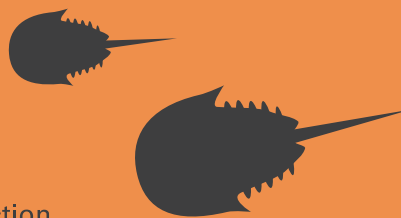# CITIZEN SCIENCE

Quality Assurance & Documentation

"The environment is where we all meet; where we all have a mutual interest; it is the one thing all of us share."

–Lady Bird Johnson

TEMPLATES

EPA United States Environmental Protection Agency

https://go.usa.gov/xEw43

Templates for Citizen Science
Quality Assurance and Documentation

March 2019

To develop the QAPP using the templates, complete each of the recommended templates applicable to your project. Templates may also be combined provided the information is clearly distinguishable.

Template #1: Title and Preparer Page

Develop a descriptive project title, state who wrote the QAPP, and provide a signature and a date space for all parties who need to acknowledge they have read, understand and agree with the plan.

Put a header on the top right side of each page with the following 4 items:
Title:
Revision Number:
Date:
Page _ of _

Project Name: _____

Effective Date of Plan: _____

Name(s) who prepared the plan: _____

Printed Name & Title: _____

Signature & Date: _____

Printed Name & Title: _____

Signature & Date: _____

Printed Name & Title: _____

Signature & Date: _____

Printed Name & Title: _____

Signature & Date: _____

Template #2: Example Table of Contents

Include section headings with appropriate page numbers and a list of figures, tables, references and appendices.

Example Table of Contents (section examples listed)

Page

Template #3: Problem Definition, Background and Project Description

A. Problem Definition: Clearly state the environmental problem(s), question(s) or threat(s) to be addressed by the project. Explain why the work needs to be done, identifying the reasons for conducting the work and/or collecting information relating to the project.

B. Background: Provide relevant historical information, previous studies, and data that have been collected. Identify the data gaps that this project will fill. Use information from Template #8 here as well.

C. Project Description: Describe how the project addresses the problem or answers the environmental questions and links data results with possible actions. Summarize the work to be performed, and the data you want or need to collect, the technologies or methods used to collect data and the decisions you plan to make with the data. The project description should include information on project objectives, study area, and data users.

The project objectives should link data results with possible actions. Clearly describe the decision to be made, or outcome to be achieved, including any action levels or standards to which the data should be compared.

Provide a description and map of the project site or study area, and sampling locations and how they were chosen so that you can tie this information back to the goals and objectives of the project. Specific locations are addressed in other templates.

Identify the time period for data collection.

Identify who will be using the data (data users).

Include the following information in narrative, tabular, or graphic formats:

A. Problem Definition:

B. Background:

C. Project Description:

    Project Objectives:

    Project Sites or Study Area:

    Time Period:

    Data Users:

Template #4: Data Quality Objectives and Indicators

Data Quality Objective(s): Provide a qualitative or quantitative DQO statement for the project.

A. Data Quality Objectives

B. Data Quality Indicators

Provide a table that lists the **Data Quality Indicators**, QC activities, and goals. We have filled out the table below with suggested DQI goals.

Data quality indicators	Quality control activities and checks	Typical DQI goals
Precision	Field and laboratory replicates	20 percent RPD (relative percent deviation) or RSD (relative standard deviation)
Bias	Pre- and post-calibration, blanks	Data are not biased in a particular direction
Accuracy	Calibration standards, blanks	No blanks contaminated and all calibrations within acceptable limits (or acceptance criteria)
Representativeness	Evaluate whether the data accurately represents the system, population, place, time and/or situation of interest	Data collected represent the system characterized or exposure experienced and are not biased
Comparability	Compare to existing data or datasets.	Data collected are sufficiently similar in methodology to permit a meaningful analysis
Completeness	Compare to intended sampling goals to meet the project purpose	Could be stated as the total number of samples or a percentage (e.g. 90%) of samples collected, or an identification of the critical samples needed for the project purpose
Sensitivity	Compare to reporting or detection limits from existing data or for decision-making	State the sensitivity needed for the instruments, methods or processes used for the project to obtain meaningful data. This depends on analytical method but generally the reporting or detection limits should be 3 to 5 times lower than an action level.
Measurement range	Evaluate maximum and minimum values	Minimum values are at or above the detection limit and maximum values are not above the highest calibration standard

