



# Oklahoma Carbon Program

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A Voluntary Program for  
Verification, Certification & Registration of  
Oklahoma Carbon Offsets

**2011 Update**

Agriculture • Forestry • Geologic



# Oklahoma Conservation Commission

- To conserve, protect and restore Oklahoma's natural resources, working in collaboration with the conservation districts and other partners, on behalf of the citizens of Oklahoma through **voluntary** programs.

- **Water Quality Division**

- 319 NPS Program
- Wetlands Conservation Program
- **Carbon Program\***

*\*only fee-based program*



# Legislation

- ❑ Oklahoma Carbon Sequestration Enhancement Act (2001)
- ❑ OCC authorized to administer “Carbon Sequestration Certification Program”
- ❑ Findings
  - Improved **ag, forestry, injection of CO<sub>2</sub>** reduce atm CO<sub>2</sub>
  - In the interest of citizens to quantify C seq resulting from improved stewardship
  - Efforts to document and quantify C seq will enhance the ability of Oklahomans to participate in future C markets
- ❑ Shall develop program to be as “consistent as possible with other gov programs designed to create carbon reserves for the purpose of voluntarily reducing GHG.”
- ❑ **\$0 funding**



# Timeline

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- ❑ 2001-2003
  - Oklahoma Carbon Sequestration Enhancement Act
- ❑ 2008
  - Pilot program begins N. Canadian River Watershed (3 counties)
  - Verifier training begins
  - Soil carbon sampling program begins (OSU)
  - Emergency rules passed
- ❑ 2009
  - Final rules approved
  - Pilot program expanded (18 counties)
  - Verifier training program begins w/NRCS
- ❑ 2010
  - Selected for funding from FY2010 NRCS CIG
  - Received first applications for verification of ag and geologic seq



# Carbon Pilot Program

# North Canadian River Watershed 319 Project between Canton Dam and Lake Overholser

## Purpose

- ❑ 1. Encourage BMPs
- ❑ 2. Develop verification methods
- ❑ 3. Gauge interest in C offsets



## Made Possible by

- 319 Project staff in watershed
- Conservation districts
- Sponsorship from electric co-op
  - \$90,000 for carbon offset payments (\$3.50 metric ton CO<sub>2</sub>e)
  - \$20,000 to OSU for soil sampling

# Verifier Training Program

With input from OK NRCS, the carbon program has developed a 4-level training process for verifiers. It is similar to the NRCS process for conservation plan writers and requires classroom and field instruction, as well as demonstration of field skills prior to certification. Conservation Districts and WQ staff have been trained.

Level 1 – Trainee

Level 2 – Apprentice

Level 3 – Independent Verifier

Level 4 – Senior Verifier/Trainier



# Soil Carbon Sampling Program

- ❑ **Who:** Oklahoma State University
- ❑ **Why:** Strong interest in Oklahoma-specific C seq rates for GHG market transactions
- ❑ **How:** Assess: total carbon, inorganic carbon, bulk density, pH, 5 year tillage history, crop rotation, fertilizer application, crop yield
- ❑ **Goals:**
  - Evaluate SOC seq potential of soils
  - Gather baseline data for long-term evaluation of SOC in soils after conversion
  - Determine how many samples needed to assess avg seq rate of aggregated acres in project area



# BMP: Conventional-Till to No-Till



## Incentives

**\$19.70/ac/yr**

**EPA 319 NPS Program**

**\$0.70 - \$2.10/ac/yr**

**Electric Co-op**

# BMP: Marginal Cropland to Grass



## Incentives

**\$90/ac/yr**

**EPA 319 NPS Program**

**\$1.40 - \$3.50/ac/yr**

**Electric Co-op**

# BMP: Riparian Exclusion / Buffer



## Incentives

**\$90/ac/yr**

**EPA 319 NPS Program**

**\$0.70/ac/yr**

**Electric Co-op**

# N. Canadian River Watershed Results

## ❑ Carbon Pilot Program

- 22 signed C contracts
- 100 fields / 9,290 ac
- 3,698 mtons CO2 sequestered
- \$12,943 to producers – Yr 1
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## ❑ 319 Project

- >100 signed contracts
  - 17,976 ac converted to NT
  - 920 ac from cropland to grass
  - 394 ac riparian area protected
- \$862,711 to producers 2008-2010

