

**Amendment # 2  
to the Red River Authority of Texas  
Clean Rivers Program FY 2010/2011 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:

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Effective: **Date to be inserted by TCEQ Lead QA Specialist**

**Justification:** This document details the changes made to the basin-wide Quality Assurance Project Plan to update Section A4 Project/Task Organization, Table D2.1- Data Review and Appendix B for fiscal year 2011.

**Summary of Changes:**

The following information in Section A4 is amended to reflect changes to:

- Change in Red River Authority Laboratory Supervisor
- Change in Red River Authority Laboratory QA Officer

The following information in Table D2.1 – Data Review is amended to reflect changes to:

- Change in Red River Authority Laboratory Supervisor

The following information in Appendix B is amended to reflect changes to:

- Sample Design Rationale FY 2011
- Monitoring Sites Table with updated legends
- Maps of sampling sites

**Detail of Changes:**

Section A4 - Project/Task Description and Chart 1

- Jill Simpson has replaced Jim Quashnock as the Red River Authority Laboratory Supervisor and Laboratory QA Officer.

Table D2.1 – Data Review

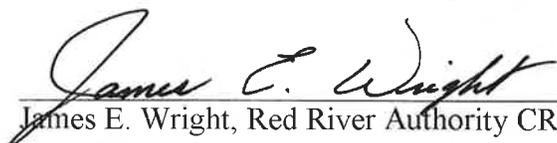
- Jill Simpson has replaced Jim Quashnock as the Red River Authority Laboratory Supervisor.

**Sample Design Rationale FY 2011:** See Appendix B.

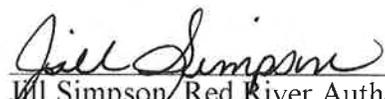
**Monitoring Sites Table:** The attached monitoring Table B1.1 in Appendix B is added to reflect monitoring for FY 2011.

**Maps:** The attached maps are added to Appendix B to reflect monitoring sites for FY 2011.

These changes will be incorporated into the QAPP document and TCEQ and the Red River Authority of Texas will acknowledge and accept these changes by signing this amendment.

  
James E. Wright, Red River Authority CRP Project Manager      7-29-10  
Date

  
W. Scott Burns, Red River Authority CRP QA Officer      7-29-10  
Date

  
Jill Simpson, Red River Authority Laboratory QA Officer      7-29-10  
Date

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Julie McEntire, TCEQ CRP Project Manager Date

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Jennifer Delk, TCEQ CRP Project QAS Date

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Allison Woodall, TCEQ CRP Group Leader Date

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Daniel R. Burke, TCEQ CRP Lead QAS Date

The Red River Authority of Texas will secure written documentation from each project participant (e.g., subcontractors, other units of government, laboratories) stating the organization's awareness of and commitment to requirements contained in this quality assurance project plan amendment. The Planning Agency will maintain this documentation as part of the project's quality assurance records, and will ensure the documentation is available for review.

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

### **Sample Design Rationale FY 2011**

The sample design is based on the legislative intent of the Clean Rivers Program. Under the legislation, the Basin Planning Agencies have been tasked with providing data to characterize water quality conditions in support of the 305(b) assessment, 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 Red River Authority of Texas coordinates closely with the TCEQ and other participants to ensure a comprehensive water monitoring strategy within the watershed.

Based on evaluations of previous assessments and screening efforts by the TCEQ and the Authority, the hydrologic subdivisions of each basin have been prioritized according to the level of concern. Utilizing the current Texas Water Quality Inventory (TWQI) and the Draft 2010 Integrated Report, a priority list is prepared and presented for discussion at the Authority's Annual Coordinated Monitoring Meeting with the other monitoring entities and the TCEQ. This meeting is based on the need to maximize monitoring efforts in an attempt to expend the limited resources as prudently as possible. The results of the priority ranking are presented for approval at a meeting of the Basin Advisory Committees. This approach enables comprehensive monitoring to occur on a rotational reach basis and completely encompasses the basins within the five-year basin management cycle.

### **Canadian River Basin**

The monitoring sites for the Canadian River Basin will, for the most part, remain the same as in FY 2010 for all participating entities. This is due to the lack of water present at other non-monitored stations and the need for additional data by TCEQ at other sites. The one 24 Hr DO at Palo Duro Reservoir (Site 10005) for FY 2010 was collected by the SWQM Team, thus it does not appear for FY 2011. TCEQ,

Region 1 will add metals to Lake Meredith (Site 10036) due to an impairment/concern for mercury in fish tissue. The USGS has added a flow gauge at Big Blue Ck near Fritch, TX and is in the process of developing a rating table. It is presumed that this site is Big Blue Ck @ FM 1913 (Site 15270), currently being monitored by the Red River Authority of Texas.

### **Red River Basin**

The monitoring sites for the Red River Basin will primarily remain the same as in FY 2010 for all participating entities for the same reasons as mentioned above. The following exceptions are noted:

#### **Red River Authority of Texas (RRA)**

- 1) RRA will add the Wichita River @ FM 810 (Site 10145) due to TCEQ, Region 3 discontinuing this site. It has long been a routine site for RRA and will return to our schedule.
- 2) RRA will add Lake Wichita near Dam (Site 10163) due to TCEQ, Region 3 discontinuing this site.
- 3) RRA will add Red River @ US 183 (Site 16733) due to a request by Pat Bohannon, TCEQ, Austin and assisting TCEQ, Region 3, as needed, with the monitoring of the Wichita River, CAMS 746 (Site 20321) due to limited resources in Region 3.
- 4) RRA will be monitoring nine (9) sites on a monthly basis. In the past, only field, bacteria, flow and turbidity have been collected. Beginning in FY 2011, RRA will add Total Phosphorus as an additional parameter to be collected at the sites monitored on a monthly basis. This parameter is being added, as per suggestion by TCEQ, during a conference call this past year.

#### **City of Sherman**

The City of Sherman will continue to monitor the same sites as in FY 2010. They will increase their monitoring at Sand Ck @ SH 56 (Site 15446) and Post Oak Ck @ FM 1417, Northwest of Sherman (Site 17599) due to the increased rainfall in their area and water being present on a more seasonal basis. It remains their intention to add more conventional parameters as they are able.

