

Draft 2012 Basin Highlights Report & FY 2012 Coordinated Monitoring





Red and Canadian River Basins Vicinity Map

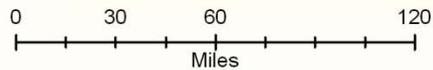


Texline



Legend

-  Hydrology
-  Interstate Highway
-  US Highway
-  State Highway
-  Populated Area
-  Canadian River Basin
-  Red River Basin



Surface Water Quality

The Federal Clean Water Act – Sections 305(b) & 303(d)

The Environmental Protection Agency (EPA)

The State of Texas

Texas Commission on Environmental Quality (TCEQ)

**The Texas Water Quality Integrated Report
For Clean Water Act Sections 305(b) and 303(d)**

**Surface Water Quality Monitoring Team (SWQM)
Continuous Water Quality Monitoring Team (CWQM)**

Total Maximum Daily Load Team (TMDL)

Clean Rivers Program Partners (CRP)

The Red River Authority of Texas

Data and Information Used in the Basin Highlights Report

The Stakeholder

Red River Authority of Texas

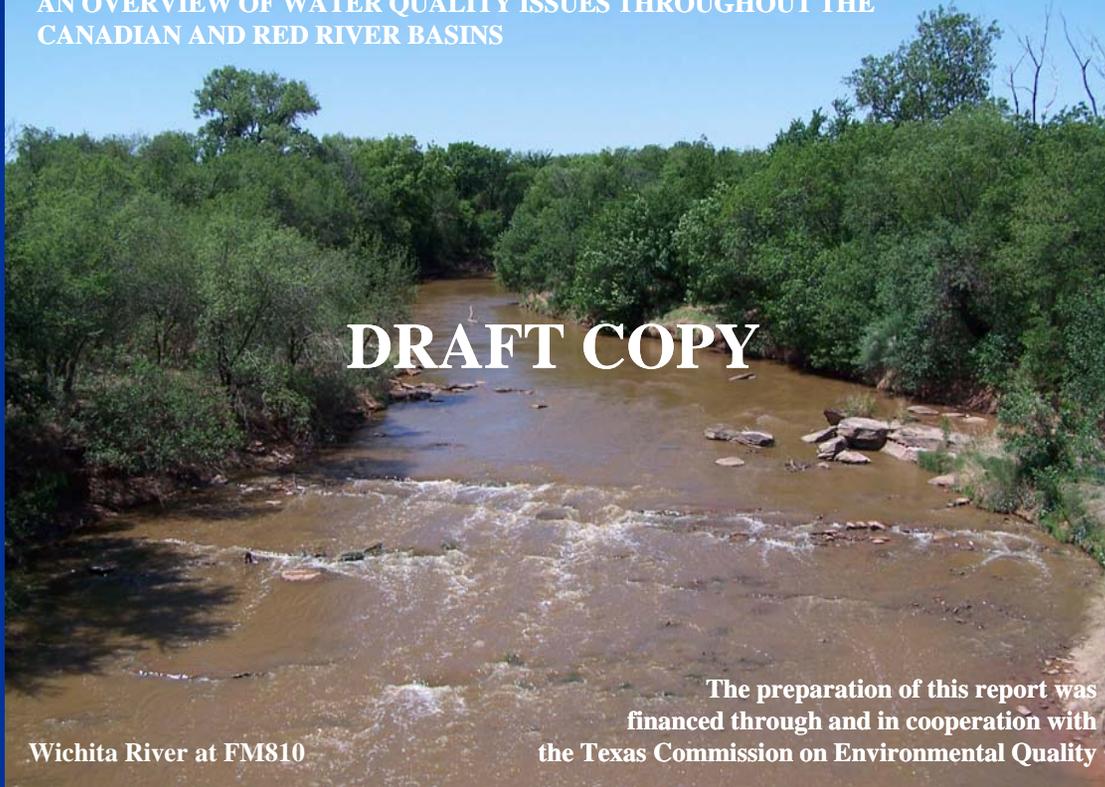
**Texas Commission on Environmental Quality
(TCEQ)**

**United States Geological Survey
(USGS)**

Water Quality in the Canadian River Basin

2012 BASIN HIGHLIGHTS REPORT

AN OVERVIEW OF WATER QUALITY ISSUES THROUGHOUT THE
CANADIAN AND RED RIVER BASINS



DRAFT COPY

Wichita River at FM810

The preparation of this report was
financed through and in cooperation with
the Texas Commission on Environmental Quality



Water Quality Parameters Requiring Attention

Dissolved Salts

Total Dissolved Solids
Chlorides

Aquatic Health

Low Dissolved Oxygen
pH

Nutrient Enrichment

Ammonia
Chlorophyll-a
Nitrates
Total Phosphorous
Ortho-Phosphorous

Human/Wildlife Health

Bacteria – *E. coli*
Mercury – Fish Tissue

Weather ?

