

# Virtual NADP Fall 2025 Business Meeting

## Final Joint Minutes

Thursday, December 4, 2025, 11:00 AM – 4:00 PM CST

Attendees (104): Abby Carr, Alexander Nyhus, Alissa Chrisekos, Amanda Cole, Angie Dickens, Anna Hyland, Anne Marie Macdonald, Anthony Ward, April Hathcoat, Becky Stephens, Bob Larson, Bret Schichtel, Cami Ritoria, Cari Furiness, Casey Lanham, Cheryl Sue, Chris Bauknecht, Chris Rogers, Christa Dahman, Cindy Dallmann, Colleen Baublitz, Colleen Flanagan Pritz, Connor Olson, Connor Olson, Cynthia Sides, Da Pan, Dana Grabowski, David Gay, David Krabbenhoft, David Wischnack, David Wischnack, Ella Osby, Emmi Felker-Quinn, Eric Uram, Gary Yip, Greg Beachley, Hazel Cathcart, Ian Rumsey, James Schauer, Jamie Gauthier, Jason Lynch, Jason O'Brien, Jayde Alderman, Jean Steele, Jeff Collett, Jeremy Ash, Jim Renfro, John Offenberg, Johnathan Jernigan, Joseph Felix, Kat Mckinnon, Kat Mckinnon, Katie Blaydes, Katrina Macsween, Kaushlendra Tingi, Ken Brice, Kevin Mishoe, Kristi Morris, Kristopher Novak, Kulbir Banwait, Liam Trinhnguyen, Marcus Stewart, Marilyn Wurth, Mark Kuether, Martin Shafer, Mary Fauci, Mary Lynam, Melissa Puchalski, Michael Mchale, Michael Randall, Mike Bell, Na Zhang, Naomi Tam, Nate Topie, Nichole Miller, Nifer Wilkening, Noel Deyette, Olivia Burch, Pablo Sanchea Alvarez, Paige Huhta, Ralph Perron, Randy Kolka, Rebecca Dalton, Rebecca Dalton, Richard Tanabe, Rick Haeuber, Rodolfo Sosa Echeverría, Ryan Fulgham, Ryan Mccammon, Sarah Benish, Sarah Nelson, Sarrah Dunham-Cheatham, Stacy Knapp, Steve Strebel, Sydney Schultz, Thomas Butler, Timothy Sharac, Vid Grande, Vincent Vetro, Walter Ballesteros, Yayne Aklilu, Yuan You, and Zac Najacht.

## Motions

The PFAS NTN subnetwork will transition to an official NADP subnetwork for all participating sites beginning with the sample deployed on April 7, 2026. Any PFN sponsors that are required to sequester their data should notify the PO prior to Feb. 1, 2026. The PFN quality assurance activities will be incorporated into the NADP QAPP and annual QA reports.

NTN and MDN Field Observer Report Form Edit/Update include the following changes:

- Revise Section 6. **Bucket Sample Weight** for lid change-out procedures' changes
- Removal of Section 7. **Precipitation Record** entirely
- Increase size of Section 10. **Remarks**
- **Entire form** formatting revisions
- Comments from Joint discussion also be put in place

# Meeting Notes

## Quick recap

The meeting began with introductions and updates from NOS leadership covering network changes and financial status. Program updates were shared across the National Trends Network (NTN), Mercury Deposition Network (MDN), Ammonia Monitoring Network (AMoN), Atmospheric Mercury Network (AMNet), and the Mercury Litterfall Network, with a particular focus on PFAS-related research and sampling projects. The meeting concluded with discussions on network optimization and upcoming events, including the Spring Science Symposium and a retirement celebration for David Gay. Changes to field forms and mapping updates were also addressed.

### **11:00 Welcome, Logistics, Introductions (Noel Deyette)**

**Noel Deyette** thanked everyone for being here this afternoon, or good morning, wherever you are and introduced herself as USGS NADP Coordinator. She also introduced NOS committee members, Jason Lynch, Vice Chair, and Nate Topie from WSP as Secretary.

### **11:10 Welcome address (Jamie Schauer)**

**Jamie Schauer** welcomed everyone to the joint meeting for the last time. He is retiring as director of the State Laboratory of Hygiene, where the National Atmospheric Deposition Program (NADP) is based. He is also a faculty member at the University of Wisconsin-Madison and is transitioning to emeritus status. He expressed gratitude for the lab's involvement with NADP, highlighting its positive impact on the State Laboratory of Hygiene and on his personal growth. Although he could not attend the entire meeting due to other commitments, he emphasized the importance of change and new opportunities and expressed excitement about new leadership and hires at the lab. He intends to remain connected with NADP, thanked everyone for their collaboration, and hopes to keep in touch in the future.

### **11:20 State of the NADP (Sarah Benish, NADP Coordinator)**

**Sarah Benish**, the new NADP program coordinator, delivered the State of NADP update at the fall meeting. She introduced herself and highlighted recent staffing changes, including the hiring of Ella Osby as a site support specialist. She also discussed NADP's financial status, noting that federal and state funding remained stable, with total expected funding of approximately \$3.1 million.

