Amendment # 1
to the Red River Authority of Texas'
Clean Rivers Program FY 2016-2017 QAPP

Prepared by the Red River Authority of Texas
In Cooperation with the
Texas Commission on Environmental Quality (TCEQ)

Questions concerning this QAPP should be directed to:

Red River Authority of Texas
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Effective: Immediately Upon Approval by all parties

JUSTIFICATION

This document details the changes made to the Authority's basin-wide Quality Assurance Project Plan to update **Appendix B**, specifically **Table B1.1**, to include two (2) 24-hour dissolved oxygen (DO) studies at White Deer Creek, Station 21174, and Wolf Creek, Station 10059. Additionally, **Figure A4.1** was updated to reflect the change in the TCEQ's CRP Quality Assurance Specialist and the Authority's CRP Field Staff. Finally, **Section A4** was updated to list Kelly Rodibaugh as the current TCEQ CRP Project Quality Assurance Specialist.

SUMMARY OF CHANGES

Section A4 – Project/Task Organization

Section **A4 – Project/Task Organization** was updated to reflect current personnel responsibilities.

Figure A4.1 – Organization Chart – Lines of Communication

The **Project Organizational Chart**, **Figure A4.1**, has been updated with current personnel and lines of communication.

Table B1.1 – Sample Design and Schedule – FY 2016

Table B1.1, Sample Design and Schedule – FY 2016, has been updated to reflect 24-hour monitoring events at two (2) monitoring stations.

DETAIL OF CHANGES

Section A4 – Project/Task Organization

Section A4 was updated to list Kelly Rodibaugh as the CRP Project Quality Assurance Specialist, following the departure of Allison Fischer from the agency.

Figure A4.1 – Organization Chart – Lines of Communication

Figure A4.1 was modified to incorporate Ron Mullins under the Red River Authority of Texas Field Staff. Additionally, Allison Fischer was removed as TCEQ Project QA Specialist and replaced with Kelly Rodibaugh, TCEQ Project QA Specialist.

Table B1.1 – Sample Design and Schedule – FY 2016

24-Hour monitoring events were added at White Deer Creek, Station 21174, and Wolf Creek, Station 10059 per the request of Bill Harrison, TCEQ Central Office, Surface Water Quality Monitoring.

DISTRIBUTION

QAPP Amendments/Revisions to Appendices will be distributed to all personnel on the distribution list maintained by the Authority.

These changes will be incorporated into the FY 2016-17 QAPP document and TCEQ, the Authority and all program participants will acknowledge and accept these changes by signing this amendment.

Red River Authority of Texas

Signed Electronically Effective 5/9/2016

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Allen M. Pappas, Date
Red River Authority Project Manager

Signed Electronically Effective 5/9/2016

_____

Jose Martinez, Date
Red River Authority CRP QA Officer

Red River Authority of Texas Environmental Services Laboratory

Signed Electronically Effective 5/9/2016

_____

Jill Simpson, Date
Red River Authority Laboratory Supervisor

Signed Electronically Effective 5/9/2016

_____

Allen M. Pappas, Date
Red River Authority Laboratory QA Officer

Texas Commission on Environmental Quality

Signed Electronically Effective 5/9/2016

_____

Russell Bond, Date
CRP Project Manager

Signed Electronically Effective 5/9/2016

_____

Kelly Rodibaugh, Date
CRP Project QAS

Signed Electronically Effective 5/9/2016

_____

Sarah Eagle, Date
CRP Work Leader

Signed Electronically Effective 5/9/2016

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Daniel R. Burke, Date
Lead CRP Quality Assurance Specialist

A4 PROJECT/TASK ORGANIZATION

Description of Responsibilities

<u>Texas Commission on Environmental Quality</u>

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, reviews, 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.

Daniel R. Burke
CRP Lead 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 review and approval of CRP QAPPs. Prepares and distributes annual audit plans. Conducts monitoring systems audits of Planning Agencies. Concurs with and monitors implementation of corrective actions. 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 QAPPs and audit records for the CRP.

