



November 29, 2021

MEMORANDUM FOR: RMAP Participants and Laboratory Directors

From: Isabel Chavez Baucom,
Laboratory Metrology Program
Office of Weights and Measures

Subjects: 2022 Regional Measurement Assurance Programs (RMAP) Training

NIST Handbook 143, Section 5.2, Table 2 notes that annual attendance at the RMAP training session is required for ongoing laboratory Recognition. Handbook 143, Program Handbook details the criteria used for OWM Laboratory Recognition. In addition, participation in ongoing RMAP proficiency tests (PTs) requires completion of training requirements to the designated level and attendance at the annual RMAP training sessions.

The 2022 Regional Measurement Assurance Program (RMAP) training events are scheduled in-person as noted in the table below after being delivered virtually for the past couple of years. Training topics are selected based on annual needs assessments; input is obtained during laboratory assessments, annual reviews of submitted data, laboratory requests, and input at prior regional training events.

NOTE: The in-person meeting is tentative and contingent on status of the pandemic and we will do our best to provide adequate advance notice to the Regions if in person RMAPs have to be canceled.

Schedules:

The schedule, location, and contact host for each of the RMAP training is listed below. The agenda and detailed learning objectives are in the following sections. NIST will provide training content. Local hosts will provide details on hotel and local registration logistics as each training event approaches.

Region	Dates	City, State <i>(City may change)</i>	Host Contact
SEMAP*	March 28 to 31, 2022	Frankfort, KY	Jason Glass jason.glass@ky.gov 502-782-9215
WRAP*	May 16 to 19, 2022	Sparks, NV	James Kellames jkellames@agri.nv.gov 775-353-3788
NEMAP	June 13 to 16, 2022	Avenel, NJ	Michael Cecere CecereM@dca.njoag.gov O: 732-815-7821/C: 201-919-5163
SWAP	September 12 to 15, 2022	Las Cruces, NM	Clay Ivey civey@nmda.nmsu.edu 575-646-1551
MidMAP	September 26 to 29, 2022	Madison, WI	Justin Lien justin.lien@wisconsin.gov 608-224-4913

* At the end of this RMAP event, NIST/OWM will provide an abbreviated Fundamentals of Metrology training event for students who successfully completed the interim online Fundamentals and LAP Problems Preparation Course.

Registration:

TWO registrations are required for each event (with OWM and with the HOST). The OWM Contact System is used to generate attendee registration lists, name tags/tent cards, adequate training materials, and training certificates. The registration list is shared with the host. Registration fees for the RMAP training are determined by the local hosts. Every effort is made to keep registration fees to a minimum. Specific details about registration will be sent with information for each RMAP.

Agenda at a Glance:

Sessions will be held from 8:00 am to 5:00 pm each day, except for last day. Successful completion requires full attendance and participation in group activities. If any participants leave early, attendance certificates will be adjusted accordingly and full attendance is required according to Handbook 143 by at least one staff member of the laboratory for full Recognition eligibility.

Monday	Tuesday	Wednesday	Thursday
Laboratory Round Table <i>(Lab Reports)</i> --- NCSLI Workload Survey Report	Laboratory Technical Management – Special Topics (Part 1)	Quality Tools in Metrology (Part 1)	Non-Conformities for Software V&V and Uncertainty <i>(Bring your own Uncertainty spreadsheets for peer-to-peer OJT review practice and peer reviews; OWM to identify top non-conformities and action needed from prior reviews)</i>
Lunch	Lunch	Lunch	Lunch
RMAP PT Presentations PT Reporting and Planning Lab Visit and Assessment	Laboratory Technical Management – Special Topics (Part 2)	Quality Tools in Metrology (Part 2)	ONLY for SEMAP/WRAP FoM seminar for online FoM/LAP interim attendees By invitation Only

Abstracts and Learning Objectives (in order of appearance on the agenda):

Laboratory Round Table (Lab Reports) –Ongoing standard reporting of sections 6.2, 6.3, 6.4, 6.5, in the ISO/IEC 17025 standard plus reporting on accreditation, economics, and any measurement issues that come up. Learning Objectives: After this session, participants will be able to

- IDENTIFY general issues facing laboratories within their region;
- DESCRIBE action items they may want to take based on sharing and feedback during this session. OWM staff will facilitate this session; and
- IDENTIFY unique issues that may require national-level coordination or assistance.

