TMDL Program Texas Recreational Use Attainability Analysis Quality Assurance Project Plan (TMDL RUAA QAPP) Revision 2

Date submitted to TCEQ: 06/18/2010

Funding Source: Specified in Project QAPs

Total Maximum Daily Load Program
Office of Water, Planning and Implementation Section
Texas Commission on Environmental Quality
P.O. Box 13087, MC - 203
Austin, Texas 78711-3087

This QAPP is effective for a period of one year from approval date.
Questions concerning this QAPP should be directed to:

Amanda Ross
TMDL Program
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Austin, Texas 78711-3087
aross@tceq.state.tx.us
(512) 239-6646

A1 APPROVAL PAGE

Texas Commission on Environmental Quality

Office of Water, Water Quality Planning Division
Planning and Implementation Section

_____

Monica I. Harris, P.G., Section Manager Date
Planning and Implementation Section

_____

Ronald Stein, Team Leader Date
Total Maximum Daily Load Program

Office of Water, Water Quality Planning Division
Monitoring and Assessment Section

_____

Lori Hamilton, Work Lead Date
Standards Group

Office of Compliance and Enforcement
Field Operations Support Division

_____

Stephen Stubbs, TCEQ Quality Assurance Manager Date

_____

Kyle Girten, TMDL Quality Assurance Specialist Date
Quality Assurance Team

Note: This is a program-level QAPP, and project work cannot begin until a project-specific Quality Assurance Plan (QAP) has been approved and the project participants have signed a letter (Appendix A) documenting adherence to this umbrella QAPP and any amendments or revisions of this plan. The TMDL Project Manager is responsible for obtaining the signed adherence letter and maintaining a copy of the letter in the TCEQ project file.

A2 TABLE OF CONTENTS

A3 DISTRIBUTION LIST

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Office of Water
Planning & Implementation Section
TMDL Program
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Planning & Implementation Section
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Field Operations Support Division
Tracy Miller, Water Program Manager
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U.S. Environmental Protection Agency Region 6
Water Quality Division
1445 Ross Avenue
Suite # 1200
Dallas, TX 75202-2733
Teresita Mendiola, Project Officer
(214) 665-7144

Note: The TMDL RUAA Coordinator will provide copies of this program-level QAPP and any amendments or revisions of this plan to each person on this list. The TMDL RUAA Coordinator will document transmittal of the plan and maintain this documentation as part of the project's quality assurance records. **Copies must be provided within two weeks of QAPP approval. This documentation will be available for review.**

List of Acronyms

(NOTE: Use only acronyms that apply to this QAPP. Add any that are needed for this specific project)

CAR	Corrective Action Report
COC	Chain of Custody
CWA	Clean Water Act
DOC	Demonstration of Capability
EPA	Environmental Protection Agency
FOSD	Field Operations Support Division
GPS	Global Positioning System
ISO/IEC	International Standard Organization/International Electrotechnical Commission
NELAC	National Environmental Laboratory Accreditation Conference
NPS	Nonpoint Source
PCR	Primary Contact Recreation
QA/QC	Quality Assurance/Quality Control
QAO	Quality Assurance Officer
QAM	Quality Assurance Manual (or Manager)
QAP	Quality Assurance Plan
QAPP	Quality Assurance Project Plan
QAS	Quality Assurance Specialist
QMP	Quality Management Plan
RUAA	Recreational Use-Attainability Analysis
SCR1	Secondary Contact Recreation 1
SCR2	Secondary Contact Recreation 2
SOP	Standard Operating Procedure
SWQM	Surface Water Quality Monitoring
TMDL	Total Maximum Daily Load
TCEQ	Texas Commission on Environmental Quality
TSWQS	Texas Surface Water Quality Standards
USGS	United States Geological Survey
WQS	Water Quality Standards

A4 PROJECT/TASK ORGANIZATION

Description of Responsibilities

U.S. EPA Region 6

Teresita Mendiola
EPA Project Officer
Responsible for managing the project for EPA. Reviews project progress and reviews and approves applicable QAPP and QAPP amendments.

TCEQ Office of Water
Planning and Implementation Section

Monica I. Harris, P.G.
Planning and Implementation Section Manager
Responsible for managing the TCEQ TMDL Program. Reviews and/or approves all TMDL Projects, QA audits, QAPPs, agency QMPs, work plans, and contracts.

Ronald Stein
TMDL Program Team Leader
Responsible for supervising the TCEQ TMDL Program and TMDL staff. Oversees the development of QA guidance for the TMDL Team to ensure sure it is within pertinent frameworks of the TCEQ. Reviews and/or approves all TMDL Projects, QA audits, QAPPs, agency QMPs, corrective action reports, work plans, and contracts. Enforces corrective action where QA protocols are not met. Ensures TCEQ TMDL personnel are fully trained.

Amanda Ross
TMDL RUAA Coordinator
Drafts program-level QAPP and any amendments or revisions and ensures distribution of approved/revised QAPPs to TCEQ participants. Coordinates with the WQS Group regarding RUAA procedures, RUAA questions, project status, timeframes, etc.

