National Atmospheric Deposition Program (NADP)
Quality Assurance Advisory Group (QAAG)
Agenda: September 28th, 2026
Co-chairs: Kat McKinnon, Martin Shafer

NADP QAAG Agenda

Monday, September 28th, 2026

12:30 PM – 2:00 PM Central

Join via Zoom
https://uwmadison.zoom.us/s/99498534333
Meeting ID: 994 9853 4333
Passcode: 206154

Attendance: Kat McKinnon, Nichole Miller, Ella Osby, Michael Randall, Eric Hebert, Zac Najacht, Tim Sharac, Noel Deyette, Sarah Benish, Greg Beachley, Melissa Puchalski, Jason O'Brien, Mark Kuether, Dana Grabowski, Christa Dahman, Martin Shafer, Jess Trevino, Sandy Grenville, Cheryl Sue

1. **Site Support Issues/Questions** – *EEMS/PO (Eric)*
    a. Update on EEMS Site Audits- audits are going along fine. EEMS had to rework some scheduling issues due to travel budget concerns. Regardless, they will keep up with what is left for the year.
    b. AMNet Audits- Only one audit was conducted in 2026 (OH02), with no more scheduled for the remainder of the year. Budget pending, 4 audits are scheduled for 2027. During the last QAAG meeting, low-level linearity tests were discussed on electronic gauges. EEMS then proceeded to make those changes to the procedure to include the linearity tests. Now considering precision checks to replace the linearity checks. Eric performed precision checks on 5 rain gauges (including both OTT and ETI) to test the precision checks. Overall, the precision tests were effective but were found to be time-consuming. Discussion focused on how frequently precision checks should be performed and on how many rain gauges. It was suggested by Ella that a random 10% of rain gauges be randomly selected, in addition to gauges that were already scheduled for maintenance or repair or if EEMS staff are in the area.
2. **Site Operations** – *Ella*
    a. Overall Network Update
        i. AMoN- AMoN network fully switched to ALPHA samplers at the beginning of the year. Initial issues included weld nuts falling off, samplers falling off of the Velcro, and operator confusion on sampler parts. The SOP was updated to include an additional weld nut tightening step, and a training video as developed. Since then, there have been no new issues noted by the sample receiving team.
        ii. MDN- The 1-week vs 2-week sampling collocated study has been completed, with initial results showing a strong correlation. Additional results will be presented at NOS following completion of WI06 sampling on 9/29/26. 15 sites are currently operating on a 2-week sampling schedule, which may provide great cost saving measures to sites with limited funding.
        iii. NTN- To remove any potential discrepancies, the procedure for how operators use the lids on sampling buckets was changed. Now, operators first weigh the bucket without a lid, then add on the weight of the lid they retrieved the sample bucket with. The NTN and MDN field forms were both updated to remove daily precip total.

iv. PFAS- Two new PFAS studies have started, a 3-year MN study, with 8 sites and a 1-year USGS with 60 sites across the country. The lid seal pad construction procedure was also updated.

b. Precip Sensor Discussion *(Mike)*- NADP currently uses a Thies sensor with a sensor lid that appears to be prone to cracking, likely caused by thermal cycling and UV degradation. Cracking can allow moisture to enter the sensor and damage or corrode the internal electronic components. Mike listed several potential solutions to this problem, including routine sensor replacements, application of a protective coating such as FlexSeal, inserting a silica gel moisture indicator to provide early moisture warnings, and evaluating an alternative sensor type. The NED is currently testing the protective coating and moisture indicators. There was significant discussion regarding the alternative sensor, including the need for a comparison study prior to implementation consideration.

c. PFAS Lid Seal Pad/changes *(Mike)*- The current lid pad design uses PTFE fiberglass fabric attached to a backing plate with Teflon-covered aluminum tape. Concerns include potential PFAS contamination, material cost, and time-consuming construction. LDPE is being evaluated as an alternative because it is less expensive and allows for faster construction using a heat-sealed sleeve. A one-year study is currently ongoing to evaluate the material. Concerns discussed included excess material from heat sealing and the possibility of operators mistaking the LDPE sleeve for the shipping bag and removing it. Eric also suggested routinely replacing lid pads annually rather than relying on operators to identify when replacement is needed. The group will revisit the lid pad material and replacement frequency following completion of the one-year study.

3. **Internal/External Audit** – *Kat*
   a. 2026 Internal audit- The NTN/AMoN internal system and method audits were carried out from Sept. 9th through Sept. 18th. Majority of findings were centered around document control. Management and QAAG can expect write ups to be completed in the next few weeks. Na Zhang is currently working on the PFN audit and will be starting that in the next week or so.
   b. 2027 External audit volunteers- Planning to hold the external audit in late summer or early fall of 2027. Now accepting volunteers to perform the audit. Audit sections include MDN/MLN System/Method, NTN/AMoN System/Method, PRC Method, IT Resources, Data Review/Coding, Financial, and Site Support. A call for volunteers will also be made at NOS and the beginning of the year.
4. **PCQA Update** – *Noel*
   a. General Update- USGS plans to reduce the number of annual field audit samples from 100 to ~50 due to the addition of the PFAS QA project. Software firmware issues have been reported from sites using Sierra modems, and Campbell Cell 210 modems are being considered for sites with power and freezing concerns. PR20 has received Forest Service approval for repairs and a new tower, with the schedule still yet to be determined. The 2023-2025 NTN and MDN field audit data release is almost complete and is expected to be published within the next month. During the winter, Noel and Jess Trevino are planning to work on the updated Corresponding Scientific Investigations Report.

i. PFN QA project-12 labs received samples in mid-September, with each shipment containing 2 spiked precipitation samples and 1 blank. This project also includes quarterly PFAS snapshot for 60 sites.
ii. MDN- Sample preparation has been moved to the M3 Research Lab in Wisconsin. University of Nevada at Reno backed out, now down to 7 laboratories.
iii. NTN- Bureau of Reclamation and UNH WQAL were added, now up to 10 participating laboratories.