Template #5: Project Schedule

List all major project activities that will be performed during the project. Provide estimates of the timeframe expected for the activities – such as procuring equipment, the time period for data collection, and preparation of the final report – to be conducted and completed.

Activities	Group/Person responsible for activity completion	Timeframe work will be done

Template #6: Training and Specialized Experience

A. Training

In this section, state any required training that an individual involved with the project would need. Also include any refresher trainings that may be conducted.

In the **Personnel/Group to Be Trained** section, state who will need the specific training and how many people will be trained.

In the **Description of Training** section, state who will perform the training and what kind of information the trainee will learn.

In the **Frequency of Training** section, state how many times the training will be conducted during the project.

Personnel/Group to be Trained	Description of Training (Including Trainer(s))	Frequency of Training

B. Specialized Experience

Complete this table if any individuals have specialized experience that will be utilized by the project. State who the individual is, their specialized experience and their years of experience.

Note on Use of Laboratories: If a laboratory relies on accreditation/certification to demonstrate their qualifications in the field of sampling or analyses to be conducted, they should be able to provide documentation. Some examples follow:

• a copy of the organization's quality system documentation such as a quality manual, or some other name, depending on the organization. It should describe how the organization will plan, implement, and assess the effectiveness of its quality assurance and quality control operations applied to environmental programs.

• a signed narrative statement from a responsible corporate official affirming that the organization holds relevant accreditation/certification from a specific accrediting body. This statement could be part of an overall proposal, or bid response, or it could be a separate requirement.

Person	Specialized Experience	Years of Experience

Template #7: Documents and Records

Identify the field and laboratory information and records needed for the project. These records may include, but not limited to raw data; data from other sources such as data bases or literature (see Template #8); field logs; field data sheets; laboratory forms; calibration and quality control (QC) checks. Also include final disposition of records and documents, including location for storage and length of retention period.

Create a table or provide a narrative statement in response to these questions.

Document Control: How will you make sure everyone has the same approved version of the QAPP? Who will be responsible for making sure this happens?

Data Generation: What records and documents will be produced during and for your project? Three basic areas to cover are field data, laboratory data, and data assessment.

Data Report Package: What specific records and/or documents will be included with the final data report? Raw data? Data from literature searches and/or databases? Field/analytical log books? Audit reports? Other information?

Reporting Format: Are there hard copy and/or electronic reporting formats? If so, what are they?

Storage: Do you have requirements for storing the records and documentation? If so, what are they? For example, for how long and where will the documents be stored? What goes into the project files? What will happen to the records and documentation after the time period it will be (or needs to be) stored (its final disposition)?

Template #8: Existing Data and Data from Other Sources

Identify all existing data that will be used for the project, and their originating sources. Specify how the existing data will be used, and the limitations on their use.

Create a table or provide a narrative statement in response to these questions.

Existing data: What existing data and/or non-measurement data will you be using?

Data sources: Where did the data originally come from (e.g. a database, program, literature, publication)?

Data usage: How and for what will the data be used? State the need for this data and its proposed use.

Requirements and limitations: What are the requirements and limitations for the data to be acceptable for use in your project? Do they meet your previously determined project quality objectives? For example, if you are looking for temperature data for a water body collected in July, then temperature data collected in April would not be acceptable for the project. Data collected with a certain instrument or by a certain method are also instances where the collected data may not be acceptable for the project.

