Introduction

This table details the minimum requirements for a Quality Assurance Project Plan (QAPP), a formal planning document which describes how environmental information operations are planned, implemented, documented, and assessed during the life cycle of a project. Per EPA, all elements and sub elements must be presented in your final QAPP and should not be deleted. If a section of the QAPP Template is not applicable to your specific project, indicate that the section is not applicable and include an explanation as to why the section is not applicable.

Element	Description	Notes & Hints
A	**GROUP A ELEMENTS: Project Management and Information/Data Quality Objectives**	**Organizing and running project activities**
A1	**Title Page**	
A2	**Approval Page**	
	Include, at a minimum: • Author and organization • Date prepared or revised • Approval signatures of key individuals, including EPA	
A3	**Table of Contents**	
	Include, at a minimum: • Period of applicability • Revision / version control information • Grant number	
A4	**Project Purpose, Problem Definition, and Background**	**Describes the purpose of the project's Environment Information Operations (EIO) (e.g., research, monitoring, environmental technology, use of existing information).**
	Include, at a minimum: • Project goals and objectives	
A5	**Project Task Description**	**Work to be performed and the work product to be produced**
	Include, at a minimum: • Regulatory criteria or standards	

Element	Description	Notes & Hints
A6	**Information/Data Quality Objectives and Performance/Acceptance Criteria**	**The Data Quality Objectives (DQO) process is used to establish the criteria that serve as the basis for designing a plan for collecting information/data of sufficient quality and quantity to support the goals of the project and achieve the stated outcomes. The seven (7) DQO steps guide the project team to plan for their project and meet their project goals.** **1. State the Problem** **2. Identify the Study Goals** **3. Identify Information Inputs** **4. Define the Study Boundaries** **5. Develop the Analytic Approach** **6. Specify Performance and Acceptance Criteria** **7. Develop Plan for Obtaining Data**
	Include, at a minimum: • Information needs and sources • Study area and surroundings • History of study area • Summary of previous studies and existing data • Performance acceptance criteria • Targets for precision, accuracy (bias) and sensitivity • Targets for comparability, representativeness, and completeness • Acceptance criteria for quality of existing data • Model quality objectives	
A7	**Distribution List**	**List of individuals receiving a copy of the approved QAPP and any subsequent revisions**
A8	**Project Organization**	**Identify the individuals and organizations participating in the project or EIO and describe their roles and responsibilities.**
A9	**Project Quality Assurance Manager (QAM) Independence**	**Describe how the project QAM's independence from EIO is ensured. For example:** • Establish Separate Reporting Lines: The QAM should report directly to senior management or an oversight body that is not involved in the day-to-day operations of the project. • Clearly Define Roles and Responsibilities: The QAM's duties should focus exclusively on quality assurance activities, such as auditing, oversight, and verifying compliance with the QAPP. These responsibilities should be explicitly separated from operational

Element	Description	Notes & Hints
		tasks like data collection, analysis, or reporting. • Conflict-of-Interest Policies: Implement policies that prohibit the QAM from participating in activities they are responsible for auditing or reviewing. • Independent Oversight Authority: Assign the QAM authority to oversee quality-related matters independently, with the ability to escalate concerns or discrepancies directly to decision-makers without interference from project operations personnel. • Regular Training and Documentation: Provide training to all team members emphasizing the QAM's independent role and the importance of adhering to quality assurance principles. Document this structure within the QAPP to ensure transparency and clarity.
A10	**Project Organization Chart and Communications**	**Show lines of authority and lines of communication.**
	Include, at a minimum: • Key individuals and their responsibilities • Describe communication procedures to EPA to include elevating discrepancies and QAPP non-conformances.	Describes the organization's project roles and responsibilities, including: • Project manager • Project QAM • Individual responsible for QAPP management • Titles, roles, and names (if determined during planning) of operations and quality individuals within the organization conducting or supporting EIO and their reporting relationships
A11	**Training and Certifications**	**Identify and describe any specialized training or certifications needed by personnel doing EIO. Include system to document training**
A12	**Documents and Records**	**Describes or references processes for management of documents and records, including the QAPP**
B	**GROUP B ELEMENTS - Implementing Environmental Information Operations**	**How you will collect and report data**
B1	**Identification of Project Environmental Information Operations**	
B2	**Methods for Environmental Information Acquisition**	