## Monitoring Sites for FY 2011

The sample design for surface water quality monitoring is shown in Table B1.1 below.

**TABLE B1.1**  
**Sample Design and Schedule, FY 2011**

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	Rock Creek at Bridge in Electric City near Borger	10024	RR	RT									4			4	4		4
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
0101	1	1	White Deer Creek at Jeep Trail Crossing on Duncan Ranch	18195	RR	RT									4			4	4		4
0102	1	1	Big Blue Creek Approx. 250 yds. Upstream of FM 1913	15270	RR	RT									4			4	4		4
0103	1	1	Unnamed Tributary of West Amarillo Creek at Loop 335	17056	RR	RT									4			4	4		4
0103	1	1	East Amarillo Creek at US 287 North of Amarillo	10018	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
0103	1	1	Thompson Park Lake North End West Bank in Amarillo	15775	RR	RT									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 at FM 1454 East of Lipscomb	10059	RR	RT									4			4	4		4
0202	4	2	Choctaw Creek at SH 11, Southeast of Sherman	10111	SH	RT									4			6	6		6
0202	4	2	Choctaw Creek at Luella Rd.	10112	SH	RT									4			6	6		6
0202	4	2	Post Oak Creek at First County Rd Crossing below Sherman STP	10114	SH	RT									4			6	6		6
0202	4	2	Post Oak Creek at FM 1417 Southeast of Sherman	10115	SH	RT									4			6	6		6
0202	5	2	Pine Creek at US 271 North of Paris	10120	RR	RT									4			4	4		4
0202	5	2	Red River at US 259 North of DeKalb	10125	RR	RT									4			4	4		4
0202	5	2	Red River at US 271 at Arthur City	10126	RR	RT									4			4	4		4
0202	4	2	Red River at SH 78 North of Bonham	10127	RR	RT									4			4			4
0202	4	2	Sand Creek at SH 56 West of Sherman	15446	SH	RT									2			4	4		4
0202	5	2	Pecan Bayou at FM 1159 Northeast of Clarksville	16001	RR	RT									4			4	4		4
0202	5	2	Smith Creek at US 271 North of Paris	17044	RR	RT									4			4	4		4
0202	4	2	Post Oak Creek at FM 1417 Northwest of Sherman	17599	SH	RT									2			4	4		4

**TABLE B1.1**  
**Sample Design and Schedule, FY 2011**

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	Choctaw Creek at US 82 East of Sherman	18370	SH	RT									4			6	6		6
0202	4	2	Bois D' Arc Creek at SH 78 South of Bonham	18652	RR	RT									4			4	4		4
0202	4	2	Bois D' Arc Creek at FM 1396 Northwest of Honey Grove	20167	RR	RT									4			4	4		4
0203	4	2	Lake Texoma Big Mineral Arm	10130	RR	RT									4			4			4
0203	4	2	Lake Texoma at US 377 North of Gordonville	10131	RR	RT									4			4			4
0203	4	2	Lake Texoma at South End of Denison Dam	15440	RR	RT									4			4			4
0203	4	2	Lake Texoma Little Mineral Arm	17480	RR	RT									4			4			4
0204	3	2	Red River at US 81, 4.5 Mi North of Ringgold	10133	RR	RT									4			12	12		12
0204	3	2	Red River at FM 677 Northwest of Saint Jo	20168	RR	RT									4			12	12		12
0205	3	2	Red River Bridge on US 277-281 Northeast of Burkburnett	10134	RR	RT									4			12	12		12
0205	3	2	Red River at US 183 North of Oklaunion	16733	RR	RT									4			4	4		4
0207	1	2	Lower Prairie Dog Town Fork Red River Bridge at US 62-83	10136	RR	RT									4			4	4		4
0207	1	2	Lower Prairie Dog Town Fork Red River at SH 207	13637	RR	RT									4			4	4		4
0211	3	2	Little Wichita River Bridge on FM 2332	10140	RR	RT									4			12			12
0214	3	2	Buffalo Creek at FM 1814	10097	RR	RT									4			12	12		12
0214	3	2	Wichita River at FM 810 West of Byers	10145	RR	RT									4			12	12		12
0214	3	2	Wichita River at FM 368	10154	RR	RT									4			12	12		12
0214	3	2	Wichita River at SH 25	10155	RR	RT									4			12			12
0214	3	2	Beaver Creek at FM 2326, 10.5 Km North of Kamay	15120	RR	RT									4			12	12		12
0214	3	2	Beaver Creek at US 283/183 Approx 18.2 Km South of Vernon	15121	RR	RT									4			4			4
0219	3	2	Lake Wichita Near Dam	10163	RR	RT									4			4			4
0220	3	2	Pease River Bridge on FM 104 South of Kirkland	10167	RR	RT									4			4	4		4
0222	1	2	Salt Fork Red River Bridge at US 83 North of Wellington	10171	RR	RT									4			4	4		4
0224	1	2	McClellan Creek at SH 273 22.5 Km (14 Mi) North of McLean	10064	RR	RT									4			4	4		4
0224	1	2	North Fork Red River Bridge at US 83 North of Shamrock	10178	RR	RT									4			4	4		4
0230	3	2	Paradise Creek at US 287 East of Vernon	10094	RR	RT									4			4	4		4
0230	3	2	Pease River at US 287 Bridge, 3 Mi. NW of Downtown Vernon	10166	RR	RT									4			4	4		4
0299	1	2	Sweetwater Creek SH 152 Southeast of Mobeetie	10074	RR	RT									4			4	4		4

**TABLE B1.1**  
**Sample Design and Schedule, FY 2011**

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
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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

Sampling Entity: Entity conducting water quality monitoring  
 (RR) Red River Authority  
 (SH) City of Sherman