Template #9: Sampling Design and Data Collection Methods

A. Sampling Design

For this section, describe and provide a rationale for the sampling design and the data collection activities and methods, including the types of technologies you will employ. Include location-specific information, such as global positioning system (GPS) coordinates or landmarks, or maps for the data collection locations. Provide information about the frequency of sampling, and the collection of quality control samples.

Create a table or provide a narrative statement in response to these questions.

Sampling Design: Are you planning a descriptive, statistical, or a targeted approach? Will you sample reference or impacted stations or populations? For continuous data, what will your averaging period be?

Methods: What are your data collection activities? Why did you choose this method? Are these grab samples, or transects? Are you using a continuous air sensor, an *in situ* electronic instrument or recording vegetation in quadrats along a transect?

Locations: At what locations are you sampling? Be as specific as possible, using GPS, landmarks, maps, etc.
A site map showing the sampling locations and other relevant information for the project should include a north arrow, enough detail to put the sampling locations in context to the surroundings and a good key for any symbols used. Any information that makes it easier to locate exactly where samples were collected is useful.

Frequency: How often are you taking samples?

Quality control: What kinds of quality control samples (e.g. field blanks, replicates, co-located samples, species validation) will you collect?

B. Data Collection Methods

Provide the following information in the table(s) below for either discrete, or continuous samples.

State what kind of **matrix** (air, water, soil, vegetation/animal/organism) is being sampled or observed during the project.

State the **parameters** (e.g., indicator, substance, species) that will be measured/sampled.

Provide the **number of sampling locations**.

State if **multiple samples will be collected at each location**, such as sampling at different depths or taking repeated measurements over a given amount of time (i.e. once/quarter).

State the **type of quality control (QC)** samples that will be collected.

State the **total number of samples** that will be collected for each sampling event or total project including field QC samples, such as replicates, or validation samples.

State the **specific methods or SOPs** that will be used. Attach any SOPs as necessary in the appendices.

State the **rationale** for these samples, e.g. why the data will be collected at the particular location, frequency and time. Use a short reference to the objective, for example, some stations might be considered "reference" stations, while others may be considered "impacted".

Discrete samples

Matrix	Parameter	# of Sampling Locations	# of Samples per Location	Type of Field QC Samples	Total Number of Samples/ Measurements	Sampling SOP Reference (Attach SOP to the QAPP)	Rationale
Water							

Continuous air or water monitoring

Matrix	Parameter, including sensor type	# of Sampling Locations	Frequency of measurement (e.g. every 15 minutes)	Type of Field QC Samples including comparison to reference methods or discrete measurements	Averaging period (e.g. one hour, one day)	Sampling SOP Reference (Attach SOP to the QAPP)	Rationale
Air							

Vegetation transects

Matrix	Parameter (e.g. species composition or percent cover)	# of Transects	# of Quadrats per transect and/or length of transect	Type of Field QC Samples, such as field replicates or species validation samples	Total # of Transects	Sampling SOP Reference (Attach SOP to the QAPP)	Rationale
Vegetation transect							

Template #10: Sample Handling and Custody

Identify the requirements for sample handling, custody in the field, laboratory and transport, taking into account the nature of the samples, the maximum allowable sample holding time before extraction or analysis and available shipping options and schedules. Sample handling includes packaging, shipment from the site and receipt by and storage at the laboratory. Examples of sample labels, custody forms and sample custody logs should be included. Fill in the table below to identify organizations responsible for custody of samples. If appropriate, ask the laboratory you will be using to help you complete this template. *Note that most of these items are applicable to discrete sampling and for samples that will be transported to a laboratory.* Continuous monitoring is less established and other requirements may be needed to ensure providence of data.

Activity	Name/Organization	Contact Information
SAMPLE COLLECTION, PACKAGING, & SHIPMENT		
Sample Collection		
Sample Packaging		
Coordination of Shipment		
SAMPLE RECEIPT & ANALYSIS		
Sample Receipt		
Sample Custody & Storage		
Sample Preparation		
Sample Analysis		
Sample Archiving (if appropriate)		
Sample Disposal (if appropriate)		

Create a table or provide a narrative statement in response to these questions.

