THE NATURE CONSERVANCY AND
ITS FRESHWATER PROGRAM

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THE NATURE CONSERVANCY’S (TNC) MISSION:

• To conserve the lands and waters on which all life depends.
THE NATURE CONSERVANCY

- Largest World Environmental Non-Profit Organization
- Work in all 50 States
- Work in 35 Countries
- Protected 120 million acres to date
- Founded in 1951
- Board of Governors
- Employ 3,000 people
GLOBAL FRESHWATER EFFORTS

Great Rivers Partnership: Formed in 2005

- www.greatriverspartnership.org

- Collaborative whole basin management solutions for water use and development

- Expanded efforts to eight global river basins by 2016

- Work primarily done on Mississippi, Yangtze and Parana-Paraguay Rivers
Over the next five years, The Nature Conservancy will protect freshwater supplies needed to nourish millions of people around the globe, as well as the rich diversity of plants and animals on Earth.
GLOBAL FRESHWATER EFFORTS

• Alliance for Water Stewardship
• Dam Removal Projects
• Hydropower Development
• Where does your water come from?
• Water Footprint
• Water Funds: www.nature.org/waterfund
TNC-OKLAHOMA CHAPTER

- Staff of 26

- 26 Board of Trustees

- Buy and protect lands with important conservation values

- Implement conservation easements

- Currently own 90,000 acres

- Manage 11 preserves
FRESHWATER CONSERVATION PROGRAM

• Implemented June 25, 2012
• Work with variety of partners
• Developed aquatic monitoring plans for five preserves
• Monitor biological, water quality and hydrological components
PURPOSE AND OBJECTIVE FOR AQUATIC MONITORING PLANS

• PURPOSE: Assess the biology, water quality, hydrology, geomorphology and connectivity of water resources on the preserves

• OBJECTIVE: To develop instream flow recommendations for streams and rivers on the preserves and collect data on the five riverine components
METHODS FOR AQUATIC MONITORING PLANS

• METHODS:
  – **Biology**: Fish Seining and backpack shocking. Macroinvertebrate kick-netting and Hess sampling
  – **Water Quality**: DS5 Water Quality Meter for five parameters
  – **Hydrology**: Set up cross sections and measure discharge with a Sontek Flowtracker
  – **Geomorphology**: Set up cross sections and longitudinal profiles using laser levels
  – **Connectivity**: Mapping all major rivers and streams along with tributaries
FRESHWATER CONSERVATION PROGRAM

• Participate in the Oklahoma Comprehensive Water Plan: Instream Flow Workgroup

• Implement Sediment Workshops

• OSU/TNC: Arbuckle Mountains Blue River Watershed Research Project

• Water Quality Study: Potential Impacts from Oil and Gas Production and Exploration on the Tallgrass Prairie Preserve
TALLGRASS PRAIRIE WATER QUALITY
SAMPLING AND ANALYSIS FOR POTENTIAL IMPACTS FROM OIL AND GAS

• PURPOSE:
  – To analyze surface water quality, subsurface water quality and biological populations and diversity in groundwater wells and streams

• OBJECTIVES:
  – To collect water samples from 11 groundwater wells and 12 surface water streams
  – To collect biological data on fish and macroinvertebrates from 10 streams
1) Develop flow-ecology hypotheses that focus on fish in the Arbuckle Mountains region

2) Assess temperature changes across several stream reaches to determine potential impacts to fish
Reduce sediment input to streams

Geocell for road/stream crossings
FUTURE ACTIVITIES

• Conducting a sediment workshop in Tahlequah

• Participate in National and State American Fisheries Society Meetings

• Participate in Instream Flow Council meetings

• Continue river and stream monitoring at preserves

• Continue water quality monitoring and biological monitoring at the Tallgrass Prairie Preserve
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• Choctaw Nation
QUESTIONS??