Element	Description	Notes & Hints
	Field Activities Environmental Measurements	Describe field activities, Standard Operating Procedures (SOPs): • Collection, production, evaluation and/or use + design, construction, operation, or application of environmental technology • Sampling approach: methods, containers, preservation, holding times • Field parameters and lab analytes to be measured • Field log requirements: decontamination, sample ID, chain of custody • Modeling and analysis design, set up and data needs • Describe or reference SOPs
	Laboratory Analysis and Accreditation	• Identifies laboratory methods or SOPs by number, version/revision date, and regulatory citation • Where applicable, indicates modifications to the method or SOP
	Existing Information – intended use, suitability and acceptance criteria	Data obtained from databases, literature, software, websites and how it will be determined suitable
	Environmental Technology	• Identify whether the technology is primarily for pollution prevention, contamination containment, storage, or remediation. • Describe physical parameters or processes collected using environmental technologies, and specific systems, devices and components applicable to both hardware and methods or techniques that measure and/or remove pollutants or contaminants and/or prevent them from entering the environment.
B3	**Integrity of Environmental Information**	**Describe or cite the procedures for ensuring the integrity of the environmental information operations.**
B4	**Quality Control**	**Complete a table of field and lab quality controls.**
	Include, at a minimum: • Corrective action processes and determination of effectiveness • For existing data: systematic review, independent secondary review of literature studies, quality control of databases or spreadsheets • Model calibration and validation	
B5	**Instruments/ Equipment Calibration, Testing, Inspection and Maintenance**	

Element	Description	Notes & Hints
B6	**Inspection/Acceptance of Supplies and Services**	
B7	**Environmental Information Management**	
	Include, at a minimum: • Controls for detecting and correction errors • Procedures to process, compile and analyze information • Required computer hardware/software	
C	**GROUP C ELEMENTS: Assessment and Oversight**	**Management of Data Generated**
C1	**Assessments and Response Actions**	**QAPP implemented as approved?**
	Assessments	Assessment activities may include audits, performance evaluations, management reviews, peer reviews, inspections, surveillance, or readiness reviews, peer consultations, product reviews (e.g., data inspection, software testing, pre-dissemination reviews, or review of contractor deliverables).
	Response Actions	Describe how response actions associated with assessment findings, non-conformances, and corrective actions will be developed, documented and tracked to ensure completion.
C2	**Oversight and Reports to Management**	**Identify the individual(s) responsible for oversight activities and describe management reports.**
D	**GROUP D ELEMENTS: Environmental Information Review and Usability Determination**	**How to Review and Interpret the Information**
D1	**Environmental Information Review**	**Describe or cite the procedures for the information/data verification and information/data validation activities and who will conduct these activities.**
D2	**Useability Determination**	**Qualitative and quantitative evaluation of the project type, quality and quantity to support its intended use**

Quality Assurance Project Plan (QAPP) for
Project Title

Grant Number

Date of the QAPP
QAPP Revision Number

A1. Title Page

Quality Assurance Project Plan for

Project Title: _____

QAPP Preparation Date: _____

Organization Conducting Environmental Information Operations: _____

Organization that Developed the QAPP: _____
(*if different from organization conducting the work*)

Period of Applicability: _____

Revision Number: _____

Grant Number: _____

A2. Approval Page

Subgrantee Approvals:

Quality Assurance Officer (QAO)
Printed Name & Title: _____

Signature & Date: _____

Project Manager:
Printed Name & Title: _____

Signature & Date: _____

JSI Approvals:

