

NADP Joint Technical Subcommittee Session Minutes, Fall 2024 Hybrid Meeting

Motions Passed in Joint:

Motion: Change the Governance Handbook on Renewing science committee charters, from:

“Currently, Science Committees are established by a vote of approval by the EC, after submission of its mission and charges. The Science Committee is then either dissolved or renewed by the EC at the request of the Science Committee every four years.”

To:

“ Science Committees are established by a vote of approval by the EC, after submission of its mission and charges. The Science Committee is then either dissolved or renewed by the EC at the request of the Science Committee after four years. Thereafter, a Science Committee can be maintained by having an annual report document published online and approved by the EC each year or requesting renewal from the EC.”

Moved by Mike Bell, Amanda Cole, second

Motion passed

Motion: Extend the PFN transition network for another year (through calendar year 2025)

Moved by Melissa Puchalski, second Amy Mager

Motion passed

Motion: Nominate Mike McHale as incoming NADP Secretary

Moved by Kristi Morris, Winston Luke second

Motion passed

Motion to adjourn by Mike McHale

Monday November 4, 2024 | 8:30 AM – 9:30 AM Central Time

Welcome (Mike McHale)

- Welcome and introductions – New attendees only

Welcome Address by Dr. James Schauer, WSLH Director, NADP Principal Investigator

- One focus of the meeting will be thinking about doing things a little bit differently to maximize the benefit of NADP products, and increase efficiencies across the program.

Executive Committee on the status of our 2024 priorities (Mike Bell)

- NADP EC is responsible for executing decisions and actions brought forward by the subcommittees, advisory committees, science committees, and ad hoc groups; for making budgetary decisions; and for ensuring program continuity, stability, and balance.
- How we currently function
 - Two open meetings – Spring business meeting and Fall business/science symposium
 - Monthly core planning/logistics meetings with NOS Chair, PO and NAL representatives
 - Committee reps invited based on topic/need
 - Plan to send out agenda/minutes and allow others to join moving forward
- Priorities for 2024
 - Help agencies manage sites among decreasing budgets
 - Better understand how agencies rank sites, and support science committees in to develop data products to assist this process
 - Support PO in having conversations with staff and representatives in Washington DC
 - Increase agency awareness of site data and those not meeting data completeness criteria – build support for NADP at all levels
 - Create one-page or online data visualization summaries
 - Give site operators and managers a quick look at data and the value it provides to NADP
 - Provide feedback on development of PFAS network
 - Approved as a transitional network in Fall Meeting 2023, ~ 40 sites
 - Ensure SOPs are in place and workload does not affect data processing of other networks; ensure data review and distribution
 - Developing primers - help science committees transition to new leaders
 - Richard Tanabe developed NADP Wiki site – Robert’s Rules of Order, requirements for motions and governance

Discussion of Moving Science Symposium to Spring (Mike Bell)

- Proposal
 - Move the Science Symposium from Fall to Spring, move Business Meetings to Fall

- Two Business Meetings in 2025 – Spring and Fall
- Next Science Symposium in Spring 2026
- Why? Challenges of finding a suitable time in Fall; questionable federal budgets to start the fiscal year; federal travel in early October is difficult
- Pros
 - Easier for Federal budgets
 - Could plan around end of academic calendar
 - Aligns better with annual data releases
 - Move away from timing of annual IMPROVE meeting
- Cons
 - Could conflict with some schools' finals
 - Would require changes to Exec leadership timeline.
 - Could overlap with other meetings?
- Other considerations
 - 4 shorter quarterly business meetings? Only Science Symposium in Spring?

General Discussion

Broad support for moving the Science Symposium to the Spring, and the Business meeting to the Fall. Perhaps move the August Budget Committee meeting to the first day of the Spring meeting, to keep budget discussions better aligned with federal funding guidance. Alternate proposal to include an EC meeting at the August Budget meeting. Truncating the business portion of the Symposium, to provide a summary of key outcomes and action items from the previous Fall business meeting? Need to prioritize NADP's existence, growth, and continuation. Pursuing grants for science symposium, travel support, etc., would help increase attendance, reduce PO costs.

With budget uncertainty, federal agencies need to work together to prioritize essential sites. Possibly initiate this process through CLAD or TDep. Gather and condense key information, prioritization criteria onto a single document to present consistent information to agencies, science committees, etc.