5. **Sampler Colocation Update** *(Noel)*- Currently in the 3rd year of 1-week, 2-week comparison collocated study at NY20.
6. **Lab Investigation Projects (current and upcoming)**
    a. Hg Passive Samplers *(Christa/Martin)*- As a pilot network, everything is moving smoothly, with no major developments or changes. The data is being evaluated from last year by Connor Olson, Katrina McSween, and Tim Sharac who will be presenting at MELD.
    b. AMoN ALPHA Expired Acid Study *(Kat)*- A study was conducted to determine whether the expiration date of the 2% phosphorous acid in methanol solution used during ALPHA sampler preparation could be extended. Comparisons of fresh, aged (expired), and refrigerated phosphorous acid solution showed no significant differences in hood blanks, prep blanks, or WI06 field duplicates. Based on these results, we planned to extend the expiration date to four weeks (two AMoN prep cycles). Future work may evaluate preparing a phosphorous acid stock solution that can be secondarily diluted during sampler preparation.
7. **Lab Updates** – *Katie/Kat*
    a. New SEAL instrument progress *(Katie)*- Katie was out sick, Kat presented this section in her place. Initially had instrument issues that needed to be worked out, those have since been fixed. Abby Simonson is now performing instrument validation and will present a detailed update in NOS.
    b. ECCC Spring 2026 PT Results *(Kat)*- Results looked good overall. After initial result submission, ECCC reached out to notify the lab of a possible transcription error for Na. ECCC gave the lab an opportunity to identify and correct the transcription error. This created a bigger conversion about PT peer review process. The PT peer review cover sheet was updated to include a detailed checklist of what details to look for during peer review, the lab also opened a nonconformance.
8. **MDN/MLN** – *Christa*
    a. Stop collection of % moisture information- MLN currently collects several sample mass measurements throughout processing to calculate percent moisture and non-grindable material. Christa proposed discontinuation of the percent moisture information because it is not used for data correction or reporting and there are potential bias concerns. The MLN group will continue collecting this information for the 2026 samples, with a vote proposed for the next QAAG meeting in the spring to determine if this information collection can be discontinued for the 2027 samples.
    b. MDN Contam Invalidation *(Zac/Dana/Christa)*- There is currently no formalized process for determining sample validity when high analytical values are observed in samples with visible debris. Christa suggested incorporating the deposition when determining validity rather than focusing entirely on analytical concentration. Similar to how NTN data review uses historical averages for comparisons, it was proposed that during preliminary review, any analytical value

of 75 ng/L or higher would trigger further investigation. An OIS ticket has been put in for Casey to add a flag to the data review program that would highlight the concentration if it is ≥90% of the historical value.

9. **PFAS** – *Martin/Christa*
    a. General update- Elizabeth has been hired as the new Chemist III and she has been working on ultra-short chain method development. Website data is still ongoing. All samples from the first month of PFN have been analyzed, peer reviewed, and uploaded to LIMS. Christa is completing the final review, which includes looking all flags to ensure any necessary data invalidations are addressed. At this time, EPA data cannot be publicly released. There are lots of papers in development. As Ella previously mentioned, there are new PFN sites (MN project, USGS snapshot), along with a New Jersey DEP Project. A QA field protocol for extractable organic fluorine (EOF) is also in production. Formal field and analytical replicates have been added to analyses at a 5% rate. Batch sizes of LCMSMS have changed to include multiple extraction batches. Bag lot QC is now being performed instead of having operators return bags for lab extraction, with bags still evaluated for blanks, spikes, and absorption alongside field QC.
10. **Data Review** – *Zac/Dana/Mark*
    a. Process Updates- MDN data review has not changed. Oliver is working on 2nd DE with help from the sample receiving staff. Before Liam's departure at the end of March, he has been working with Zac on Jean's coding. Rachel Mallum, a former APHL fellow/intern has joined the sample receiving team. Previous precipitation sensor issues have been resolved, and Casey is working on developing a precipitation review processing program. Issues continue to be identified during development, which has pushed back the OCR launch. Zac will discuss this more in-depth at DMAG.
11. **QA Documents** – *Kat*
    a. 2025 QAR- The 2025 QAR has been sent out to QAAG for edits, review, and approval. Vote on QAR by 10/23/26.
12. **Open Discussion** –Future agenda items include a vote on discontinuation of MLN percent moisture information (Christa), and further discussions on changes to precip sensors (Mike), MDN Contamination Invalidation (Zac/Dana/Christa), and revisiting the LPDE PFAS lid seal pad replacement (Mike).