

**Montana Department of Environmental Quality**  
Guidance for Development of Sampling and Analysis Plans (SAPs)

**Title Page (include appropriate signatures)**

**Table of Contents (provide TOC for quick reference to sections)**

**1. Introduction and Background Information**

- Project scope
- Site history (if described in QAPP or Eq. Doc. provide reference or cite)
- Regulatory framework (e.g., 40 CFR, MCA, ARM, DEQ-7, etc.)
- Summary of previous investigations, and conclusions, if any
- Location/characteristics of any known pollution sources at the site or in the area
- Site location description and map showing area at a broad scale

**2. Objectives and Design of the Investigation**

- Objectives of study
- Parameters of concern
- Study design (i.e., sampling site locations and the rationale for site selection and the sampling timeframe)

**3. Field Sampling Methods**

- Field measurements (cite instruments used for measurements, calibration procedures, and field measurement methods or procedures)
- Sample collection (cite sampling methods, data and metadata requirements, required field forms, and field QC)
- Field forms
- Photograph procedures & photo documentation, naming and recording method

**4. Laboratory Sample Handling Procedures**

- Describe sample containers, preservation, and holding times
- Describe field documentation (SVF/COC) and sample labeling procedures
- Describe shipping plan for sample transport to laboratory

**5. Analytical Methods**

- Chemical – list parameter, analytical method, required reporting limits
- Biological – cite method or desired taxonomic level and organism target count, etc.
- Required laboratory reporting procedures (i.e., hardcopy, electronic deliverables)

**6. Project Quality Control Requirements (precision, accuracy, blanks)**

- Table of QC limits for field instruments (if applicable)

Operation range, accuracy, precision

- Analytical (internal to lab) QC limits for chemical analyses  
Acceptable precision, accuracy, and negative control (lab method blank)
- Field sample QC limits for chemical analyses  
Acceptable precision (field duplicates) and negative control (field or trip blanks)
- QC limits for biological analysis  
Acceptable precision (% diff in enumeration, % taxonomic difference)
- Data quality assurance review procedures
  - Describe system of data qualification
  - Describe measure of completeness relative to planned design
  - Corrective actions for non-conformance

#### **7. Data Analysis, Record Keeping, and Reporting Requirements**

- Data verification and validation process and QA/QC reporting (e.g., QC summary, project summary report)
- Data interpretation approach
- Project record keeping procedures (i.e., hardcopies, electronic data)
- Data management procedures (e.g., data upload to MT-eWQX)

#### **8. Schedule**

- Schedule of data collection activities and expected project completion (may include table or figure showing project schedule with key project milestones)

#### **9. Project Team and Responsibilities**

- Project team responsibilities
- Sampling personnel
- Subcontractors (e.g., labs – chemical and biological)

#### **References**

#### **Appendices & Attachments**

#### **Don't forget:**

- 1. Obtain document number from QA Officer.**
- 2. Plan ahead!! Make sure signed SAP is in place before sampling.**
- 3. Each sampling site needs to be on an established Assessment Unit (AU). If no AU has been established for a given waterbody segment, request a new AU ID from the IMTS Supervisor.**
- 4. Use the most current monitoring suite so that the appropriate methods and required reporting limits are referenced.**
- 5. Save a copy of the final SAP to the EQuIS Staging folder for that field season.**