Sarah presented updates on various NADP networks, including NTN, MDN, AMoN, AMNet, and MLN, highlighting site closures, openings, and changes. Some federal sites did close during 2025, but many have been picked up by other federal agencies. BLM no longer supports its sites. There are a couple of site openings, such as MD91, located at Oldsfield School in Maryland; NE97 and CA93 are also pending. MDN site numbers continue to decline, with about 15 sites switching to biweekly sampling at the beginning of the new year, which will help reduce costs for those sites. AMoN has 99 sites, including 10 new sites in California with the South Coast Air Quality Management District that started in June. In January 2026, NADP will switch to ALPHA samplers to save costs. AMNet has eight sites, but NY98 at Whiteface Mountain will be closed soon. MLN has 26 sites; all 2024 data are available on the website, and one additional site is expected to be added. NPN was approved a couple of years ago to supply

quality-assured electronic precipitation data collected from sites with electronic sensors; these data are available at 15-minute, hourly, and daily resolutions. The data will be accessible shortly after an initial review, with a lag of about one to two weeks. Currently, users can visit the website, follow the provided link, and select the desired data for a specific site.

She also mentioned the upcoming launch of the NADP PFAS network, as well as the passive mercury pilot. Sarah announced the availability of annual AMoN maps and updated AMNet and MLN figures online, along with methylmercury data on the MDN web page. She mentioned the scientific symposium planned for spring, with location and date still undecided but potentially virtual to allow federal employee participation. Sarah also discussed her role as new coordinator, including counting publications and presenting at the Mid-Atlantic Regional Air Management Association consortium. The conversation ended with recognition of David Gay's retirement effective January 2<sup>nd</sup>.

#### **11:45 Executive Committee 2025 priorities (Melissa Puchalski)**

**Melissa Puchalski** presented program priorities, including expanding networks, modernizing the network, applying for grant funding, and automating site reports. She outlined current priorities and accomplishments while inviting input on additional priorities. Key priorities include:

1. **Expanding networks through partnerships:** Efforts to strengthen external communication and partnerships—for example, workshops and university engagements—have been hindered by federal travel restrictions. However, there is optimism about resuming outreach and showcasing program growth despite budget constraints.
2. **Network modernization:** Led by **Mike Bell**, strategies to reduce network costs are being developed, with progress in evaluating and implementing cost-saving changes. The focus is on maintaining consistency while exploring new equipment and data products.
3. **Grant funding for PFAS and NTN monitoring:** Although grant funding was paused, plans are underway to establish a PFAS science committee to attract sponsors and pursue funding opportunities.
4. **Automating site reports:** New site status reports have improved communication with site operators, enhancing engagement and addressing issues. Ongoing feedback will help sustain operator involvement and leadership.

**Mike Bell and Noel Deyette** thanked Melissa for her excellent leadership and guidance.

#### **11:55 Discussion of stakeholder's support and status of sites supported**

This topic was covered in Sarah's report. **Noel Deyette** noted that the network maps look good and expressed enthusiasm. Noel added that the Network Optimization Committee is helping identify ways to preserve sites and maintain map coverage, such as transitioning MDN to biweekly sampling next year.

**David Gay** noted that NOAA sites might rejoin the network.

**Cari Furiness** highlighted funding challenges affecting North Carolina sites. She is actively seeking ways to secure support for both the near term and the long term. She would welcome discussions about opportunities with agencies such as the USGS and others. She is exploring options at the university and state level. Additionally, she is interested in learning more about network optimization efforts to understand how they might inform our strategy.

**Mike Bell** noted it might be beneficial to create a data product to share with everyone, highlighting the value of specific sites. In past analyses, we identified sites that didn't significantly impact the overall map and could be deprioritized, while others were higher priority. A concise, visual representation of this data could be effective in maintaining funding. For the North Carolina sites, demonstrating their quality, contribution, and the resources they help protect could be key to securing ongoing support.

**Noel Deyette** noted that the USGS has a general information product—a fact sheet—that it aims to release annually. Next week, we will publish a social media post that interested parties can share to highlight the importance of weekly data collection and its applications.

## **12:15 Update on PFN (Martin Shafer, John Offenberg)**

### **PFAS Research Lab Integration Updates**

**Martin Shafer** presented updates on the PFAS research, the lab, and its integration with NADP, highlighting improvements in laboratory efficiency and data management. He discussed changes to field and laboratory quality-control procedures, including enhanced QC measures and the development of a new LC-MS method to improve data accuracy and expand the PFAS compound menu.

Martin noted that the team's ability to analyze atmospheric processes has improved with small-volume samples, which are crucial for understanding cloud scavenging and PFAS-specific processes. This capability enhances receptor modeling and allows analysis of individual events, helping identify air mass origins that were previously obscured by compositing. The merging of NADP and PFAS databases also benefits from avoiding compositing, as it simplifies automated integration.

