RED BAYOU WATERSHED PROJECT

Putting Water Back Where It Belongs

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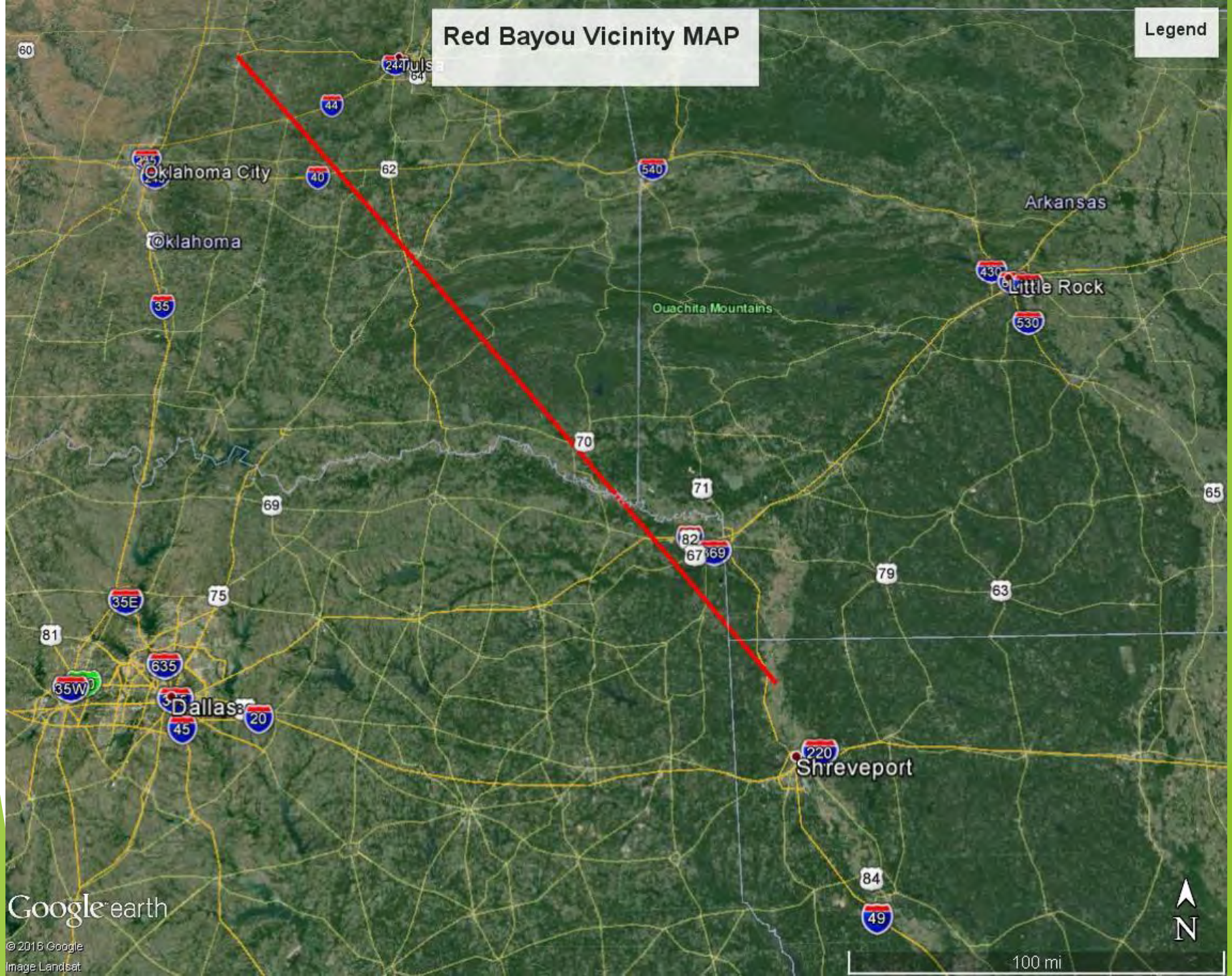
Red Bayou Vicinity MAP
Legend
Oklahoma City
Oklahoma
Arkansas
Little Rock
Ouachita Mountains
Dallas
Shreveport
Google earth
© 2015 Google
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100 mi

Oklahoma Surface Water Resources

Arkansas and Red River Drainage Basins

This map shows the drainage basins for the Arkansas and Red Rivers in Oklahoma. The Arkansas River drains 45,095 square-miles (64.5%) of Oklahoma's land surface area, and the Red River drains 24,837 square-miles (35.5%). For more information please visit the OWRB's web site at: (http://www.owrb.ok.gov)