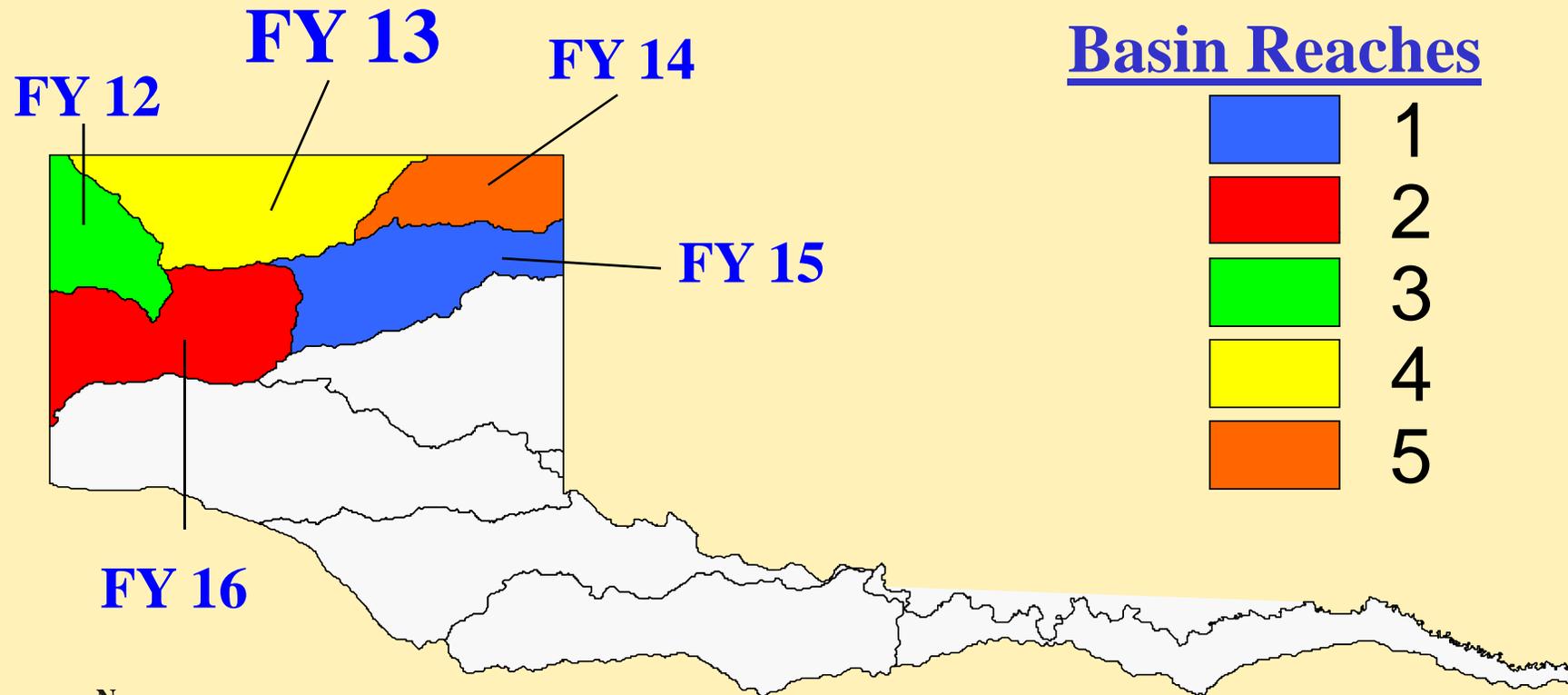
Drought, Drought, & Drought

Water Quality Monitoring in the Canadian River Basin

| <u>ENTITY</u> | <u>FY 11</u> | <u>FY 12</u> |
|---------------------------------|--------------|--------------|
| RRA | 11 | 14 |
| TCEQ | 9 | 9 |
| USGS | 4 | 5 |
| <hr/> | | |
| Total Stations Monitored | 24 | 28 |