He reported improvements in the signal-to-noise ratio for PFAS, given their low concentrations, by controlling blanks and expanding the PFAS menu. The new method targets lower limits of detection (LOD) for many compounds, enhancing data robustness, and adds more atmospherically relevant PFAS compounds to the analytical menu. Key advancements include larger injection volumes on the LC, processing samples greater than 50 mL, and using a combined wax granular carbon cartridge to eliminate a cleanup step and improve efficiency. Calibration standards and QC levels are being lowered to achieve lower LODs and limits of quantitation (LOQs). The method is being formally validated, with completion expected by early Q1 2026. The team is expanding from 33 to 40 compounds and exploring additional compounds for future updates.

**Martin Shafer** provided an overview of several projects and manuscripts related to atmospheric processes and PFAS research. Key highlights include:

1. **EPA ORD Pilot Project:** Supported since fall 2020, involving sites like ME96, NC30, NJ99, and NY98. Data from 2020-2022 is fully audited and included in a manuscript under review at EPA Office of Applied Science and Environmental Solutions (OASES). The project demonstrated robust annual and daily flux measurements with high precision in co-location studies.
2. **NWRI-Funded Projects:** Two projects under USGS's NWRI grant program focused on Minnesota Sea Grant sites, collecting two years of precipitation data. Manuscripts are in preparation, with studies on PFAS concentrations, loadings, and partitioning.

3. **Great Lakes Project:** Focused on eight sites, including Upper Great Lakes and Minnesota, to study PFAS deposition. Manuscripts are being prepared, with findings on PFAS sources and atmospheric wet deposition.
4. **New Jersey Project:** Conducted at six sites, including MDN and NTN sites, with two years of precipitation and air collections. Collaboration with New Jersey DEP scientists will lead to multiple manuscripts, exploring contrasts and similarities with other sites.
5. **Collaborations and Additional Projects:** Collaboration with the University of Rhode Island involved passive samplers during the New Jersey program. Other projects include cloud water sampling at Whiteface Mountain and throughfall studies at Duke Forest and the Bronx, exploring PFAS movement from the atmosphere.

Overall, these projects have generated approximately 2,600 samples over the past 4-5 years, with significant contributions from EPA's pilot program and USGS-funded studies.

### 12-point Plan

**Martin Shafer** presented updates on the PFAS Network (PFN) and a 12-point plan outlining the network's future structure and activities. Developed and presented at the Fall 2025 business meeting, the plan transitions the network from a pilot study to a provisional network. This transition enables the finalization of quality assurance (QA) documentation, improvements to methods, and the publication of initial data in manuscript form.

#### Key points include:

- **Progress and Transition:** The network has moved from a pilot study to a transitional provisional network, focusing on finalizing QA documentation and improving methods to reduce sample volume to minimum required sample volume required for analysis.
- **Funding and Support:** EPA supports 10 sites through July 2026, with additional support from other agencies and a recent \$900,000 grant from the Environmental Resource Trust Fund in Minnesota for continued PFAS collections.
- **Data and Quality Control:** Data from 2020-2022 has been fully audited, with ongoing audits for 2023 and 2024 data. Efforts are underway to improve data accessibility and transparency, including associating field notes with PFAS data.
- **Laboratory and Field Protocols:** Current laboratory protocols are documented and available, with updates planned for field protocols. Validation of new methods is expected early in Q1 2026.
- **Database and Web Access:** Plans to enhance data accessibility through the NADP website are in progress, with discussions on efficient data transfer and user tools.
- **Strategic Planning:** A strategic planning document for PFN maintenance and growth is planned for mid-next year, with considerations for data embargoes and public availability.

**Melissa Puchalski** expressed gratitude to **Martin Shafer** for his efforts and provided updates on the PFAS network's progress. She highlighted key points:

- **12-Point Plan and Advisory Committee:** The 12-point plan generated various suggestions for data products and tools to enhance the network's value. An advisory or science committee is proposed to address these questions and ensure data utility for site sponsors and users.
- **Network Transition:** Despite delays due to organizational shifts and government shutdowns, the network is well-established with effective data quality and procedures. The goal is to transition the PFAS NTN subnetwork to an official NADP network, starting with samples deployed on January 6, 2026. This transition will integrate PFAS sites into the NADP framework, allowing participation like other NADP networks.
- **Motion:** The motion proposes that the PFAS NTN subnetwork becomes an official NADP network for all participating sites by January 6, 2026. Sponsors needing to sequester data should inform the Program Office by January 1, 2026. Quality assurance activities will be incorporated into NADP reports, with website and site information updates occurring early in the new year.

#### **Discussion on Motion:**

**Noel Deyette** asked whether, given the distinct nature of science compared with other networks, the PFAS Network (PFN) should have a separate Quality Assurance Report (QAR) to accommodate the breadth of QA and analytes.

**Martin Shafer** disagreed. He emphasized that PFN QA and field protocols will largely draw from NTN standards, which is crucial for advancing PFN. While NADP typically handles fewer compounds, PFN will implement compound-specific quality control without invalidating entire samples due to a single failure. These unique aspects will be reflected in the QAR and Quality Assurance Plan (QAP), as a distinct section within NADP's structure.