Russell Bond
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, including coordination and tracking of CRP data sets from initial submittal through CRP Project Manager review and approval; ensuring that data is reported following instructions in the Surface Water Quality Monitoring Data Management Reference Guide, November 2013, or most current version (DMRG);

running automated data validation checks in Surface Water Quality Monitoring Information System (SWQMIS) and coordinating data verification and error correction with CRP Project Managers; generating SWQMIS summary reports to assist CRP Project Managers' data review; identifying data anomalies and inconsistencies; providing training and guidance to CRP and Planning Agencies on technical data issues to ensure that data are submitted according to documented procedures; reviewing QAPPs for valid stream monitoring stations, validity of parameter codes, submitting entity code(s), collecting entity code(s), and monitoring type code(s); developing and maintaining data management-related standard operating procedures (SOPs) for CRP data management; and coordinating and processing data correction requests.

Peter Bohls
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 is reported following instructions in the DMRG. Runs automated data validation checks in 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).

Kelly Rodibaugh
CRP Project Quality Assurance Specialist
Serves as liaison between CRP management and TCEQ QA management. Participates in the development, approval, implementation, and maintenance of written QA standards (e.g., Program Guidance, SOPs, QAPPs, QMP). Serves on planning team for CRP special projects and reviews QAPPs in coordination with other CRP staff. Coordinates documentation and implementation of corrective action for the CRP.