Sample Identification Procedures: How will your samples be identified? Each must have a unique ID, for example, state and sample number [e.g. MA001].

Chain-of-Custody Procedures: How will you ensure chain-of-custody? What forms or procedure? Every person who handles, transports or accepts samples signs the chain-of-custody form with date and time. See an example of a chain-of-custody form in the compendium of examples.

Field Sample Custody/Tracking Procedures: What custody and tracking procedures will be used from sample collection to packaging to shipment to delivery to the laboratory? Will you use custody seals? What type of shipment or carrier will you use for transportation? Will you use laboratory sample transfer forms? What is the maximum holding time (amount of time between sample collection and sample extraction or sample analysis)? Where will samples be kept and preserved while transporting to the laboratory?

Laboratory Sample Custody/Tracking Procedures: What custody and tracking procedures will be used from receipt of samples to preparation to analysis to archiving to disposal? Will you use laboratory sample receipt forms?

Template #11: Equipment/Instrument Maintenance, Testing, Inspection and Calibration

In the tables below, generate a list of all laboratory and field equipment that will be used for the project. Provide any maintenance and calibration requirements for the equipment that will be used during the project. State how the calibration information will be documented. Calibration records should be kept on calibration data sheets specific to each piece of equipment. Calibration records should include date, time, name of individual doing calibration, and the calibration results. Acceptance criteria for calibration checks should also be included on the data sheets.

Also document how supplies and/or consumables (e.g. reagents) are inspected before using them. List who conducts the inspections and how they do it, e.g. by visually checking them or documenting the expiration dates or if they were inspected before shipping. Your project may need specific criteria for acceptance of consumables.

These tables may not be needed if an attached standard operating procedure (SOP) or manual includes the same information.

Equipment and Instrument Maintenance, Testing, and Inspection

Field & Analytical Equipment and/or Instrument	Maintenance Activity	Testing/ Inspection Activity	Frequency	Acceptance Criteria	Corrective Action	Responsible Person	Analytical SOP Reference

Equipment and Instrument Calibration

Field & Analytical Equipment and/or Instrument	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action	Responsible Person	Analytical SOP Reference

Template #12: Analytical Methods

Although this table is more applicable to discrete samples analyzed by a laboratory, it can be adapted for field analyzed samples. Identify all laboratory organization(s) (if applicable) that will provide analytical services for the project and list the specifications for each analytical group (such as metals, or nutrients), or parameter measured. Include information such as reporting (or detection) limits, analytical/preparation method SOP, sample volume, containers, preservation requirements, maximum holding time and the laboratory contact information. The table should be adjusted to add or remove your project's applicable laboratory specifications. Note that these items are typically applicable to discrete water sampling. The list of items for air sampling and continuous monitoring is less established and may not be applicable. This may also apply to Template 13. Name and Address of the Laboratory can be listed as a footnote.

Matrix	Analytical group or parameter	Reporting or Detection Limits	Analytical & Preparation Method/SOP Reference	Sample Volume	Containers (number, size, type)	Preservation Requirements (chemical, temperature, light protected)	Maximum Holding Time (preparation and analysis)

Template #13: Field and Analytical Laboratory Quality Control (QC) Summary

In the tables below, identify the number and types of field and laboratory quality control samples. Complete a separate table for each matrix or analytical group and, as needed, concentration level. Concentration level refers to level of the analyte <u>expected</u> in your sample, and is typically rated as trace, low, medium or high. Include the field QC samples that will be collected and sent to the laboratory, and the QC samples performed by the laboratory. See Template #4 for your data quality objectives and Template #s 4 and 9 for types of QC samples. Ask the laboratory you will be using to help you complete these templates. Corrective Actions are measures you take to fix conditions that may have caused exceedances of acceptance criteria, such as contamination in a sampling bottle, or a poor calibration. You can inspect the instruments, recalibrate, re-analyze samples, or flag the samples (see Template #16). This template may not be applicable for continuous sampling or for recording biological observations.