Outreach efforts to the general public, private sector, etc., were stressed and encouraged, to build support for NADP. Affiliating with the National Institute for Water Resources (NIWR) to enhance visibility and program advocacy.

Proposals to hold the science symposium every other year, and in conjunction with other monitoring groups and programs – IMPROVE, National Estuary Program, AMS, Association for the Sciences of Limnology and Oceanography (ASLO), etc.

Broad support for keeping Fall business meeting as hybrid, rather than virtual, to enhance face-to-face interactions. Discussion of conducting truncated business meetings virtually on a quarterly basis.

External PO/NAL Review 2024 Comments (Ryan McCammon)

- NADP PO and NAL Audit: October 1-2, 2024
 - Every 3 years
 - How well is the program serving stakeholder needs? Improvements needed?

- On site visit – interviews, gathering information, personnel responsibilities, processes, functions, flow of information, communication, financial responsibilities
- Audit Team
 - Ryan McCammon (lead), Noel Deyette, Sarah Janssen, Yongqiang Liu, Brian Izbicki, Michael Butler, Kevin Mishoe, Tracy Dombek
- Next Steps
 - Team is finalizing report, will deliver to PO mid-November
 - General agreement that the NAL/PO staff are performing exceptionally well.
 - Report will include:
 - Recommendations – suggestions offered for improving PO and NAL - no formal response required
 - Findings – items that require a formal written response from the PO and NAL, noting any corrective actions taken
 - PO should provide regular updates to Exec/QAAG between mid-November and 2025 Spring Meeting on response progress
 - Present the PO/NAL’s responses to findings during the 2025 Spring Meeting.

Tuesday November 5, 2024 | 1:30 PM – 3:30 PM Central Time

Van Bowersox Meritorious Service Award, Ellis B. Cowling Lifetime Achievement Award

- The Van Bowersox Meritorious Service Award was presented to:
 - Linda Pardo by Mike Bell
 - Mark Olson by Winston Luke
 - Andy Johnson by Selma Isil
- The Ellis B. Cowling Lifetime Achievement Award was presented to:
 - Doug Burns by Mike McHale
 - Rick Haeuber by Jason Lynch, Melissa Puchalski, and David Schmeltz

Science Committee Charters – Mike Bell

- Most science committees have started developing annual reports. To minimize work required by the 4-year charter renewal processes, proposal to change the Governance Document
- **See above for motion to change the Governance Handbook on renewing science committee charters**

Early Results - Meeting Planning Survey (Mike Bell)

- A Spring Science Symposium was desirable -easier to budget, consider venues other than Madison
 - Early April to early May preferred
- Support for virtual or alternate schedule business meetings
 - But pushback by those favoring in-person meeting
 - Some respondents find it harder to travel to two meetings in a year

- Timing of Spring Symposium

Committee Reports – Motions and Highlights

- **MELD (David Schmeltz)**

- AMNet declined from about 20-24 in 2016 sites, to 10-12 in 2019. After NOAA's departure (Oct. 1, 2024), AMNet is down to 8 sites (6 in U.S.)
- Minimata updates
 - Convention calls for atmospheric mercury measurements
 - Prepping draft reports for review by COP 6 (Oct. 2025)
- PO considering purchasing a new instrument (PS Analytical Inc. G525s 100 Air Sentinel)
- Moving forward with Teflon bag (MDN) - QA and field tests
- Passive Hg pilot network starts on Dec. 31, 2024; 90-day samples
- Interagency meeting on U.S. Hg monitoring: will develop a summary white paper on integrating Hg networks
- MELD will convene a work group to evaluate potential recipients of NOAA Hg instruments
- Randy Kolka talked about the USFS mercury/sulfur initiative. Looking to expand virtual engagement and touting the science.
- Incoming leadership: Co-chair Connor Olson, Post-doc (Harvard/CU-Boulder) and Secretary Trent Wickman (USFS)