RMAP PT Presentations, PT Reporting and Planning This session will cover the annual reporting on PTs and planning for the next cycle. (*OWM Objective: Ensure compliance with the NIST Policy and Plan (NISTIR 7082 and HB 143)*) Each regional group is responsible for updating their 4-year PT plan with input from OWM. Regional participants will prepare draft reports and analysis prior to the training sessions. Final PT analyses and reports are prepared by OWM prior to the meeting. Each new coordinator is responsible for developing a PT Plan with inputs from participants and OWM to identify suitable objectives and to identify appropriate standards to be circulated. Learning Objectives: After this session, using the PT Plan, PT reports, and OWM PT Policy, participants will be able to

- IDENTIFY upcoming PTs for their laboratory; and
- DESCRIBE action items they need to take to follow up prior PT results. Session to be facilitated by OWM staff, regional PT coordinators, and PT coordinators.

Laboratory Technical Management – Special Topics (Part 1) and (Part 2)

A series of eight modules were selected based on collected input from laboratories during the planning phase of this session:

- 1) Laboratory staffing;
- 2) Critical thinking and decision making;
- 3) Managing for Impact;
- 4) Managing and Leading;
- 5) Next Generation Influences;
- 6) Past Generation Insights;
- 7) Generational Synergy; and
- 8) Strategic Planning.

Overall learning objectives: At the end of this session, participants will:

- IDENTIFY 2 to 3 useful action items from each module; and
- CREATE an action plan that you can apply for your personal development and/or your laboratory program to ensure continual improvement. Additional, specific learning objectives are defined and tailored for each selected module. Through presentations, case studies, team work, sharing, and discussions, participants will gain valuable knowledge and skills about laboratory management that can be applied in their laboratory whether they are a laboratory manager, for professional development, and for effective communications with supervisors. Training to be provided by OWM staff and OWM instructors/teaching assistants.
- Note: Additional module-specific learning objectives are within each module.

Quality Tools and Processes Special Topics (Part 1) and (Part 2)

At the end of this session, participants will be able to:

- DESCRIBE the 7 quality tools and 5 processes (listed below); and
- APPLY all tools and processes to at least one metrology example through hands-on case studies and activities conducted during the session.

All examples can be taken back to the laboratory for immediate application and process improvement.

Tools and processes include: Cause and Effect Diagram, Check/Data Sheet, Control Chart, Histogram, Pareto Chart, Scatter Diagram, Flow Chart, Plan-Do-Check-Act, Gantt Chart, SWOT Analysis, Brainstorming, and Five Whys.

Software V&V for Lab Uncertainty Spreadsheets: NISTIR 8250, GLP 15, SOP 29, and Document Control

OWM Objectives: Ensure laboratories used appropriate procedures for verification and techniques for software validation records, identify which criteria in ISO/IEC 17025 address requirements for computer systems and review Uncertainty spreadsheets from the perspective of SOP compliance, good document control, and good software V&V). An introduction on Software Verification and Validation will be provided following Good Laboratory Practice GLP 15. The remainder of this session will be a facilitated activity where participants will be divided into teams by SOP or measurement area. A mock on-the-job training session will be provided by each person to a peer from another laboratory with the goal of identifying questions and answers that are not clear during training and software inspection. At the end of this session, using notes and reference materials and practical experience, participants will be able to:

- IDENTIFY which criteria in ISO/IEC 17025 address computer system requirements;
- LIST examples of Verification and Validation techniques; and
- PERFORM software verification and validation techniques on their laboratory Uncertainty files, as part of a peer-evaluation team.
- Participants will also be able to IDENTIFY, DESCRIBE, and PRACTICE essential components of an on-the-job training exercise.

Training to be provided by OWM staff and OWM instructors/teaching assistants. Note: Laboratories must bring copies of their Calibration Spreadsheets along with validation evidence.