**Richard Tanabe** also agreed with Martin. Also, he recommends keeping the PFAS network as a subnetwork of NTN.

**Martin Shafer:** Yes, I totally agree.

**Jason Lynch** seconded the motion by **Melissa Puchalski**.

**Melissa Puchalski** asked whether **Martin Shafer** had examined analytical costs and whether there would be any changes given the potential increase in samples analyzed. Martin responded that there might be a small reduction in costs.

**John Offenberg** noted that, given the official launch of the network and potential changes to SOPs and protocols, the proposed start date is fast approaching and asked whether it would make sense to shift it from January 6, 2026. **Christa Dahman** said she would be more comfortable with shifting the start date.

**Martin Shafer** said the plan had been to wrap up by the end of the year but that he would be okay with delaying the start by a few months. **Steve Strebel** asked whether there would be any downside to delaying it by two or three months, and Martin responded that there would not. **Melissa Puchalski** suggested March 17, and Martin replied that the end of the first quarter would be better (i.e., April 6). Christa emphasized that April 6 would mark the date when the first official network samples are collected, not when data will be available. **Mike Bell** noted that the delay would also provide time to set up data use agreements.

**Michael McHale** stated that he thinks PFAS is a little different from many other constituents, and that it makes him uneasy to set a precedent allowing sites to request that data be withheld, as this could potentially spread to other networks. **David Gay** seconded Mike's concern and said this is something the Exec. needs to address because there are ramifications. **Christa Dahman** asked whether it would be realistic to say that those who do not want their data shared need to move to a fee-for-service model and not be part of the network. **Mike Bell** stated that this has been a sticking point since the beginning of the program and that we're getting closer to figuring it out; he agreed that a fee-for-service model is a good option. **Richard Tanabe** recommended asking participants sooner rather than later (January or February) whether their data can be released publicly and including that in the motion. After much discussion, it was decided not to change the motion for the Joint meeting but to have the Exec. deal with it in March. **John Offenberg** recommended that those who do not release their data should pay more, and many agreed. **Martin Shafer** suggested conducting an initial survey of sites planning to participate to determine who might not want their data released.

**Amended Motion:** The PFAS NTN subnetwork will transition to an official NADP subnetwork for all participating sites beginning with the sample deployed on April 7, 2026. Any PFN sponsors that are required to sequester their data should notify the PO prior to Feb. 1, 2026. The PFN quality assurance activities will be incorporated into the NADP QAPP and annual QA reports.

**Motion passes** with 54-55% participation, and 98% in favor, 2% not.

### **12:35 NTN FORF updates and discussion (Zac Najacht)**

**Zac Najacht** outlined proposed updates to field forms across networks (FORF), focusing initially on the NTN form, with plans to extend similar updates to the MDN form later. Key updates include:

1. **Field Form Updates:**
  - **Section 6 (Bucket Sample Weight):** Removal of lid weight entry fields, as the lid weight is now included with the prepared bucket and bag.
  - **Section 7 (Manual Precipitation Recording):** Proposed removal due to redundancy, as precipitation data is now electronically submitted. Some fields will be retained for operators to compare rain gauge data and collector efficiency.
  - **Section 10 (Remarks Section):** Enlargement to accommodate necessary manual entries and clarify required information.
  - **Overall Formatting:** Implementation of optical character recognition (OCR) for efficiency, replacing checkboxes with radio buttons to facilitate scanning and data entry.
2. **Feedback and Approval:** Feedback was solicited from various groups, including DMAG, QAAG, and field groups, and further discussion is encouraged. A motion for approval of these updates will be presented.
3. **Implementation Strategy:** The NTN form will be updated first, as it handles most samples. The MDN form will follow, assessing feedback and ensuring a smooth transition.

**Noel Deyette** asked for feedback on Box 6, particularly the remaining space for the lid weight entry. She asked whether this would be acceptable and whether it might confuse site operators and expressed hope that they would be able to adapt. She suggested graying out the section where the lid is being removed, especially for remote sites with multiple operators. **Richard Tanabe** recommended adding

“Not for Site Use” to that area. **Mark Kuether** asked whether OCR performs better with freehand text in an open space versus text inside a box. **Zac Najacht** responded that handwritten text is difficult to process anywhere and does not need to be in a box. **Richard Tanabe** asked how well OCR will read decimal points. **Zac Najacht** noted that this issue has been raised with the OCR team and is still being worked on. **Alissa Chrisekos** asked whether Box 4 should say “fill in” instead of “check.” **Zac Najacht** agreed that would be a good change.

**Tom Butler** raised a concern about the reliability of the NOAA IV electronic rain gauge at his site (NY67), expressing a preference for using a stick gauge when the electronic gauge fails. He asked whether it is acceptable to report stick gauge data instead of electronic readings, as electronic data is not always available at the time of collection. **Dana Grabowski** responded that it is acceptable to use alternative rain gauge data when the electronic gauge is not functioning properly. Such data should be noted in the remarks section as backup rain gauge data. Operators may include either total or day-to-day measurements from the stick gauge or a National Weather Service (NWS) gauge; these data can then be used for NY67 or other sites.