- **TDep (Amanda Cole)**

- Brett provided updates on 3 projects in the measurements working group (WG)
 - SNPiT field study; impacts of wildland smoke on deposition; and winter particle nitrate formation study in the southeast
- Expect a report from the measurements workshop end of 2024, a white paper to follow.
- Greg Beachley gave an update from the Measurement Model Fusion work group
- New 2023 TDep maps are now posted along with the TDep map factsheet
 - Impact of losing the CASTNET SO₂ measurements was mitigated by use of a multi-year average bias correction. But that will be a significant change and a challenge for the maps in future.
- Ian gave an update on the stakeholder workgroup - 1st webinar for agricultural stakeholders October 9 - recording is on NADP website. Next webinar November 20, final one in January 2025 (date TBD)
- Presentations
 - Overview of WSON on IMPROVE and CSN filters by Tracy Dombeck.
 - Christine Braven (CEH) gave an overview of the N deposition in complex terrain project in the UK (gap analysis and new measurements to address them)
 - Irene Chang (ECCC) gave an update on the Canadian ADAGIO project
 - John Walker and Amanda Cole gave updates on WMO activities related to TDep – the Measurement-Model Fusion for Global Total Atmospheric Deposition Initiative, and

the SAG overview paper on total atmospheric deposition, dry deposition method evaluation and monitoring recommendations.

- Leadership changes – Da Pan is new TDep Secretary, Colleen Baublitz and Kristen Foley are new co-chairs
- **CLAD (Jeremy Ash)**
 - No motions
 - Chris Clark discussed selecting critical loads for natural resource applications
 - Jason Lynch provided an update on the national critical loads database, new ways of organizing the data, streamlining some naming conventions, and things that will guide people towards which critical loads and data sets to use for decision making.
 - Update from the Ozone working group, from Emmy Felker-Quinn and Chris Novak on estimating and setting critical ozone levels. Updates on ozone impacts in national parks, and the ozone garden network (citizen science).
 - Trent Wickman provided insights from his current detail as a tribal relations specialist with the USFS, discussions of CLAD data and products of interest to tribal resource managers and better engaging tribes
 - Discussed succession planning for Linda Pardo's projects – CL hub, WG3, and CLASS
 - Will renew CLAD charter and submit report to Exec
- **AMSC (Andy Johnson)**
 - Approved Spring meeting minutes
 - Brief recap of activities since the Spring meeting
 - Stakeholders report outs
 - Dan Coats at Aero Biology Research Labs spoke of activities in Canada
 - Claudia Brown from National Center for Disease Control gave an update, including the Council of State and Territory epidemiologists. They have a new liaison that works with NADP and CDC. Looking to reach out and get them more involved again.
 - Melissa Puchalski gave an update on the EPA CASTNET program; investments in pollen monitoring unlikely for now. A few Pollen Sense instruments are on tribal lands
 - No one from National Allergy Bureau in meeting – will follow up w/them
 - Updates from Pollen Sense – they have roughly doubled the size of the sensors deployed nationally, and are making improvements in hardware, software, website, and AI algorithms
 - Updates on pollen monitoring activities from reps from Maine, Washington, and Wisconsin
 - April Hathcoat of the Cherokee nation gave updates on tribal activities
 - Elected Eric Uram as AMSC Chair. Andy will stay connected. Secretary position open
- **NOS (Winston Luke)**
 - Jason Lynch elected as the incoming NOS secretary
 - Progress with streamlined data review approach. Both AMoN and MDN are meeting the 90-day TAT goal, NTN is getting there

- Cost savings in the PO and NAL - reusing PFAS bottles to reduce costs. PO is saving ~\$80K per year using the Federal shipping rate
- Amy Mager gave updates on field operations and the NED, walked us through efforts to upgrade the lab LIMS system software. Mike Randall has organized and streamlined operations of the NED
- Dana Grabowski is now the research operations analyst for the lab and the program, is still doing precip data review, resolving site issues, and serves as a technical lead for instrumentation issues.
- Nichole Miller gave the QA report and outlined steps by the NAL and PO to establish an overarching quality assurance program for both entities
- Noel Deyette gave an update on the USGS external QA Program. The NAL is fully compliant and met the QA goals easily.
- Discussed but tabled a proposed change to the lid change-out procedures for NTN bag sampling, and will address that in the 2025 Spring meeting
- Katie Blaydes gave an update on the Alpha and Radiello comparison (AMoN). Should produce significant cost savings. Comparison to start this month, continue through August 2025 at ~10 sites
- CASTNET update from Melissa
- Kristi gave us a National Park Service update
- **EOS (Beck Dalton)**
 - Motion: Requested to transition from PDF version of governance handbook to HTML version of handbook – passed
 - Motion: Tracy Dombek as new EOS secretary and Emmi Felker-Quinn as co-chair – passed
 - Updates:
 - NADP Factsheet: in-progress, expected completion by EOY
 - NADP Newsletters: expected every March and August
 - Seeking volunteers for AQAW
 - Student presentation and travel award updates
 - Potential communication workshop at next scientific symposium
 - Committee factsheets
- **DMAG (Mark Kuether)**
 - No motions
 - Zac Najacht discussed streamlined NTN data review process - quicker turnaround time
 - Web updates
 - Precipitation network - will provide reviewed data only, with export at 15 min, hourly, and daily resolution. Will have interactive maps, and metadata.
 - AMoN data will be moving to a static table this week and will go live.
 - Web update will have corrections to data export