OWRB

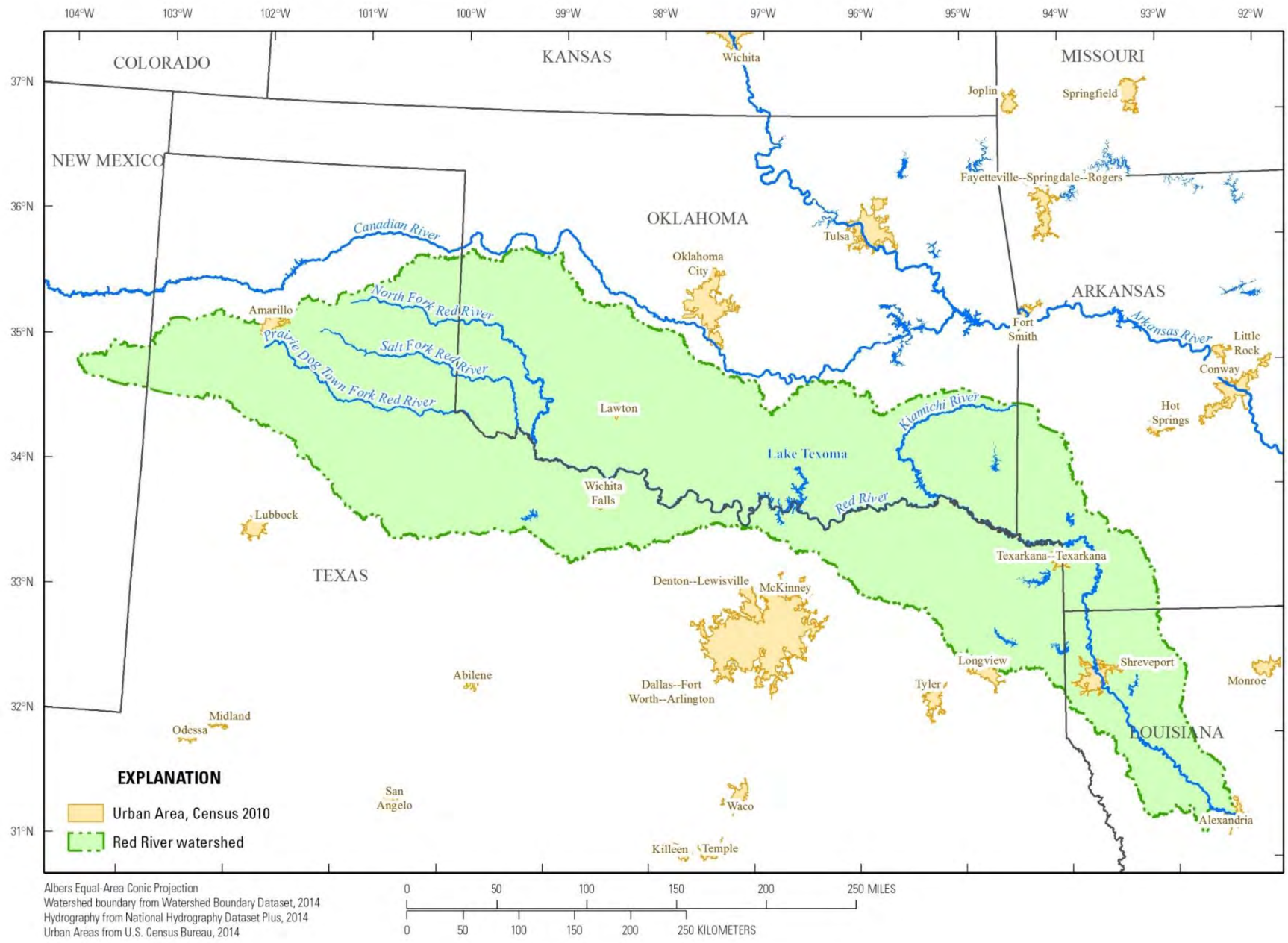


Figure 1. Red River watershed of New Mexico, Texas, Oklahoma, Arkansas, and Louisiana.

How It All Began

- In 1997 a small group of landowners approached the Caddo Soil and Water Conservation District (SWCD)
  - Lack of water
  - Soil erosion and sedimentation
  - Inefficient irrigation systems
  - Poor water quality
  - Degraded fish and wildlife habitat
- Caddo SWCD requested assistance from NRCS and we completed a feasibility study in April of 2000.