**Richard Tanabe** recommended removing the bubbles beside “gloves” and “Tyvek jacket” in Section 8 and instead adding bubbles for glove sizes—small, medium, large, and XL. **Zac Najacht** agreed to the change.

The motion from DMAG on these updates to the new form was tabled until more work on the OCR is completed.

1:00 **Committee report outs – highlights, motions, regular business**

#### **MELD (Connor Olson/Tim Sharac)**

**Connor Olson** provided an update on the upcoming MELD meeting scheduled for December 17th, highlighting several personnel changes and agenda items:

##### **1. Personnel Changes:**

- **Tim Sharac** is the new MELD co-chair, following David Schmeltz's retirement. Tim will also lead the passive pilot network efforts alongside Katrina McSween, who has experience with Environment Canada's global passive network.
- Andrew Reichardt is the new Mercury contact person in International Tribal Affairs
- Changes in the International Mercury front include Sandy Stephen potentially taking over roles previously held by Terry Keating within the Minamata group.

##### **2. Committee Meeting:**

- The bulk of the meeting will focus on the passive pilot network, with Q1 and Q2 data already presented and Q3 data pending QA.

- A motion to extend the pilot network by an additional year was passed at the NOS meeting due to scheduling changes and equipment needs.
- Another motion discussed reducing the number of replicate and trip blanks at each site to save costs, which will be reviewed at the MELD meeting.

### **TDEP (Colleen Baublitz/Kristin Foley)**

**Colleen Baublitz** provided an update on the recent TDEP meeting, highlighting several key points:

#### **1. Leadership and Work Groups:**

- **Mike Barna** from the NPS was elected as the new secretary, bringing a unique perspective as a regional air modeler.
- Updates were shared from the Measurement and Agricultural Stakeholders Work Groups. The Measurement Work Group is planning a project in Colorado for the summer, while the ACT Stakeholders Working Group is exploring future coordination and possibly resuming their webinar series.

#### **2. New Developments:**

- A new Earth Engine plugin for TDEP has been developed to make TDEP data more accessible, allowing users to view trends and maps interactively.
- **Mike Bell** presented an analysis on network optimization related to TDEP maps, focusing on site density and interpolation.
- **Greg Beachley** announced that the Measurement Model Fusion maps version 2025.01 is available on the TDEP website.
- **Liam Trin Nguyen** from Wisconsin State Labs conducted a machine learning analysis to infer data for missing measurement periods.

#### **3. Upcoming Seminar Series:**

- TDEP is starting a seminar series in 2026, with **Jesse Bash** discussing ammonia emissions and **Glenn Wolf** from NASA providing an overview of the FarmFlux measurement campaign.

### **CLAD (Kris Novak/Hazel Cathcart)**

**Kris Novak** provided a preview of the upcoming CLAD meeting scheduled for December 11<sup>th</sup> from 12 to 2 PM. Key points include:

#### **1. Meeting Agenda:**

- The meeting will cover working group and project updates.
- There will be a segment for science sharing, featuring short presentations despite the shortened meeting duration due to current scheduling challenges.
- Time for general discussion is also planned.

#### **2. Leadership and Acknowledgments:**

- **Jeff Sorkin** has been welcomed as the new CLAD Secretary.

- Kris expressed gratitude to **Jeremy Ash** for his service in various executive roles, particularly during recent transitions.
3. **Call for Contributions:**
- A call for CLAD-related papers and highlights has been issued for inclusion in the annual report. Contributions should be sent to **Kris Novak, Cathcart Hazel, or Jeff Sorkin** to compile a formal report in time for the spring meeting.

### **AMSC (Eric Uram)**

**Eric Uram** provided an update on the Aeroallergen Monitoring Science Committee (AMSC), highlighting recent activities and future plans:

1. **Meeting Schedule and Purpose:**

- The AMSC continues to hold quarterly meetings aligned with seasonal changes, reflecting their focus on pollen and seasonal impacts.
- The committee aims to create a unified network of sites, operating practices, and protocols, assessing sensors and collection methods to collect useful data for the public and scientific community.

2. **Collaborations and Partnerships:**

- **Maine DEP:** Operating sites with PollenSense units and Rotorod sampling methods.
- **Tribal Partners:** Collaborating with Nez Perce, Choctaw, and Cherokee tribes on sensor data utilization.
- **Wisconsin:** Partnering with local clinics and colleges to place sensors between Madison and Milwaukee for studying west-to-east weather impacts.
- **Great Lakes Indian Fish and Wildlife Commission:** Exploring sensor placement for climate impact documentation on wild rice beds.
- **NOAA and Other Agencies:** Collaborating on modeling and forecasting pollen, with interest in ground-truthing data.
- **Universities:** Emory University, UNLV, Washington State, and Oregon are analyzing PollenSense data and comparing it with traditional methods.

3. **Data and Technology:**

- **PollenSense:** The company has improved its sensors and data interface, enhancing particulate analysis, including smoke ash and microplastics.
- **Data Access:** The committee has recently gained access to historical data collected by Andy Johnson, with ongoing efforts to review and utilize this information.

4. **Challenges and Future Plans:**

- Funding acquisition and distribution remain a challenge.