- Change in the maps to expand interpolated concentrations and deposition from the continental U.S. to include Canada
 - Amanda Cole discussed ECCC study to apply temperature and pressure corrections to Radiello data. ECCC will continue with Alpha samplers going forward.
 - Going forward, DMAG will only have a single chair – Mark Kuether for this year, then will alternate with Zac Najacht
- **QAAG Update (Nichole Miller)**
 - Site support and operations
 - Weather delays, brief EEMS mobile lab breakdown
 - External Review
 - Completed on October 1st – 2nd, 2024 in Madison.
 - Will receive a formal write up from the team by the end of the year.
 - PCQA update
 - Currently 10 NTN, 8 MDN participating laboratories.
 - Proposed change to NTN in 2025 - 12 samples quarterly (now 4 samples monthly)
 - FA/SB program: proposed to only sending to sites we know participate
 - Review to see if more sites need windshields; update the map on the webpage.
 - Co- located sampler
 - NY20 and 20NY is testing 2-week sampling protocol (NTN)
 - Will continue until July 2025
 - Going forward: Select new site? Different climate?
 - Strong interest in continuing this study to reduce costs across the NTN
 - Lab investigation updates
 - Will start field testing of Hg passives
 - TN/TP
 - Reduced [H₂SO₄] to solve over-acidification of LV samples
 - Has been corrected for TN, but still some issues with TP.
 - Will analyze TP on the ICP-OES.
 - ALPHAs
 - Starting a co-located study with Radiellos - 1 Canadian, 10 U.S. sites
 - First deployment on 11/19/2024, 9 months duration
 - MDN Bags
 - Located a supplier to make the bags
 - Lab updates
 - Replace FIA Lachat with a SEAL AA-3 segmented flow auto analyzer

- Changed the naming system for NTN samples in March of 2024.
 - Implemented pH probe rinse
- PFAS
 - About 30 PFAS sites; All using bags
 - ~1,500 total PFAS samples and ~500 of those are QC samples
 - Continuing with trip blanks, field blanks, and spikes quarterly
 - The sites also return their bags on a quarterly basis for analysis
 - No concern with blanks
- QA Update
 - The 2023 QAR is in external review.
 - Working on establishing uncertainty measurements for our samples.
 - The last sample set of the archive project was run in April 2024. Plan to run a robust set of statistics on the data.

Update on Passive Mercury Pilot Network (Kristi Morris)

- Passive Hg Pilot – Overview
 - Tekran MerPAS sampler measures GEM in ng Hg/m³
 - 90-day samples - 4 periods/year
 - 4 samplers and 2 trip blanks each deployment
 - 3 samplers, 1 blank purchased from Tekran; 1 sampler and 1 blank produced by WSLH (in MerPAS bodies)
 - Begin December 31, 2024 and continue through 2025
- Cost
 - \$1000 per sample set of 4
 - 4 times per year = \$4,000 per year per site
 - For sampling devices, analyses, and QA
 - EPA and NPS seed money
- Potential Sites
 - NPS
 - Makah Tribe (MDN WA14, Dragonfly)
 - Zion National Park (USGS Water Quality Partnership Hg study, Dragonfly)
 - EPA
 - Confederated Tribes of the Umatilla (MDN WA04) – also interested in Tekrans
 - La Posta Tribe (E. San Diego) – working to establish passives co-located at their CASTNET site
 - Self-funded
 - AMNet site NY06 –NYDEC (MDN)