Project Partners

Caddo Soil and Water Conservation District

USDA Natural Resources Conservation Service

Louisiana Department of Agriculture and Forestry

State of Louisiana-FP&C

North Caddo Irrigation District

Red River Waterway Commission

Red River Valley Association

Red River Research Station-LSU AgCenter

Caddo Parish Commission

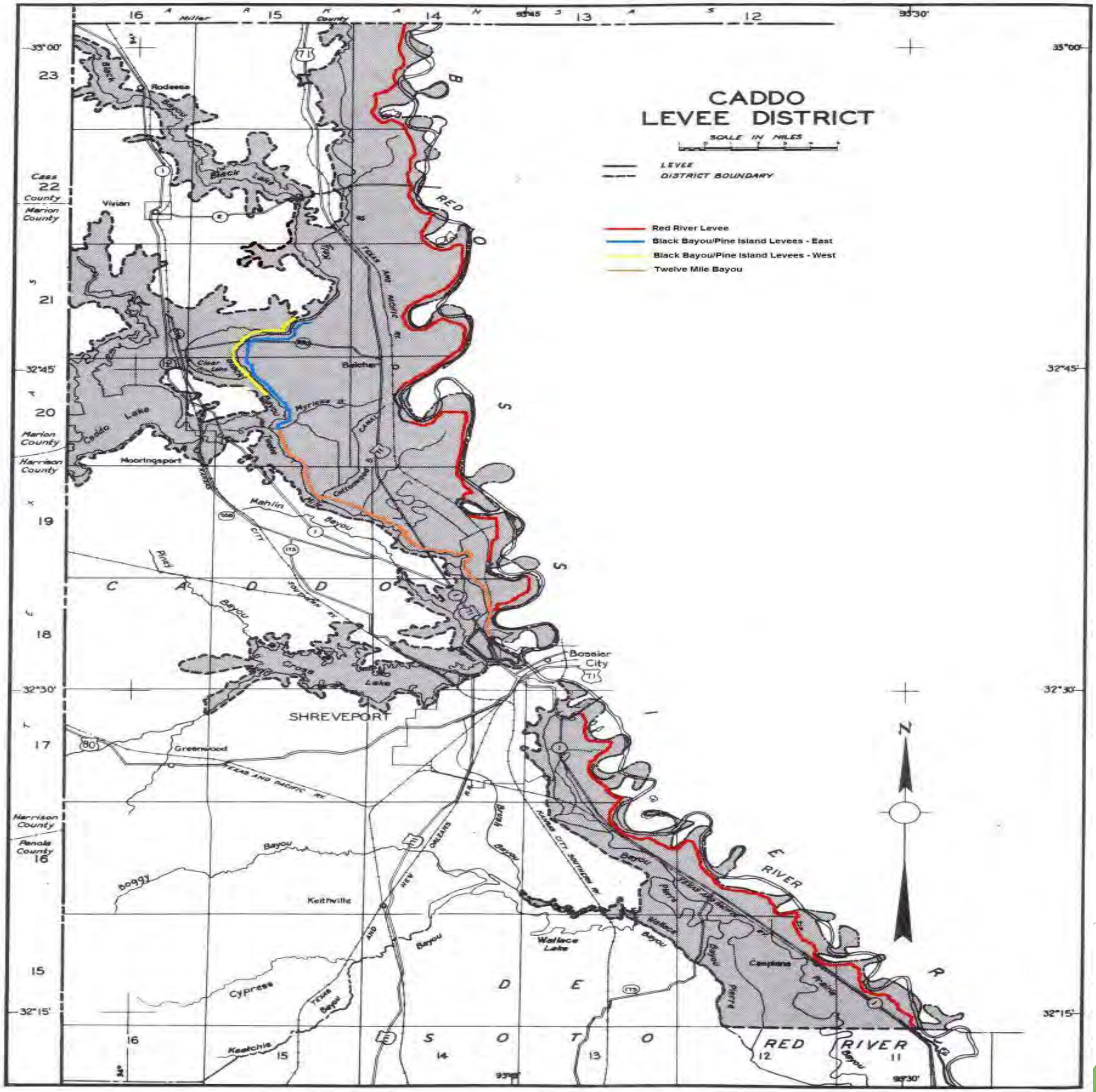
Caddo Levee District

Louisiana Farm Bureau Federation

Twin Valley RC&D

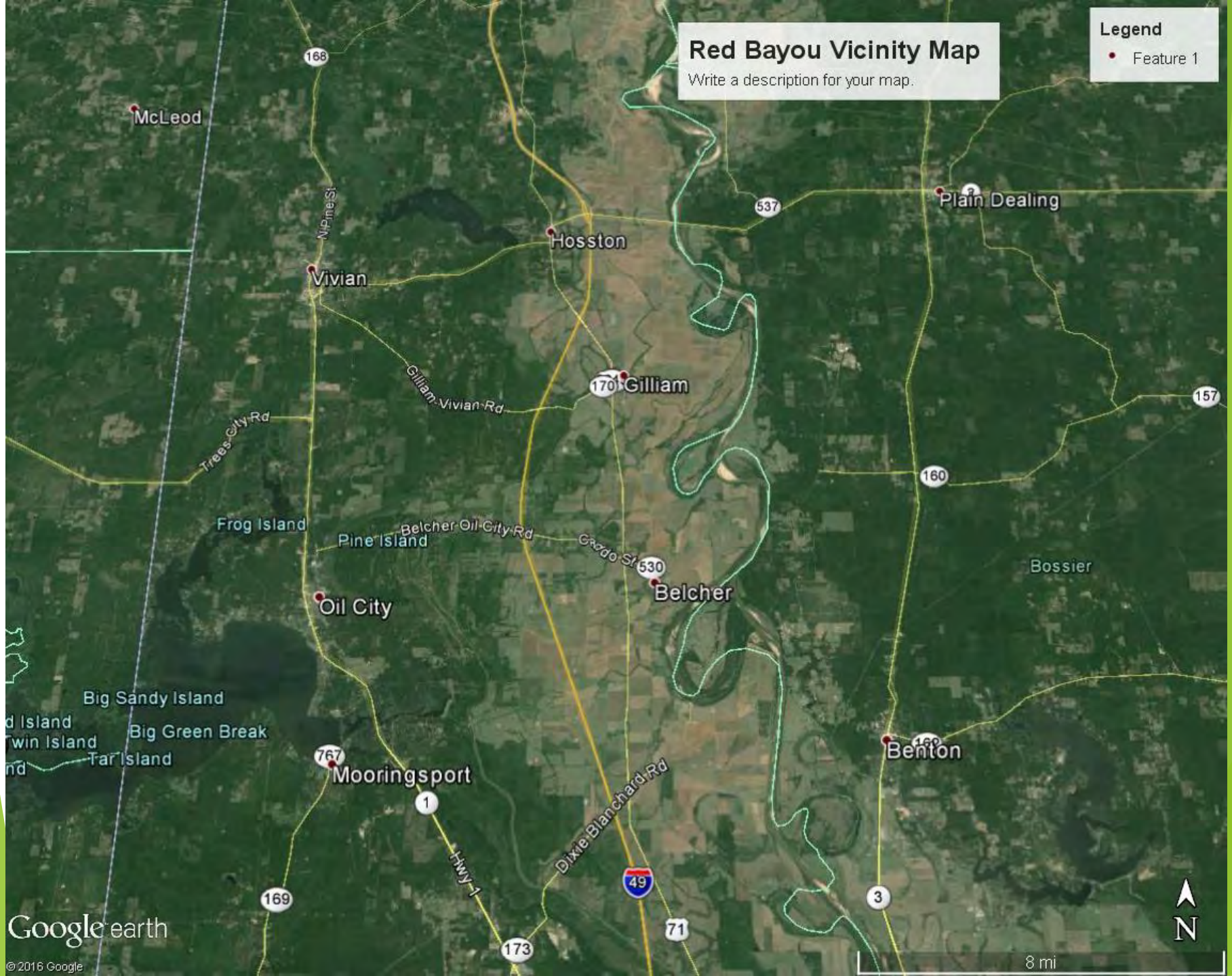
Funding

- American Recovery and Reinvestment Act
- State Funding



CADDO
LEVEE DISTRICT
SCALE IN MILES
LEVEE
DISTRICT BOUNDARY
Red River Levee
Black Bayou/Pine Island Levees - East
Black Bayou/Pine Island Levees - West
Twelve Mile Bayou
Rodessa
Vivian
Black Lake
Belcher
Caddo Lake
Mooringsport
Mahlin Bayou
Bossier City
Cross Lake
SHREVEPORT
Greenwood
Keithville
Wallace Lake
Campiana
RED RIVER
C A D D O
D E S O T O
Cass County
Marion County
Harrison County
Panola County
Miller County
33°00'
32°45'
32°30'
32°15'
93°30'