Canadian River Basin



Basin Reaches

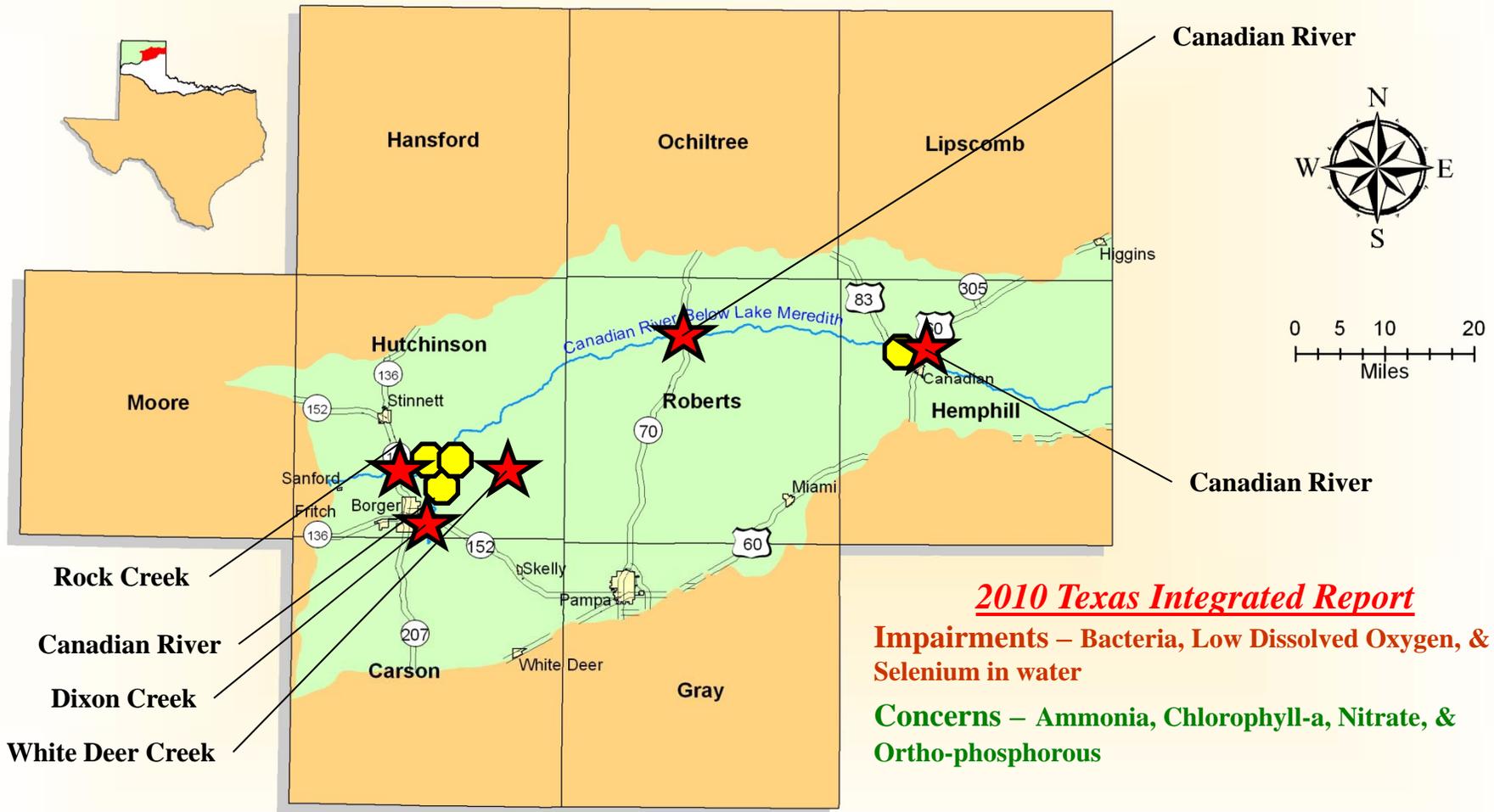
| | |
|---|---|
|  | 1 |
|  | 2 |
|  | 3 |
|  | 4 |
|  | 5 |



Basin Reach Rotation Schematic



Canadian Basin Reach I



2010 Texas Integrated Report
Impairments – Bacteria, Low Dissolved Oxygen, & Selenium in water
Concerns – Ammonia, Chlorophyll-a, Nitrate, & Ortho-phosphorus

Coordinated Monitoring Efforts

Canadian River @ US 83





Canadian River @ US 83



White Deer Creek @ Jeep Crossing



White Deer Creek @ Jeep Crossing



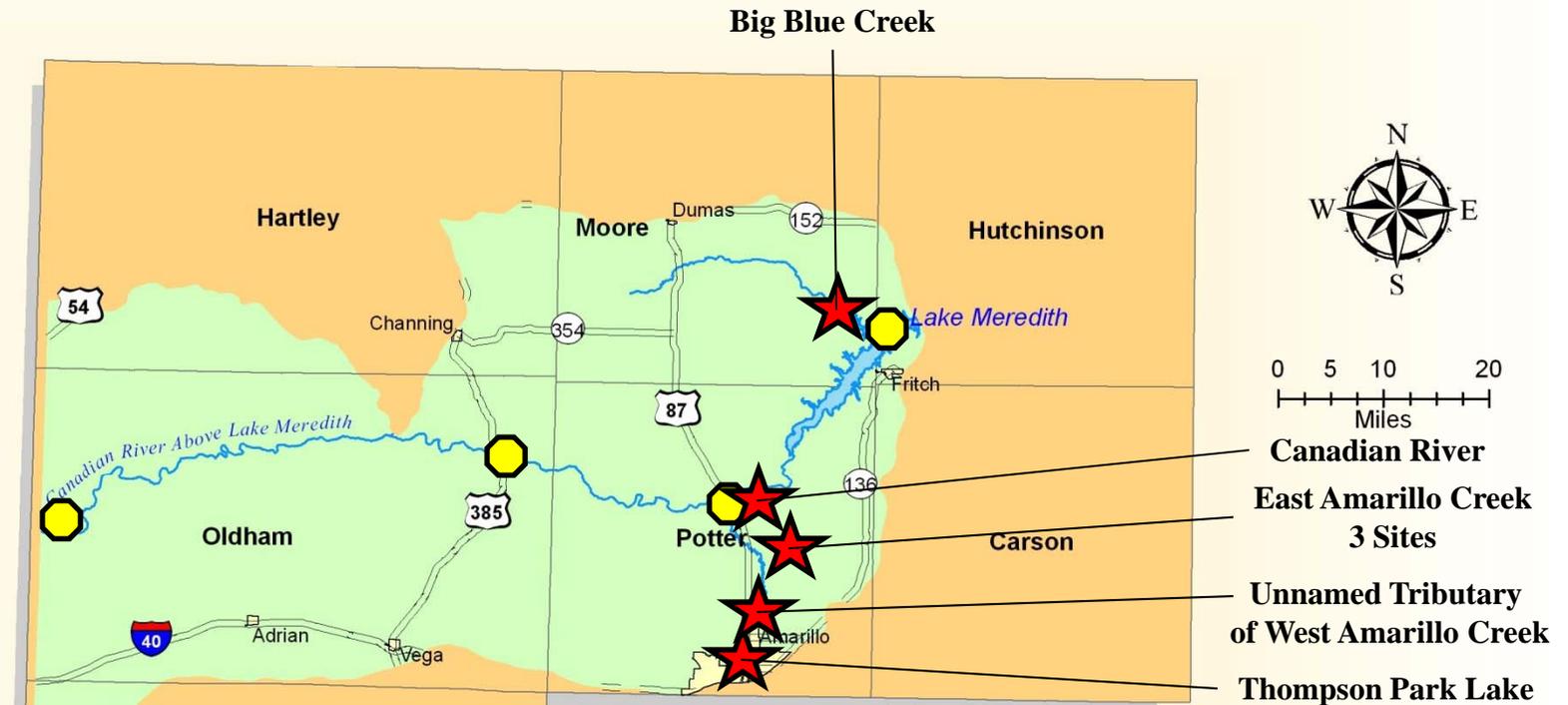
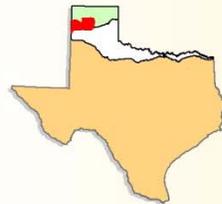
Canadian River @ SH 70