PROJECT ORGANIZATION CHART

Figure A4.1 – Organization Chart - Lines of Communication

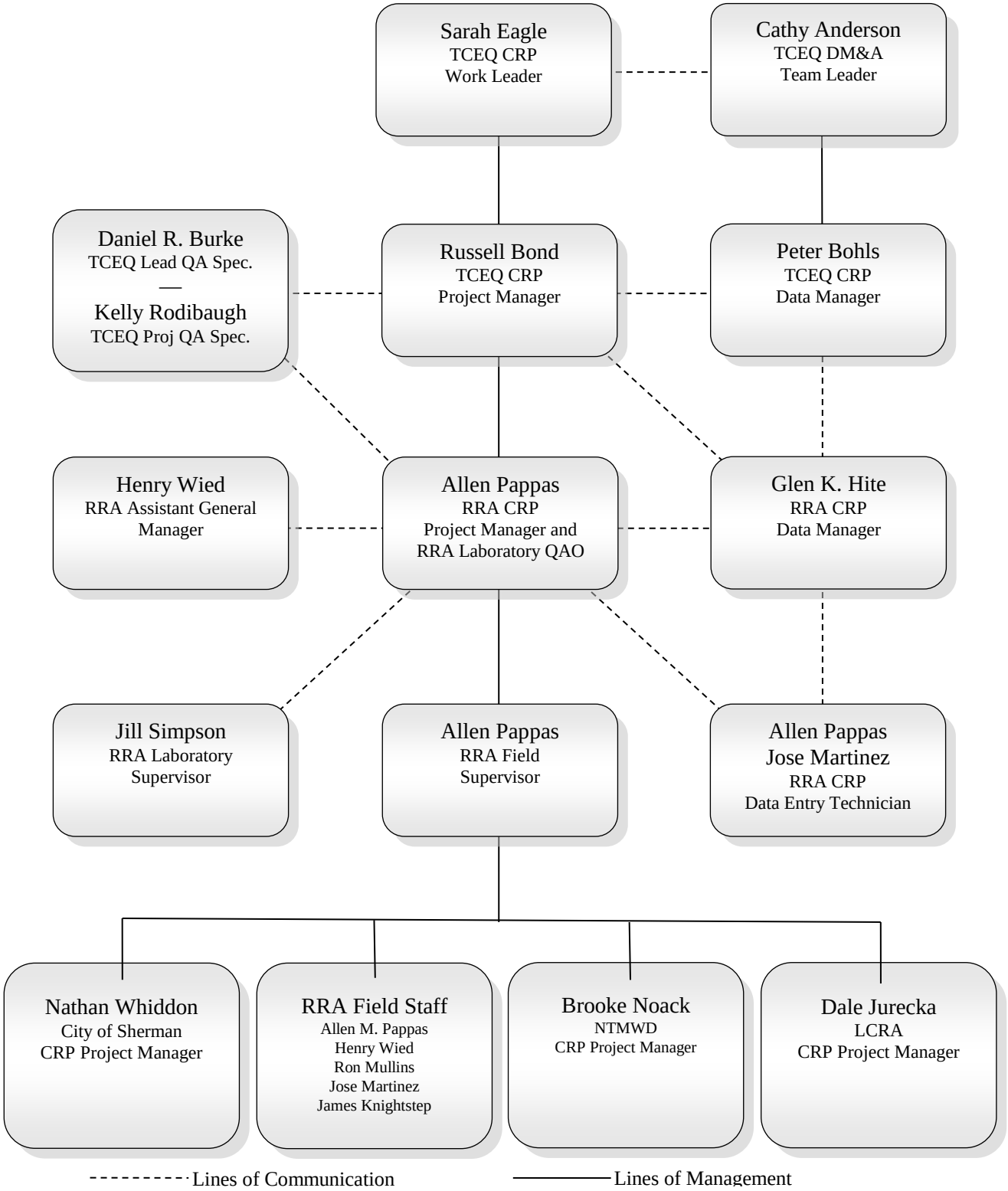

TABLE B1.1
Sample Design and Schedule - FY 2016

Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0101	1	1	CANADIAN RIVER BRIDGE AT US 60-83 AT CANADIAN	10032	RR	RT									4			4	4		4
0101	1	1	CANADIAN RIVER BRIDGE ON SH 70 NORTH OF PAMPA	10033	RR	RT									4			4	4		4
0101A	1	1	DIXON CREEK AT SH 152 WEST OF RR2171 EAST OF BORGER	17045	RR	RT									4			4	4		4
0101A	1	1	DIXON CREEK 150 M UPSTREAM OF HUTCHINSON COUNTY ROAD, UPSTREAM OF CANADIAN RIVER CONFLUENCE NE OF BORGER	10016	RR	RT	2											2	2		2
0101B	1	1	ROCK CREEK 15 M DOWNSTREAM OF CHICKASAW RD BRIDGE IN ELECTRIC CITY NEAR BORGER	10024	RR	RT									4			4	4		4
0101C	1	1	WHITE DEER CREEK AT JEEP TRAIL CROSSING APPROX 0.45 KM EAST OF THE DUNCAN RANCH COMPLEX AT THE END OF HUTCHINSON COUNTY ROAD 26	21174	RR	RT	1								4			4	4		4
0102A	1	1	BIG BLUE CREEK 250 YDS UPSTREAM OF FM 1913 APPROXIMATELY 21 MI SE OF DUMAS	15270	RR	RT									4			4	4		4
0103	1	1	CANADIAN RIVER BRIDGE AT US 87-287 NORTH OF AMARILLO	10054	RR	RT												4	4		4
0103A	1	1	EAST AMARILLO CREEK 15 METERS UPSTREAM OF CITY OF AMARILLO RIVER ROAD WWTP OUTFALL	10017	RR	RT									4			4	4		4
0103A	1	1	EAST AMARILLO CREEK IMMEDIATELY DOWNSTREAM OF US 287 NORTH OF AMARILLO	10018	RR	RT									4			4	4		4