- Red Lake Nation, MN – The Red Lake Band of Ojibwe is operating MerPAS samplers, has expressed interest in NADP samplers and GEM-only Tekran
 - Great Smoky Mountains National Park (MDN TN11, Dragonfly)
 - Interested
 - Choctaw Nation (MDN OK24)
 - AMNet site OH02 – Ohio University (MDN too)
 - Mexico with Rodolfo Sosa
- Next Steps
 - EPA/NPS/NOAA/PO
 - Finalize network participants
 - Host kick-off call in December
 - Develop fact sheet for distribution to interested sites
 - WSLH
 - If lab can re-pack samplers in-house using MerPAS bodies - cost savings
 - Can network operate with one sampler (like AMoN) & intermittent trip blanks?
- Methods at the lab
 - Written SOPs for lab, field, and pilot data are nearing last steps of review and finalizing
 - Analytical method tweaking to optimize instrument performance

PFAS Updates (Martin Shafer, Melissa Puchalski, Amy Mager)

- PFAS in Cloud Water Precipitation at Whiteface Mountain, NY
 - Deitsch et al., MS in preparation
- PFAS in Tree Canopy Throughfall
 - Doug Burns will lead manuscript preparation
- Quantifying multi-media loadings of PFAS in the Great Lakes basin using targeted and non-targeted Analyses
 - Quantify PFAS in tributaries, precipitation, open water, and sediments to estimate water column partitioning, loadings. Source fingerprinting.
- Tracing Atmospherically Deposited PFAS from Source to Sediment in the Great Lakes Region
 - Precipitation, loading and PFAS signatures in sediments
 - Manuscripts in preparation
- Atmospheric Transport of PFAS and its Impact on Surface Water Contamination
 - Use passives for atmospheric concentrations, co-locate with some Hi Vol studies
- Historic Depositional Fluxes of PFAS as Documented in Lake Sediment and Soil Cores from Southern Wisconsin
- PFAS In Precipitation
 - Long-term Monitoring for PFAS at NADP-NTN Sites

- Sponsored by USEPA/ORD, USEPA/OAP
 - Summary since 2020; > 1,300 samples, including > 300 QC samples
 - Manuscripts in Draft
 - PFAS in Wet-Deposition Collected at NADP-NTN Sites in the Eastern U.S.A.
 - Development and Validation of Field & Laboratory Methods for Wet-Deposition Monitoring of PFAS using the NADP-NTN Infrastructure.
- PFN Update
 - 14 active, 5 pending sites, good geographic coverage
 - Logistics – incorporation of process into NADP
 - Financial , supply prep, support, sample receipt, etc.
 - Streamline field ops
 - All sites will use bags, sites not required to return bags for extraction
 - PFAS-site specific S
 - PFN vs “regular” PFAS research sites pose some logistical challenges
 - Analytical – enhance robustness and utility of data
 - Updated analytical volume (250 mL) - more samples, less compositing
 - More conducive to quantification of low concentrations in precip
 - Analytical SOP updated, added to lab-wide SOP database
 - Data
 - Movement of data from Horizon to NADP LIMS to website
 - Incorporation of precip and field data
 - Resulting Flagging/Quality Rating (QR) codes
 - Data deliverables – what do data users want?
 - Should develop an Interlab comparison program
 - Proposal to form a PFN Data Committee to address these topics in the next year
- EPA/ORD Updates
 - Continue with current sites, contingent upon FY25 funding.
 - Support Network Growth
 - 12-Point Plan continues to be refined
 - New sample volume requirements, lower LODs
 - New PFAS (chloro-ethers)
 - Data processing and validation requirements
 - PFAS Panel recommendations will be incorporated into the plan
 - Request a 1-year extension as a transitional network
 - Finalize SOPs and QA documentation

- Review by QAAG, DMAG, PFN Advocates
 - Decide on data products and data reporting procedures
 - Build out website with network and site information
 - Continue to evaluate and implement network efficiencies
 - Submit publication(s) with 2020-2022/2023 results/data release
 - Continue to engage with potential new site sponsors
- **See above for motion to extend PFN as a transitional network**

Nomination of NADP Secretary (Kristi Morris)

- **See above for motion to elect Mike McHale as NADP Secretary**

Spring Meeting 2025 (Winston Luke)

- May 12-16, 2025 in Madison, WI
 - Hotel rooms have been reserved at the Madison Concourse
 - The meetings will also take place in the hotel
 - 1:30 PM, Monday May 12 to 1:30 PM, Friday May 16
 - Input and suggestions are welcome

Motion to adjourn by Mike McHale