A photograph of a river winding through a marshy area. The river is the central focus, with water that is a mix of brown and blue. The banks are lined with tall, green grasses and some flowering plants. The sky is a clear, bright blue. In the foreground, there are dark, silhouetted grasses on the left side. A few birds are visible in the sky. The overall scene is a natural, outdoor setting.

Canadian River @ SH 70



Canadian Basin Reach II



2010 Texas Integrated Report

Impairments – Chloride, Mercury in Edible Tissue, Sulfate, TDS, & Bacteria

Concerns – Mercury in Edible Tissue, Chlorophyll-a, & Nitrate

● Coordinated Monitoring Efforts



Big Blue Creek @ FM 1913



Big Blue Creek @ FM 1913



Canadian River Basin Reach III

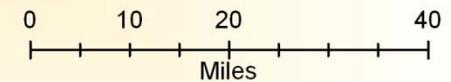


Rita Blanca Lake



2010 Texas Integrated Report
Impairments – pH

**Concerns – Ammonia, Chlorophyll a, Nitrate,
Ortho-phosphorus, & Total Phosphorus**



● Coordinated Monitoring Efforts



Rita Blanca Lake Near Dalhart, Tx.



Rita Blanca Lake Near Dalhart, Tx.



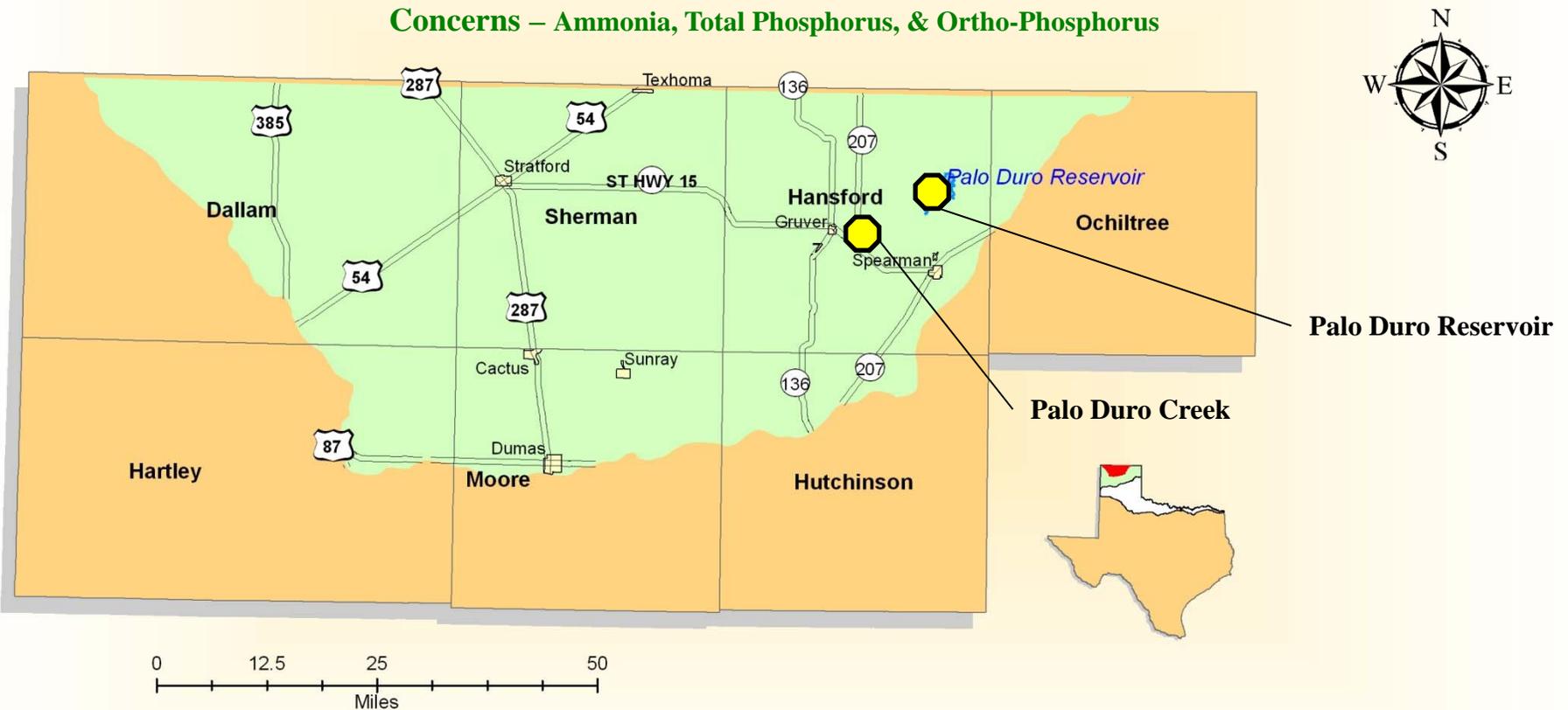
Canadian River Basin Reach IV



2010 Texas Integrated Report

Impairments – None at this time.

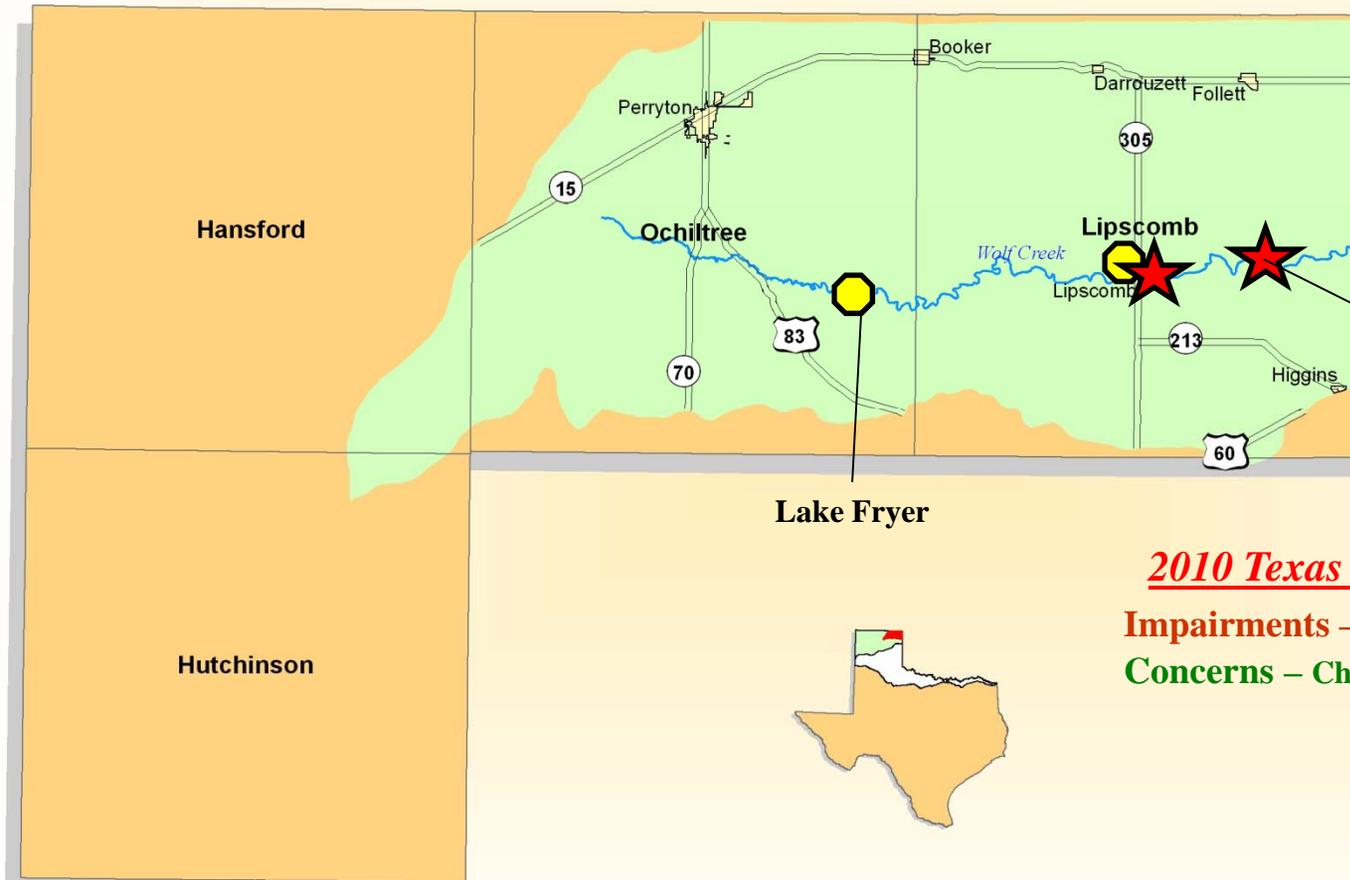
Concerns – Ammonia, Total Phosphorus, & Ortho-Phosphorus