- The committee is transitioning leadership and reviewing past data to identify future work areas.

### **DMAG (Zac Najacht/Mark Kuether)**

**Zac Najacht** provided an update on DMAG and the discussion about field form updates and OCR implementation:

#### **Meeting Overview:**

- DMAG met in late September with a full group, including Noel Deyette, Tim Sharac, Amanda Cole, Jason Lynch, Greg Beachley, Chris Rogers, Bob Larson, and others.
- The meeting focused on updates regarding site and sample data, and three main topics: OCR implementation, field form updates, and mapping updates.

#### **OCR Implementation for NTN and MDN:**

- The Abbey Vantage OCR by Navient is being tested to improve data entry efficiency for NADP.
- The OCR initiative is funded by the State Lab of Hygiene, with annual use costs covered by NADP.
- The goal is to streamline the data entry process, reducing manual entry from five steps to three, with OCR handling the initial data entry.

**Motion** - NTN and MDN Field Observer Report Form Edit/Update include the following changes:

- Revise Section 6. **Bucket Sample Weight** for lid change-out procedures' changes
- Removal of Section 7. **Precipitation Record** entirely
- Increase size of Section 10. **Remarks**
- **Entire form** formatting revisions
- Comments from Joint discussion also be put in place

**Mark Kuether** seconded the motion. **Noel Deyette** commented that she is interested to hear what the site operators think that we haven't even thought of yet.

Motion passes with 54% voting and 100% in favor of the motion.

#### **Mapping Updates (Mark Kuether):**

##### **1. Interpolation and Mapping Efforts:**

- An attempt was made to extend precipitation interpolation into Canada using data from a Canadian environmental network. However, the group felt the data lacked sufficient resolution and did not compare favorably with the PRISM product.
- Concentration interpolations were extended into Canada, resulting in split maps showing concentration but not deposition interpolations.

## 2. Correction of Mapping Errors:

- Several errors in past maps were identified, including integration issues with NADP and PRISM precipitation data, miscalculations in total nitrogen deposition maps for 2019-2020, and positional errors in 2024 corrections for NH<sub>4</sub> and total nitrogen and sulfur maps.
- Raster cell size errors were also identified and will be corrected. The corrections will be implemented collectively, ensuring archived maps remain available and changes are clearly communicated on the website.

## 3. Future Plans:

- After correcting these errors, the focus will shift to creating animated maps due to increasing demand.
- Continued research will explore extending precipitation interpolations into Canadian provinces.

### QAAG Meeting Overview (Martin Shafer)

- The QAAG meeting took place during the first week of the government shutdown, on October 8th.
- **Justin Knoll** was introduced as a new EEMS member, contributing timely data reviews over the past months.

### Sitting Criteria Discussion:

- **Eric Hebert** raised concerns about legacy sitting criteria, specifically guidelines on ground slope and ground cover near samplers. The group discussed these but made no recommendations, noting potential misinterpretation due to lack of historical data tracking.

### Site Operations:

- **Richard Tanabe** assessed the impact of the shutdown on site operations, which turned out to be less severe than anticipated.

### Lab Investigations and Updates:

#### 1. Mercury Passive Samplers:

- **Christa Dahman** provided updates on data and discussed reconfiguring the mix of samplers and exploring less aggressive absorbents.

#### 2. ALPHA Samplers:

- Updates were provided on ALPHA samplers, with plans to increase the QC deployment rate to 15% to improve performance assessment.

#### 3. MDN Discussions:

- Discussions on Teflon bags and alternatives, including a move to polypropylene bags and 2-liter Teflon bottles, were held. Shipping cost savings were noted.

#### 4. Total Phosphorus Study:

- The study is on hold due to high blanks in samplers, with plans to make new samplers.

### Additional Lab and QA Updates:

- Optical character recognition (OCR) was discussed as a tool for improving data entry efficiency.
- Replacement of the Hach Lachat with a segmented flow auto-analyzer is underway.

- The 2024 Laboratory QAR report is complete and under review, with comments requested by year-end.
- The SOP for the sample lid change protocol is also out for review.

**Martin Shafer** concluded by noting that there were no motions from QAAG and opted not to repeat details on PFAS changes already covered earlier.

### **NOS (Noel Deyette/ Jason Lynch)**

**Noel Deyette** provided an update on NOS.

#### **Motions Passed:**

1. **MDN Analysis:** Starting January 2026, the minimum sample volume for MDN analysis will change from 1.5 mL to 1.7 mL, and the “v” notes code criteria will adjust accordingly.
2. **Passive Mercury Network:** The network will remain a pilot through 2026.

