

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
(Project Name)
CONTINUOUS WATER QUALITY MONITORING
PROJECT PLAN

(Note to user: This form provides some of the text to be used in the project plan. Instructions are provided in *italics*, and should be deleted during completion of the form.)

A1 APPROVAL PAGE

Charles Dvorsky
CWQMN Network Coordinator, TCEQ

Date

Patrick Roques
Section Manager, TCEQ WQM&A Program

Date

Brenda Archer
Team Leader, TCEQ SWQM Program

Date

Sharon Coleman
CWQMN Quality Assurance Officer

Date

Name
Project Lead, TCEQ SWQM Program

Date

Edward Ragsdale
CWQMN Quality Control Officer, TCEQ SWQM Program

Date

Other Project Participants

Date

Other Project Participants

Date

This Continuous Water Quality Monitoring Network Project Plan (CWQMN) documents project specific details for new continuous water quality projects. Critical project specific details for new CWQMN stations are not covered in the CWQMN Quality Assurance Project Plan (QAPP). Please see the CWQMN QAPP for other network details.

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Table A7.1: Measurement Performance Specifications

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LIST OF ACRONYMS (*common Acronyms*)

CAMS	Continuous Ambient Monitoring Station
CFS	Cubic Feet per Second
CVS	Calibration Verification Sample
CWQMN	Continuous Water Quality Monitoring Network
DO	Dissolved Oxygen
DM&QA	Data Management and Quality Assurance
EC	Electrical Conductance (Reported as Specific Conductance)
FOD	Field Operation Division
FY	Fiscal Year
LEADS	Leading Environmental Analysis and Display System
MDL	Method Detection Limit
mg/L	Milligram per Liter
MOPs	TCEQ Monitoring Operation Division
NA	Not Applicable
NIST	National Institute of Standards and Technology
NTU	Nephelometric Turbidity Units
ppmv	parts per million by volume
QA	Quality Assurance
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
QC	Quality Control
RPD	Relative Percent Difference
SC	Specific Conductance
SOP	Standard Operating Procedure
SWQM	Surface Water Quality Monitoring Team
T	Temperature
TBD	To Be Determined
TCEQ	Texas Commission on Environmental Quality
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
RPE	Relative Percent Error
TSWQS	Texas Surface Water Quality Standards
μS/cm	micro Siemens per centimeter
WQM&A	Water Quality Monitoring & Assessment Section
°C	Degrees Centigrade

A3 DISTRIBUTION LIST

Include project participants (e.g., site operators, contractors, etc.).

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Mr. Charles Dvorsky, Network Coordinator, Ambient Monitoring Section, Monitoring Operations Division

Mr. Scott Mgebroff, Section Manager, Ambient Monitoring Section, Monitoring Operations Division

Mr. Patrick Roques, Section Manager, Water Quality Monitoring & Assessment Section, Monitoring Operations Division

Ms. Sharon Coleman, CWQMN Quality Assurance Officer, Compliance Support Division

Mr. David Manis, Section Manager, Data Management & Quality Assurance Section, Monitoring Operations Division

Mr. Larry Lehman, System Planning and Implementation Team, Ambient Monitoring Section, Monitoring Operations Division

Ms. Anne Panko, Quality Assurance & Audit Team, Data Management & Quality Assurance Section, Monitoring Operations Division

Mr. Chris Owen, Quality Assurance & Audit Team, Data Management & Quality Assurance Section, Monitoring Operations Division

Ms. Brenda Archer, Surface Water Quality Monitoring Team Leader, Monitoring Operations Division

Ms. Michele Blair, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Ms. Robin Cypher, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Mr. Pat Bohannon, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Ms. Christine Kolbe, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Ms. Anne Rogers, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Ms. Shawna Baker, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Mr. Edward Ragsdale, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Mr. Steven Earnest, Surface Water Quality Monitoring Team, Water Quality Monitoring & Assessment Section

Mr. Ed Bridgman, Ambient Monitoring Section, Monitoring Operations Division

Ms. Rebecca Ross, Data Management Technology Team, Data Management & Quality Assurance Section, Monitoring Operations Division

Ms. Nancy Ragland, Data Management Technology Team, Data Management & Quality Assurance Section, Monitoring Operations Division

Ms. Gail Rothe, Categorical 106 Grant Project Manager

Ms. Laurie Curra, Watershed Management Team, Water Quality Monitoring & Assessment Section

List other TCEQ staff if applicable. Also list contractors if applicable.

A4 PROJECT/TASK ORGANIZATION

This section is intended to identify individuals and organizations that will be responsible for developing and/or supporting new CWQMN projects. For a list of additional project/task and responsibilities please refer to section A4 of the CWQMN QAPP.

The Project Lead is responsible for the development of the Project Plan.

A4.1 TCEQ CWQMN Network Coordinator (Charles Dvorsky)

-
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A4.2 TCEQ SWQM Project Lead (*Name*)

- Develop Project Plan
-

A4.3 *Site Operator (Name and Agency)*

- Site Operation and Maintenance

A4.4 (*Name and Agency*)

- Data Validation
-

A4.5 *Project Participant (Name and Agency)*

-
-

A4.6 *Contractor (Name)*

-
-

A5 PROBLEM DEFINITION/BACKGROUND

State the specific problem to be solved or decision to be made, or the outcome to be achieved. Include enough background information to provide a historical perspective and scientific perspective. The discussion should include enough information (i.e., past history, regulatory context, and previous work) to understand the project objective.