● Coordinated Monitoring Efforts



Canadian River Basin Reach V



Wolf Creek

2010 Texas Integrated Report

Impairments – Bacteria

Concerns – Chlorophyll-a

● *Coordinated Monitoring Efforts*



Wolf Creek @ FM 1454



Wolf Creek @ FM 1454

Wolf Creek @ SH 305



Wolf Creek @ SH 305



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Chlorides

Aquatic Health

Low Dissolved Oxygen

Nutrient Enrichment

Ammonia
Chlorophyll-a
Nitrates
Total Phosphorous
Ortho-Phosphorous

Human/Wildlife Health

Bacteria – *E. coli*

Drought, Drought, & Drought

Water Quality Monitoring in the Red River Basin Reaches IV & V

| <u>ENTITY</u> | <u>FY11</u> | <u>FY 12</u> |
|---------------------------------|-------------|--------------|
| RRA | 8 | 8 |
| TCEQ | 7 | 7 |
| USGS | 8 | 8 |
| <hr/> | | |
| Total Stations Monitored | 23 | 23 |

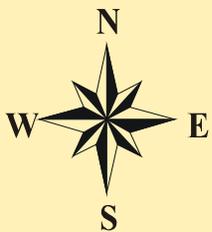
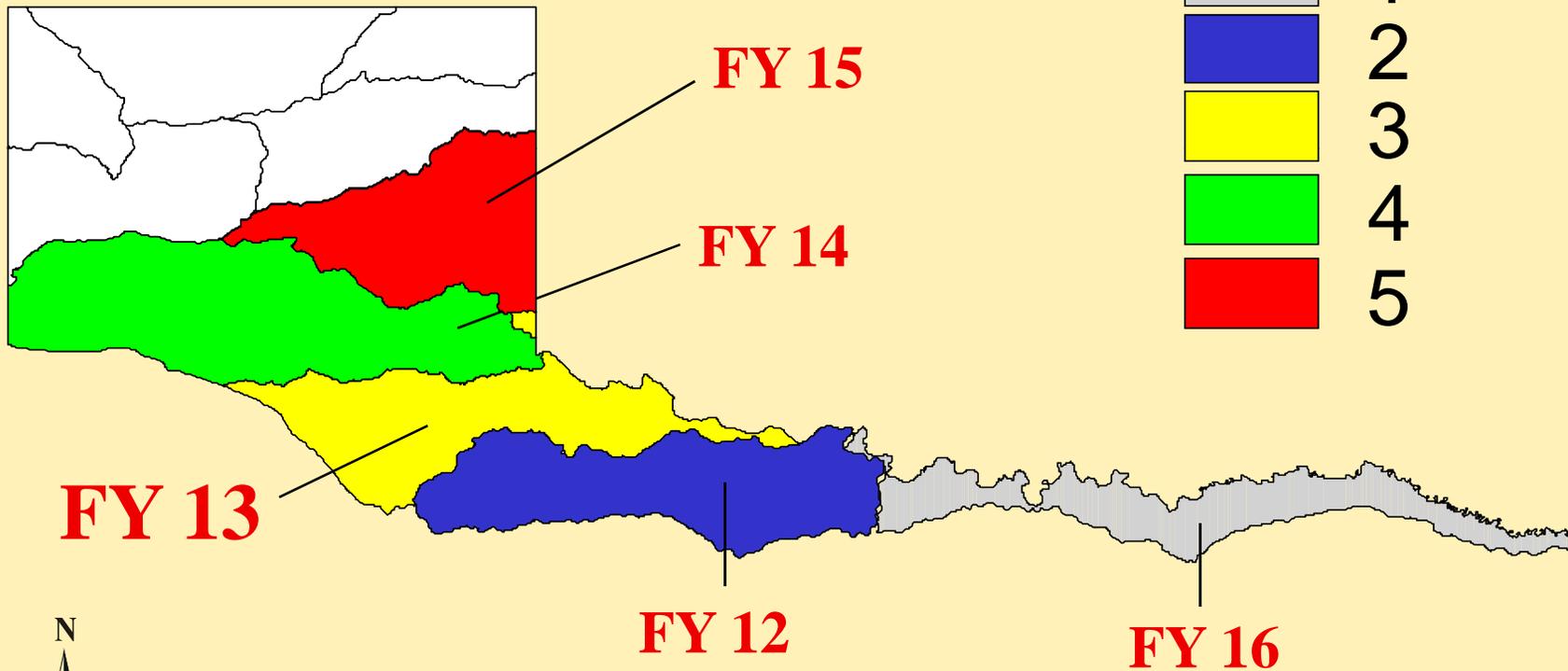
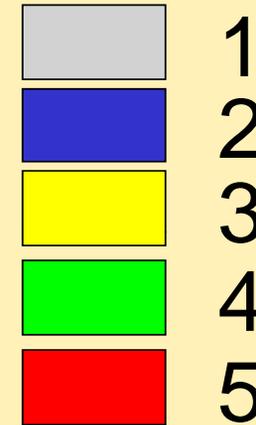
Water Quality Monitoring in the Red River Basin