Matrix	Analytical group or parameter	Concentration level	Quality Control (QC) Sample type	Frequency or Number of QC samples	Method or SOP QC Acceptance criteria or DQI goals (See Template #4)	Corrective Actions

Template #14: Data Management

> Describe the data management processes used throughout the life of the project. Data management includes recording and transcribing field notes, logging and retrieval of instrument data, transmittal of automated field and laboratory results, data transformation and reduction procedures, compilation of survey results, and data storage, retrieval and security uses throughout the project. Describe the way data handling errors will be controlled (i.e. spot checks for transcription and calculation errors).

Create a table or provide a narrative statement in response to these questions.

Data Management Process: How will you manage data so that it may be traced from planning through sampling and analysis to assessment to final use and storage? Some of this information may have been covered in Template #9.

Data Management Procedures: Do you have existing standard operating procedures (SOPs), such as for record keeping, document control, storage and retrieval of data, that you will reference? If not, how will you describe the procedure(s)? Make sure through either SOPs, tables, text, etc., you include data management of all phases of your project, including, as appropriate, project planning, field, lab, assessment, storage and retrieval, project planning, data from other sources, etc.

• How will all data be recorded?
• Will data be transcribed from datasheets to an online database?
• What percent of data will be checked for accuracy and transcription errors?
• Who will check for discrepancies in data entries, How?
• How will lab results be delivered and by whom?
• How will data that did not meet the QC requirements of the lab be qualified?
• Will data be entered into an electronic database? By whom?
• If applicable, will electronic files be backed up daily?
• How will original data be stored and for how long?
• How will you qualify raw data for QA and QC?
• How will you ensure access to data by appropriate parties in various stages of processing (e.g., raw, under QA review, final)?

Data Handling: Will data be generated by hand (such as in the field), collected from literature or other sources (existing data), from computerized equipment or instruments and/or computer generated (such as in the lab or during review of the data)? Will you need any minimum performance or acceptability requirements for sources of data (such as computer hardware or software) not previously noted in Template #13?

Management Requirements: Do you plan to work with other organizations to make sure you are following their data management requirements?

Template #15: Reporting, Oversight and Assessments

In the tables below, specify the frequency of all reports, the names of the originators and to whom they will be issued. Itemize what information and records must be included in the report(s). This might include but is not limited to the following:

· Sample collection records including QC sample records

· Equipment calibration records

· Assessment reports

- Corrective actions taken

· Data reviews with associated recommendations/limitations

· Final report of results

If the project will include posting data to a website for public access, state in your description information about how data limitations will be conveyed.

For each type of assessment, describe procedures for handling any deviations in the project plans (such as changes in sampling design, or sampling locations) that may be encountered during the planned project assessments. Provide information on assessment type, frequency of assessment, who will conduct the assessment, and how issues or deviations will be addressed.

Reports: List the types of reports, such as status reports or final reports, that you will prepare, and who the recipients are. For smaller, less complex projects, this template may take the form of a narrative description of the following elements.

Type of Report	Frequency (Daily, weekly, monthly, quarterly, annually, etc.)	Projected Delivery Date(s)	Person(s) Responsible for Report Preparation (Title and Organizational Affiliation)	Report Recipient(s) (Title and Organizational Affiliation)

Assessment, if part of your project: If not part of your project, note this in your QAPP and either write N/A in the template or do not include the template. This table may take the form of a narrative description of the following elements.

Assessment Type (on-site inspection, laboratory, data quality, etc.)	Frequency	Person(s) Responsible for Performing Assessment (Title and Organization)	Person(s) Responsible for Responding to Assessment Findings (Title and Organization)	Person(s) Responsible for Identifying and Implementing Corrective Actions (CA) (Title and Organization)	Person(s) Responsible for Monitoring Effectiveness of CAs (Title and Organization)

Assessment Deficiencies and Corrective Actions (CAs), if part of your project: If not part of your project, note this in your QAPP and either write N/A in the template or do not include the template. This table may take the form of a narrative description of the following elements.