TMDL Project Manager (to be specified in project QAPs)
Responsible for ensuring that the project delivers data of known quality, quantity, and type on schedule to achieve project objectives. Provides the primary point of contact between the Lead Organization and the TCEQ. Tracks and reviews deliverables to ensure that tasks in the work plan are completed as specified in the contract. Reviews and approves QAPP and any amendments or revisions and ensures distribution of approved/revised QAPPs to TCEQ participants. Responsible for verifying that the QAPP is followed by the Lead Organization. Notifies the TCEQ QAS, TMDL QAS, and TMDL Program Manager of significant project nonconformances and corrective actions taken as documented in CARs and/or quarterly progress reports from Lead Organization Project Manager. Coordinates with the WQS Group regarding RUAA procedures, RUAA questions, project status, timeframes, etc.

TCEQ Field Operations Support Division

Kyle Girten
TMDL Quality Assurance Specialist
Assists the TCEQ TMDL QA Coordinator, Program Manager, and Project Manager on QA-related issues. Coordinates reviews and approves QAPPs and amendments or revisions. Prepares and distributes annual audit plans. Conveys QA problems to appropriate TCEQ management. Monitors implementation of corrective actions. Coordinates and conducts audits. Ensures maintenance of QAPPs and audit records for the TMDL program.

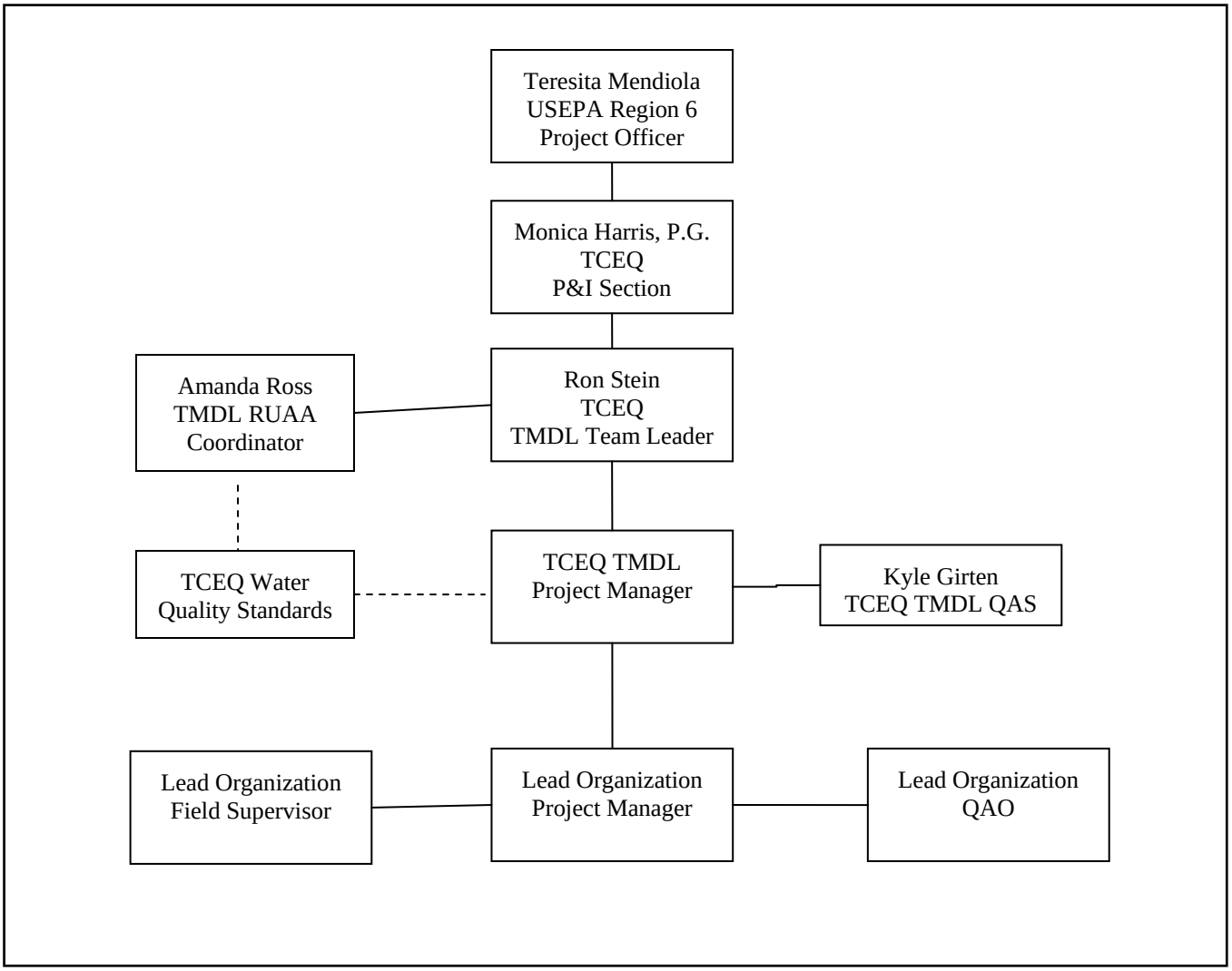
Lead Organization (to be specified in project QAPs)