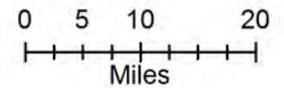
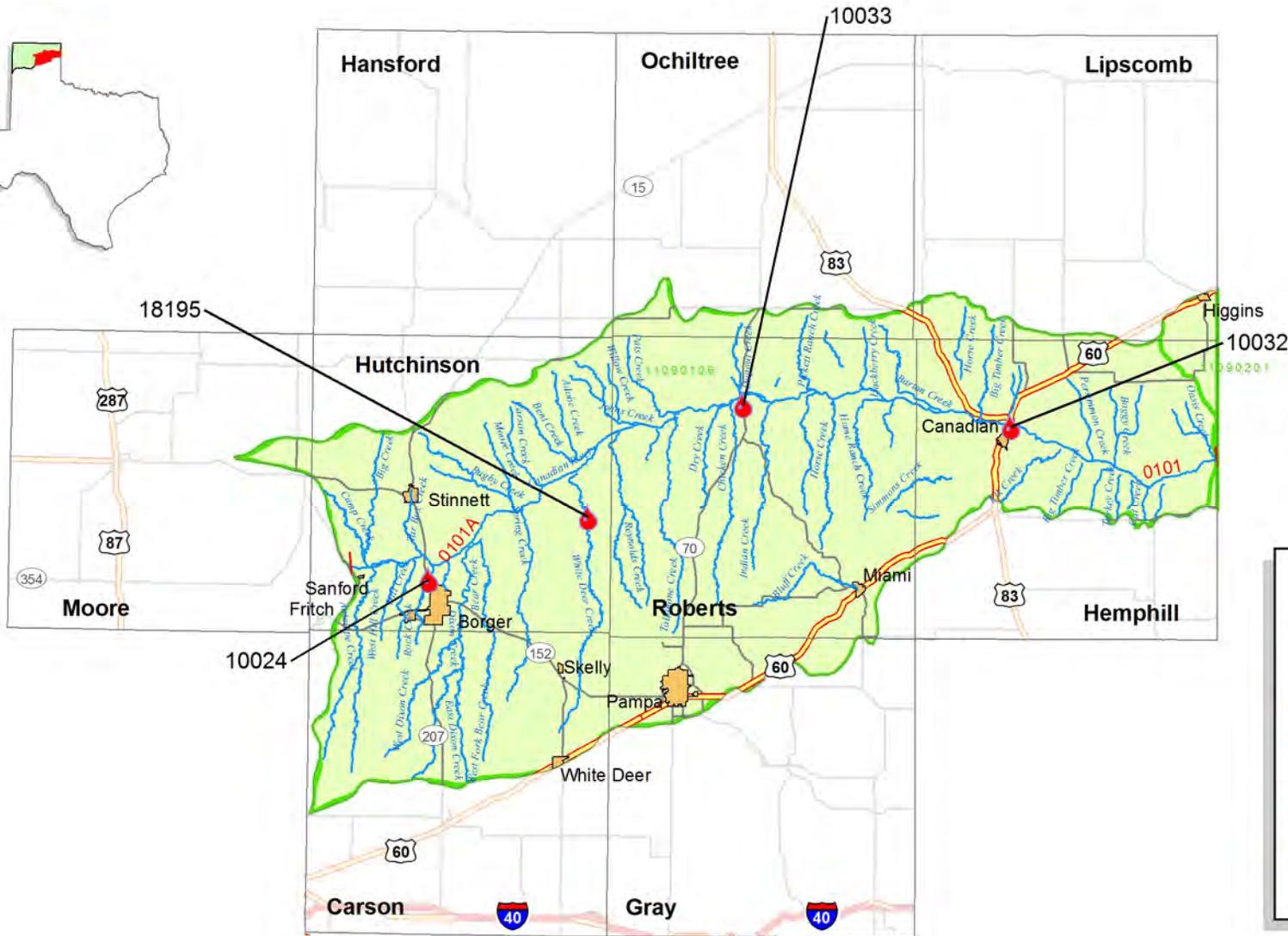
Monitoring Type: (RT) Routing water quality sampling  
 Conventional: Samples of nutrients, minerals and dissolved calcium collected & analyzed by a lab  
 Ind Bact: Indicator Bacteria  
 Inst Flow: Instantaneous flow measurement at time of sampling  
 Field: Parameters measured in the field; i.e. temperature, pH, dissolved oxygen, conductivity, etc.

**Critical vs. non-critical measurements**

All data taken for CRP and entered into SWQMIS are considered critical.