Assessment Type (on-site inspection, laboratory, data quality, etc.)	Where Deficiencies Documented (checklist, logbook, written or electronic report, etc.)	Person(s) Notified of Findings (Name, Title, Organization)	When Notification Due (immediately, within 1 week, in final report, etc.)	Where CA Response Documented (checklist, logbook, written or electronic report, etc.)	Person(s) Receiving CA Response (Name, Title, Organization)	When response Due (immediately, within 1 week, in final report, etc.)

Template #16: Data Review and Usability

Include in this section the types of checks that will be performed during and at the end of the project to determine if the data collected are usable for achieving the objectives of the project. Describe the data review, verification and validation steps that will be performed to determine if project data were collected, generated, and analyzed according to the project's planned requirements. You will need to lay out a process for determining data usability in the event that QC criteria are not met. Although data verification, validation, and usability are typically conducted sequentially, it may be beneficial (and more cost effective) for many projects to combine steps. For example, the entity conducting the verification could also conduct the first step of the validation process concurrently. Refer to E*PA QA/G-8 Guidance on Environmental Data Verification and Data Validation* for more detailed information on these reviews.

Create a table or provide a narrative statement in response to these questions.

Data Review: Describe the overall methods or procedures you will use to review the data, including deviations from the QAPP, SOPs and project objectives. If issues are found, who will resolve them and how? How will you communicate the results and any limitations of the data?

Data verification: Describe your verification process. You should address conformance of collected data with QC goals in Template #s 4, 9 and 11. What documentation will you assess? Examples of records commonly included in the verification process include: instrument logs or bench notes; instrument readouts (raw data); calculation worksheets; quality control (QC) results; internal laboratory checklists, and field logbooks and datasheets.

Data validation: Describe your validation process. Validation might address many of the activities in Template #s 9 through 14. List the activities you will review, such as:
- how field sample collection, handling, and field analysis were performed;
- the specific method(s) used to produce data for each analytical group, matrix, and concentration level;
- how analytical laboratory measurements were performed;
- the procedures used for data recording and management including electronic or manual transfer, data entry or transcription, calculations, and use of data from other datasets;
- evaluation of appropriate ranges of data; and
- the name of the person, identified by title, responsible for data validation.

Examples of records commonly included in the verification process include: field logs; chain-of-custody forms (field and laboratory); laboratory receipt records; refrigerator and freezer logs; and certificates for standards or solutions, and electronic spreadsheets.

Data usability: How will you reconcile your data with your project and data quality objectives, and document limitations on the use of the data?

Data presentation: Describe how the data will be summarized or analyzed (e.g., qualitative analysis, and descriptive statistics, or inferential statistics) to meet project objectives. If descriptive statistics are proposed, list how the data will be summarized (e.g., mean, median, standard error, or minimum and maximum values). If an inferential method (which allows you to apply sampling results to a general population) is proposed, an indication of what is specifically proposed (hypothesis test, confidence interval, or confidence limit) should be indicated.