Lead Organization Project Manager
The Lead Organization Project Manager is responsible for ensuring that tasks and other requirements in the contract are executed on time and with the quality assurance/quality control requirements in the system as defined by the contract and in the project QAPP; assessing the quality of subcontractor/participant work; submitting accurate and timely deliverables to the TCEQ TMDL Project Manager; and coordinating attendance at conference calls, training, meetings, and related project activities with the TCEQ. Responsible for verifying that the QAPP is distributed and followed by the Lead Organization (including all subcontractors) and that the project is producing data of known and acceptable quality for reporting to the TCEQ. Responsible for ensuring adequate training and supervision of all activities involved in generating analytical and field data, including the facilitation of audits and the implementation, documentation, verification and reporting of corrective actions.

Lead Organization Quality Assurance Officer
Responsible for coordinating development and implementation of the Lead Organization's QA program. Responsible for writing and maintaining QAPPs and monitoring its implementation. Responsible for maintaining records of QAPP distribution, including appendices and amendments. Ensures the data collected for the project is of known and acceptable quality and adheres to the specifications of the QAPP. Responsible for maintaining written records of sub-tier commitment to requirements specified in this QAPP. Responsible for identifying, receiving, and maintaining project quality assurance records. Responsible for compiling and submitting the QA report. Responsible for coordinating with the TCEQ QAS to resolve QA-related issues. Notifies the Lead Organization Project Manager and TCEQ Project Manager of particular circumstances which may adversely affect the quality of data. Coordinates the research and review of technical QA material and data related to water quality monitoring system design and analytical techniques. Conducts assessments of participating organizations during the life of the project as noted in Section C1. Coordinates and monitors deficiencies, nonconformances and corrective actions, and completes CARs. Also implements or ensures implementation of corrective actions needed to resolve nonconformances noted during assessments.

Lead Organization Field Supervisor
Responsible for supervising all aspects of the sampling and measurement of surface waters and other parameters in the field. Responsible for the collection of water samples and field data measurements in a timely manner that meet the quality objectives specified in Section A7 (Table A7.1), as well as the requirements of Sections B1 through B8. Responsible for field scheduling, staffing, and ensuring that staff is appropriately trained. When monitoring activities include TCEQ entities the field supervisor shall coordinate with the TCEQ Project Manager. Reports status, problems, and progress to Lead Organization Project Manager.

Figure A4.1 Organization Chart



A5 PROBLEM DEFINITION/BACKGROUND

Bacteria and other pathogens are a growing concern in Texas waters because a majority of the water quality impairments on the 303(d) List are for bacteria. Questions have been raised by stakeholders as to whether the current recreational WQS uses and associated criteria for certain water bodies are appropriate. The proposed Standards Revisions include an expansion of the recreational use criterion from the current single Primary Contact Recreation use into three categories of contact recreation uses: Primary Contact Recreation (PCR), Secondary Contact Recreation 1 (SCR1), and Secondary Contact Recreation 2 (SCR2). Currently, the presumed use for nearly all Texas water bodies is PCR. Certain water bodies are designated Noncontact Recreation due to hazards to recreation such as barge traffic or elevated concentrations of indicator bacteria that are due to sources of pollution which cannot be reasonably controlled by existing regulations. Those water bodies will not be considered for RUAAs.

This project will result in recreational use surveys on water bodies where reconsideration of the current WQS for contact recreation is warranted. The survey data collected will be used in the RUAA. This project will allow the TCEQ WQS Group to evaluate the existing and attainable recreation uses of these selected water bodies to determine if the current contact recreation uses are appropriate.

The QAPP is reviewed by the TCEQ to help ensure that data generated for the purposes described herein are scientifically valid and legally defensible.

A6 PROJECT/TASK DESCRIPTION

This is the program level QAPP for RUAAs. Candidate waterbodies are selected by the WQS Group based on their impairment status, physical characteristics, potential for changes to their recreational uses, and historical data reviews. The work to be performed and the products to be produced are described in detail in the individual Project QAPs. Maps of the monitoring sites and protocols for execution of RUAAs are provided with each QAP. All work under this QAPP will conform to the procedures contained in the *Recreational Use-Attainability Analyses Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* (Attachment 1). The WQS notification requirement contained in the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* (Attachment 1) page CIF 2-of-2 will be accomplished through e-mail notification from the TMDL Project Manager to WQS that a Notice to Proceed has been issued with the specific segments assigned RUAAs. A reply e-mail from WQS will serve as affirmation and approval to proceed on the segments contained in the Notice to Proceed.

QAPP Revision

Until the work described is completed, this QAPP shall be revised as necessary and reissued annually on the anniversary date, or revised and reissued within 120 days of significant changes, whichever is sooner. The last approved versions of QAPPs shall remain in effect until revised versions have been fully approved; the revision must be submitted to the TCEQ for approval before the last approved version has expired. If the

entire QAPP is current, valid, and accurately reflects the project goals and the organization's policy, the annual re-issuance may be done by a certification that the plan is current. This can be accomplished by submitting a cover letter stating the status of the QAPP and a copy of new, signed approval pages for the QAPP. No sampling may begin prior to authorization by the TMDL Project Manager.

