



Beginner's Guide to Preparing Quality Assurance Project Plans for Environmental Projects

This two-part training course is provided to assist you in meeting the quality assurance conditions of your grant.



About this training . . .

Part 1 “Project QA Documentation” provides basic information about QA Project Plans (QAPPs) and will answer some frequently asked questions.

- If this is the first time you’ve planned an environmental project, then you should contact the EPA Region 9 Quality Assurance Unit for assistance before you begin.

Part II “Elements of a QA Project Plan” provides an overview of project information that should be included in the QAPP.

- Additional information on topic slides may be viewed in the speaker notes. (Right click and select Speaker Notes)



Let's get started with some Q & A . . .

I just submitted a grant proposal to EPA for an environmental project, what happens next?

Once you've submitted a grant proposal to EPA Region 9 to conduct an environmental project, you may be required to submit quality assurance (QA) documentation as a condition of the financial agreement.

For example, if you are collecting or using environmental data or designing a new environmental technology, you will be required to write a **QA Project Plan**.



What is a QA Project Plan (QAPP)?

A QAPP is a written document that describes your plan for collecting and using environmental information and data. It documents the results of the planning that you've done.

Document as you Go! Ideally, you should begin describing your planned activities as soon as you decide what you'll be doing. This will avoid having to write a lengthy document at the end of the planning process.



Why do I need to write a QA Project Plan?

A sound *scientific approach* should be used to support your environmental study and the decisions you make.

Therefore, EPA requires, in its financial assistance regulations, that you document in a QAPP how **quality assurance** (QA) and **quality control** (QC) will be incorporated into technical activities to ensure that the data you collect will meet the needs of your project.

QA/QC are used to answer the critical question:
“Do the data represent actual conditions?”



When do I prepare a QA Project Plan?

A QAPP must be written and approved before you start collecting data.

Your grant condition requires you to send copies of the QAPP to both the EPA Project Officer and the Regional Quality Assurance Manager no later than 30 days before you begin sampling.

Therefore, you should begin to plan and document the technical and QA/QC activities of your project with this timeframe in mind.

How do I prepare the QAPP?

Prepare your QAPP while you plan your project by:

- ✓ identifying the purpose and objectives of the study
- ✓ designing an experimental approach that includes choosing sampling locations and collection procedures
- ✓ determining the environmental parameters (chemical, physical, radiological or biological) to be measured
- ✓ selecting a laboratory and measurement methods
- ✓ determining appropriate QA/QC activities
- ✓ determining how data will be recorded, reviewed and reported.

What if I've already planned my project?



If you've already planned your project, then you're more than halfway through developing your QA Project Plan!!!

Now you just need to organize and present the planned activities in a QA Project Plan.

I just finished writing a project Workplan, won't that do?

If you've already described your project's objectives and technical activities in a workplan, then you've completed a major portion of the work involved in preparing a QAPP.

However, there is specific QA/QC information which must also be documented.

The good news is that you can incorporate any previously developed documents (e.g., workplans, sampling and analysis plans, standard operating procedures, methods) directly into the QAPP. These can be included as attachments, eliminating the need to rewrite the information.

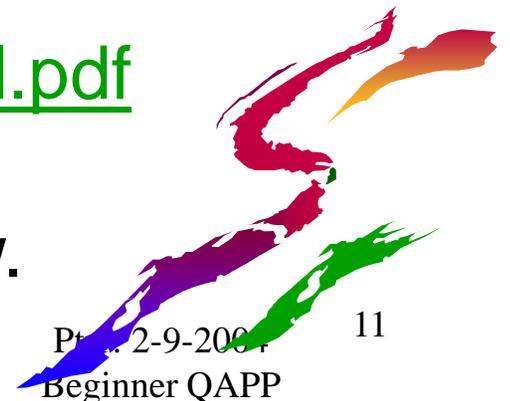
What if I haven't planned my project yet, or I have questions?

The EPA Region 9 QA Unit can help.

We also strongly recommend putting together a Project Team to help plan your project. The team should include field and laboratory personnel and data users.

I've already planned my project, but I've never written a QAPP. Where do I begin?

- 1) Talk to other technical folks who have written QAPPs
- 2) Contact EPA QA Unit personnel for assistance
- 3) Check out our EPA R9 website to view example QAPPs:
<http://www.epa.gov/region9/qa>
- 4) Download EPA's requirements for QAPPs described in *EPA Requirements for Quality Assurance Project Plans*:
<http://www.epa.gov/quality/qs-docs/r5-final.pdf>
- 5) Access program-specific QAPP guidance documents. Refer to speaker notes below.



I'll be using environmental data for my project, but I won't be doing any sampling or analysis. Do I still need to write a QAPP?

Yes. QAPPs are also required when the data you'll use were originally collected for another project or purpose. For example, data that is in public databases, compliance data, or published in the literature.

Data that are generated outside of the project that is being funded is referred to as **secondary data**.

Secondary data must also be determined to be “good enough” before it is used.

➤ If your project will only use secondary data, then contact the EPA R9 QA Unit for guidance.

Exactly what information must I include in the QAPP to get it approved by EPA?

There are 4 groups of project information that all QAPPs must address:

1. Project Management
2. Data Generation
3. Assessment and Oversight
4. Data Review and Usability

Each group contains a number of elements which are discussed in more detail in the following slides

1. Project Management

The elements of this group address the following questions:

- Who will be involved in the project?
- What is the environmental problem?
- What is the background history of the problem?
- What questions must be answered?
- How will the data be used? What decisions will be made with the data?
- What type, quantity and quality of data are needed to support scientifically sound decisions?

2. Data Generation and Acquisition

The elements in this group address the following questions:

- What is the sampling design and what is the rationale behind it?
- What sample collection methods will be used? What quality control activities will be performed to assure that representative samples are collected?
- What field and laboratory analytical procedures will be used? What quality control activities will be performed to assure accurate, precise and sensitive data are collected?
- How will sample data be managed?
- Will secondary data (previously collected data) also be used?



3. Assessment and Oversight

The elements in this group address the following questions:

- How will you check to make sure that the project is being conducted as described in the QAPP. For example:
 - are the samplers collecting samples at the correct locations?
 - is the laboratory generating accurate data?

- What interim and final reports will be generated and provided to management and data users?



4. Data Review: Verification, Validation & Usability Assessment

This final group of elements address the following questions:

- How will you check that individual data collection tasks were completed correctly?
- How will you determine that individual sample results are acceptable or unacceptable based on QC data? How will you determine the limitations on the use of a data set?
- How will you assess the entire set of project data to determine whether the data are “good” enough to use in making project decisions and drawing conclusions?



How can I streamline the writing of my QAPP?

A couple of important points to remember when planning your project and writing the QAPP . . .

- The level of detail in each QAPP will vary according to the type of work being performed and the intended use of the data. In other words, the amount of information in a QAPP is dependent upon the complexity of the project.
- Although a QAPP is usually comprised of 24 elements, not all elements apply to every project. So if an element does not apply to your project, then you just need to state this and explain why.

I've finished Part I of the training, now what?

Congratulations!

At this point you may want to continue on to Part II of the training which provides a more detailed discussion of the types of project information that should be described in a QAPP. If so, click on the icon below.

(It may take a few minutes to download.)



Remember, if you have any questions regarding Part I, give us a call.