# Title and Approval Page (A1)

## Quality Assurance Project Plan for [Project Name]

**Revision: 0
RAE/EPA Grant #: XXXX
Lead Organization:**

**Partner Organization(s):
January 27, 2021**

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| Thomas Ardito – Restore America’s Estuaries Grant Manager |  | Date |
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|  |  |  |
| Margherita Pryor – EPA Project Officer |  | Date |
|  |  |  |
|  |  |  |
| Nora Conlon – EPA Quality Assurance |  | Date |
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# Distribution List (A3)

*Includes all individuals who are to receive a copy of the QAPP and identifies their organization*

| **Organization** | **Contact / Address** | **Email Address** |
| --- | --- | --- |
| Organization Name | **Name** Job title**Name** Job titleAddress Line 1Address Line 2(111) 111-1111 | Email of Name 1 Email of Name 2 |
| Organization Name | **Name** Job title**Name** Job titleAddress Line 1Address Line 2(111) 111-1111 | Email of Name 1 Email of Name 2 |
| Organization Name | **Name** Job title**Name** Job titleAddress Line 1Address Line 2(111) 111-1111 | Email of Name 1 Email of Name 2 |
| Restore America’s Estuaries/Southeast New England Watershed Grants Program | **Thomas Ardito**,Director2300 Calrendon Blvd., Suite 603Arlington, VA 22201(401) 575-6109 | tardito@estuaries.org |
| Environmental Protection Agency | **Nora Conlon**, Quality Assurance11 Technology DriveNorth Chelmsford, MA 01863617-918-8335 | conlon.nora@epa.gov  |
| Environmental Protection Agency | **Margherita Pryor**, Project Officer5 Post Office Square, #100Boston, MA 02109617-918-1597 | pryor.margherita@epa.gov |

# Section A: Project Management

The following section provides information regarding the background of the [Project Name], the tasks involved in completing the project, and the names and responsibilities of key project team members.

***NOTE: Text in italics is for guidance purposes only. It should be removed from the final product. Any sections that are not applicable to the Project should be removed from the QAPP with an explanation as to why they were not included.***

## A4: Project Task/Organization

*Identify the individuals or organizations participating in the project and discuss their specific roles and responsibilities. Include the principal data users, the decision makers, the project QA manager, and all persons responsible for implementation. The project quality assurance manager must be independent of the unit generating the data. (This does not include being independent of senior officials, such as corporate managers or agency administrators, who are nominally, but not functionally, involved in data generation, data use, or decision making.) Identify the individual responsible for maintaining the official, approved QA Project Plan.*

*Provide a concise organization chart showing the relationships and the lines of communication among all project participants. Include other data users who are outside of the organization generating the data, but for whom the data are nevertheless intended. The organization chart must also identify any subcontractor relationships relevant to environmental data operations, including laboratories providing analytical services.* See **Table 1** for a list of the specific members from each organization.

Table 1 Project Participants

|  |  |  |  |
| --- | --- | --- | --- |
| Name  | Title | Organization | Primary Responsibility |
| Name | Title | Organization Name | Role |
| Name | Title | Organization Name | Role |
| Name | Title | Organization Name | Role |
| Name | Title | Organization Name | Role |
| Name | Title | Organization Name | Role |
| Tom Ardito | Grant Manager | Restore America’s Estuaries  | Project oversight |
| Nora Conlon | EPA Quality Assurance | EPA | Final review and approval of QAPP |
| Margherita Pryor | EPA Project Officer | EPA | Project oversight and QAPP review |

### Organization 1

*Provide description of Organization’s role and project tasks for which they will be responsible.*

### Organization 2

*Provide description of Organization’s role and project tasks for which they will be responsible.*

### Organization 3

*Provide description of Organization’s role and project tasks for which they will be responsible.*

### Restore America’s Estuaries

Restore America’s Estuaries (RAE) has been selected by the Environmental Protection Agency (EPA) to manage the Southeast New England Watershed Grant Program (SNEP) for 2018 and 2019. RAE will oversee fiscal and technical aspects of the grant project.

### EPA

EPA is the grantor to RAE for the grant money that is being used for this project. The EPA will review and approve this Quality Assurance Project Plan (QAPP).

## A5: Problem Definition/Background

*State the specific problem to be solved, decision to be made, or outcome to be achieved. Include sufficient background information to provide a historical, scientific, and regulatory perspective for this particular project.*

## A6: Project Task Descriptions

*Provide a summary of all work to be performed, products to be produced, and the schedule for implementation. Provide maps or tables that show or state the geographic locations of field tasks. This discussion need not be lengthy or overly detailed, but should give an overall picture of how the project will resolve the problem or question described in A5.*

Table 2 Project Tasks and Schedule

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Deliverable | Timeline | Relevant Details/Comments |
| Task | Deliverable | Month-Month Year |  |
| Task | Deliverable | Month-Month Year |  |
| Task | Deliverable  | Month-Month Year |  |
| Task | Deliverable  | Month-Month Year |  |

### Task 1: QAPP Development

This QAPP describes the quality management system and procedures, as well as the roles and responsibilities of the Project Team. The QAPP provides an overview of the project and quality assurance related to data used for the project.

The Project Manager, [Name], will be responsible for maintenance and distribution of the approved QAPP. The QAPP will be provided electronically as needed.

### Task 2

*Summarize work to be performed for this task, for example, measurements to be made, data files to be obtained, etc., that support the Project’s goals. Provide work schedule. Provide geographical locations to be studied, including maps, where appropriate. Discuss resource and time constraints, where appropriate.*

### Task 3

*Summarize work to be performed for this task, for example, measurements to be made, data files to be obtained, etc., that support the Project’s goals. Provide work schedule. Provide geographical locations to be studied, including maps, where appropriate. Discuss resource and time constraints, where appropriate.*

### Task 4

*Summarize work to be performed for this task, for example, measurements to be made, data files to be obtained, etc., that support the Project’s goals. Provide work schedule. Provide geographical locations to be studied, including maps, where appropriate. Discuss resource and time constraints, where appropriate.*

## A7: Quality Objectives and Criteria

*State the overarching quality objectives that must be met to ensure a successful outcome of the project. The quality objectives of the project are determined by the end users (e.g., risk assessors, regulators, local state government, citizen groups, etc.). For example, if the project quality objective is to compile and analyze scientifically sound, defensible and transparent data adequate for the development of a TMDL, then acceptance criteria used for evaluating the quality of existing data must be tight enough to minimize decision errors.*

*Specify acceptance criteria for each matrix and measurement (analytical) parameter and indicate QC sample or activity associated with the quality indicator. For example:*

Matrix: Stream water

Measurement Parameter: Nitrate – Nitrogen

* Precision (e.g., Relative Percent Difference <20%, field duplicates)
* Precision (e.g., Relative Percent Difference <15%, laboratory duplicates)
* Accuracy (e.g., 85 – 115%, Spiked Control Samples)
* Sensitivity (0.05 mg/L, calibration standards)
* Comparability (all nitrate analyses generated in accordance with USEPA Method 300.1, Method citation)
* Representative sampling (Documented sampling SOPs must used by trained personnel, required training documentation)

*Quality acceptance criteria are unique to each project; many environmental studies (e.g., non-TMDL projects) may require less stringent data quality acceptance criteria.*

*Once data acceptance criteria are established, the project team selects existing data that meet the criteria. In order to determine the quality “pedigree” and usefulness of the secondary data, supporting QC information must be reviewed. Information (a.k.a., metadata) about why, how, and when the existing data were collected provides the user with more confidence. Metadata are documented in project reports, validation reports and accompany database information.*

## A8: Special Trainings/Certification

*Identify and describe any specialized training or certifications needed by personnel in order to successfully complete the project or task. Discuss how such training will be provided and how the necessary skills will be assured and documented. Identify where this information is satisfied.*

## A9: Documentation and Records

*Describe the process and responsibilities for ensuring the appropriate project personnel have the most current approved version of the QA Project Plan, including version control, updates, distribution, and disposition.*

*Itemize the information and records which must be included in the data report package and specify the reporting format for hard copy and any electronic forms. Records can include raw data, data from other sources such as data bases or literature, field logs, sample preparation and analysis logs, instrument printouts, model input and output files, and results of calibration and QC checks.*

*Identify any other records and documents applicable to the project that will be produced, such as audit reports, interim progress reports, and final reports. Specify the level of detail of the field sampling, laboratory analysis, literature or data base data collection, or modeling documents or records needed to provide a complete description of any difficulties encountered.*

*Specify or reference all applicable requirements for the final disposition of records and documents, including location and length of retention period.*

*Describe how individuals identified in A3 will receive the most current copy of the approved QAPP and identify the individual(s) responsible for this.*

# Section B: Data Selection and Management

This QAPP was developed with guidance from the EPA Requirements for Quality Assurance Project Plans (QA/R-5) and EPA New England QAPP Guidance for Environmental Projects Using Only Secondary Data.

## B1: Sources of Existing Data

*List the sources(s) of all secondary data that may be used, including:*

* *type of data and collection dates*
* *originating organization*
* *report title, author and date*
* *data base names*

*Note: Information may be presented in tabular format; an example is provided below:*

Table 3 Existing Data Sets to be used for Project

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Non-Direct Measurement (Secondary Data) | Data Source (Originating Organization, Report Title & Date) | Data Generator(s) (Origination Organization, Data Types, Data Generation/Collection Dates) | How Data Will be Used | Limitations on Data Use |
| *Soil gas data* | *BioWatch Consulting, LTD: “Titanic Shipyard Investigation Report,” 11/20/95* | *BioWatch Consulting, LTD: VOC Soil Gas Data, Sample Collection Dates: 10/19-23/95* | *To assess the potential sources of contaminated soil and resultant groundwater migration* | *1. Unvalidated data used to generate report* *2. Insufficient data points to fully characterize on-site contamination and off-site migration* |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

*Explain the reason(s) for selecting various sources(s) of existing data (data bases, reports, etc.).*

*To ensure transparency and defensibility in the decision-making process, it is very important to document why certain related project reports and/or existing data were not used. For example, if reported dry weather data did not have associated information on number of antecedent dry days prior to collection, then the project team may decide not to use the data.*

*Describe the data format (e.g., electronic, hardcopy) and how data will be maintained for the project. If data are obtained from data bases, include as much accompanying quality control, temporal, locational data, etc. as needed to document and verify the quality of the data.*

## B2: Intended Use of Existing Data

*Describe how different types of data will be used. For example, certain data may be used to define the boundaries of a contaminated area, while other data may be used in identifying other suspected pollutants or breakdown products.*

*State how and when data that are found to have limitations (e.g., lab qualified data) will be used in the project.*

## B3: Limitations on the Use of Existing Data

*Specify criteria for selecting existing data for the project. Appropriate selection criteria will ensure that secondary data are “good enough” to support project conclusions, decisions or actions. Selection criteria support the general project quality objectives described in Section A7.*

*The following are some examples of selection criteria. Note: These are examples; and may not apply to your project.*

* *Data sets must include quality control (QC) metadata for precision and accuracy.*
* *Data must be generated under an approved QAPP or other sampling document.*
* *Analytical methods must be sufficiently sensitive (i.e., low enough reporting limits) to support data reporting to state water quality criteria levels.*
* *All existing data sets used in the project must be generated using the same or comparable sampling and analytical methods or SOPs.*
* *Data must indicate if results are from composite or grab sampling.*
* *Sampling design must identify samples that were collected using statistical approach, i.e., “hot spot”, random, or grid.*
* *Reported data must include laboratory qualifiers and qualifier definitions*
* *Dry weather data used in the project must be preceded by a minimum 72-hour dry period.*
* *Only data generated after 1/1/2000 will be used for the current investigation.*

*Identify personnel responsible for selecting project data and the process used.*

*If no known quality requirements were applied during the sampling and analysis of the existing data, then state this in the QAPP. A disclaimer should be added to any project deliverable to indicate that the quality of the secondary data is unknown. Include the wording for the disclaimer in the QAPP.*

# Section C: Assessment and Oversight

This section addresses the activities for assessing the effectiveness of the implementation of the quality assurance and quality control activities. The purpose of the assessment is to ensure that QAPP is implemented as described.

## C1: Project Team Oversight

*Explain how the project team will ensure that project tasks are completed as planned. Identify personnel responsible for conducting audits and/or overseeing the project.*

## C2: Project Oversight Documentation

*Indicate how project oversight will be documented (e.g., assessment reports, memos, etc.)*

## C3: How to address quality issues

*Describe how problems will be resolved, including chain-of-command, and documentation process. Include examples of types of corrective actions that might be implemented (e.g., access other data sources, loosen or tighten acceptance criteria).*

# Section D: Data Review, Verification, Validation, and Evaluation

This section addresses the QA activities that occur after the data collection of the project has been completed. Implementation of these elements ensures that the data conform to the specified criteria and achieve the project objectives.

## D1: Data Verification & Validation

*Describe how project members will review and verify or validate the adequacy of each data set data relative to the established acceptance criteria established in Section A7. Describe the following:*

* *how data qualifiers will be applied to data not meeting project acceptance criteria. Define laboratory and validation qualifiers (e.g., U, B, J, R, etc.);*
* *when data will be rejected (not used); and*
* *how limitations on the use of individual data sets will be documented.*

*See the Decision Tree for Data Quality Evaluation*

*Note: Typically, this is also included in the Quality Control Section of the Final Report or Project Deliverable.*

## D2: Data Evaluation and Project Objectives

*Finally, describe how all the gathered data will be evaluated to ensure they can be used for project purposes. Describe any statistical applications used to identify outliers, etc. Consider the following issues when reconciling data with the project objectives:*

* *are the data unbiased and sufficiently representative to be used for the current project?*
* are data sets complete?
* *were data sets collected using the same or comparable methods or SOPs?*
* *were data collected and managed according to an approved QAPP?*
* *were data collected by trained personnel familiar with the appropriate SOPs?*
* *do data meet necessary detection limits and are they reported in the right units of measurement?*

# Section E: Project Reporting

*Describe how project results will be reported (e.g., report, deliverable document, etc.). Provide the proposed document outline that includes a quality assurance section.*

*Include a statement in this Section that the final project report will identify all sources of existing data that were used in the project, and that they will be either provided as attachments to the Final Report, available through embedded websites, or available upon request.*

# References

Environmental Protection Agency. 2001. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5.

Environmental Protection Agency. EPA R-5 Checklist for Review of Quality Assurance Project Plans.

Environmental Protection Agency. 2010. New England Quality Assurance Project Plan Program Guidance. EQAQAPP2005PG2

Environmental Protection Agency New England. October 2009. Guidance for Environmental Projects Using Only Existing (Secondary) Data. Revision 2.

Attachment A – XXXXX

Attachment B – Decision Tree for Data Quality Evaluation