| <u>ENTITY</u> | <u>FY11</u> | <u>FY12</u> |
|---------------------------------|-------------|-------------|
| RRA | 33 | 52 |
| TCEQ | 20 | 19 |
| USGS | 30 | 34 |
| City of Sherman | 7 | 7 |
| North Texas MWD | NA | 8 |
| <hr/> | | |
| Total Stations Monitored | 90 | 120 |



Red River Basin

Basin Reaches



Basin Reach Annual Rotation Schematic



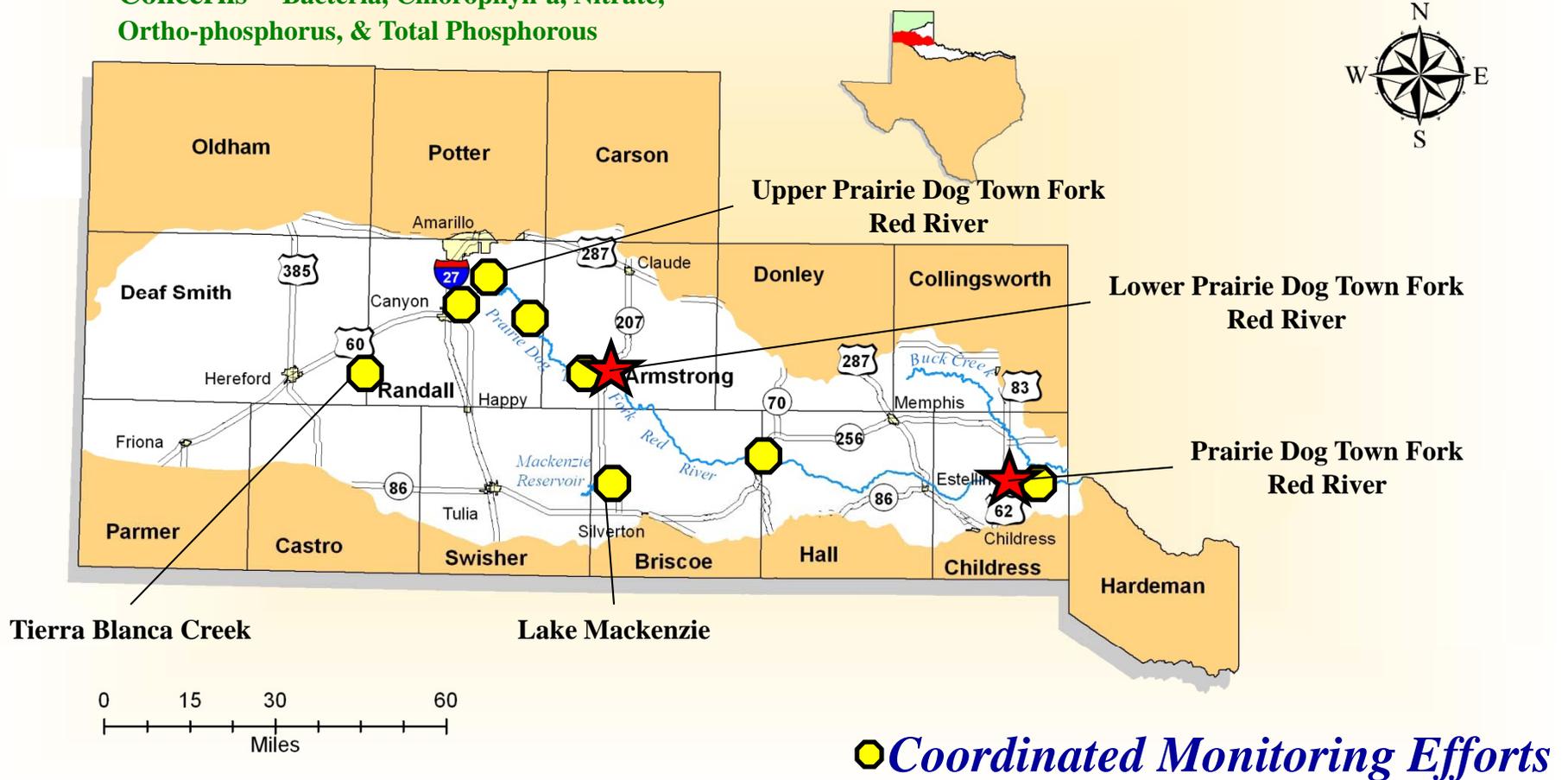
Red River Basin Reach IV



2010 Texas Integrated Report

Impairments – Bacteria & pH

Concerns – Bacteria, Chlorophyll-a, Nitrate, Ortho-phosphorus, & Total Phosphorus