# Canadian River Basin Reach I FY2011



**Legend**

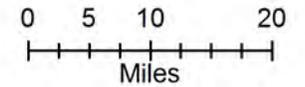
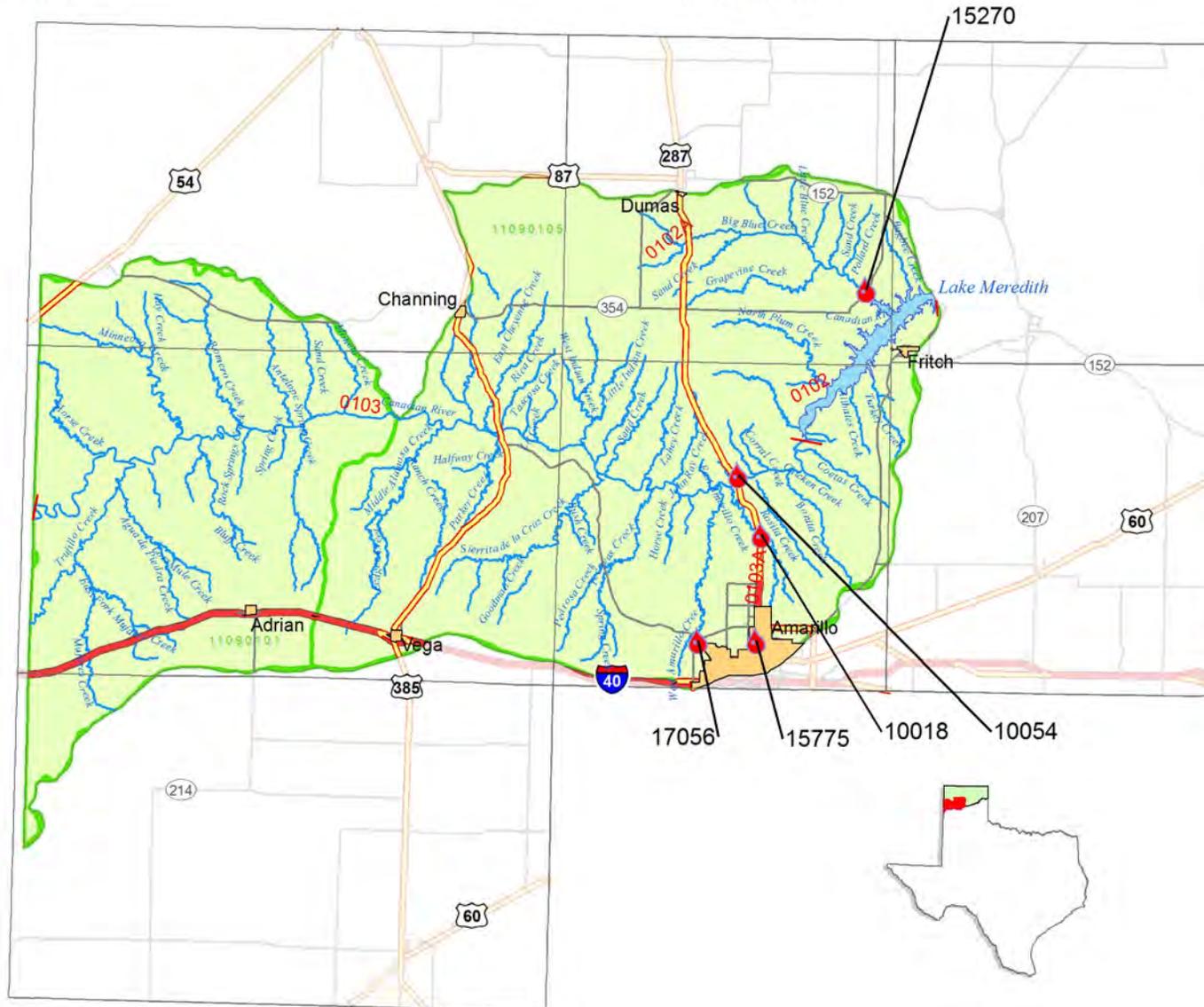
- Monitoring Station
- Segment Boundary
- 0101 Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Canadian Reach I



# Canadian River Basin

## Reach II

FY2011



### Legend

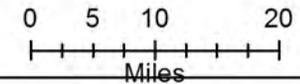
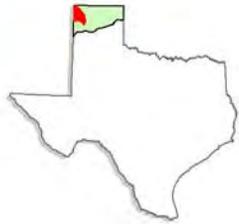
- Monitoring Station
- Segment Boundary
- 0101 Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Canadian Reach II



# Canadian River Basin

## Reach III

FY2011



### Legend

- Monitoring Station
- Segment Boundary
- 0101** Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Canadian Reach III

This Reach Monitored by TCEQ Field Office.



# Canadian River Basin

## Reach IV

FY2011

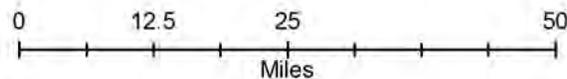


 This Reach Monitored by TCEQ Field Office and USGS.



**Legend**

-  Monitoring Station
-  Segment Boundary
- 0101* Segment ID
-  Hydrology
-  County Boundary
-  Urbanized Area
-  HUA Boundary
-  Canadian Reach IV

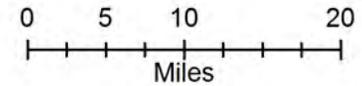
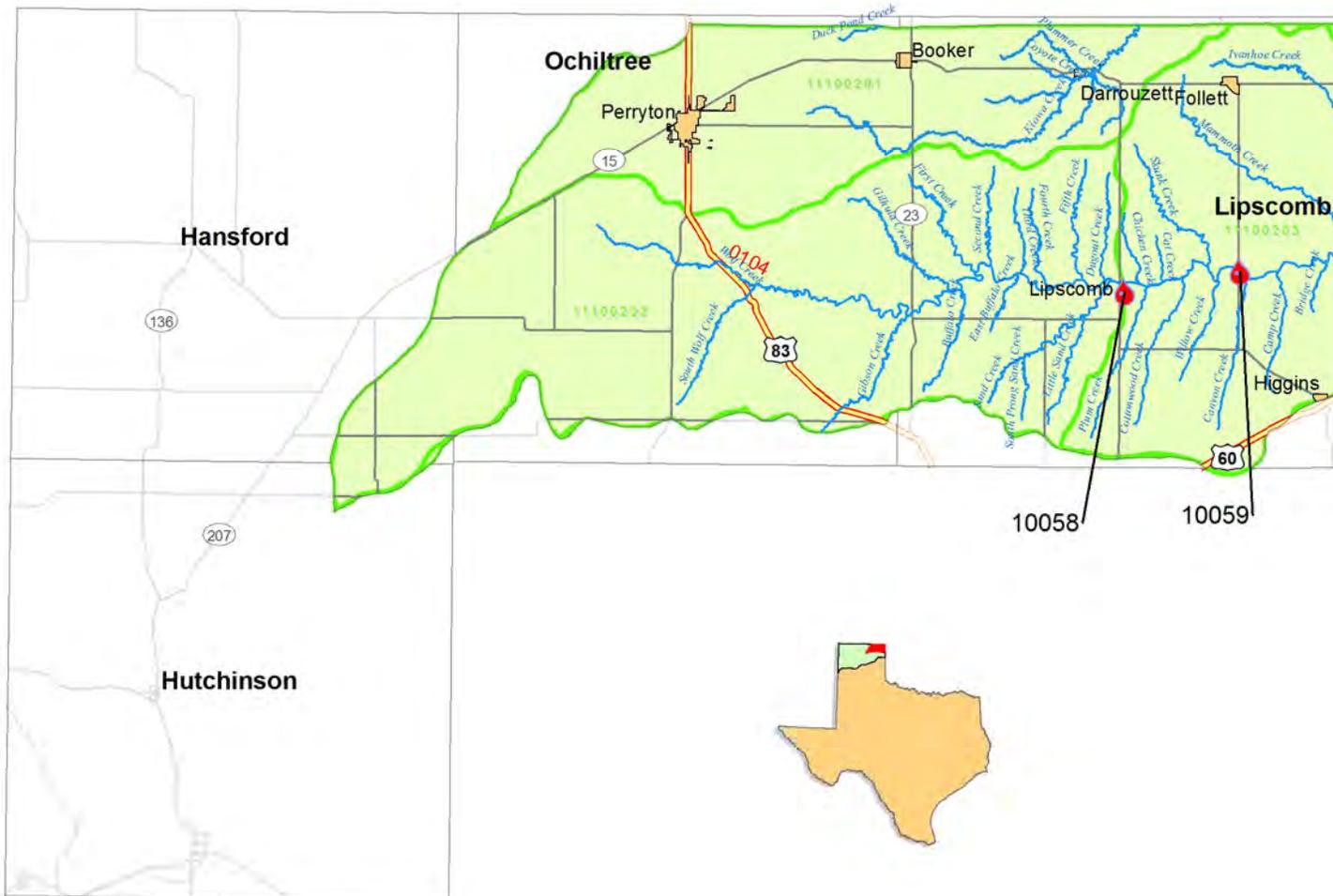




