Instructions for Using this Clean Rivers Program Quality Assurance Project Plan Shell Document”

The attached shell document was developed for use by Clean Rivers Program Basin Planning Agencies in updating the FY2020-2021 Quality Assurance Project Plans (QAPPs). Instructions for preparation of the QAPPs are provided throughout the document.

This QAPP shell does not apply to and should not be used for data collection for federally funded programs or projects. A standalone QAPP should be developed and approved by the appropriate TCEQ staff.

The shell language is to be used by Basin Planning Agencies in their QAPPs only to the extent that the language accurately and completely depicts Basin Planning Agency organizational structures, project responsibilities, project background, and project requirements, activities, and procedures. Italicized text in the shell provides instructions or information to QAPP preparers and should be deleted from the QAPP before submission to TCEQ. Yellow highlighted text indicates titles or other language that must be replaced (e.g., name and address of the Basin Planning Agency, name of Basin Planning Agency Project Manager, etc.). Green highlighted text indicates changes from the previous FY2020-2021 QAPP document.

The [***Clean Rivers Program Guidance and Reference Guide***](https://www.tceq.texas.gov/waterquality/clean-rivers/guidance/index.html) provides additional information concerning QAPP preparation and submission. Questions concerning QAPP requirements may be directed to TCEQ Clean Rivers Program Project Managers and the CRP Project Quality Assurance Specialist.

Amendment #

Update to the Clean Rivers Program FY 2020/2021 QAPP

Prepared by the Basin Planning Agency in Cooperation with the Texas Commission on Environmental Quality (TCEQ)

Effective: Immediately upon approval by all parties

**Questions concerning this QAPP should be directed to:**

# Justification

This document details the changes made to the basin-wide Quality Assurance Project Plan to update Appendix B for fiscal year 2021. This document also updates personnel changes, updates versions of referenced documentation, adds clarifying language about frequency of blank collection, and addresses any other changes made to the quality program since the last amendment.

# Summary of Changes

*List each section in which a change is proposed and provide a description of the change(s) in the table below.*

Note: Be sure to address all sections that are impacted by the change. For example, if a new parameter has been added, then a new DQO table will need to be referenced and attached, as well as a new holding timetable, sample container information, etc.

|  |  |  |  |
| --- | --- | --- | --- |
| Section/Figure/Table | Page | Change | Justification |
| Section A1 |  | Replaced Peter Bohls with Sarah Kirkland as CRP Data Manager, DM&A TeamReplaced Sharon Coleman with Dana Squires as CRP Lead Quality Assurance SpecialistRemoved Quality Assurance Manager Signature block. | Personnel changes at TCEQThe Quality Assurance Manager is not required by the QMP to sign amendments for projects not funded by EPA. |
| Section A3 |  | Replaced Peter Bohls with Sarah Kirkland as CRP Data Manager, DM&A TeamReplaced Sharon Coleman with Dana Squires as CRP Lead Quality Assurance Specialist | Personnel changes at TCEQ |
| Section A4 |  | Replaced Peter Bohls with Sarah Kirkland as CRP Data Manager, DM&A TeamReplaced Sharon Coleman with Dana Squires as CRP Lead Quality Assurance Specialist | Personnel changes at TCEQ |
| Figure A4.1 |  | Replaced Peter Bohls with Sarah Kirkland as CRP Data Manager, DM&A TeamReplaced Sharon Coleman with Dana Squires as CRP Lead Quality Assurance Specialist | Personnel changes at TCEQ |
| Section A9 |  | Changed referenced version of TNI Standard from 2009 version to 2016 version. | The 2016 TNI ELS Standard was adopted on June 18, 2018. The implementation date was set as January 31, 2020 by vote of the NELAP Accreditation Council on January 7, 2019. |
| *Section B2* |  | *If electronic data capture and/or use of electronic devices to record field observations are a part of partner or sub-participant sampling methods, please include language addressing the quality assurance of this data.* |  |
| Section B5 |  | Updated language for blank collection frequency | To clarify frequency with which field and equipment blanks are collected for Clean Rivers Program water quality samples. |
| Appendix A |  | Updated Table A7 | When determining the analytical method limits for enterococcus samples, a common misconception is that the saline matrix is interfering due in part to the IDEXX instructions regarding dilution in “marine” water.  This is not the case.  The interference is caused by competing bacillus bacteria.  Therefore, enterococcus samples should be diluted 1/10 as a routine practice.  The AWRL is changed to 10 MPN/100 mL and the LOQ will remain 1 MPN/100 mL in this amendment. |
| Appendix B |  | Updated sample design rationale for FY2021 | Describes changes to monitoring design for FY2021 based on the FY2020 Coordinated Monitoring Meetings |
| Appendix B |  | Updated Table B1.1  | Describes changes to monitoring design for FY2021 based on the FY2020 Coordinated Monitoring Meetings |
| Appendix B |  | Updated maps of monitoring stations | Describes changes to monitoring design for FY2021 based on the FY2020 Coordinated Monitoring Meetings |