HISTORIC SITE
Seawell's Canal, 1830-1873
In 1830 Lt. Washington. W. Seawell of the United States Corps of Engineers developed a canal connecting Black Bayou and Red Bayou by cleaning out and improving a natural channel between the two bayous. This canal, later named after Lt. Seawell, enabled small riverboats to navigate around the Upper Red River raft by following Twelve Mile Bayou, Caddo Lake, Black Bayou and Red Bayou. In 1873 the Upper Red River Raft was removed by the U.S. Corps of Engineers and riverboats ceased using this route and followed the cleared Red River channel.
DIXIE


Red Bayou Vicinity Map
Write a description for your map.
Legend
Feature 1
McLeod
168
N Pine St
Vivian
Hosston
537
Plain Dealing
Gilliam
170
Gilliam-Vivian Rd
157
Trees City Rd
160
Frog Island
Pine Island
Belcher Oil City Rd
Caddo St
530
Belcher
Bossier
Oil City
Big Sandy Island
Big Green Break
Tar Island
767
Mooringsport
1
Hwy 1
Dixie Blanchard Rd
49
Benton
169
3
71
173
N
8 mi
Google earth
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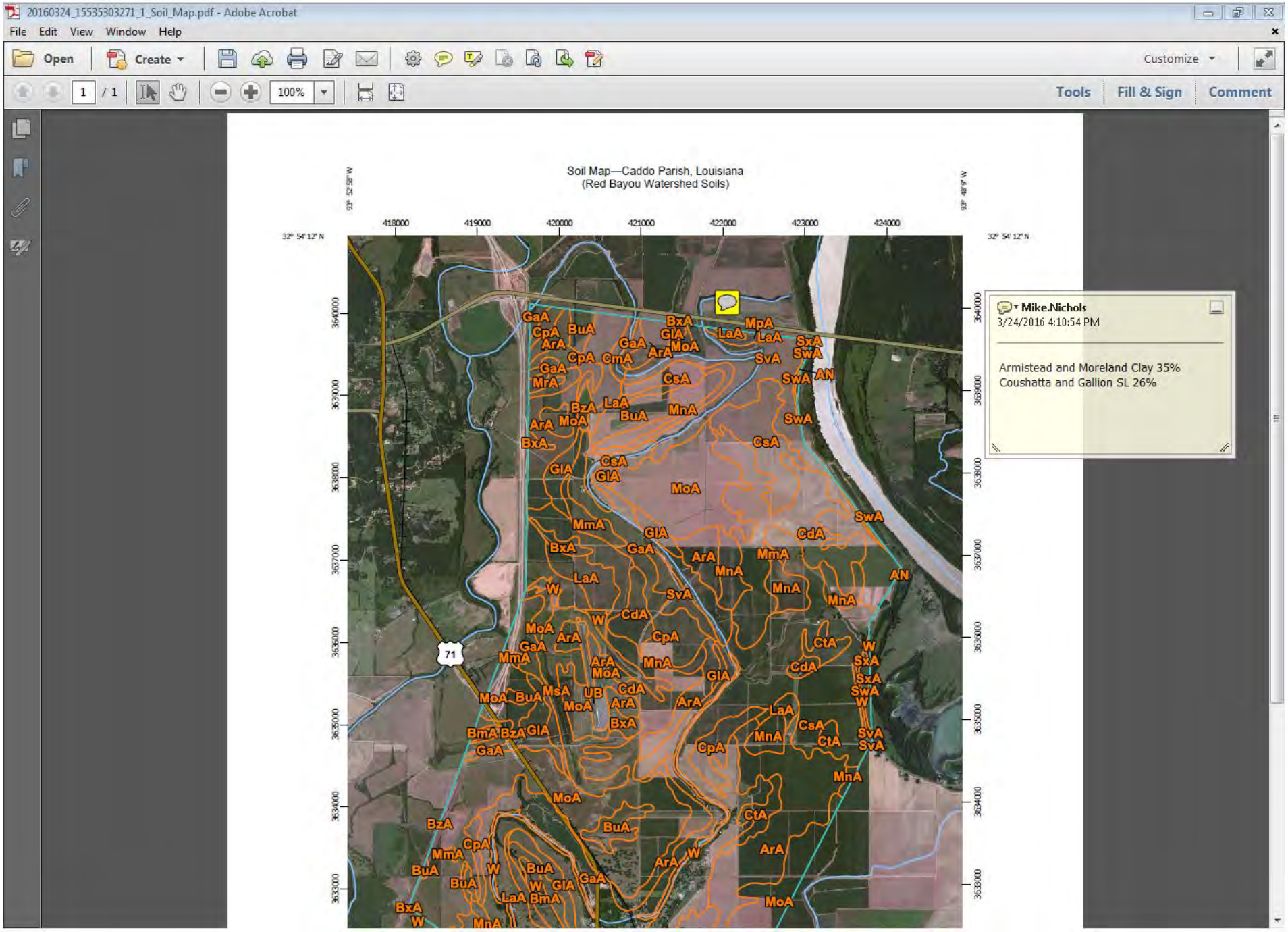
20160324_15535303271_1_Soil_Map.pdf - Adobe Acrobat
File Edit View Window Help
Open Create Customize
1 / 1 100% Tools Fill & Sign Comment
Soil Map—Caddo Parish, Louisiana
(Red Bayou Watershed Soils)
93° 52' 58" W
93° 48' 9" W
32° 54' 12" N
418000 419000 420000 421000 422000 423000 424000
3640000 3639000 3638000 3637000 3636000 3635000 3634000 3633000
71
Mike.Nichols
3/24/2016 4:10:54 PM
Armistead and Moreland Clay 35%
Coushatta and Gallion SL 26%