TABLE B1.1
Sample Design and Schedule - FY 2016

Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0103A	1	1	EAST AMARILLO CREEK AT LOOP 335 AND US 287 IN AMARILLO	21024	RR	RT									4			4	4		4
0103A	1	1	THOMPSON PARK LAKE NORTH END OF NORTH LAKE 213 M W OF US 87 FRONTAGE RD AND 1.34 KM NORTH OF NE 24TH ST IN AMARILLO	15775	RR	RT									4			4			4
0103C	1	1	UNNAMED TRIBUTARY OF WEST AMARILLO CREEK AT LOOP 335 EASTBOUND ACCESS ROAD 470 M EAST OF ITS INTERSECTION WITH FM/RM 1061 NORTHWEST OF AMARILLO	17056	RR	RT									4			4	4		4
0104	1	1	WOLF CREEK BRIDGE AT SH 305 NORTH OF LIPSCOMB	10058	RR	RT									4			4	4		4
0104	1	1	WOLF CREEK 50 M UPSTREAM OF FM 1454 APPROXIMATELY 27.4 KM/17 MI EAST OF LIPSCOMB	10059	RR	RT	1								4			4	4		4
0199B	1	1	KIOWA CREEK AT SH 15 EAST OF DARROUZETT	10009	RR	RT									4			4	4		4
0201D	5	2	BARKMAN CREEK 35 M EAST OF RICHMOND RD OVERPASS/FM 599 0.97 KM NW OF FM 559/HOLLY CREEK ROAD INTERSECTION 11.5KM NW OF TEXARKANA	15059	RR	RT									4			4	4		4
0201A	5	2	MUD CREEK AT US 259 3.1 KM NORTH OF DE KALB	15319	RR	RT	2								4			4	4		4
0202	5	2	RED RIVER DOWNSTREAM LAKE TEXOMA AT US 259 9.3 KM NORTH OF US 259/FM 114 INTERSECTION 21 KM NORTH OF DEKALB	10125	RR	RT									4			4	4		4
0202	5	2	RED RIVER AT NORTHBOUND US 271 IN ARTHUR CITY 0.75 KM NORTH OF FM 197/US 271 INTERSECTION	10126	RR	RT									4			4	4		4