Quality Assurance Manager (QAM)
Printed Name & Title: _____

Signature & Date: _____

Grant Manager:
Printed Name & Title: _____

Signature & Date: _____

EPA Approvals:

EPA Region 8 Project Officer:
Printed Name & Title: _____

Signature & Date: _____

EPA Regional Quality Assurance Manager (RQAM)
or Region 8 Delegated Approving Official (DAO):

Printed Name & Title: _____

Signature & Date*: _____

*The effective date of this QAPP is the date the EPA Region RQAM or DAO signs the QAPP.

A3. Table of Contents

List of Figures

Appendices

Acronyms

DAO	Delegated Approving Official
DCN	Document Control Number
DQI	Data Quality Indicator
DQO	Data Quality Objective
EIO	Environmental Information Operations
EPA	U.S. Environmental Protection Agency
PAL	Project Action Level
PM	Project Manager
QA	Quality Assurance
QAM	Quality Assurance Manager
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
RQAM	Regional Quality Assurance Manager
SOP	Standard Operating Procedure
TCGM	Thriving Communities Grantmaker

A4. Project Purpose, Problem Definition, and Background

A5. Project Task Description

Project Schedule Timeline

Activity	Date (MM/DD/YYYY)		Deliverable/Document Generated	Deliverable/Document Due Date
	Anticipated Start Date	Anticipated End Date		

A6. Information/Data Quality Objectives and Performance/Acceptance Criteria

Step 1: State the Problem

Step 2: Identify the Goals of the Study/Project

Step 3: Identify Information Inputs

Step 4: Define the Boundaries of the Study/Project

Step 5: Develop the Analytic Approach

Step 6: Specify Performance or Acceptance Criteria

Step 7: Develop the Plan for Obtaining Data

A7. Distribution List

The following individuals will receive a copy of the approved QAPP and any subsequent revisions.