A6 PROJECT/TASK DESCRIPTION

Summarize the work to be performed and the schedule for implementation as well as monitoring site geographic location(s) and TCEQ segment numbers.

*In some CWQMN projects, project/task descriptions are laid out **in detail** in contractual/subcontractual workplans. If the workplan addresses the following information **in detail**, then the contractual/subcontractual workplan may be attached and referenced.*

See Appendix C of the CWQMN QAPP for Site Selection, Preparation, and Deployment of Continuous Water quality Monitoring Stations, SOP MANP-001, revision 2.

A7 QUALITY OBJECTIVES AND CRITERIA

The measurement performance specifications to support the project objectives are specified in Table(s) A7.1 – x.

Add tables as needed. Reference applicable CWQMN analytical SOPs if available.

Methods used are based on *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, 1998 unless otherwise noted.

Table A7.1 – Sonde Make and Model Sonde (Multi-Probe) Performance Specifications

Parameter	Parameter Code	Units	Method	Calibration Verification Sample (CVS) **
pH	00400	pH / units	Glass electrode, Standard Method 4500-H+B	±0.50 pH unit
DO	00300	mg/L	Galvanic membrane electrode, Standard Method 4500-O-G	% Saturation ≤6.0% ±0.50 mg/L
SC	00094	µS/cm	Toroidal*	≤5.0% RPE
Temperature	00010	°C	Standard Method 2550 B	NA

*Method not based on *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, 1998

** CVS criteria for use in the 305(b) and 303(d) Lists per SWQM DQOs.

NA = Not Applicable

Table A7.2 - In-Situ TROLL 500 Performance Specifications*

Range	Accuracy	Resolution
0 -11 meters	0.05 % Full Scale (-5 to 50 °C)	0.005 % Full Scale

* Specifications from TROLL 500 Operation Manual

Ambient Water Reporting Limits (AWRLs)

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

Precision

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

Bias

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

Representativeness

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

Comparability

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

Completeness

As described in Section A7 of the CWQMN QAPP. *(If applicable)*

A8 SPECIAL TRAINING/CERTIFICATION

Indicate who will train site operators, and how.

Discuss training schedule for site operators, data validators or other needed project training.

Provide any other training requirements.

A9 DOCUMENTS AND RECORDS

As described in sections B2 of the CWQMN QAPP. *(If applicable)*

B1 SAMPLING PROCESS DESIGN

Site Selection Criteria

Describe the rationale for selecting monitoring site(s).

Monitoring Station Design

Describe how monitoring equipment will be configured (including measurement frequencies) to collect data that will answer project objectives.

List specific monitoring and support equipment: measurement equipment, data logger, telemetry, modems, trailer, traffic box, etc.

Detail site developmental needs; pad, electricity, fence, phone, special items, etc. Discuss site development schedule.

Indicate who will be responsible for site operation and maintenance.

B2 SAMPLING METHODS

As described in sections B2 of the CWQMN QAPP. *(If applicable)*

Sampling/Measurement System Corrective Action

As described in sections B2.2 of the CWQMN QAPP.

B3 SAMPLING HANDLING AND CUSTODY

As described in Section B3 of the CWQMN QAPP. *(If applicable)*

B4 ANALYTICAL METHODS

Analytical methods and analytical SOPs are listed in Section A.7.

B5 QUALITY CONTROL

As described in Section B5 of the CWQMN QAPP. *(If applicable)*

Analytical method SOPs are listed in Section A.7 detailing QC procedures. *If SOPs are not available describe QC program for project.*

Corrective Action Related to Quality Control

As described in Section B5 of the CWQMN QAPP. *(If applicable)*

B6 INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE

As described in CWQMN QAPP. *(If applicable)*

List the equipment and/or systems needing periodic maintenance, testing, or inspection, and the schedule for such.

List all applicable equipment maintenance SOPs or equipment manuals.

B7 INSTRUMENT CALIBRATION AND FREQUENCY

As described in CWQMN QAPP. *(If applicable)*

B8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

As described in CWQMN QAPP. *(If applicable)*

Describe how spare parts, standards and reagents will be obtained by site operators.

B9 NON-DIRECT MEASUREMENTS

There are no non-direct measurements used in this project. *(If applicable)*

B10 DATA MANAGEMENT

Indicate who will manage project data, and how, including communication, telemetry, data processing, and depository. State who is performing data analysis (and how) and what action will be taken with data results.

As described in CWQMN QAPP. *(If applicable)*

C1 ASSESSMENTS AND RESPONSE ACTIONS

As described in CWQMN QAPP. *(If applicable)*

Corrective Action

As described in Section C1 of the CWQMN QAPP. *(If applicable)*

C2 REPORTS TO MANAGEMENT

As described in Section C2 of the CWQMN QAPP.

Reports to TCEQ Project Management

As described in Section C2 of the CWQMN QAPP.

D1 DATA REVIEW, VERIFICATION, AND VALIDATION

As described in Section D1 of the CWQMN QAPP.

List the TCEQ data validation SOPs that will be used.

Indicate who will be responsible for validating station data, and if the person(s) will require training.

D2 VERIFICATION AND VALIDATION METHODS

As described in Section D2 of the CWQMN QAPP.

D3 RECONCILIATION WITH DATA QUALITY OBJECTIVES

As described in Section D2 of the CWQMN QAPP.