Amendments

Amendments to the QAPP will be written to reflect specific project organization, tasks, schedules, objectives and methods; address deficiencies and nonconformances; improve operational efficiency; and/or accommodate unique or unanticipated circumstances. Requests for amendments are directed from the Lead Organization Project Manager to the TCEQ TMDL Project Manager in writing using the TMDL QAPP Amendment form. The TCEQ PM will consult with the TCEQ QAS to determine if the changes are substantive. The changes are effective immediately upon approval by the TCEQ TMDL Project Manager and Quality Assurance Specialist, or their designees, and the EPA Project Officer (if applicable). Amendments to the QAPP and the reasons for the changes will be documented, and copies of the approved QAPP Amendment form will be distributed to all individuals on the QAPP distribution list by the Lead Organization QAO.

Amendments shall be reviewed, approved, and incorporated into a revised QAPP during the annual revision process or within 120 days of the initial approval in cases of significant changes.

A7 QUALITY OBJECTIVES AND CRITERIA

The project objective is to collect data which may be used to support decisions related to TMDL development, stream standards modifications, permit decisions, and water quality assessments. Data to be collected is listed in the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* (Attachment 1). No measurement data will be submitted to the TCEQ for inclusion in the Surface Water Quality Monitoring Information System.

Table A7.1 Measurement Performance Specifications*

PARAMETER	UNITS	METHOD
Temperature, Water	°C	TCEQ SOP v1[1]
Temperature, Air	°C	TCEQ SOP v1[1]
Flow	cfs	TCEQ SOP v1[1]
Flow Measurement Method	1=gauge station, 2=electronic, 3=mechanical, 4=weir/flume, 5=Doppler	TCEQ SOP v1[1]

* THE SUITE OF SITE INFORMATION COLLECTED AND SURVEY QUESTIONS ASKED DURING AN RUAA IS SPECIFIED IN THE *PROCEDURES FOR A COMPREHENSIVE RECREATIONAL UAA AND A BASIC UAA SURVEY* (ATTACHMENT 1). THIS TABLE CONTAINS ONLY THE INSTRUMENT MEASUREMENTS.
1. SURFACE WATER QUALITY MONITORING PROCEDURES, VOLUME 1: PHYSICAL AND CHEMICAL MONITORING METHODS.

Accuracy and Precision

Precision is the degree to which a set of observations or measurements of the same property, obtained under similar conditions, conform to themselves. It is a measure of agreement among replicate measurements of the same property, under prescribed similar conditions, and is an indication of random error. Instrument precision will be assured by proper use, maintenance, and calibration of flow meters and thermometers in accordance with manufacturer specifications.

The accuracy and precision of the information gathered from this project is dependent on the knowledge and expertise of the responders. To assure precision and accuracy of the response, a number of responders representing a wide spectrum of the population are required. Corroboration between divergent sources of information offers greater confidence that precise and accurate measurements were made.

Bias

Bias is a statistical measurement of correctness and includes components of systemic error. A measurement is considered unbiased when the value reported does not differ from the true value. Bias in instrument measurements will be addressed through training in instrument use to assure consistency within and between field teams.

Representativeness

Representativeness is a measure of how accurately a monitoring program reflects the actual water quality conditions and recreational uses. The representativeness of the data is dependent on the sampling locations, the conditions under which surveys are performed, and the survey procedures.

The RUAAs will ideally be performed at a frequency of three sites per five stream miles. This will assure maximum capture of stream recreational uses. Additionally, sites will be surveyed preferentially during high recreational use potential, both temporally and hydrologically. The final determination of the applicability of individual and collective site recreational use conditions at the assessment unit or segment level will be made by the TCEQ WQS Group. Representativeness will be measured with the completion of samples collected in accordance with the approved QAP and monitoring plan.

Comparability

Confidence in the comparability of data sets from this project and those for similar uses is based on the commitment of project staff to use only the methods and QA/QC protocols prescribed in the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* (Attachment 1) in accordance with quality system requirements and as described in this QAPP.

Completeness

The completeness of the data is basically a function of weather, site access, and the availability and willingness of individual responders. Unavailable data due to weather and the inability to access the sites and interview individuals are to be expected. At a minimum, interviewing the required contacts, completing the field data sheets and the RUAA Summary Form, and providing the photographic evidence, maps, and final report will guarantee the completeness of the each data set.

A8 SPECIAL TRAINING/CERTIFICATION

Field personnel will receive training in proper sampling and field analysis. Before actual sampling or field analysis occurs, they will demonstrate to the Lead Organization QA Officer their ability to properly calibrate field equipment and perform field sampling and analysis procedures. Training will be documented and retained in the Lead Organization personnel file and be available during a monitoring systems audit.

Global Positioning System (GPS) training and certification are required in accordance with TCEQ Operating Policies 8.12: Global Positioning System. Certification can be obtained by: 1) completing an agency training class, 2) completing a suitable training class offered by an outside vendor, or 3) by providing documentation of sufficient GPS expertise and experience.