Name	Title	Organization	Phone Number and Email Address

A8. Project Organization

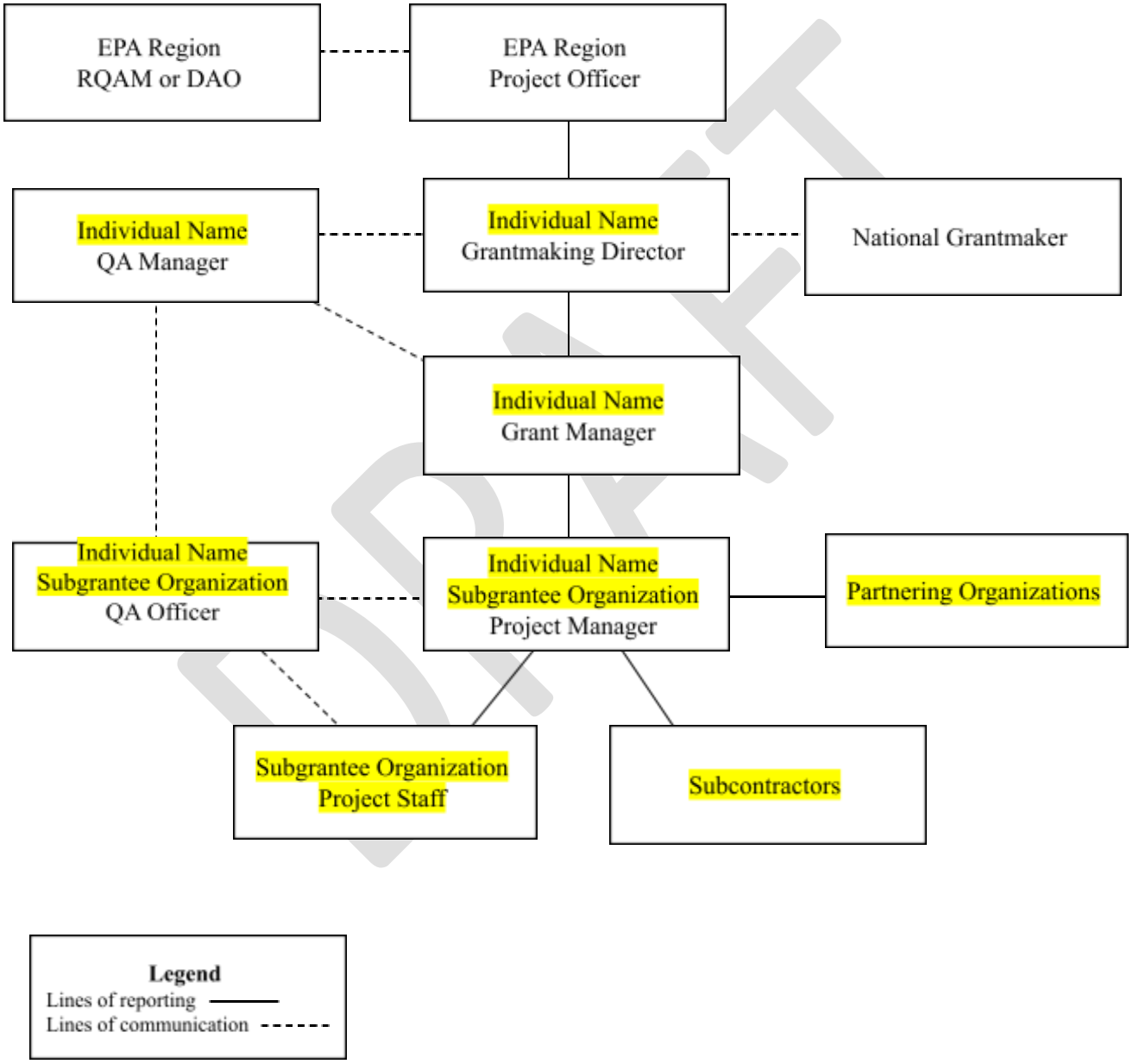
Name	Title	Organization	Responsibilities

A9. Project Quality Assurance Manager Independence

A10. Project Organization Chart and Communications

Figure 1 presents the key personnel participating in this project. Quality assurance (QA) personnel are independent of all environmental information operations, as shown by lines of communication, rather than lines of reporting.

Figure 1 Project Organization Chart



A10. Project Organization Chart and Communications (cont.)

Project Communication Procedures

Communication Driver	Send Communication to (Name and Organization)	Contact Information	Procedure (timing, pathway, documentation, etc.)

A11. Personnel Training/Certification

Role	Specialized Training/Certification	How training will be provided and documented

A12. Documents and Records

QAPP

Monthly Progress Reports

Sample Collection/Field Records

Analytical Records

Assessment Records

Corrective Action Reports

Data Verification and Validation Records

Data Usability Report

Final Project Report

B1. Identification of Project Environmental Information Operations

Sampling Locations and Sampling Standard Operating Procedures (SOPs)

Sample Location	Sample ID Number	Sample Matrix	Analytical Parameter/ Group	Sampling SOP	Rationale	Comments

B2. Methods for Environmental Information Acquisition

Subsection B2.a – Field Activities Environmental Measurements

Sampling Methods

Field/Sampling Equipment and Materials

Decontamination

Laboratory (name, sample receipt address, point-of-contact, email, and phone numbers):

List any required accreditations/certifications:

Sample Container, Volume, Preservation, and Holding Time Requirements

Analytical Parameter/ Group	Analytical Matrix	Method/SOP	Accreditation Expiration Date	Sample Container(s) (number, size, and type)	Preservation (chemical, temperature, light protected)	Maximum Holding Time from Collection to Extraction/ Analysis	Data Package Turnaround Time

B2. Methods for Environmental Information Acquisition (cont.)