# Canadian River Basin

## Reach V

FY2011



**Legend**

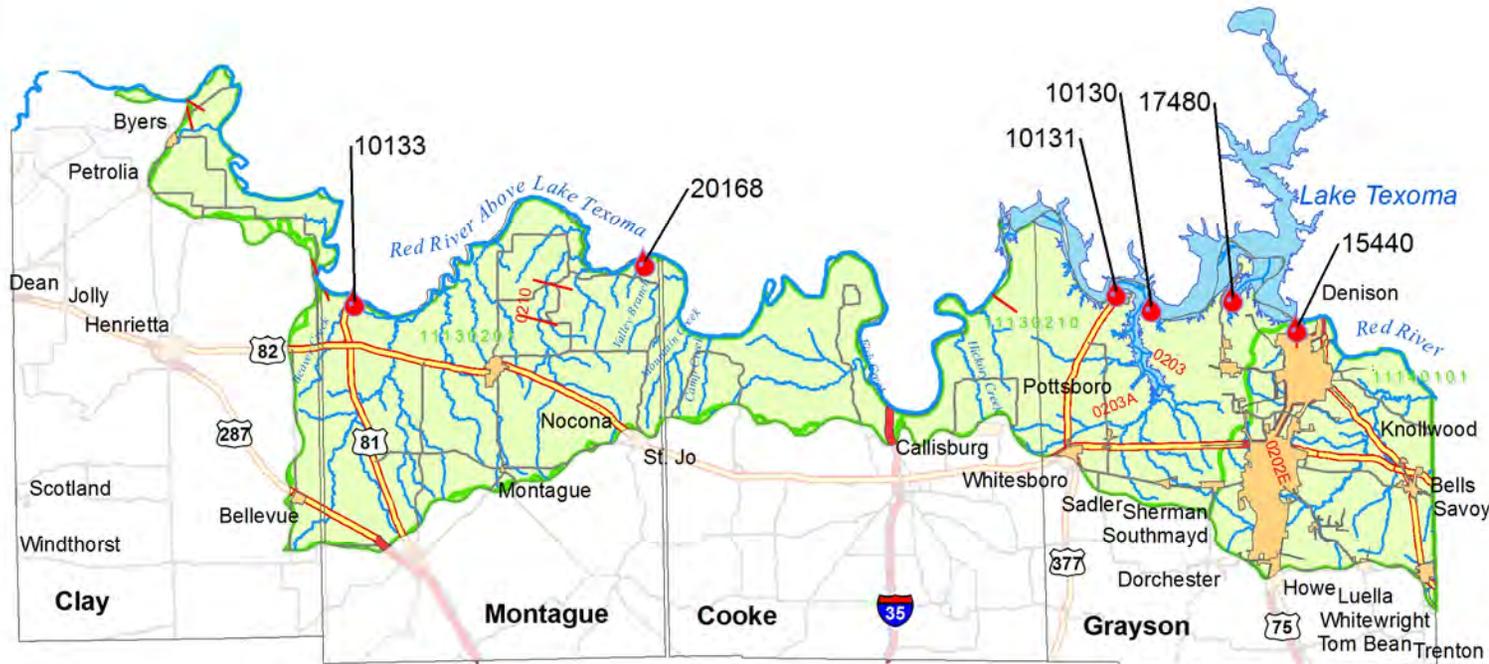
- Monitoring Station
- Segment Boundary
- 0101 Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Canadian Reach V



# Red River Basin

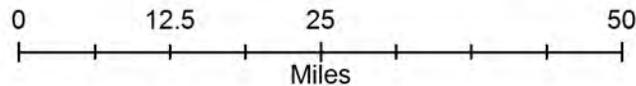
## Upper Reach I

FY2011



**Legend**

- Monitoring Station
- Segment Boundary
- 0201** Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Red Upper Reach I