# Detail of Changes

Include all changes (e.g., body of text, tables, figures) in their entirety. When possible, please emphasize changes (though highlighting or adjusted font color) to direct reviewers to pertinent sections. All changes made by TCEQ QAS for this amendment are highlighted in green. Any text highlighted in yellow is specific to project (rather than to the overall CRP program) and will be unique to that project/CRP partner. Please remove all highlighting in the final draft of this amendment.

# A1 Approval Page

## Texas Commission on Environmental Quality

### Water Quality Planning Division

 Kyle Girten, Acting Work Leader Date

Clean Rivers Program

 Kelly Rodibaugh Date

Project Quality Assurance Specialist

Clean Rivers Program

[name], Project Manager Date Cathy Anderson, Team Leader Date

Clean Rivers Program Data Management and Analysis

### Monitoring Division

 Dana Squires Date

Lead CRP Quality Assurance Specialist

 S

# A3 Distribution List

Texas Commission on Environmental Quality

P.O. Box 13087

Austin, Texas 78711-3087

Name, Project Manager

Clean Rivers Program

MC-234

(512) 239-XXXX

Dana Squires

Lead CRP Quality Assurance Specialist

MC-165

(512) 239-0011

Cathy Anderson

Team Leader, Data Management and Analysis

MC-234

(512) 239-1805

Basin Planning Agency

Street

City, Texas Zip

Name, Project Manager

(XXX) XXX-XXXXName, Quality Assurance Officer

(XXX) XXX-XXXX

Laboratory

Street

City, Texas Zip

Name, Manager

(XXX) XXX-XXXXName, Quality Assurance Officer

(XXX) XXX-XXXX

# A4 Project Task/Organization

## Description of Responsibilities

### TCEQ

#### Sarah Eagle

#### CRP Work Leader

Responsible for Texas Commission on Environmental Quality (TCEQ) activities supporting the development and implementation of the Texas Clean Rivers Program (CRP). Responsible for verifying that the TCEQ Quality Management Plan (QMP) is followed by CRP staff. Supervises TCEQ CRP staff. Reviews and responds to any deficiencies, corrective actions, or findings related to the area of responsibility. Oversees the development of Quality Assurance (QA) guidance for the CRP. Reviews and approves all QA audits, corrective actions, reports, work plans, contracts, QAPPs, and TCEQ Quality Management Plan. Enforces corrective action, as required, where QA protocols are not met. Ensures CRP personnel are fully trained.

#### Dana Squires

#### Lead CRP Quality Assurance Specialist

Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Assists program and project manager in developing and implementing quality system. Serves on planning team for CRP special projects. Coordinates the approval of CRP QAPPs. Prepares and distributes annual audit plans. Conducts monitoring systems audits of Planning Agencies. Conveys QA problems to appropriate management. Recommends that work be stopped in order to safeguard programmatic objectives, worker safety, public health, or environmental protection. Ensures maintenance of QAPP records and audit records for the CRP.