Subsection B2.b – Laboratory Analysis

Contaminants of Concern and Other Target Analytes

Analyte	Sample Matrix	Analytical Method	Units	Project Action Level (PAL)	PAL Source	Laboratory-Specific Reporting Limit

B2. Methods for Environmental Information Acquisition (cont.)

Subsection B2.c – Existing Information

B2. Methods for Environmental Information Acquisition (cont.)

Subsection B2.d – Environmental Technology

B3. Integrity of Environmental Information

Sampling Organization:

Laboratory name and address:

Method of sample delivery (shipper/carrier):

Number of days from reporting until sample disposal:

Sample Handling System

Activity	Organization and title of person responsible for the activity	SOP reference
Sample Collection, Packaging, and Shipment		
Sample labeling		
Chain-of-custody form completion		
Sample packaging		
Sample shipping coordination		
Sample Receipt and Analysis		
Sample receipt, inspection, and log-in		
Sample custody and storage		
Sample Disposal		
Sample disposal		

B4. Quality Control

Field and Analytical QC

Sample Matrix	
Field Sampling SOP	
Analytical Parameter	
Analytical Method/ Laboratory SOP	

QC Sample	Frequency/Number	QC Acceptance Limits	Corrective Action	Person Responsible for Corrective Action	Data Quality Indicator
Field Duplicate					
Method Blank					
Laboratory Control Sample					
Laboratory Matrix Spike					
Laboratory Matrix Spike Duplicate					
Surrogates					
Internal Standards					
Others					

B5. Instruments/Equipment Calibration, Testing, Inspection, and Maintenance

Calibration, Testing, Inspection, and Maintenance of Field Sampling Equipment and Laboratory Analytical Instruments

Equipment/ Instrument	Calibration Activity	Testing Activity	Inspection Activity	Maintenance Activity	Responsible Person	Frequency	Acceptance Criteria	Corrective Action	SOP Reference

B6. Inspection/Acceptance of Supplies and Services

Inspection/Acceptance Requirements for Supplies and Services

Critical Supplies/ Service	Inspection/ Acceptance Specifications	Acceptance Criteria	Testing Method	Frequency	Responsible Individual	Handling/ Storage Conditions

B7. Environmental Information Management

C1. Assessments and Response Actions

Assessments and Corrective Action

Assessment Type	Responsible for Conducting the Assessment	Number/ Frequency	Estimated Dates	Assessment Deliverable	Deliverable Due Date	Responsible for Responding to Assessment Findings	Timeframe for Response	Responsible for Implementing Corrective Action	Responsible for Monitoring Corrective Action Effectiveness

C2. Oversight and Reports to Management

QA Reports to Management

Type of Report	Frequency (daily, weekly, monthly, quarterly, annually, etc.)	Projected Delivery Date(s)	Person(s) Responsible for Report Preparation	Report Recipients

D1. Environmental Information Review

Data Verification

Data Validation

D2. Usability Determination

References

Intergovernmental Data Quality Task Force, Uniform Federal Policy for Quality Assurance Project Plans Optimized UFP-QAPP Worksheets, March 2012

U.S. Environmental Protection Agency, Quality Assurance Project Plan Standard (S-2), CIO 2105-S-02

U.S. Environmental Protection Agency, Guidance for Quality Assurance Project Plans (QA/G-5), EPA/240/R-02/009, December 2002

U.S. Environmental Protection Agency, Guidance of Systematic Planning Using the Data Quality Objectives Process (QA/G-4), EPA/240/B-06/001, February 2006

U.S. Environmental Protection Agency, Guidance for Preparing Standard Operating Procedures (SOPs) (QA/G-6), EPA/600/B-07/001, April 2007

FIGURES

APPENDIX A

Standard Operating Procedures

APPENDIX B

Field Forms

APPENDIX C

Laboratory Certificate of Accreditation

APPENDIX D

Checklists