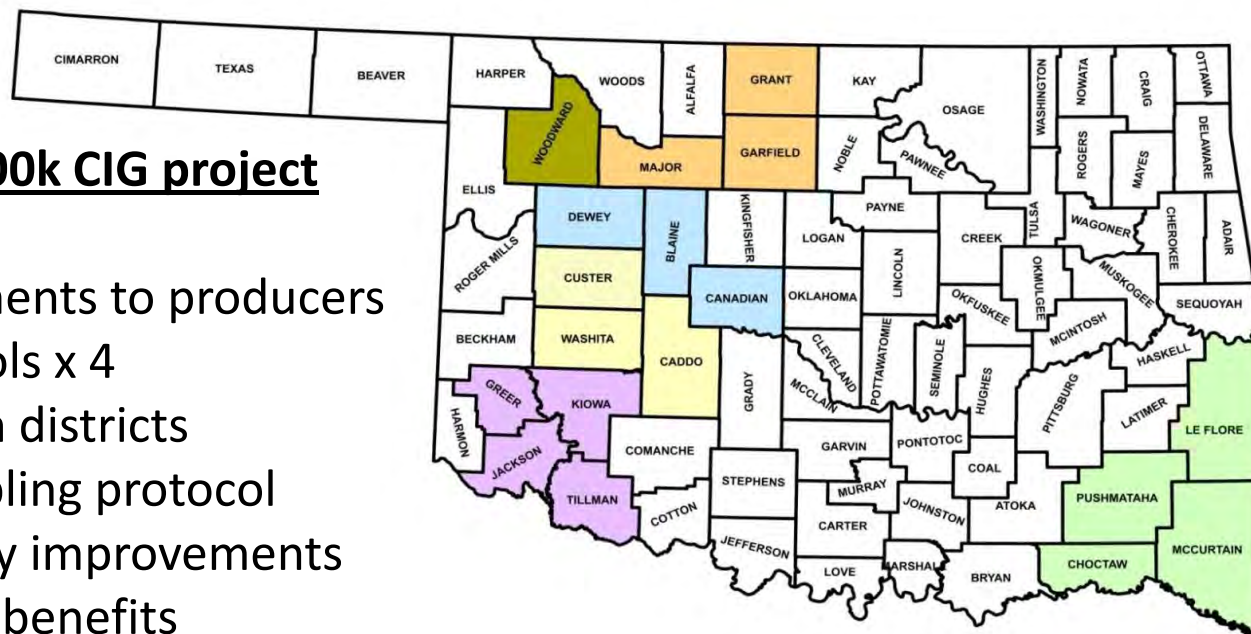


**Soil Sampling Program**  
6,000 samples collected  
(statewide)

# WFEC/CIG Project

**\$90k pilot** → **\$600k CIG project**

1. Carbon credit payments to producers
2. Verification protocols x 4
3. Utilize conservation districts
4. SOC testing & sampling protocol
5. Model water quality improvements
6. Quantify economic benefits
7. Manual of all methods to NRCS



# The Bigger Picture

- ❑ 2008 Farm Bill (sec. 2709) : USDA developing technical guidelines and science-based methods to quantify GHG sources and sinks for ag and forestry....to be used by farmers and USDA to improve mgmt practices and to identify actions to reduce GHG emissions and increase carbon sequestration.
- ❑ USDA Office of Environmental Markets created 2008
- ❑ NRCS Rapid Assessment of U.S. Soil Carbon began 2010



# Ecosystem Services

- ❑ USDA is shifting to “**ecosystems services**” (ES) concept, which recognizes the benefits that people obtain from ecosystems.
- ❑ New approach to trying to get public to understand impacts of environmental degradation on humans
- ❑ They are looking for demonstrations of how the ES concept can be applied and quantified.
- ❑ Example of ES: Riparian buffers not just good for stream health and protecting property, but can be managed for wildlife
- ❑ Example of ES: What is impact on air, water if forests are cut down for housing developments

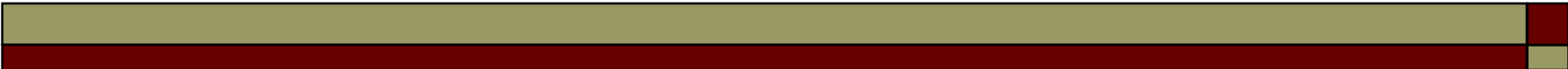


# What's Next?

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- ❑ California GHG Cap and Trade Program scheduled to take effect 2012. Will likely affect demand for carbon offsets in Oklahoma and drive up price of CO<sub>2</sub>
- ❑ Nitrogen crediting
- ❑ Rangeland project verification
- ❑ Forestry project verification
- ❑ Forested easement C credit project
- ❑ Verification of Geologic storage of CO<sub>2</sub>
- ❑ Wetlands research





# CONTACT

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