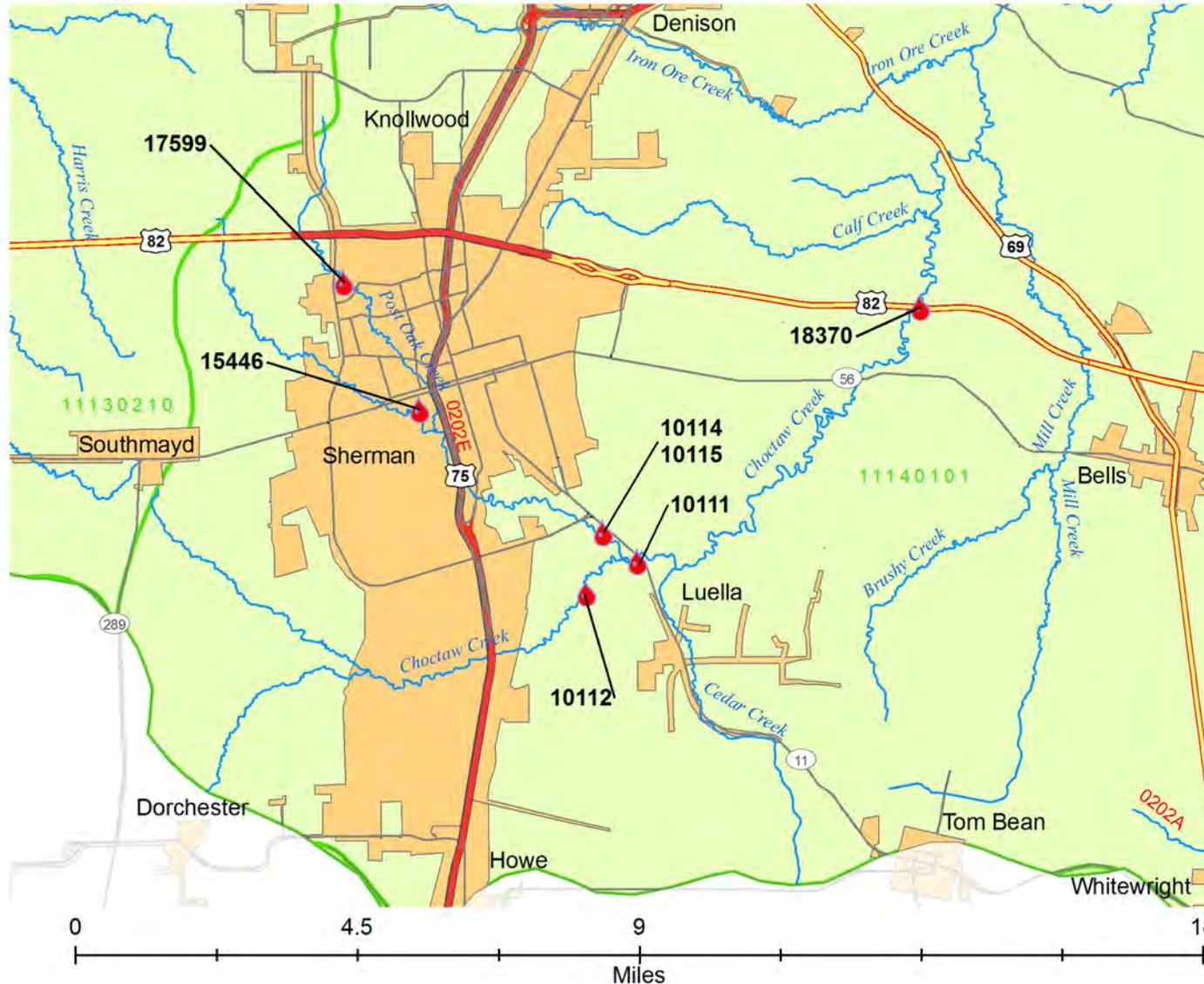


# Red River Basin

## Upper Reach I

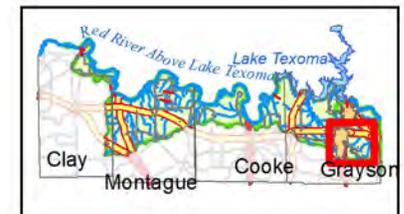
(Sites Monitored by City of Sherman)

### FY2011



### Legend

- Monitoring\_Station
- Segment Boundary
- 0201** Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Red Upper Reach I



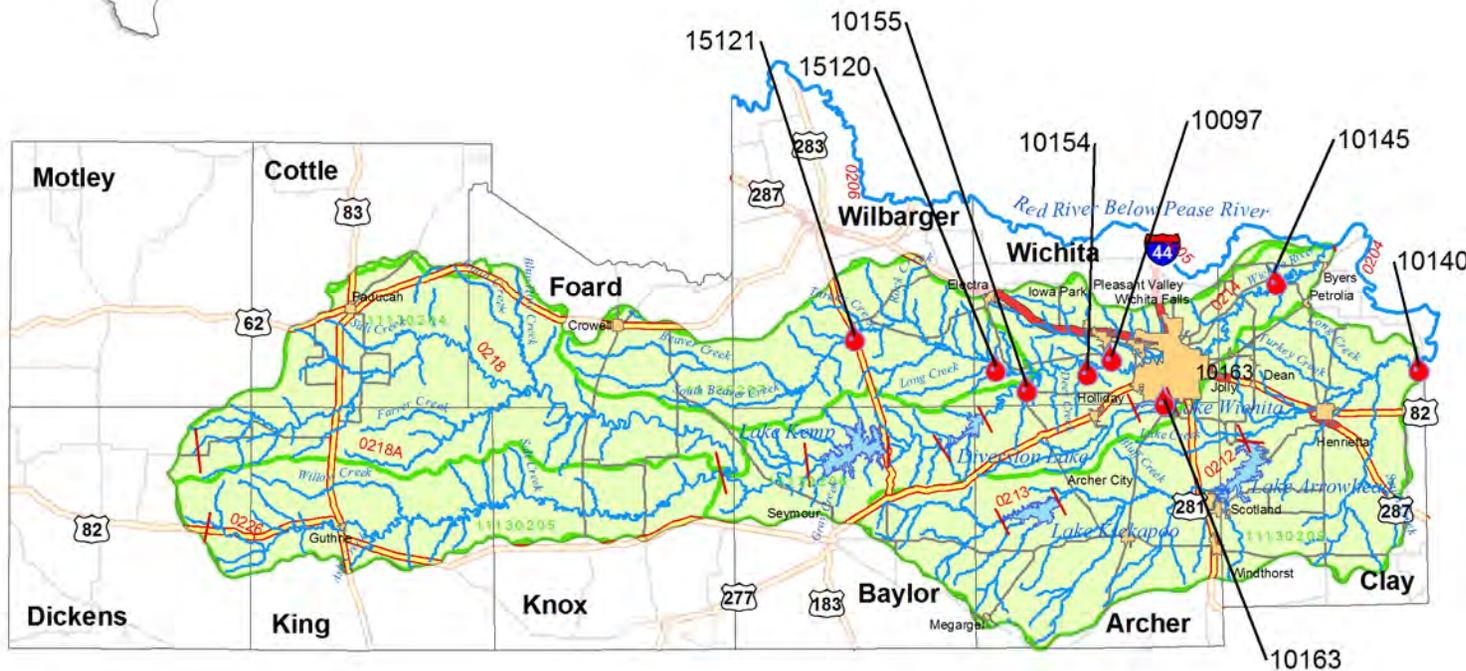




# Red River Basin

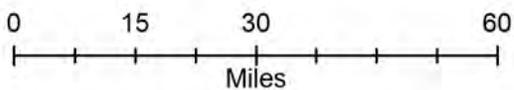
## Reach II

FY2011



**Legend**

- Monitoring\_Station
- Segment Boundary
- 0201 Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Red Reach II

