Trey Lam
Executive Director
Observed Mesonet Rainfall
Calendar Month to Date

May 1, 2019 through May 31, 2019

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Arkansas River Watershed Characteristics

- 161,000 square miles across 7 states
- Average discharge of 41,000 ft$^3$/s at the mouth
- >20,000 (mostly) perennial stream miles
- 486,126 reservoir surface acres
- Supports McClellan-Kerr Arkansas River Navigation System
Total Loss in Acres

- **Total Losses**
  - Immediate Arkansas River Watershed Acres: 100,000
  - State Acres: 400,000

- **Flood and Excessive Moisture losses**
  - Immediate Arkansas River Watershed Acres: 100,000
  - State Acres: 300,000

- **Prevented Planting**
  - Immediate Arkansas River Watershed Acres: 20,000
  - State Acres: 100,000
And Now We’ll Look at the Damage to the Land
The cost to fill this area would be $201,000.

5 Feet Deep

Represents 1,000 trucks
Now Look at the Response
And Now Let’s Take a Look at the Available Resources
Oklahoma Conservation Commission

State Technical Support
Professional Consultation
United State Department of Agriculture Resources:
USDA Farm Service Agency

FSA-Emergency Conservation Program

Sand and Silt 0-4 inches: $15 per acre
Sand and Silt Deposits 4-8 inches: Cost = $34 per acre
Sand and Silt Deposit 8-12 inches: Cost = $235 per acre
Grading and Shaping Gullies
Sand and Silt Deposits greater than 12 inches (Debris Removal):
Cost = $336 per acre

Currently Paid
$618,711 Tornado  $332,821 Flooding
(only 6 of 28 effected counties)

Livestock Program
$118,590
USDA Natural Resources Conservation Service

Emergency Watershed Protection Program – Floodplain Easements: Will pay fair market value. This is a perpetual easement that stays with the title of the land.

Environmental Quality Incentive Program Funding on Cropland only for Cover Crop establishment to landowners who have been and continue to be impacted by this natural disaster: Will pay $53-$63 per acre to plant cover crops.
Next Time
State Emergency Funding for Agriculture
Watershed Structures of Oklahoma

- High Hazard Watershed Structures
- Watershed Structures
- County Boundaries
- Conservation District Boundaries
Watershed Areas Contributing to Flooding

- Arkansas River Watershed - 161,000 square mile area
- Arkansas River between Wichita and Tulsa (red outline) - ~36,000 square miles - 66% crop and pastureland, 28% rangeland
- Arkansas River Basin between Tulsa and Stateline (purple outline) - ~82,000 square miles - 43% crop and pastureland, 38% rangeland

We’ve lost at least half of the organic matter in Oklahoma Soils, dropping from 5-6% to 1-3%
Benefits of Soil Organic Matter

• Increase organic matter by 1% in cropland and pastureland soils and by 0.5% in rangeland soils - increase water holding capacity:
  • In areas affecting Tulsa by 463 billion gallons
  • In areas affecting Spiro by 811 billion gallons
• That’s like building additional reservoirs the size of Oklahoma’s four largest - Texoma, Eufaula, Oolagah, and Broken Bow, and then also adding another Canton Lake