LPDTF Red River @ SH 207



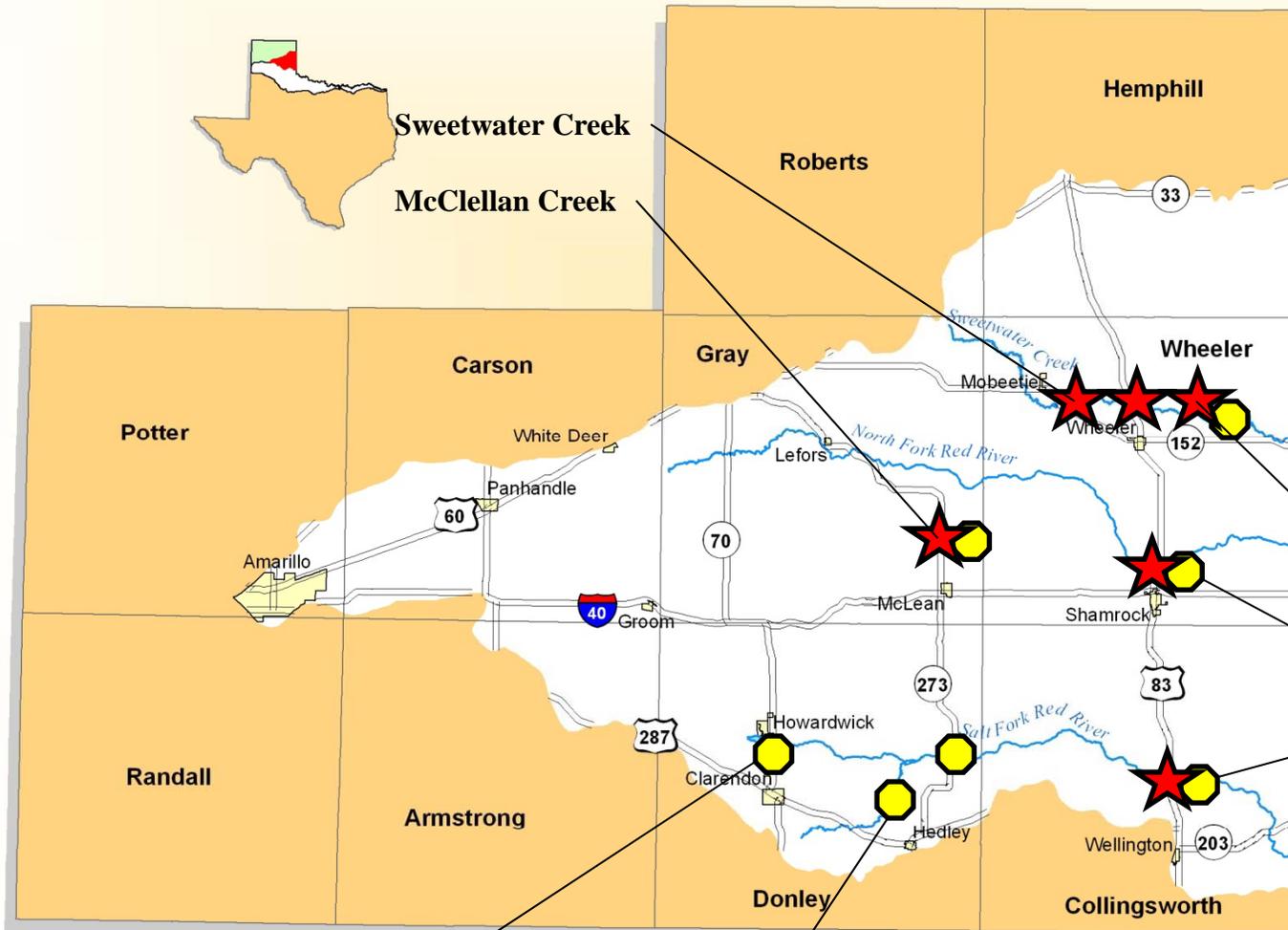
PDTF Red River @ US 83



PDTF Red River @ US 83



Red River Basin Reach V



2010 Texas Integrated Report

Impairments - Bacteria
Concerns – None at this time.

- Sweetwater Creek
- North Fork Red River
- Salt Fork Red River

Greenbelt Reservoir

Lelia Lake Creek

Coordinated Monitoring Efforts



Salt Fork Red River @ US 83



Salt Fork Red River @ US 83



North Fork Red River @ US 83



North Fork Red River @ US 83

The Future of Water Quality Monitoring

Watershed Action Planning Process

Management Tool - To coordinate the planning, facilitation, and tracking of actions to address water quality issues.

Numerous Agencies – TCEQ Water Programs, River Authorities, CRP Partners, TSSWCB, and other interested entities.

Local Watershed Discussions

Characterize the Watershed – Who knows what!

Identify – Research, funding capabilities, and potential stakeholders.

Recommendations – What needs to be done!

QUESTIONS OR COMMENTS



www.rra.dst.tx.us