Purpose of the Study

To engage in a facilitated process which recognizes the broad differences in group members and allows us to make informed decisions on participation (opt in/opt out) in a regional water supply project with particular consideration to cost and timing.
Objectives

● The objective of this project is to provide water supplies to the central region of Oklahoma while maintaining desired environmental conditions in the area of origin.

● Quality of life is maintained for all parties involved.
Participation
Collective Needs

● Each City of the Oklahoma City metro region is experiencing water supply problems either now or in the foreseeable future

● Each City realizes that we will have to address this collectively

● We are all in this together
Collective Demands

- We must recognize the Collective Demands along with individual needs in our search for a complete decision.

Blending the two tracks of water resource planning enables us to move from technical needs to "interest-based" solutions.
Collective Commitment

Selection
Draft scope
Workshop #1 Internal
Scope & Fee
Enter into Contract

PROJECT EXECUTION
- Technical
- Regulatory / Permitting / Intergovernmental
- Environmental
- Organizational / Management
- Economic

FACILITATED PROCESS

DECISION SUPPORT

Next Steps and Staged Approach

PROJECT COSTS

Financial / Rate Structure

PRODUCTS

Project Costs

Next Steps and Staged Approach

Identify Additional Studies Needed

Project Definition

Form Cohesive Work Group

PROCESSES
Choice of Consultant

- Through a public advertisement process the participants selected CDM to complete the study.
Choice of Financial Commitment

This study is funded by the member cities. Their individual commitment is proportional to their population in relation to the metro region.
Individual Demand Data Collection

- The first question in planning for this project was “How Much Water is Needed?”

- Participants provided their demand forecasts

- These demands were placed on top of the expected demands of Oklahoma City
Phased Analysis Approach

- Attention to the possibility of phased construction activities were critical in the analysis.

- Project phasing helps spread the project costs over an extended period.
Implementation Opportunities

- North Canadian -- 80,000 AFY
- Lake Atoka -- 91,667 AFY
- Additional Lake Sardis -- 100,813 AFY
- Existing Atoka Pipeline
  - 90 MGD
- Proposed Pipeline
  - 184 MGD
- McGee Creek -- 40,000 AFY
- Additional McGee Creek -- 11,800 AFY
- Lake Atoka -- 91,667 AFY
- North Canadian -- 80,000 AFY

Atoka Pipeline Project Required
Phased Projects

Local Government Activities
- Interlocal Agreement
- Water Plan Updates
- Cost-of-Service Studies
- Water Distributions Studies
- Finalize Alternative

Environmental Activities
- Consult with COE
- USFWS Discussions
- Water Rights & Permitting
- Federal Permitting
- Sardis Resolution

Design Activities
- Route Acquisition
- Atoka Alignment Survey
- Atoka Pipeline Design
- Atoke Pumpstation Design
- ODEQ Permitting

Construction Activities
- Atoka Pipeline Construction
- Atoka PS Construction
- Sardis Pipeline Design and Const.
- Sardis PS Design and Const.
Alternatives

- **Sources:** four well define locations
  - Sardis
  - Moyers Crossing
  - Highway 3
  - Hugo

- **Conveyance:** three well defined options
  - Atoka
  - McGee
  - Storage tank

- **Delivery:** multiple options, large number of permutations
  - Defined three “themes” to bind the analysis
This page contains a diagram labeled "Theme D1: OKC Treatment" with various locations and pathways labeled, such as "Arcadia," "Lake Thunderbird," "Draper WTP," "Stanley Draper," "Shawnee," "Seminole," "Tecumseh," "McGee Creek," "Atoka," and "Sardis." The diagram includes legend symbols and annotations for existing and proposed water treatment facilities, pipelines, and reservoirs. Detailed labels and annotations are provided within the diagram itself.
OWRB provided water quality data for all potential source waters and receiving waters.
Threatened & Endangered Species
Issues – Pipeline Construction

- Potential minor issues with a variety of species which can be addressed via informal consultation with USFWS
  - American Burying Beetle
  - Whooping Crane
  - Piping Plover
  - Arkansas River Shiner
  - Interior Least Tern
  - Black-Capped Vireo
Cost Development Procedures

- **Unit Costs by Broad Category**
  - Treatment (flow)
  - Pumping (horsepower)
  - Pipeline (unit length)
  - Storage (volume)

- **Increased detail for project elements:**
  - Tunnels, River Crossings, Trenching in Open Areas and Heavily Developed Areas

- **Lump sum costs for case specific items**
  - Example: river diversion or reservoir intake
Atoka Pipeline
Project Construction Components

• Project elements
  ► 587,000 feet of pipe
  ► Roadway, river, railroad crossings
  ► 6 Pump stations averaging 11,000 horsepower each
  ► Balancing tanks
  ► Blowoffs, air release vaults
  ► Raw water intake
Atoka Pipeline
Factors Affecting Construction

- Material quantities and prices
- Large diameter pipe – limited options, manufacturers

Rising Raw Materials Costs and Global Economic Trends Affecting Electrical Component Pricing

Manufacturing industries continue to be taxed for sourcing and operational efficiencies. Global economic forces continue to make price-containment a challenge. In previous topic briefs we discussed the causes of rapidly rising market prices for raw materials and oil and their impact on the cost of electrical components. In this brief, we will look at new events in those segments and also at global economic forces that impact our industry and the cost of the products we manufacture.

Metals Prices: Rising with a Vengeance

Steel: Steel prices一路上升, reaching all-time highs, with cold-rolled, hot-rolled steel prices at over $1,300 per ton. With the U.S. dollar weak and global demand for steel in emerging markets like India very strong, there's no consensus as to when prices could level or drop. Some analysts predict this could happen later in the year, but others are not nearly as optimistic, predicting increases until 2014-2015.

Supply and demand economics aren't the only drivers of higher steel prices. Price for raw materials, iron ore, and making steel have also increased since 2009. Iron ore is up almost 600 percent since 2005, and crude oil is up almost 500 percent since 2005. These are also important factors to consider in the pricing of raw materials for industries that depend on steel.

Figure 1: STEEL: $/ton

Source: Iron Age
Cost Distribution

- Planning level costs will be established for project components:
  - Source Alternatives
  - Raw Water Transportation
  - Water Treatment
  - Treated Water Delivery
  - Possible Operational Costs

- Total capital costs will be established for each participant’s consideration
**Next Steps**

- Continue collaborative work toward a secure water supply for one-third of Oklahoma’s population

- Continued detailed work:
  - Public Communication and Outreach
  - Environmental Studies
  - Financial Analyses
  - Water Conveyance Studies
Public Information Discussion

- Road Show Package
- Presentation Video
- Social Group Presentations