A9 DOCUMENTS AND RECORDS

The document and records that describe, specify, report, or certify activities, requirements, procedures, or results for this project and the items and materials that furnish objective evidence of the quality of items or activities are listed. The TCEQ may elect to take possession of records at the conclusion of the specified retention period.

Table A.9.1 Project Documents and Records

Document/Record	Location	Retention	Form
QAP and amendments	Performing Party/ TCEQ	5 years	Paper/Electronic
Field notebooks or field data sheets	Performing Party	5 years	Paper/Electronic
Field equipment maintenance logs	Performing Party	5 years	Paper
Field SOPs	Performing Party	5 years	Paper
Corrective Action Documentation	Performing Party	5 years	Paper/Electronic
RUAA Surveys	Performing Party/ TCEQ	3 years	Paper/Electronic
Progress reports/final report	Performing Party/ TCEQ	3 years	Paper/Electronic

B1 SAMPLING PROCESS DESIGN

The Monitoring Plan is specified in the Project QAPs. Generally, water bodies are selected for RUAAs where a change to the contact recreation WQS may be warranted due to physical characteristics, accessibility, and recreational uses of the water body. All sampling process design will be based on the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey*.

B2 SAMPLING METHODS

The Lead Organization will follow all sampling and survey methodology as described in the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey*.

Documentation of Field Sampling Activities

Field sampling activities are documented on the Field Data Sheets, Comprehensive Interview Forms, and RUAA Summary Sheets as specified by the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* (Attachment 1).

Recording Data

For the purposes of this section and subsequent sections, all field personnel follow the basic rules for recording information as documented below:

1. Legible writing in indelible, waterproof ink with no modifications, writeovers or cross-outs;
2. Changes should be made by crossing out original entries with a single line, entering the changes, and initialing and dating the corrections;
3. Close-outs on incomplete pages with an initialed and dated diagonal line.

B3 SAMPLE HANDLING AND CUSTODY

Sample Handling

No physical samples are collected, so this section is not applicable.

B4 ANALYTICAL METHODS

Failures in Measurement Systems and Corrective Actions

Failures in field measurement systems involve, but are not limited to such things as instrument malfunctions, failures in calibration, etc. In many cases, the field technician will be able to correct the problem. If the problem is resolvable by the field technician, then they will document the problem on the field data sheet and complete the measurement. If the problem is not resolvable, then it is conveyed to the Lead Organization QAO. The nature and disposition of the problem is reported to the Lead

Organization Project Manager. The Lead Organization Project Manager will include this information in the CAR and submit with the Progress Report which is sent to the TCEQ TMDL Project Manager.

B5 QUALITY CONTROL

No physical samples are collected, so this section is not applicable.

B6 INSTRUMENT/EQUIPMENT TESTING, INSPECTION AND MAINTENANCE

All sampling equipment testing and maintenance requirements are detailed in the TCEQ *Surface Water Quality Monitoring Procedures, Volume 1*. Sampling equipment is inspected and tested upon receipt and is assured appropriate for use. Acceptance criteria are detailed in the Lead Organization's purchasing manual. Equipment records are kept on all field equipment and a supply of critical spare parts is maintained by the Lead Organization Field Supervisor, or designee.

B7 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

Field equipment calibration requirements are contained in the TCEQ *Surface Water Quality Monitoring Procedures, Volume 1*.

B8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

All new batches of field supplies are inspected before use to ensure that they are adequate. Acceptance criteria will be detailed in organization's purchasing manual.

B9 NON-DIRECT MEASUREMENTS

This project includes no non-direct measurements.

B10 DATA MANAGEMENT

The Lead Organization will collect, store electronically, and make available all data collected to the TCEQ. They will also be responsible for maintaining backup files to protect the data. Data will be stored, managed and submitted to the TCEQ WQS Group through the TCEQ TMDL Project Manager. RUAA data will not go into the Surface Water Quality Monitoring Information System (SWQMIS). The data will be accompanied by other deliverables, such as a final RUAA report. Deliverables will be submitted to the TCEQ as described in the contract.

Project level data management protocols are addressed in the Data Management section of the Project QAPs.

C1 ASSESSMENTS AND RESPONSE ACTIONS

The following table presents types of assessments and response action for data collection activities applicable to the QAPP.

Table C1.1 Assessments and Response Actions

Assessment Activity	Approximate Schedule	Responsible Party	Scope	Response Requirements
Status Monitoring Oversight, etc.	Continuous	Lead Organization Project Manager	Monitoring of the project status and records to ensure requirements are being fulfilled. Monitoring and review of contract laboratory performance and data quality	Report to TCEQ in Quarterly Report. Ensure project requirements are being fulfilled.
Monitoring Systems Audit	Dates to be determined by TCEQ	TCEQ QAS	Field sampling, handling and measurement; facility review; and data management as they relate to the TMDL Project	30 days to respond in writing to the TCEQ to address corrective actions

Corrective Action Procedures

Examples of deviations from sampling method requirements or sample design include but are not limited to such things as sampling at the wrong site, incomplete survey collection, etc. Any deviations from the QAPP and the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* may invalidate resulting data and may require corrective action. Corrective action may require re-measurement or collection of survey components. It is the responsibility of the Lead Organization Project Manager, in consultation with the Lead Organization QAO, to ensure that the actions and resolutions to the problems are documented and that records are maintained in accordance with this QAPP. In addition, these actions and resolutions will be conveyed to the TMDL Project Manager both verbally and in writing in the project progress reports and by completion of a corrective action report (CAR).