Template #17: Project Organization Chart

Fill in the names of the individuals and their project titles (where applicable). If the project does not have all the personnel in the chart, put N/A in the box where this applies. Modify or add boxes to accurately reflect the communication and reporting structure of the project. The key roles are the Project Lead, Project Quality Assurance Manager (QAM), Field Personnel and the Laboratory Name and Contact Person (if applicable).
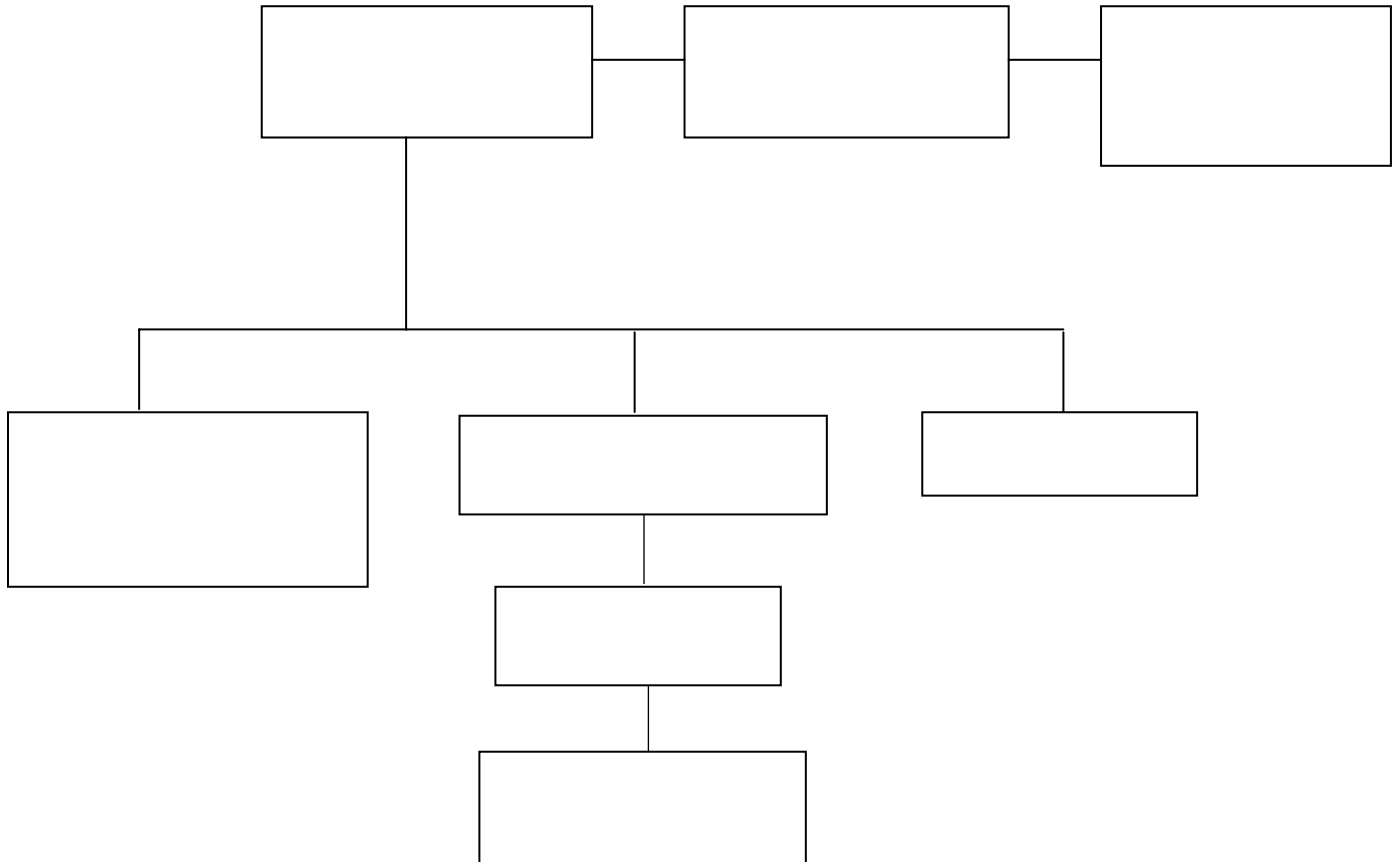
Template #18: Project Organization

Fill in the name, title, organization affiliation and responsibilities for each individual in the project. For the responsibilities section, state the work or task (e.g. data collection, or Quality Assurance Manager) each individual will be doing throughout the project. Identify all key personnel and organizations that are involved in your program, including data users. List their specific roles and responsibilities. In some monitoring projects, one individual may have several responsibilities. An organizational chart is a good way to graphically display the roles of key players, but a table may also be used to summarize the information.