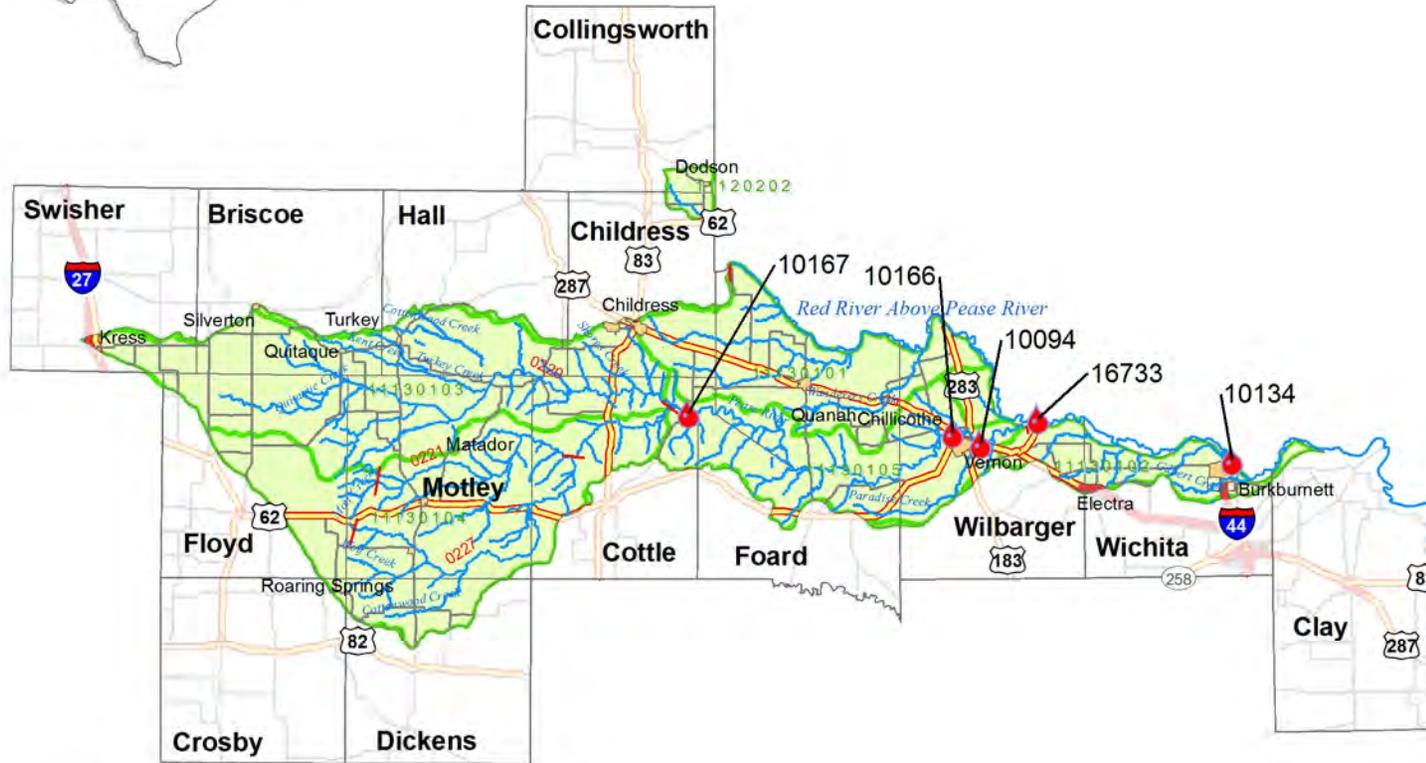




# Red River Basin

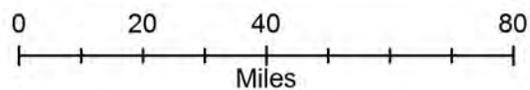
## Reach III

FY2011



### Legend

- Monitoring\_Station
- Segment Boundary
- 0201** Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Red Reach III