TABLE B1.1
Sample Design and Schedule - FY 2016

Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0202	4	2	RED RIVER AT SH 78 355 M NORTHWEST OF FANNIN CR 200/SH 78 INTERSECTION AT TEXAS STATE LINE 10 KM NORTHEAST OF CITY OF RAVENNA	10127	RR	RT									4			4			4
0202	4	2	RED RIVER AT US 75 NORTH OF DENISON	21031	RR	RT									4			4	4		4
0202A	4	2	BOIS D' ARC CREEK AT FM 1396 NORTHWEST OF HONEY GROVE	20167	NM	RT					12				12			12	12		12
0202A	4	2	BOIS D’ARC CREEK AT FM 409 NORTHWEST OF HONEY GROVE	21029	NM	RT					12				12			12	12		12
0202A	4	2	BOIS DARC CREEK AT FM 898/OAK HILL ROAD 1.4 KM NORTHEAST OF CITY OF WHITEWRIGHT	15036	RR	RT									4			4	4		4
0202A	4	2	BOIS D'ARC CREEK AT SH 78 SOUTH OF BONHAM	18652	RR	RT									4			4	4		4
0202A	4	2	BOIS D’ARC CREEK AT FM 2945 IN FANNIN COUNTY	21706	NM	RT					12				12			12	12		12
0202C	5	2	PECAN BAYOU AT FM 1159 9.62 KM NORTHEAST OF CLARKSVILLE IN RED RIVER COUNTY	16001	RR	RT									4			4	4		4
0202B	4	2	CORNELIASON CREEK AT FM 1897 NORTH OF BELLS	10117	RR	RT									4			4	4		4
0202C	5	2	PECAN BAYOU AT BLANTON CREEK CEMETARY ROAD/RED RIVER CR 2235 11.65 KM NORTH OF CITY OF BAGWELL	14472	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0202D	5	2	PINE CREEK AT SOUTHBOUND US 271 APPROX 7.8 KM NORTH OF THE CITY OF PARIS PERMIT WQ001012-000 CAMPBELL SOUP SUPPLY COMPANY	10120	RR	RT									4			4	4		4
0202D	5	2	SIX MILE CREEK AT FM 195 NORTHEAST OF PARIS	21298	RR	RT									4			4	4		4
0202E	4	2	DEAN GILBERT LAKE NEAR THE DAM SOUTHWEST OF THE HWY 82 AND FM 1417 INTERSECTION IN SHERMAN TEXAS	21130	SH	RT									4			4			4
0202E	4	2	POST OAK CREEK AT FIRST COUNTY ROAD CROSSING DOWNSTREAM SHERMAN WWTP 0.33 KM SOUTH OF E FM 1417/SH 11 INTERSECTION 5.75 KM SE OF SHERMAN	10114	SH	RT									4			6	6		6
0202E	4	2	POST OAK CREEK AT FM 1417 0.25 KM WEST OF SH 11/FM 1417 INTERSECTION 5.3 KM SOUTHEAST OF SHERMAN	10115	SH	RT									4			6	6		6
0202E	4	2	POST OAK CREEK AT FM 1417 0.95 KM SOUTH OF FM 1417/US 82 INTERSECTION 4.75 KM NORTHWEST OF SHERMAN	17599	SH	RT									2			4	4		4
0202F	4	2	CHOCTAW CREEK AT SH 11 1.6 KM SOUTHEAST OF FM 1417/SH 11 INTERSECTION 7 KM SOUTHEAST OF SHERMAN	10111	SH	RT									4			6	6		6
0202F	4	2	CHOCTAW CREEK AT LUELLA ROAD 7.3 KM SSE OF SHERMAN FIRST CROSSING UPSTREAM CONFLUENCE WITH POST OAK CREEK	10112	SH	RT									4			6	6		6
0202F	4	2	CHOCTAW CREEK AT US 82 5.07KM DOWNSTREAM OF SH 56 EAST OF SHERMAN	18370	SH	RT									4			6	6		6
0202G	5	2	SMITH CREEK AT SOUTHBOUND US 271 385 M UPSTREAM OF THE CONFLUENCE WITH PINE CREEK 7 KM NORTH OF CITY OF PARIS	17044	RR	RT					4				4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0202G	5	2	SMITH CREEK AT LAMAR CR 31700 NEAR CITY OF PARIS	21026	RR	RT					4				4			4	4		4
0202G	5	2	SMITH CREEK AT LOOP 286/US 82 IN THE CITY OF PARIS	21027	RR	RT					4				4			4	4		4
0202H	5	2	BIG PINE CREEK SOUTH BANK AT FM 410 EAST/NORTH	18513	RR	RT									4			4	4		4
0202I	5	2	LITTLE PINE CREEK AT FM 195	18514	RR	RT									4			4	4		4
0202O	4	2	PICKENS LAKE MID LAKE AT HERMAN BAKER PARK 1.0 KM EAST OF FM 1417 AND 700 M NORTHEAST OF END OF SOUTHRIDGE LANE SOUTHWEST OF SHERMAN	16945	SH	RT									4			4			4
0202J	4	2	SAND CREEK AT SH 56 1.35 KM WEST OF SH 56/US 75 INTERSECTION WEST OF SHERMAN	15446	SH	RT									2			4	4		4
0203	4	2	LAKE TEXOMA NEAR BIG MINERAL ARM 4.1KM EAST OF US 377/OXFORD DRIVE INTERSECTION 1.5 KM E OF WEST SHORE 15 KM NORTHWEST OF POTTSBORO	10130	RR	RT									4			4			4
0202L	4	2	HONEY GROVE CREEK AT FANNIN CR 2770	21030	NM	RT					12				12			12	12		12
0202M	4	2	LAKE BONHAM APPROX 265 METERS NORTH AND 165 METERS EAST OF THE INTERSECTION OF FM 273 AND WESTVIEW DRIVE	21032	NM	RT					12				12			12			12
0202N	5	2	HICKS CREEK APPROX 400 M UPSTREAM OF PINE CREEK CONFLUENCE AT PRIVATE ROAD 1.55 KM EAST OF US 271 10 KM NNE OF THE CITY OF PARIS	10121	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0202N	5	2	HICKS CREEK AT US 271 11 KM NORTH OF THE CITY OF PARIS	10122	RR	RT									4			4	4		4
0203	4	2	LAKE TEXOMA AT US 377 O.42 KM NORTH OF TEXAS BANK ON US 377 8.05 KM NORTH OF GORDONVILLE	10131	RR	RT									4			4			4
0203	4	2	LAKE TEXOMA-LITTLE MINERAL ARM AT BOAT RAMP AT SIMMONS SHORE IN PRESTON 4.5 KM E OF FM 120 5.5 KM N OF FM 406 12.5 KM NNW OF DENISON	15388	NM	RT					12				12			12			12
0203	4	2	LAKE TEXOMA LITTLE MINERAL ARM SOUTHEAST OF PRESTON SHORE NEAR INTAKE STRUCTURE EQUIDISTANT BETWEEN SHORELINES 1.5 KM EAST OF FM 120	17480	RR	RT									4			4			4
0203	4	2	LAKE TEXOMA 260 METERS DUE WEST FROM LAKE TEXOMA DAM 282 METERS EAST AND 392 METERS NORTH TO THE INTERSECTION OF FM 1310 AND NORTH SH 91 NORTH OF DENISON	20545	NM	RT					12				12			12			12
0203C	4	2	MUSTANK CREEK AT SPALDING ROAD 0.47 KM WEST OF SPALDING ROAD/SIEBERT HILL LANE INTERSECTION 1.75 KM EAST OF SADLER	17504	RR	RT									4			4	4		4
0203D	4	2	DEAVER CREEK AT US 82 EAST OF SADLER	17503	RR	RT									4			4	4		4
0204	3	2	RED RIVER AT US 81 2.1 KM NORTH OF US 81/PARR ROAD INTERSECTION 6.5 KM NORTH OF RINGGOLD	10133	RR	RT									4			4	4		4
0204	3	2	RED RIVER AT FM677 NORTHWEST OF SAINT JO	20168	RR	RT									4			4	4		4
0204B	4	2	MOSS LAKE AT SPILLWAY 130 M WEST OF FM 1201 467 M NORTH OF FISH CREEK DAM INTAKE STRUCTURE 18.25 KM NORTHWEST OF GAINESVILLE	15447	RR	RT									4			4			4

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0205	3	2	RED RIVER BRIDGE ON IH 44/US 277/US 281 313 M NORTHEAST OF TEXAS SHORE NEAR MID BRIDGE 4.0 KM NORTHEAST OF CITY OF BURKBURNETT	10134	RR	RT									4			4	4		4
0205	3	2	RED RIVER AT US 183/US 70 N 10.5 KM NORTH NORTHEAST OF OKLAUNION	16733	RR	RT									4			4	4		4
0205A	3	2	WILDHORSE CREEK AT US 281/277/IH44 3.1 KM NORTHEAST OF BURKBURNETT	10096	RR	RT									4			4	4		4
0206	3	2	PRAIRIE DOG TOWN FORK RED RIVER AT SH 6 12.75 KM NORTH OF QUANAH	10135	RR	RT									4			4	4		4
0206A	3	2	GROESBECK CREEK AT SH6 NORTH OF QUANAH	20166	RR	RT									4			4	4		4
0206C	3	2	NORTH GROESBECK CREEK AT FM 1166 NORTHWEST OF QUANAH	21297	RR	RT									4			4	4		4
0207	1	2	LOWER PRAIRIE DOG TOWN FORK RED RIVER AT US 62-83 3.4 KM NORTH OF US 83/RR 2465 INTERSECTION 16 KM NORTH OF CHILDRESS	10136	RR	RT									4			4	4		4
0207	1	2	LOWER PRAIRIE DOG TOWN FORK RED RIVER AT SH 207 10 KM SOUTHWEST OF FM 2272/SH 207 INTERSECTION 30.45 KM SOUTH OF CLAUDE	13637	RR	RT									4			4	4		4
0207	1	2	LOWER PRAIRIE DOG TOWN FORK RED RIVER AT US 70 70 M SOUTHWEST OF THE NORTHERN TIP OF SOUTHBOUND US 70 BRIDGE 26.4 KM NORTH OF TURKEY	16037	RR	RT									4			4	4		4
0207A	1	2	BUCK CREEK AT US 83 1.5 M NORTH OF US 83/SH 256 INTERSECTION 30.7 KM NORTH OF CHILDRESS 16.8 KM SOUTHWEST OF DODSON	15811	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0207A	1	2	BUCK CREEK IMMEDIATELY UPSTREAM OF RR 1547 IN COLLINGSWORTH COUNTY WEST OF WELLINGTON	20366	RR	RT									4			4	4		4
0208	5	2	LAKE CROOK MID LAKE 0.88 KM SW OF 19TH STREET/OLD LAKE CROOK ROAD SOUTH INTERSECTION 200M W OF E SHORE 6.6 KM NNW OF CITY OF PARIS	10137	RR	RT									4			4			4
0210	3	2	FARMERS CREEK RESERVOIR/NOCONA LAKE MID LAKE NEAR DAM 1.3 KM SW OF OAK SHORES ROAD/FM 2953 INTERSECTION 0.36 KM SOUTH OF MID DAM	10139	RR	RT					4				4			4			4
0211	3	2	LITTLE WICHITA RIVER AT FM 2332 0.63 KM UPSTREAM FROM MOUTH AT RED RIVER CONFLUENCE 9.2 KM NORTHWEST OF RINGGOLD	10140	RR	RT									4			4			4
0212	3	2	LAKE ARROWHEAD MID LAKE NEAR DAM 609 M SOUTH OF MID DAM 765 M SE OF LITTLE WICHITA R INTAKE STRUCTURE 14 KM NE OF SCOTLAND	10142	RR	RT									4			4			4
0213	3	2	LAKE KICKAPOO NEAR MID DAM 521 M SOUTH OF NORTH FORK LITTLE WICHITA RIVER INTAKE STRUCTURE 13.8 KM SOUTH OF US 82/SH 25 INTERSECTION	10143	RR	RT									4			4			4
0214	3	2	WICHITA RIVER AT FM 368 325 M NORTH OF FM 368/FM 1206 INTERSECTION 7.38 KM SOUTHWEST OF CITY OF IOWA PARK 9.15 KM NORTH OF HOLLIDAY	10154	RR	RT									4			4	4		4
0214	3	2	WICHITA RIVER AT SH 25 1.3 KM NORTH OF SH 258/SH 25 INTERSECTION 14.5 KM NORTHWEST OF CITY OF HOLLIDAY	10155	RR	RT									4			4	4		4
0214	3	2	WICHITA RIVER AT FM 810 1.25 KM SOUTH OF FM 1740/FM 810 INTERSECTION 9.65 KM WEST OF BYERS	10145	RR	RT									4			4	4		4
0214	3	2	WICHITA RIVER AT END OF EASTLAND LANE 0.75 KM SE OF RIVER ROAD/EASTLAND LANE INTERSECTION 5.5 KM NORTH NORTHEAST OF WICHITA FALLS	10148	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0214	3	2	WICHITA RIVER AT SH 240 345 M NORTHWEST OF SH 240/EASTSIDE DRIVE/FRONT STREET INTERSECTION IN WICHITA FALLS	10150	RR	RT									4			4	4		4
0214A	3	2	BEAVER CREEK AT FM 2326 2.0 KM SOUTHWEST OF SH 25/FM 2326 INTERSECTION 22 KM NORTHWEST OF HOLLIDAY	15120	RR	RT	2								4			4	4		4
0214A	3	2	BEAVER CREEK AT US 283/US183 2.23 KM SOUTH OF FM 1763/US 283 INTERSECTION 22.1 KM SOUTH SOUTHEAST OF VERNON	15121	RR	RT									4			4	4		4
0214B	3	2	BUFFALO CREEK AT FM 1814/BELL ROAD 3.6 KM SOUTH OF CITY OF IOWA PARK	10097	RR	RT									4			4	4		4
0214B	3	2	BUFFALO CREEK AT COLEMAN PARK ROAD2.95 KM SOUTHWEST OF IOWA PARK 1.7 KM UPSTREAM OF FM 368	16036	RR	RT									4			4	4		4
0214C	3	2	HOLLIDAY CREEK AT HARDING STREET 97 M EAST OF WILLIAMS AVENUE/HARDING STREET INTERSECTION IN WICHITA FALLS	10095	RR	RT									4			4	4		4
0214C	3	2	HOLLIDAY CREEK AT WICHITA FALLS COUNTRY CLUB GOLF COURSE APPROX 120 METERS NORTH AND 10 METERS WEST OF THE INTERSECTION OF BRIDWELL STREET AND 30TH STREET IN WICHITA FALLS	21025	RR	RT									4			4	4		4
0214E	3	2	SOUTH CANAL 80 M DOWNSTREAM OF LAKE DIVERSION SPILLWAY NEAR DUNDEE	18831	RR	RT									4			4	4		4
0214F	3	2	UNNAMED TRIBUTARY OF BUFFLAO CREEK AT COLEMAN PARK ROAD DOWNSTREAM OF THE CITY OF IOWA PARK WWTP	21172	RR	RT									4			4	4		4
0215	3	2	DIVERSION LAKE NEAR DAM 0.64 KM NORTHWEST OF SPILLWAY FACE 390 M WEST OF DAM EQUIDISTANT BETWEEN SHORELINES 22.8 KM WEST OF HOLLIDAY	10157	RR	RT									4			4			4

TABLE B1.1
Sample Design and Schedule - FY 2016

Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0216	3	2	WICHITA RIVER AT US 183/US 283 NEAR LAKE KEMP DAM 10.7 KM NORTH US 82/US 283 INTERSECTION 9.8 KM NORTH OF MABELLE	10158	RR	RT									4			4	4		4
0217	3	2	LAKE KEMP NEAR DAM 0.80 KM SW OF WATER INTAKE STRUCTURE AT WICHITA RIVER 0.72 KM NORTH OF WILLINGHAM LOOP 1.64 KM WEST OF US 283	10159	RR	RT									4			4			4
0218	3	2	NORTH WICHITA RIVER AT FM 1919 5.25 KM NORTHWEST OF BAYLOR CR 129/FM 1919 INTERSECTION 16.8 KM NORTHWEST OF SEYMOUR	10161	RR	RT									4			4	4		4
0218	3	2	NORTH WICHITA RIVER AT SH 6 19KM SOUTH OF CROWELL AND 7.5 KM NORTH OF TRUSCOTT	10162	RR	RT									4			4	4		4
0218	3	2	NORTH FORK WICHITA RIVER 6 KM DOWNSTREAM OF COTTONWOOD CREEK 2.04KM UPSTREAM OF COTTLE CR 493 NEAR PADUCAH	15119	RR	RT									4			4	4		4
0218A	3	2	MIDDLE WICHITA RIVER 240 M UPSTREAM OF FARRER CREEK 24.25KM EAST OF US 83/FM 1168 INTERSECTINO 30.15 KM NORTHEAST OF GUTHRIE	14900	RR	RT									4			4	4		4
0219	3	2	LAKE WICHITA NEAR MID DAM 376 M SE OF END OF CITY ACCESS RD IN WICHITA FALLS 2.94KM SW OF SOUTHWEST PKWY/LAKE PARK DR INTERSECTION	10163	RR	RT									4			4			4
0220	3	2	PEASE RIVER AT FM 104/RR 104 16.7 KM SOUTH OF KIRKLAND	10167	RR	RT									4			4	4		4
0221	3	2	PEASE RIVER ON THE MIDDLE FORK, 0.5 KM UPSTREAM FROM CONFLUENCE WITH NORTH FORK, 32 KM NORTHEAST OF PADUCAH, TX	10169	RR	RT									4			4	4		4
0221	3	2	PEASE RIVER MIDDLE FORK AT US 62-83 SOUTH OF CHILDRESS	10170	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field
0222	1	2	SALT FORK RED RIVER 80 M DOWNSTREAMM OF US 83 AT SOUTH BANK 11 KM NORTH OF WELLINGTON	10171	RR	RT									4			4	4		4
0224	1	2	NORTH FORK RED RIVER AT US 83 4.25 KM NORTH OF SHAMROCK	10178	RR	RT									4			4	4		4
0224	1	2	NORTH FORK RED RIVER BRIDGE AT FM 2473 SOUTHWEST OF WHEELER	10179	RR	RT									4			4	4		4
0224A	1	2	MCCLELLAN CREEK AT SH 273 0.22 KM SOUTH OF SH 273/HUDGINS ROAD INTERSECTION 10.5 KM NORTH OF CITY OF MCLEAN	10064	RR	RT									4			4	4		4
0226	3	2	SOUTH FORK WICHITA RIVER AT SH 6 6.7 KM NORTH OF BENJAMIN	10185	RR	RT									4			4	4		4
0230	3	2	PEASE RIVER AT US 287 0.91 KM SOUTHEAST OF RR 925/US 287 INTERSECTION 4.6 KM NORTHWEST OF DOWNTOWN VERNON	10166	RR	RT									4			4	4		4
0230	3	2	UPPER PEASE/NORTH FORK PEASE RIVER AT US 283 3 KM NORTH OF VERNON	10165	RR	RT									4			4	4		4
0230A	3	2	PARADISE CREEK AT US 287 3.75 KM EAST OF VERNON	10094	RR	RT									4			4	4		4
0299A	1	2	SWEETWATER CREEK AT RR 592/FM 592 3.33 KM NORTH OF SH 152/RR 592 INTERSECTION 14.15 KM EAST OF WHEELER	10070	RR	RT									4			4	4		4
0299A	1	2	SWEETWATER CREEK AT US 83 6.25 KM NORTH NORTHWEST OF WHEELER	10072	RR	RT									4			4	4		4

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Segment	TCEQ Region	Basin	Site Description	Station ID	Collecting Entity	Monitoring Type	24 Hr DO	Aq Hab	Benthics	Nekton	Metals Water	Organics Water	Metals Sed	Organics Sed	Conventional	Amb Tox Water	Amb Tox Sed	Indicator Bacteria	Inst Flow	Fish Tissue	Field

Segment: State river segment where station is located

Region: TCEQ Region where station is located
Basin: (1) Canadian (2) Red
Site Description: Description of sampling site
Station ID: TCEQ Station ID numbers

Collecting Entity: Entity conducting surface water quality monitoring

(RR) Red River Authority of Texas
(SH) City of Sherman
(NM) North Texas Municipal Water District

Metals Water: Samples collected by NTMWD will be analyzed by NTMWD. Samples collected by the Authority will be analyzed by LCRA.
Conventional: Samples of nutrients, minerals and dissolved calcium collected and analyzed by laboratory
Ind Bact: Indicator Bacteria
Inst Flow: Instantaneous flow measurement at time of sampling
Field: Parameters measured in the field; i.e. temperature, pH, dissolved oxygen, conductivity, etc.