Corrective Action Reports (CARs) document: root cause(s); programmatic impact(s); specific corrective action(s) to address any deviations; action(s) to prevent recurrence; individual(s) responsible for each action; the timetable for completion of each action; and the means by which completion of each corrective action will be documented. CARs will be included with project progress reports. In addition, significant conditions (i.e., situations which, if uncorrected, could have a serious effect on safety or on the validity or integrity of data) will be reported to the TCEQ TMDL Project Manager immediately both verbally and in writing.

The Lead Organization is responsible for implementing and tracking corrective action procedures as a result of audit findings. Records of audit findings and corrective actions are maintained by the TCEQ TMDL Project Manager and QA Specialist. If audit findings

and corrective actions cannot be resolved, then the authority and responsibility for terminating work is specified in agreements or contracts between participating organizations.

C2 REPORTS TO MANAGEMENT

Reports to TCEQ Project Management

Procedures for reporting to TCEQ project management are specified in project QAPs.

Reports by TCEQ Project Management

Contractor Evaluation - The Lead Organization is evaluated in a Contractor Evaluation by the TCEQ annually for compliance with administrative and programmatic standards. Results of the evaluation are submitted to the TCEQ Financial Administration Division, Procurements and Contracts Section.

D1 DATA REVIEW, VERIFICATION, AND VALIDATION

The TCEQ TMDL Project Manager will review each completed RUAA Survey for completeness and then submit to the TCEQ WQS Group. All measurement data will be verified and validated at the Project level.

D2 VERIFICATION, AND VALIDATION METHODS

The Lead Organization Project Manager is responsible for reviewing surveys for completeness and accuracy. At least 10% of measurement data in final RUAA surveys should be verified against the original values in field notebooks for accuracy.

D3 RECONCILIATION WITH USER REQUIREMENTS

Completed RUAA Surveys will be used by the TCEQ WQS Group to determine contact recreation uses at study water bodies. This information may result in changes to the site's contact recreation use in the WQS.

APPENDIX A.
EXAMPLE LETTER

APPENDIX A.
EXAMPLE LETTER TO DOCUMENT ADHERENCE TO THE QAPP

TO: *(name of Lead Organization Project Manager)*
(organization)

FROM: *(name of TCEQ Project Manager)*
(TCEQ)

RE: TMDL Program Texas RUAA QAPP

Please sign and return this form by (*date*) to:

MC-203
PO Box 13087
Austin, TX 78711-3087

I acknowledge receipt of the TMDL RUAA QAPP and verify that all procedures will be followed in accordance with the TMDL RUAA QAPP (June 18, 2010) and verify that all procedures in that document will be followed. I understand the document(s) describe quality assurance, quality control, data management and other technical activities that must be implemented to ensure the results of work performed will satisfy stated performance criteria.

_____

{Lead Organization Project Manager} Date

_____

{Lead Organization QAO} Date

_____

{Lead Organization Field Supervisor} Date

Note: Copies of the signed letter should be sent by the Lead Organization to the TCEQ TMDL Project Manager prior to obtaining signatures for the QAP.

ATTACHMENT 1 - ***Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey, May 2009***

(Note: This attachment includes the *Procedures for a Comprehensive Recreational UAA and a Basic UAA* Survey that were effective at the time of the approval of this QAPP. The effective date for the procedures used on an individual RUAA should be specified in the QAP.)

ATTACHMENT 2 – RUAA QAP SHELL

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ)
TOTAL MAXIMUM DAILY LOAD (TMDL) PROGRAM
RECREATIONAL USE ATTAINABILITY ANALYSIS
QUALITY ASSURANCE PLAN (QAP)

DATE OF QAP: {INSERT DATE}

PERFORMING PARTY: {INSERT NAME}

TCEQ PROJECT MANAGER NAME: {INSERT NAME}

TCEQ PROJECT MANAGER CONTACT INFORMATION: {TCEQ PROJECT MANAGER NAME AND ADDRESS}

FUNDING SOURCE: {OBTAIN GRANT ID FROM TCEQ PROJECT MANAGER}

This quality assurance plan for a TCEQ TMDL Program study is produced as an addendum to the TCEQ TMDL Recreational Use Attainability Analyses (RUAA) QAPP. QAPs for the TMDL Program will be kept on file by the TMDL Program in the TCEQ central office QA files.

A. RUAA STUDY TITLE

{IDENTIFY THE RUAA STUDY BY TITLE.}

B. PROJECT DESCRIPTION OF THE RUAA STUDY

{IDENTIFY THE SEGMENTS TO RECEIVE RUAAs. INCLUDE A STATEMENT THAT THESE SEGMENTS WERE CHOSEN BY THE TCEQ AS CANDIDATES FOR A POTENTIAL CHANGE IN THE DESIGNATED OR PRESUMED RECREATIONAL USES}

{WATER BODY LOCATION DESCRIPTIONS ARE FOUND IN THE 2008 303(D) LIST OF IMPAIRED WATERS, THE 2000 TEXAS SURFACE WATER QUALITY STANDARDS, AND THE TCEQ'S ATLAS OF TEXAS SURFACE WATERS. THESE MAY BE PARTIAL OR COMPLETE DESCRIPTIONS. IF PARTIAL DESCRIPTIONS ARE PROVIDED, THE ENTIRE WATERBODY WILL NEED TO BE EVALUATED FOR THE UAA}

C. EXPERIMENTAL DESIGN

{Note: The Monitoring Plan should be incorporated as an attachment to the QAP}
{DESCRIBE THE MONITORING PLAN FOR THE RUAA STUDY, AND EXPLAIN THE RATIONALE FOR SITE SELECTION. PROVIDE A TABLE

OF MONITORING SITES WITH UNIQUE IDENTIFIERS, DESCRIPTIONS, LAT/LONGS, SEGMENT NUMBERS, AND OTHER APPLICABLE NARRATIVE INFORMATION. PROVIDE MAPS OF SAMPLING LOCATIONS. THE MONITORING PLAN SHOULD BE BASED ON ELEMENTS *A* THROUGH *F* OF THE SITE RECONNAISSANCE SECTION OF THE *PROCEDURES FOR A COMPREHENSIVE RECREATIONAL UAA AND A BASIC UAA SURVEY* AND REFLECT THAT CONTENT IN EITHER THE TABLE OR THE MAPS (OR BOTH). DESCRIBE ANY CLARIFICATION TO PROCEDURES BECAUSE OF CIRCUMSTANCES THAT ARE NOT DESCRIBED IN THE *PROCEDURES FOR A COMPREHENSIVE RECREATIONAL UAA AND A BASIC UAA SURVEY}*

{THE WATER BODY NAME, SEGMENT NUMBER, DESCRIPTION, AND NUMBER OF PROPOSED SAMPLING SITES ARE LISTED IN TABLE C.1. FINAL SITE SELECTION AND ANY CHANGES IN SAMPLING SITES WILL BE IDENTIFIED IN THE MONITORING PLAN IN APPENDIX A OF THIS QAP}

The study will be conducted in accordance with the TCEQ Recreational Use Attainability Analysis (RUAA), Procedures for a Comprehensive RUAA and a Basic RUAA Survey (May 2009). A Basic RUAA Survey will be conducted to collect information on unclassified water bodies and a comprehensive survey on classified water bodies, such as the presence or absence of water recreation activities, stream flow type, stream depth and establish/verify presumed use. Data collection will occur Friday through Sunday, during the period of the week when people are most likely to be using the water bodies for recreation purposes. Each site will be surveyed at least once in accordance with the Basic RUAA procedures and multiple times in accordance with the Comprehensive RUAA procedures during the period from {DATES}. If at any point during a Basic RUAA Survey it becomes apparent that primary contact recreation is clearly the appropriate use for the water bodies the Performing Party will stop conducting the RUAA. If the Basic RUAA Survey indicates that the existing use for recreation might be lower than the presumed primary contact, secondary contact recreation 1, or designated recreational use, then a Comprehensive RUAA will be performed to fully evaluate the appropriate use. A Comprehensive RUAA is required for a classified segment. Detailed procedures for when a Basic RUAA Survey will need to become a Comprehensive RUAA are discussed in the Applicability Section and in Figure 1 of the RUAA Procedures. This study was planned and developed so that the study can proceed from a Basic RUAA survey to a Comprehensive RUAA, if necessary, without requiring an amendment to the QAP.

Table C.1 Number of Sites and Approximate Stream Miles of Selected Segments, including Segment ID and Name

Segment	Name of Water Body	Description	Stream Miles	Approximate Number of Sites
{#}			{#}	{#}

D. SAMPLING, ANALYTICAL METHODS, AND QUALITY ASSURANCE

The study will be conducted in accordance with the *Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey* and according to the following requirements described in the most current TCEQ TMDL RUAA QAPP:

- Data Representativeness - TCEQ TMDL RUAA QAPP Section A7
- Field measurement techniques found in the SWQM Procedures Manual – TCEQ TMDL RUAA QAPP Section B2
- Data Management - TCEQ TMDL RUAA QAPP Section B10{SPECIFY THE PROCEDURES IN PLACE TO MINIMIZE DATA LOSS AND SPECIFIC METHODOLOGY FOR COMPILING, STORING AND REPORTING COMPLETED SURVEYS. COORDINATE ALL FILE FORMATS WITH THE TCEQ TMDL PROJECT MANAGER AND EXPLICITLY STATE WHAT FORMAT SURVEYS, PHOTOGRAPHS, AND OTHER PRODUCTS WILL TAKE.}
- Data Completeness - TCEQ TMDL RUAA QAPP Section A7
- Documentation and Records – TCEQ TMDL RUAA QAPP Section A9
- Corrective Action Procedures – TCEQ TMDL RUAA QAPP Sections B4, C1

E. REPORTS TO TCEQ PROJECT MANAGEMENT

Quarterly Progress Report - Summarizes the Lead Organization activities for each task; reports problems, delays, and corrective actions; and outlines the status of each task's deliverables.

Monitoring Systems Review Audit Report - Following any audit performed by the Lead Organization, a report of findings, recommendations and responses are sent to the TCEQ project manager in the quarterly/monthly progress report.

Completed RUAA Surveys – electronic copies—will be submitted to the TCEQ Project Manager as completed.

F. ROLES AND RESPONSIBILITIES

{MODIFY/REPLACE THESE PARAGRAPHS AS APPROPRIATE}
Sampling, data interpretation, and report preparation for the RUAA will be performed by {NAME}, {JOB TITLE}. {NAME} will have supervisory responsibility to ensure that the RUAA is completed as required. The TMDL Project Manager will review the RUAA Monitoring Plan to ensure data representativeness, be available for consultation as necessary, and oversee review of the final RUAA reports.

{ROLES AND RESPONSIBILITIES OF SUBCONTRACTOR STAFF SHOULD ALSO BE ENTERED HERE}

Additional Roles and Responsibilities are contained in Section A4 of the TCEQ RUAA QAPP.

G. TIME FRAME AND DELIVERABLES

RUAA surveys will be conducted during fiscal year {ENTER NUMBER} and final reports will be submitted by {ENTER DATE}. RUAA reports will be submitted to the TCEQ Project Manager as completed.

H. ADHERENCE LETTERS

Lead Organization: Must return the adherence letter to the QAPP contained in Appendix A of the RUAA QAPP to the TMDL PM prior to submitting the signed QAP.

Project Sub-Participants: Must return a letter (example below) documenting adherence to this QAP, the program QAPP, and any amendments or revisions of this plan. A copy of this signed letter must be submitted to the TMDL Project Manager within 30 days of signature.

EXAMPLE QAP ADHERENCE LETTER (Only to be signed by Sub-Participants and not the Lead Organization)

TO: *(name of Sub-Participant Project Manager)*
(organization)

FROM: *(name of Lead Organization Project Manager)*
(LEAD ORGANIZATION)

RE: TMDL Program Texas RUAA QAPP and {TMDL Project Title} QAP

Please sign and return this form by (*date*) to:
(ADDRESS)

I acknowledge receipt of the referenced documents. I understand the document(s) describe quality assurance, quality control, data management and other technical activities that must be implemented to ensure the results of work performed will satisfy stated performance criteria.

_____

{Sub-Participant Project Manager} Date

I. REFERENCES

TMDL Program Texas Recreational Use Attainability Analysis Quality Assurance Project Plan, Revision 2, June 18, 2010.

Recreational Use-Attainability Analyses (RUAAs): Procedures for a Comprehensive Recreational UAA and a Basic UAA Survey, {INSERT DATE OF THE LATEST APPROVED VERSION WHICH CAN BE FOUND AT http://www.tceq.state.tx.us/permitting/water_quality/stakeholders/swqsawg_handouts.html#proc.)

J. DISTRIBUTION LIST- *The TCEQ Project Manager will be responsible for distribution to TCEQ and EPA parties. Copies must be provided within two weeks of signature date. The Lead Organization Project Manager will be responsible for distribution within their organization and to any sub-participants.*

Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Office of Water
Planning & Implementation Section
TMDL Program
{NAME}, TMDL Project Manager
MC-203
(512) 239-XXXX

Planning & Implementation Section
Monica I. Harris, P.G., Manager
MC-203
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Monitoring and Assessment Section
Standards Group
Lori Hamilton, Work Lead
MC-234
(512) 239-0683

Office of Compliance and Enforcement
Field Operations Support Division
Kyle Girten, TMDL Quality Assurance Specialist
MC-176
(512) 239-0425

TCEQ Field Operations Support Division
Tracy Miller, Water Program Manager
MC-174
(512) 239-4127

U.S. Environmental Protection Agency Region 6
Water Quality Division
1445 Ross Avenue
Suite # 1200
Dallas, TX 75202-2733
Teresita Mendiola, Project Officer
(214) 665-7144

K. SIGNATURES AND APPROVALS

{LEAD ORGANIZATION}

_____

{LEAD ORGANIZATION PROJECT MANAGER} Date

_____

{LEAD ORGANIZATION QAO} Date

_____

{LEAD ORGANIZATION FIELD SUPERVISOR} Date

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

_____

{NAME}, Project Manager Date
TMDL Program
TCEQ

_____

Monica I. Harris, P.G., Manager Date
Planning & Implementation Section
TCEQ

_____

Ron Stein, Team Leader Date
TMDL Program
Planning & Implementation Section
TCEQ

_____

Kyle Girten Date
TMDL Program Quality Assurance Specialist
Laboratory & Quality Assurance Section
TCEQ