#### Name

#### CRP Project Manager

Responsible for the development, implementation, and maintenance of CRP contracts. Tracks, reviews, and approves deliverables. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Assists CRP Lead QA Specialist in conducting Basin Planning Agency audits. Verifies QAPPs are being followed by contractors and that projects are producing data of known quality. Coordinates project planning with the Basin Planning Agency Project Manager. Reviews and approves data and reports produced by contractors. Notifies QA Specialists of circumstances which may adversely affect the quality of data derived from the collection and analysis of samples. Develops, enforces, and monitors corrective action measures to ensure contractors meet deadlines and scheduled commitments.

#### Cathy Anderson

#### Team Leader, Data Management and Analysis (DM&A) Team

Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Ensures DM&A staff perform data management-related tasks.

#### Sarah Kirkland

#### CRP Data Manager, DM&A Team

Responsible for coordination and tracking of CRP data sets from initial submittal through CRP Project Manager review and approval. Ensures that data are reported following instructions in the Data Management Reference Guide, December 2018 or most current version (DMRG). Runs automated data validation checks in the Surface Water Quality Management Information System (SWQMIS) and coordinates data verification and error correction with CRP Project Managers. Generates SWQMIS summary reports to assist CRP Project Managers’ data review. Identifies data anomalies and inconsistencies. Provides training and guidance to CRP and Planning Agencies on technical data issues to ensure that data are submitted according to documented procedures. Reviews QAPPs for valid stream monitoring stations. Checks validity of parameter codes, submitting entity code(s), collecting entity code(s), and monitoring type code(s). Develops and maintains data management-related SOPs for CRP data management. Coordinates and processes data correction requests. Participates in the development, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP).

**Project Organization Chart**

**Figure A4.1. Organization Chart - Lines of Communication**

Basin Planning Agency

Project Manager

Basin Planning Agency

Laboratory

Manager

Basin Planning Agency

Field Sampling Staff

Basin Planning Agency

Data Manager

Basin Planning Agency

QAO

Basin Planning Agency

Laboratory

QAO

Dana Squires

Lead CRP QA

Specialist

------------------

Kelly Rodibaugh

TCEQ Project

QA Specialist

Sarah Eagle

TCEQ CRP

Work Leader

Name

TCEQ CRP Project Manager

Sarah Kirkland

TCEQ CRP Data Manager

Cathy Anderson

TCEQ DM&A

Team Leader

Lines of Management

Lines of Communication

## Table A9.1 Project Documents and Records

|  |  |  |  |
| --- | --- | --- | --- |
| Document/Record | Location | Retention (yrs) | Format |
| QAPPs, amendments and appendices | Basin Planning Agency |  | (Specify all media, e.g., paper, electronic, etc.) |
| Field SOPs | Basin Planning Agency |  | (Specify) |
| Laboratory Quality Manuals | Basin Planning Agency/ Laboratory(ies) |  | (Specify) |
| Laboratory SOPs | Basin Planning Agency/ Laboratory(ies) |  | (Specify) |
| QAPP distribution documentation | Basin Planning Agency |  | (Specify) |
| Field staff training records | Basin Planning Agency |  | (Specify) |
| Field equipment calibration/maintenance logs | Basin Planning Agency |  | (Specify) |
| Field instrument printouts | Basin Planning Agency |  | (Specify) |
| Field notebooks or data sheets | Basin Planning Agency |  | (Specify) |
| Chain of custody records | Basin Planning Agency |  | (Specify) |
| Laboratory calibration records | Laboratory |  | (Specify) |
| Laboratory instrument printouts | Laboratory |  | (Specify) |
| Laboratory data reports/results | Basin Planning Agency/ Laboratory |  | (Specify) |
| Laboratory equipment maintenance logs | Laboratory |  | (Specify) |
| Corrective Action Documentation | Basin Planning Agency/ Laboratory |  | (Specify) |

## Laboratory Test Reports

Test/data reports from the laboratory must document the test results clearly and accurately. Routine data reports should be consistent with the TNI Standard (2016), Volume 1, Module 2, Section 5.10 and include the information necessary for the interpretation and validation of data. The requirements for reporting data and the procedures are provided.

# B5 Quality Control

## Sampling Quality Control Requirements and Acceptability Criteria

The minimum field QC requirements, and program-specific laboratory QC requirements, are outlined in SWQM Procedures. Specific requirements are outlined below. Field QC sample results are submitted with the laboratory data report (see Section A9.).