#### **Meeting Highlights:**

- **Staff and Study Updates:** **Christa Dahman** reported staff changes and mercury analysis coverage needs. Evaluation of NTN metals background from a recent field blank study is underway.
- **AMNet:** Vid Grande noted support for speciation monitoring was cut, converting sites to elemental monitoring only.
- **NTN and AMoN:** **Katie Blaydes** reported minimal quality control exceedances and successful proficiency testing. The flow injection analyzer is being replaced.
- **ALPHA-AMoN Study:** A co-located study showed cost savings and effective operator training for new samplers.
- **Site Support:** **Ella Osby** joined NADP in July. A Sample Status Hub is being used to highlight sites most impacted by missing samples.
- **CASTNET Update:** CASTNET lost BLM sites but is expanding tribal partnerships. Modernization efforts include ozone upgrades and PM sensor deployment.
- **CAPMoN Update:** Budget constraints are expected. The precipitation lab backlog is resolved, with air filter backlog completion expected by 2027-2028.
- **USGS Update:** **Noel Deyette** gave an update on the precipitation chemistry quality assurance (PCQA) program where she discussed that both the NTN and the MDN programs are now quarterly. For 2025, only three quarters of samples were sent out for the MDN program. Noel gave an update on the co-located data, which was 21 samples in the last year out of 26 valid with precipitation. She reported that 100 Field Audit (FA) samples were sent out and that all MDN sites received System Blank (SB) samples. So far, 42 FA and SB samples have been processed, and 7 samples were analyzed for both programs. **Jess Trevino** will join to assist with data release and preparation of samples will be assisted by **Ezra Grey**. Efforts to continue the co-located program continue at NY20 where the comparability of the 1-week 2-week study enters its second year. Cell modem telemetry continues to expand. The NADP GIP was released in 2025 and the NADP Fact sheet will be released soon. These will both be available through the USGS NADP website: [National Atmospheric Deposition Program \(NADP\) | U.S. Geological Survey](#)
- **MDN Bag Sampling Update:** **David Gay** reported on manufacturing issues with Teflon bags being tested, which led to exploring polypropylene bags and Teflon bottles, potentially saving up to 60% on shipping costs.

- **Passive Mercury Network Update:** The passive Mercury pilot network has 10 sites with good agreement between different samplers (Tekran and MerPAS).

### **EOS (Emmi Felker-Quinn/Tracy Dombek)**

Emmi Felker-Quinn provided an update on EOS.

#### **Committee Structure and Changes:**

- **Emmi Felker-Quinn** is the chair, with **Tracy Dombek** as secretary. **Beck Dalton**, who served as co-chair, has stepped down.
- EOS has been affected by retirements, reorganizations, and resignations, leading to adjusted goals and ambitions.

#### **Current Focus and Activities:**

- EOS decided not to hold a separate meeting during the NADP fall meeting due to capacity constraints.
- The committee is focusing on maintaining internal communication within NADP, organizing off-quarter NADP-wide meetings, and distributing updates via a newsletter.
- The next NADP-wide meeting is scheduled for February 11th, with reports distributed in March.

#### **Education and Symposium Efforts:**

- EOS continues to lead travel awards for students attending the Science Symposium and seeks volunteers to review funding requests and judge presentations.
- The committee is involved in efforts to site monitors at high schools, with projects led by **Bly Hartley** at Oldfields School in Maryland.

#### **Outreach and Volunteer Opportunities:**

- EOS remains enthusiastic about outreach and encourages members to share publications, ideas for NADP outreach projects, and volunteer for committee activities.
- Contact information for Emmi Felker-Quinn and Tracy Dombek is available on the EOS and NADP websites, and members can also use the EOS listserv for communication.

### **1:45 Network Optimization Changes Discussion (following up discussion from NOS led by Mike Bell)**

- The Network Optimization Team, composed of members from multiple agencies, focuses on reducing costs while maintaining data integrity and spatial coverage within NADP networks.
- Due to retirements, the Team seeks new members to continue these efforts.

#### **Key Initiatives:**

##### **1. Sampling Adjustments:**

- MDN sampling can now be one-week or two-week exposures, with ongoing comparisons at three sites to ensure data quality.
- Mercury speciation was removed from AMNet, and methylmercury measurement in the litterfall network was stopped.
- A Switch to ALPHA samplers for AMoN.

##### **2. Site Prioritization:**

- **Greg Beachley** led the "Leave One Out" analysis to prioritize sites consistently across agencies, ensuring no large network gaps if sites are cut.
- This analysis involves removing one site at a time to assess its impact on data interpolation and ranking sites accordingly.

### 3. Interpolation Analysis:

- Evaluated how each site contributes to interpolations spatially, using a 500-kilometer search distance and up to 15 points for data pooling.
- Maps were created to visualize site influence and identify areas with insufficient site density for accurate interpolation.

### 4. Future Directions:

- Plans to refine analyses by incorporating distance weights and emission layers to better understand site contributions and guide future site locations.
- The goal is to improve network robustness by identifying low-density, high-impact loss sites and seeking additional site sponsors.

### Feedback and Next Steps:

- **Mike Bell** invited feedback on the analysis and discussed potential extensions, such as creating maps for additional networks and aligning monitoring gaps with emission sources. The aim is to fortify the network and enhance its effectiveness in data collection and analysis.

