AGENDA

Oklahoma Water History
Oklahoma Water - 2010
Why a Reservoir Viability Study?
Methodology
Results
Conveyance Issues and Opportunities
Conveyance Feasibility
Next Steps for Conveyance
OKLAHOMA WATER HISTORY

1907 Statehood
1910 Byrd’s Mill Spring
1919 Lake Overholser
1957 OWRB Created
1907 Statehood
1910 Byrd’s Mill Spring
1919 Lake Overholser
1957 OWRB Created
1966 Potential Reservoirs Identified
1973 Extensive BOR Lake Studies
OKLAHOMA WATER HISTORY

1907 Statehood
1910 Byrd’s Mill Spring
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1966 Potential Reservoirs Identified
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1980 Comprehensive Water Plan
OKLAHOMA WATER HISTORY

1907 Statehood
1910 Byrd’s Mill Spring
1919 Lake Overholser
1957 OWRB Created
1966 Potential Reservoirs Identified
1973 Extensive BOR Lake Studies
1980 Comprehensive Water Plan
1990 Federal Funding Dries Up
1995 Comprehensive Plan Update
55,646 Miles of shoreline, 1,401 square miles of water

Use - 63% surface water and 37% groundwater

Legislative Mandate for Aquifer Sustainable Yield

• Arbuckle – Simpson Aquifer Study
OWRB Embarked on 2011 Comprehensive Water Plan in 2007
OKLAHOMA COMPREHENSIVE WATER PLAN
– GOALS & OBJECTIVES

Identify End-Users
Collect and Preserve Data
Liaison and Collaborate with Other Agencies
Make Data Available Online
Condense Data into Essential Elements of Information
Assess the Likelihood of a Reservoir Being Developed
Determine How Surplus Water Can Best Help the State
Provide Data for Future Planning and Decision Making
OKLAHOMA WATER 2010

Arbuckle – Simpson Aquifer Study
OWRB Embarked on 2011 Comprehensive Water Plan
Regional Raw Water Supply Study for Central Oklahoma
CENTRAL OKLAHOMA STRATEGY

- Potential Source Waters
- Metro-Area Infrastructure

[Map of Central Oklahoma showing various cities and water sources]
Why a Feasibility Study?

- Site Change
- State Change - Groundwater
- National Change - Funding
- Climate Change
- Consolidate and Protect Data
- Stop the Propagation of Bad Information
- Increase Focus on “Real” Prospects
- Provide Information to “Stakeholders”
- Enhance the Comprehensive Planning Process
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)

Database Population (EEIs)
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)

Database Population (EEIs)

Weighted Matrix Development

![Weighted Matrix Diagram]
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)
Database Population (EEIs)
Weighted Matrix Development
Environmental-Cultural Screen
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)
Database Population (EEIs)
Weighted Matrix Development
Environmental-Cultural Screen
Mapping
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)
Database Population (EEIs)
Weighted Matrix Development
Environmental-Cultural Screen
Mapping
Map Reconnaissance
Cost Estimate
METHODOLOGY

Literature Search (USACE, BOR, OWRB, NRCS)
Database Population (EEIs)
Weighted Matrix Development
Environmental-Screen Mapping
Map Reconnaissance
Cost Estimate
Gap Analysis
Evaluation Workshop
Results - 125 Sites

Category 4 – Apparently Feasible - 39 Sites

Category 3 – Possibly Feasible - 29 Sites

Category 2 – Sites with Fatal Flaws - 14 Sites

Category 1 – Insufficient Information - 28 Sites

Category 0 – No Information Available - 15 Sites
RESULTS - 125 SITES
RESULTS – CATEGORIES 3 AND 4

LEGEND:
Yellow = Category 3
Green = Category 4
RESULTS – WEBSITE

EVALUATION OF POTENTIAL RESERVOIR SITES IN OKLAHOMA

Purpose, Goals and Objectives (PDF)
Executive Summary (PDF)
Methodology (PDF)
Full Report (PDF)

Specific Reservoir Data
Search By:
  - Reservoir Name
  - County
  - Drainage Basin
  - Region

Reservoir Rankings, Criteria and Results

RELATED LINKS — Background Studies are Available at
www.OKreservoirstudies.com

Oklahoma Water Atlas
Water Information Mapping System
Oklahoma Water News
Oklahoma Comprehensive Water Plan

Engineers • Architects • Consultants
CONVEYANCE

Moving Water East to West
CONVEYANCE ISSUES AND OPPORTUNITIES

16 inches

56 inches
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution

Underutilized Existing Resources
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution

Underutilized Existing Resources

Precedence – Atoka to Oklahoma City Pipeline
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution
Underutilized Existing Resources
Precedence – Atoka to Oklahoma City Pipeline
Increasing Demands
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution
Underutilized Existing Resources
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Political Resistance
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution
Underutilized Existing Resources
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Costs
CONVEYANCE ISSUES AND OPPORTUNITIES

Rainfall Distribution
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Increasing Demands
Political Resistance
Costs
Alternatives
Conveyance Feasibility -- Texoma to Southwest Oklahoma
Refine a business approach to “right-size” alternatives to the future demands, customer objectives and fiscal practicality; address reality.
COME AND SEE US!