#### **Field blank**

 Field blanks are required for total metals-in-water samples when collected without sample equipment (i.e., as grab samples). For other types of samples, they are optional. A field blank is prepared in the field by filling a clean container with pure deionized water and appropriate preservative, if any, for the specific sampling activity being undertaken. Field blanks are used to assess contamination from field sources, such as airborne materials, containers, or preservatives. . Field blanks for total metals-in-water samples will be collected at a frequency of one per day of sampling. Only those samples collected on dates with associated field blanks collected on the same day will be submitted to TCEQ..

The analysis of field blanks should yield values lower than the LOQ. When target analyte concentrations are high, blank values should be lower than 5% of the lowest value of the batch, or corrective action will be implemented.

Field blanks are associated with batches of field samples. In the event of a field blank failure for one or more target analytes, all applicable data associated with the field batch may need to be qualified as not meeting project QC requirements, and these qualified data will not be reported to the TCEQ. These data include all samples collected on that day during that sample run and should not be confused with the laboratory analytical batch.

#### **Field equipment blank**

Field equipment blanks are required for metals-in-water samples when collected using sampling equipment. The field equipment blank is a sample of analyte-free media which has been used to rinse common sampling equipment to check the effectiveness of decontamination procedures. It is collected in the same type of container as the environmental sample, preserved in the same manner, and analyzed for the same parameter. Field equipment blanks for dissolved metals-in-water samples will be collected at a frequency of one per day of sampling. Only those samples collected on dates with associated field equipment blanks collected on the same day will be submitted to TCEQ..

The analysis of field equipment blanks should yield values lower than the LOQ, or, when target analyte concentrations are very high, blank values must be less than 5% of the lowest value of the batch, or corrective action will be implemented.

Field equipment blanks are associated with batches of field samples. In the event of a field equipment blank failure for one or more target analytes, all applicable data associated with the field batch may need to be qualified as not meeting project QC requirements, and these qualified data will not be reported to the TCEQ. These data include all samples collected on that day during that sample run and should not be confused with the laboratory analytical batch.

# Appendix A: Measurement Performance Specifications (Table A7.1-X)

Table A7.1 - Measurement Performance Specifications

*If Basin Planning Agency analyzes Enterococci samples, please update Table A7 to reflect amended AWRL. Please see Excel Spreadsheet provided. If other changes need to be made to Table A7s to reflect changes to parameters, LOQs, labs, or other table elements, please include in this section using the tables provided on the CRP Quality Assurance webpage (*<https://www.tceq.texas.gov/waterquality/clean-rivers/qa/index.html>).

*Note: During the development of this amendment, please review lab accreditations for* ***all*** *parameters analyzed to ensure that labs are accredited to conduct analyses for the cited parameters and methods in* ***non-potable*** *water.*

# Appendix B Sampling Process Design and Monitoring Schedule (plan)

### Sample Design Rationale FY 2021

The sample design is based on the legislative intent of CRP. Under the legislation, the Basin Planning Agencies have been tasked with providing data to characterize water quality conditions in support of the Texas Water Quality Integrated Report, and to identify significant long-term water quality trends. Based on Steering Committee input, achievable water quality objectives and priorities and the identification of water quality issues are used to develop work plans which are in accord with available resources. As part of the Steering Committee process, the Basin Planning Agency coordinates closely with the TCEQ and other participants to ensure a comprehensive water monitoring strategy within the watershed.

### Monitoring Sites for FY 2021

The sample design for SWQM is shown in Table B1.1 below.

### Table B1.1 Sample Design and Schedule, FY 2021

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Site Description | Station ID | Waterbody ID | Region | SE | CE | MT | 24 hr DO | AqHab | Benthics | Nekton | Metal Water | Organic Water | Metal Sed | Organic Sed | Conv | Amb Tox Water | Amb Tox Sed | Bacteria | Flow | Fish Tissue | Field | Comments |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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# Appendix C: Station Location Maps

### Station Location Maps

Maps of stations monitored by the are provided below. The maps were generated by the . This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact .