL is looking to shorten Hg total data delivery to 60 days.

HAL 2016 QA Report shows that matrix duplicates (Total Hg) are typically within 5% RPD.

HAL/PO – PETG Tests – WA18 - ~ 1 Year Of Data; MDN Dual NCON – PETG / MDN Glass; MDN ACM – Glass. Tests will be performed at two additional sites (IL11, WI) for approximately 3 months.

No changes in HAL staff.

09:50 AMNet Update – Mark Olson

20 sites in the network. UT97 site closed. ME97 and OK99 are on life support. Future is uncertain. One new site (GEM) installed MA22. Possible new sites include Leach Lake in MN, Mexico City (2), and New York (2). Because of the shutdown of the ARA/Southern Company sites, at least three Tekran systems became available and were acquired by the PO. These donated systems are now available for interested groups to establish AMNet sites. PO has received equipment request from the Leach Lake Band of Ojibwa in MN. Efforts are currently underway to add speciation (1130,1135) to the Bondville, IL site. Boston University has a GEM site operating. Clifty Falls has speciation now. 11 site visits were performed in 2017. Several sites are problematic: ME97 and OK99, no data for 2016. MD08 and OH02, lack of argon during site visit. IN21, perm source didn't pass. All 2016 data are available, although password protected.

### 13:30 Critical Loads Maps in Annual Report – Jason Lynch

Jason provided an update of the National Critical Loads Database (NCLD). Version 3 has been completed and posted on the NADP webpage. In the Spring, CLAD members approved a motion to add exceedance maps to future Map Summaries, first being aquatic acidification critical loads for 2018, and additional maps to follow. Uncertainty will be taken into consideration. Critical loads exceedances tell us about the risk of natural resources to air pollution/deposition and whether air quality might be impacting natural systems and where impacts might be occurring on the landscape and the scale of the impact. For impacted ecosystems by air pollution, exceedances tell us if air quality/deposition has improved enough allowing ecosystem recovery. Lastly, exceedances help to inform the effectiveness of emission reduction strategies and to inform land management decisions. Jason introduced a motion:

*CLAD moves to add exceedance maps to be included in Future Map Summaries, first being aquatic acidification critical loads for 2018, and additional critical load exceedance maps to follow in years to come. Uncertainty will be taken into consideration.*

The motion was seconded and carried.

13:40 Subcommittee Reports NOS – Greg Wetherbee TDEP – John Walker CLAD – Tonnie Cummings EROS – Pam Padgett CityDep – Rich Pouyat AMSC – Andy Johnson

See minutes from individual subcommittee meetings.

### 14:00 Phosphorous Dry Deposition Update – Janice Brahney

Dr. Janice Brahney (Utah State University) provided an update on a pilot dust deposition study using dry side ACM buckets.

### 14:10 Spring 2018 Meeting – David Schmeltz

The Spring meeting will be held April 9-13, 2018 at the Intercontinental Hotel in Milwaukee, Wisconsin. Efforts will be explored to bring meeting participants to Madison, WI to see the UW/Wisconsin State Lab of Hygiene facilities.

### 14:15 NADP Secretary Selection – Emily Elliot

Emily nominated David Schmeltz (USEPA) as NADP Secretary. David has been actively involved in the ad hoc committees to identify a new PO host. David accepted the nomination. Emily asked for nominations from the floor, and there were none. Executive Committee will be asked to ratify the nomination. Greg Wetherbee raised the issue about David's dual role as incoming NOS chair and NADP secretary, and implications for voting on the Executive Committee. Although no motion was introduced, if an officer is faced with this situation, the recommendation was made to have the chair step aside and permit the vice chair be able to have a vote in his or her place. Mark Nilles noted the precedence for this. This issue will be discussed further in the executive committee meeting and might necessitate further clarification in the NADP Governance Handbook.

### 14:20 Adjourn

Minutes prepared by: David Schmeltz, NOS Vice Chair