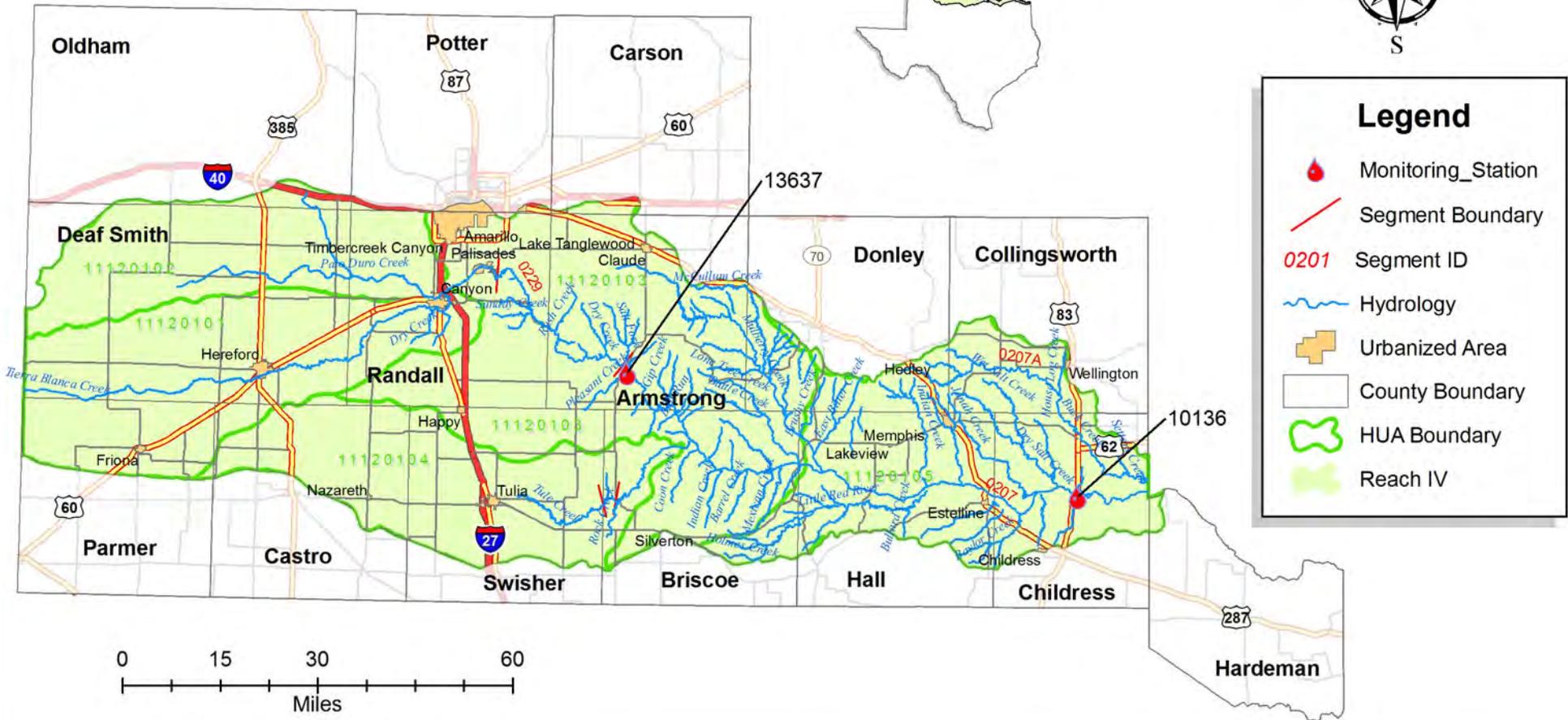




# Red River Basin

## Reach IV

FY2011

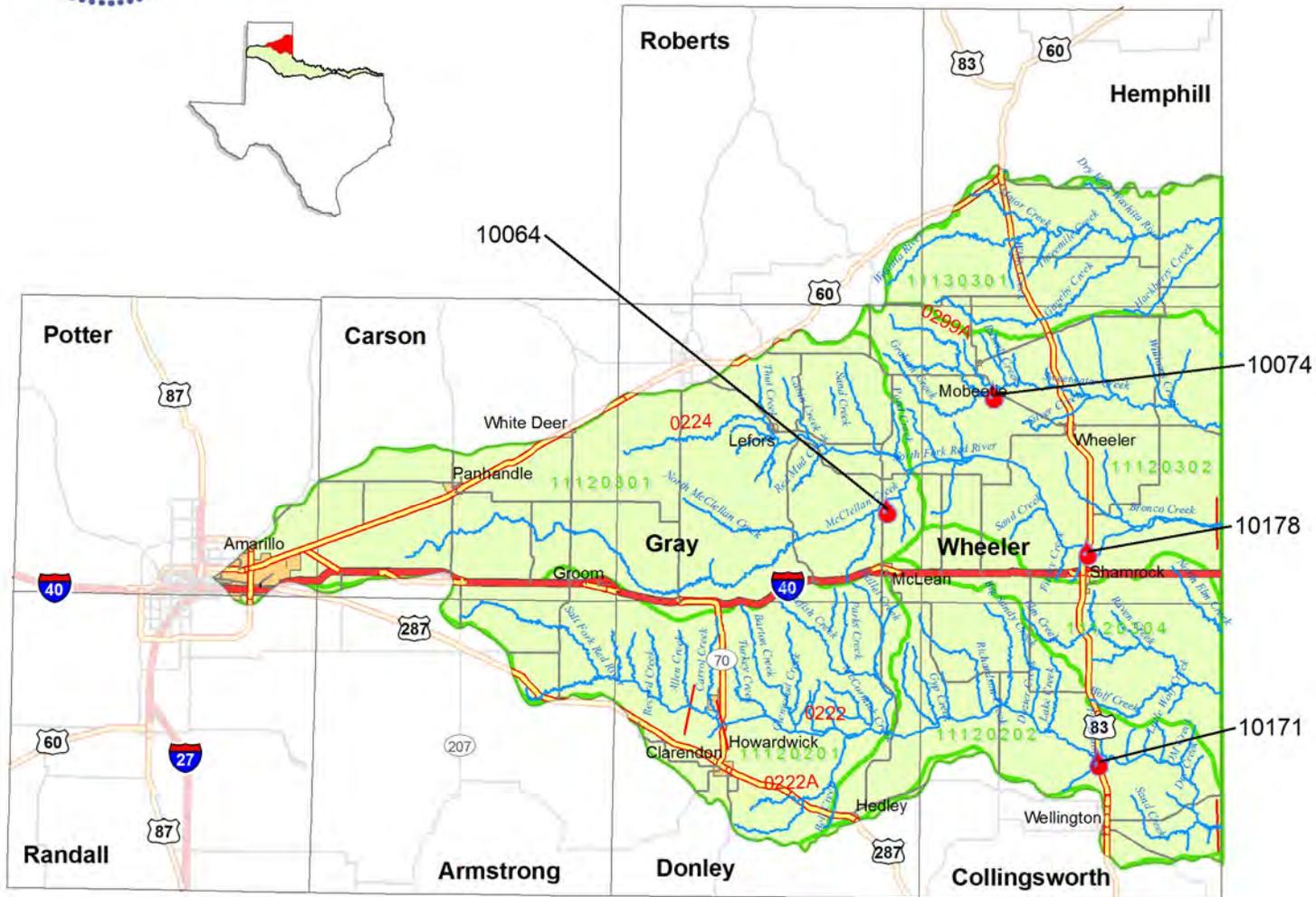
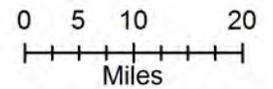




# Red River Basin

## Reach V

FY2011



### Legend

- Monitoring\_Station
- Segment Boundary
- 0201* Segment ID
- Hydrology
- Urbanized Area
- County Boundary
- HUA Boundary
- Red Reach V