Name	Title	Organizational Affiliation	Responsibilities

Template #19: Project Distribution List

For this table, input the names and contact information for all individuals who will need to get a copy of the QAPP or other documentation. For a small project, the project distribution and project organization template may be merged.

Name/Title	Contact Information

Citizen Science Quality Assurance and Documentation Checklist

The purpose of this checklist is to assist in the preparation of quality assurance documentation for planning and reporting. The checklist conforms to the companion Handbook and Templates.

Citizen Science Quality Assurance Project Plan (CSQAPP) Templates

Managing the Project			
	Y/N	NA	Comments
Template #1: Title and Preparer Page			
Develop a descriptive project title, state who wrote the QAPP, and provide signature and date space for all parties who need to acknowledge they have read, understand and agree with the plan.			
Template #2: Table of Contents			
Includes section headings with appropriate page numbers and a list of figures, tables, references and appendices.			
Template #3: Problem Definition, Background, and Project Description			
Clearly state the environmental problem(s), question(s) or threat(s) being addressed by the project. Explain why the work needs to be done, identifying the reasons for conducting the work and/or lack of information relating to the project. Describe how the project links results with possible actions.			
Template #4: Data Quality Objectives and Indicators			
Provide a qualitative or quantitative DQO statement for the project and identify the data quality indicators.			
Template #5: Project Schedule			
List all major project activities that will be performed during the project.			
Template #6: Training & Specialized Experience			
State any required training that an individual involved with the project would need. Also include any refresher trainings that may be conducted.			
Template #7: Documents and Records			
Identify the field and laboratory information and records needed for the project.			

Collecting the Data			
	Y/N	**NA**	**Comments**
Template #8: Existing Data and Data from Other Sources			
Identify all existing data that will be used for the project, and their originating sources. Specify how the existing data will be used, and the limitations on their use.			
Template #9: Sampling Design and Data Collection Methods			
For this section, describe and provide a rationale for the sampling design and the data collection activities and methods, including the types of technologies you will employ.			
Template #10: Sample Handling and Custody			
Identify the requirements for sample handling, transport and custody in the field and laboratory taking into account the nature of the samples, the maximum allowable sample holding time before extraction or analysis and available shipping options and schedules.			
Template #11: Equipment/Instrument Maintenance, Testing, Inspection and Calibration			
Generate a list of all laboratory and field equipment that will be used for the project. Provide any maintenance and calibration requirements for the equipment that will be used during the project.			
Template #12: Analytical Methods			
Identify all laboratory organization(s) that will provide analytical services for the project and list the specifications for each analytical group, or parameter measured.			
Template #13: Field and Analytical Laboratory Quality Control (QC) Summary			
Identify the number and types of field and laboratory quality control samples. Complete a separate table for each matrix or analytical group, and, as needed, concentration level.			
Template #14: Data Management			
Describe the data management processes used throughout the life of the project.			

Assessing and Reviewing the Data			
	Y/N	NA	Comments
Template #15: Reporting, Oversight and Assessments			
Specify the frequency of all reports, the names of the originators and to whom they will be issued. Itemize what information and records must be included in the report(s).			
Template #16: Data Review and Usability			
Include in this section the types of checks that will be performed during and at the end of the project to determine if the data collected is usable for achieving the objectives of the project.			

Organizing the Project			
Template #17: Project Organization List Chart	Y/N	NA	Comments
Fill in the names of the individuals and their project titles (where applicable). If the project does not have all the personnel in the chart, put N/A in the box where this applies.			
Template #18: Project Organization			
Identify all key personnel and organizations that are involved in your program, including data users. List their affiliation and specific roles and responsibilities**.**			
Template #19: Project Distribution List			
Input the names and contact information for all individuals who will need to get a copy of the QAPP or other documentation.			