## 2:30 Discussion on interagency collaboration and site prioritization

**Cari Furiness** expressed appreciation for the spatial distribution analysis and asked whether additional factors could be incorporated into decision-making. Specifically, she suggested overlaying site record length, noting that sites with longer records might warrant different considerations. **Mike Bell** acknowledged that site record length is an important factor, especially given tighter budgets in recent years. He agreed that compiling a comprehensive dataset of variables, including site record length, is essential for informed decision-making. **Noel Deyette** noted that while New York and Colorado have many clustered sites, these areas also have unique ecological and elevational variations that should be considered in site analysis and decision-making. **Mike Bell** added that factors such as critical load exceedances and the number of known sensitive resources are being incorporated into site evaluations to better understand what is being protected. He noted that the network is in a much stronger position now than it was two years ago—or even last year—in responding to unexpected budget cuts, and he expressed gratitude for the team’s efforts and collaboration, which have provided more data and strengthened the network’s overall understanding and resilience.

## 3:00 Successes and accomplishments since the spring meeting, including publications

**Noel Deyette** shared that the National Institute of Food and Agriculture (NIFA) agreements have been finalized, and the sites are now stable, marking an improvement from previous conditions. Acknowledging the challenges of the past year, Noel opened the floor for sharing successes and accomplishments since the spring meeting, encouraging participants to post publications or achievements in the chat for a boost of positive energy. Noel also mentioned that the NADP fact sheet for USGS is about to be published, expressing excitement about this development. **Mark Kuether** inquired about the graphics on the fact sheet, noting previous discussions about color usage. Noel

confirmed that a waiver was obtained to maintain the original design as published on the NADP website and promised to share the published link once available.

**David Gay** highlighted a significant positive outcome for the year: all federal funding was successfully distributed to the participating agencies, except for two federal partners that withdrew. The funds reached USDA, which processed them, marking a notable achievement.

**Mark Kuether** added another positive note, mentioning the successful recruitment of a highly qualified candidate to continue David's work. Additionally, Ella Osby was hired, who is also very qualified, marking two significant achievements for the year.

**Mike McHale** expressed appreciation for **Noel Deyette**, who stepped into the role of USGS NADP coordinator. Despite being thrown into the deep end, Noel has excelled in her position, successfully completing tasks such as finalizing the fact sheet and processing the NIFA contract. Mike commended her for her outstanding work and contributions throughout the year at USGS.

### **3:15 Spring Science Symposium (Mike McHale)**

#### **Meeting Planning and Challenges:**

- The meeting is tentatively scheduled for June 2026, with the Concourse in Madison as the preferred location due to cost considerations. Knoxville is also being considered.
- Federal participation is crucial for the meeting's success, and efforts are being made to increase attendance from other sectors, such as universities.

#### **Session Planning and Participation:**

- **Michael McHale**, as the vice chair of the executive committee, is working on the agenda and is open to session ideas. He encourages people to suggest sessions and act as "session champions" to attract attendees.

#### **Innovative Ideas:**

- **Michael McHale** proposed a "lightning session" for poster presentations, where each presenter gets one minute to pitch their poster with a countdown timer.
- Another idea is to feature short TikTok-style videos from site operators, introducing themselves and their sites, to be displayed during the meeting.

#### **Next Steps:**

- The meeting announcement will be released early in the new year, with the agenda to follow soon after.

**Richard Tanabe** proposed introducing early-bird registration, which has not been offered before, to attract more non-federal participants. He suggested discounting conference registration for new sites as part of their startup—for example, a 40% discount—to encourage attendance. The group also discussed offering a one-day registration option for local attendees, providing flexibility for those who cannot attend the entire week. **David Gay and Zac Najacht** expressed support for these ideas, noting that reduced costs could encourage more people to attend and learn, especially newcomers.

**Richard Tanabe** suggested shortening the meeting by dedicating a single day to business meetings, structured as an all-day joint session. This approach would allow committees to meet beforehand and provide more in-depth updates rather than brief highlights. The proposal includes a two-day symposium following the joint session, with Monday and Friday reserved as travel days to avoid cutting into weekends. **Noel Deyette** supported the idea but raised concerns about student participation, noting that there is no perfect timing for students; however, committed students would likely find a way to attend. **David Gay** agreed with the proposal.

**Mark Kuether** inquired about the appropriate amount of historical data to include in the site report charts within the Sample Status Hub. Currently, the charts go back a full year, but Mark suggested that a shorter timeframe, such as 4-5 weeks, might be sufficient if the purpose is to provide a snapshot. He is considering ways to produce the charts that require less maintenance. **Noel Deyette** expressed a preference for viewing several months of data to assess site performance and identify when a site shut down. While acknowledging the time-consuming nature of maintaining a full year's data, Noel suggested that 4-6 months would be acceptable and mentioned that the hub is checked multiple times a week.

**Melissa Puchalski** also finds the Sample Status Hub helpful and checks it weekly. She agreed that a shorter timeframe, such as 3-6 months, would suffice.

### **3:45    Wrap-up (Noel Deyette)**

Noel Deyette acknowledged that this joint meeting is **David Gay's** last, as he is retiring. Noel expressed gratitude for David's contributions and invited him to stay connected and informed by joining the "retire land" community to keep up with updates.

### **4:00    Adjourn**