Red Bayou Project Area
Legend
Feature 1
Hosston-Plain Dealing Hwy
Pipe Outlets
Pump and Intake
Hosston
Hosston-Vivian Rd
Weir
49
71
Par Rd 23
30
Weir
Weir
Gilliam
170
Google earth
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CBS Photo Archive
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Environmental Considerations

Wetlands

Interior Least Tern (ILT)

Blocking fisheries movements

ILT Endangered Species

- Nesting colony just south of intake
- USFWS consultation
- We agreed to a provision to stop pumping if the flow in the Red River drops below 22,000 cfs
- Peak capacity of pumps is 150 cfs
- Expect to use 95 cfs or about 42,500 gpm during an average year. That's about 20,000 acre feet per year
- About 7.5 min to pump 1 acre feet of water
- 18,200 to 36,400 acre feet
- During a normal year corn needs about 16 inches of supplemental water and 22 inches during a dry year


Northern segment
irrigated cropland draining back into red bayou
Legend
800 feet
Pipe Outlets
Pipe Outlets
Hosston River Rd
Turnley Rd
Par Rd 23
N
1000 ft
Google earth
© 2016 Google

Incentive-based conservation since 2011

- Residue Management, Mulch Till: 345 acres
- Residue Management, Strip Till: 709 acres
- Residue Management, Ridge Till: 793.6 acres
- Structure for Water Control: 23
- Grade Stabilization Structure 2
- Irrigation Pipeline: 29,516 feet (5.6 miles)
- Irrigation Land Leveling 174.7 acres
- Irrigation System, center pivot sprinkler: 4 systems, 912 acres
- Irrigation Water Management; 1,083 acres
- Pumping Plant: 6
- Reduce soil erosion by 18,700 TPY and offsite sedimentation by 6,200 TPY.

Irrigation Numbers

2015 season

PHAUCET (NRCS)
Pipe Planner (Delta Plastics)
Low pressure systems

2500 acres
400 acres expected in 2016
15 pumps operating and 1 planned in 2016
25 flow meters
658 million gallons pumped into Red Bayou
416 million gallons used to irrigate crops


4390


HISTORIC SITE
Fairview Farm
In 1897, James Richard Cavett, an early settler, acquired this 240 acres. Elsie Louella Cavett McClenaghan named it Fairview, honoring their Scots-Irish ancestry. Around 1915, her son, William Cavett McClenaghan, built a farmhouse, commissary, barns, cotton house, etc., for his family, and he was one of the first planters who had a steel wheeled tractor. Farmhands used brozines bearing the family name. Fairview has been in the family over 115 years and six generations.
DIXIE
BELCHER
GILLIAM
HOSSTON
MIRA
IDA
RED RIVER CROSSROADS
HISTORICAL ASSOCIATION


Mitigation Area
Write a description for your map.
Legend
Gilliam
Weir
49
71
Par Rd 23
Gilliam-Scotts Slough Rd
Gilliam Airport Rd
Adger Rd
Weir
Gilliam
3049
170
Lay St
Weir
Gilliam-Vivian Rd
Gilliam-Red Bayou Rd
Google earth
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N
2000 ft