Bureau of Air and Waste
Quality Management System
Refresher Training

Why Do We Have a Quality Management System?

- ☐ As a science-based agency, our goal is to make good decisions based on sound scientific data.

- ☐ MassDEP has a stated goal of maintaining and improving the quality of environmental data used for decision-making.

- ☐ When federal grant money funds an environmental data collection activity or system, EPA requires states to document how they ensure the quality of that data.

- ☐ These procedures must meet federal requirements for a Quality Management System (**QMS**).

What is a Quality Management System (QMS)

☐ The **procedures** we follow to ensure that the environmental data we use to make decisions or to describe environmental conditions are accurate

☐ The **documentation** of those procedures

☐ EPA QMS policy is based on the national consensus standard, ANSI/ASQC E4-1994, *Specifications and Guidelines for Environmental Data Collection and Environmental Technology Programs*.

What is Environmental Data?

☐ AMBIENT DATA: air quality, water quality, discharges, and waste quantities

☐ PROGRAM DATA: reports on agency actions and decisions

What are Data Activities?

- Sampling
- Analysis
- Data management, data mining
- Reporting
- Databases
- Modeling
- Performance measurement projects
- Data Transfer to EPA

What is Data Quality?

□ MassDEP QMS goal: Match data quality to the specific situation

□ Strike the right balance:

■ Our aim is not 100% perfection, 100% of the time

■ Our goal is to ensure that the data is as accurate as needed for the intended purpose.

QMS is the method

❑ The QMS ensures the information system is institutionally supported (financially, administratively, and technically) to meet needs for information management, training, assessment and continuous improvement of information systems.

❑ The QMS applies to all **Federally-funded** projects that involve environmental data operations.

What is our QMS?

- ☐ MassDEP's Quality Management Plan (QMP)
- ☐ Quality Assurance Project Plans (QAPPs)
- ☐ Quality Management Teams
- ☐ Annual QA Self-Assessment
- ☐ EPA Quality System Audit
- ☐ For MassDEP, the QMS reflects our existing procedures, policies, organizational structure, training, guidance, and management structure that makes sure our work gets done and documented properly.

MassDEP's Quality Management Plan (QMP)

- A QMP must be approved by EPA every 5 years.

- Our QMP describes how DEP meets EPA's QA requirements including:

  - Organization and approval processes
  - Training, procurement and documentation
  - Contents, approvals, and resources for QA project plans (QAPPs) for specific projects that are subject to EPA's QA requirements
  - List of such projects (updated annually)

- The Bureau of Planning and Evaluation (BPE) is responsible for the QMP along with bureau QA teams. It is signed by the Assistant Commissioners for each bureau.

When is a QAPP needed?

☐ We must produce a QAPP when BAW is collecting data, analyzing data, or building a data system for a federally-funded activity OR when a model is being applied to data collection for which MassDEP is receiving federal funds.

☐ All of our currently active QAPPS are for air monitoring (Air Assessment Branch in Lawrence). In the past they have been for federally-funded data systems or special studies like mercury in fish.

☐ If you have (or are thinking about getting) a new federal grant that funds collecting or analyzing environmental data or building a data system, you need to plan for a QAPP.

What is a QAPP?

☐ A Quality Assurance Project Plan (QAPP) sets out the data quality objectives for each individual "data operation" in a federally-funded project and how we will meet them.

☐ A QAPP must cover . . .

- ■ specific procedures such as sampling methods, analytical methods, instrument testing/maintenance/calibration, QC, data management, review, and validation
- ■ QA roles and responsibilities for staff and managers, including independence of assessors
- ■ training, documentation, and SOPs
- ■ assessment of the plan, oversight, and how problems are handled

Who approves a QAPP?

☐ Each QAPP has to be signed by the Project Manager and approved by a BAW Quality Assurance Scientist, the DD, and AC and any others indicated in the QAPP.

☐ The QAPP must be approved by EPA before work can begin on new federally-funded projects.

☐ Substantial QAPP revisions also require EPA approval.

What is the BAW QA Team?

- ☐ Each bureau has a QA Team that reports to the BPA AC (Ann Lowery) and DEP QA Coordinator (Jesse Grant).

- ☐ BAW's team includes the AC, DDs, a QA Manager, QA Scientists, and the DDD for the Air Assessment Branch who is the Project Manager for the AAB QAPPs.

- ☐ Responsibility for following QA requirements must be written in the EPRS (or MassPerform for managers) for the QA Team and any staff working under a QAPP or with specific QA responsibilities under the QMP.

What does the QA Team do?

- ☐ Identify projects that require QAPPS
- ☐ Review/approve QAPPS
- ☐ Help update the QMP
- ☐ Conduct Annual QA Assessment
- ☐ Ensure QA problems are identified and addressed
- ☐ Assign qualified staff to QA work
- ☐ Ensure adequate QA training

Annual QA Self-Assessment

Confirms that QAPPs are being followed, staff and management understand their roles and responsibilities, and identifies problems/solutions

- ✓ Refresher Training for BAW managers and supervisors
- ✓ Update QAPP list
- ✓ Questionnaires for staff working under QAPPs
- ✓ BAW QA Team interviews
- ✓ Evaluate need for training, procedure changes, and QMP modifications
- ✓ Submit MassDEP QA lead in BPE

Periodic QA Audit by EPA

- ☐ EPA Region 1 audits MassDEP's QA program every 5 years
- ☐ Our most recent audit was 2019 – no significant issues were found
- ☐ Our next audit will be in Q4 of 2024.

Where are QA docs kept ?

BPE maintains all DEP QA files.

Copies of files relevant to BAW (below) are available to staff on SharePoint here: [QA Files](#)

> Current MassDEP QMP
>
> QAPP List
>
> BAW QAPPS
>
> QSA Report & Docs (for annual assessments)
>
> MassDEP Audit Findings are available from BPE on request.

More training

□ More QA training is available at the the EPA Quality training website:

https://www.epa.gov/quality/training-courses-quality-assurance-and-quality-control-activities

Thank you and confirmation

Please go to this link to acknowledge that you have completed the training.

https://massgov.formstack.com/forms/annual_ba w_qms_training_for_staff

Thank you for supporting the BAW QA efforts.

-- BAW QA Team