

# **Norman 2060 Strategic Water Plan**

## ***Ad Hoc Committee Meeting***

May 30, 2012 – 12:00 pm  
Multipurpose Room, City Hall

# Discussion Overview

- **Introductions**
- **Review of planning goals and process**
- **Ad Hoc Committee responsibilities**
- **SWSP Public meetings: content and timing**

# Norman 2060 Strategic Water Supply Plan

The goal of the Plan is to strengthen our knowledge of short and long-term water supply source(s) and begin implementation of a robust, economical water supply solution acceptable to the citizens of Norman.

The NUA is currently unable to supply sufficient potable water to meet peak demands and is concerned about losing our groundwater resource due to a probable reduction of the maximum contaminant level (MCL) for chromium, arsenic, or other contaminants.

# Norman 2060 Strategic Water Supply Plan

- **Norman Current Water Supply**
  - Surface Water – 70%
  - Garber Wellington – 27%
  - OKC – 3%
- **Issues Facing Norman's Water Supply Future**
  - Current yield of Lake Thunderbird may be reduced
  - Quality of Lake Thunderbird is uncertain
  - Garber-Wellington aquifer yield may be reduced by half or more
  - Total Norman 2060 population will be about 200,000; service area population could approach that level
  - Based on expected demand, there may be a shortfall of over 20 mgd in 2060

# Background: Previous Studies

- Norman 2020 Land Use and Transportation Plan, prepared by The Burnham Group in 1997
- Norman 2025 Land Use and Transportation Plan, as amended
- 2040 Strategic Water Supply Plan, prepared by CDM/CH2M Hill in 2001
- Arsenic Study, prepared by CH2M HILL in 2002
- Water Treatment Plant Expansion Evaluation, prepared by Carollo Engineers in 2007

# Other Sources of Information to be Leveraged

- 2012 Oklahoma Comprehensive Water Plan (OCWP) by Oklahoma Water Resources Board (OWRB)
- Regional Raw Water Supply Study for Central Oklahoma, prepared by CDM in 2009
- Proposed Scissortail Reservoir Feasibility Study, prepared by CH Guernsey & Company in 2009
- Possible affects of the pending Garber Wellington Water Management Study
- Pending EPA Toxicological Review of Hexavalent Chromium
- Water Reuse Regulations promulgated by the Oklahoma Dept. of Environmental Quality (ODEQ)
- Ongoing Central Oklahoma Master Conservancy District (COMCD) Lake Thunderbird Reuse Study

# Previous Water Supply Planning

- 1992 Master Water Plan
- 2001 Strategic Water Supply Plan
  - Baseline development
  - Existing system assessment
  - Alternatives evaluation
  - Plan development
- 2001 Recommended Plan
  - Expand Garber Wellington Wellfield
  - Partner for SE Oklahoma Water Sources

# Previous Water Supply Planning

- 2008 Regional Raw Water Supply Infrastructure Study
  - Gather information from each participating City (11 Cities in Central Oklahoma)
  - Review quantity and quality from various SE Oklahoma sources (Kiamichi River, Lake Sardis, Lake Hugo)
  - Distribution of raw or treated water to member Cities

# Changes Since Norman's 2001 Water Supply Plan

- Arsenic Rule
- Chromium VI
- Additional Ground Water Rules
- Aquifer Yield
- Lake Thunderbird Safe Yield
- Reuse Regulations
- Conservation
- Technological Improvements

# Water Supply Planning Best Practices

- Periodic water plan updates address rapidly-evolving water issues
  - Water quality and reuse regulations
  - Changes in existing sources
  - Reuse and conservation opportunities
  - Diversion and treatment technologies
  - Supply options and partnering opportunities
- State and local planning in Oklahoma & the west
  - 2012 Oklahoma Comprehensive Water Plan
  - 2009 Central Oklahoma Study
  - Many metro communities are updating their supply plans (Edmond, Shawnee, Chickasha...)

# Sources to be Evaluated (Proposed)

- Existing sources under new regulations & yield
  - Local Garber-Wellington groundwater wells
  - Lake Thunderbird & WTP
  - OKC treated water interconnect
- Leverage Outside Water Sources
  - Bulk purchase from OKC
  - Bulk raw water from SE Oklahoma
  - Scissortail Reservoir
  - Kaw Reservoir
  - Other new sources

# Sources to be Evaluated (Proposed)

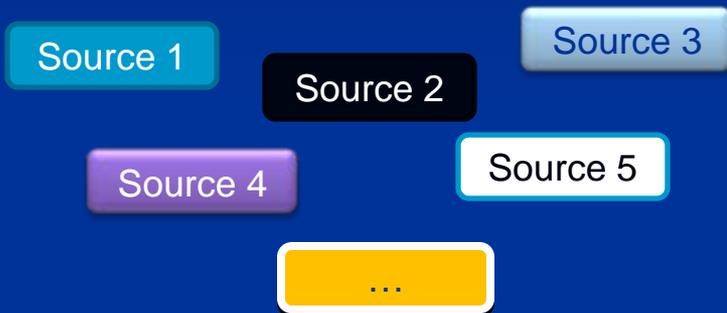
- Maximize and enhance local supplies
  - Lake Thunderbird spillage
  - Lake Thunderbird augmentation
  - Groundwater recharge
  - New Eastside or Westside Reservoir
  - New Diversions from the Canadian River
  - Treated Effluent Reuse
  - Stormwater Capture and Reuse

# Other Tasks included in Scope

- Agency coordination
- Updated demand projections
- Estimates of potential reuse demand
- Public meetings (up to 4)
- City Council presentations (2)
- Final portfolio revisions or final ranking

# Water Supply Planning Terminology & Process

## Source Options (Phase 1)



Screening Criteria

Short-List of Viable Source Options

## Supply Portfolios (Phase 2)



Detailed Evaluation Process

2-3 Preferred Supply Portfolios

# Scope of Work for 2060 Strategic Water Supply Plan

- Phase 1: Characterization and Screening of Individual Supply Options
- Phase 2: Development and Optimization of Supply Portfolios
  
- Proposed Scope of Work:  
Phase 1 + Phase 2 = \$385,947
- Proposed Time of Completion  
Phase 1 = 5 months; Phase 2 = approx. 4 months

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# Ad Hoc Committee Roles

- Ensure open and two-way dialogue between the project and the community
- Make sure the project continues on track and on schedule
- Ensure the options and suggestions of the public for potential water supplies are addressed
- Assist in evaluating non-monetary criteria for potential water supply sources
- Understand and be able to communicate the objectives and conclusions of the Strategic Water Supply Plan to the public

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# Public Meetings

- Public meeting 1 – June 2012
  - SWSP background and goals
  - Input on list of supply sources
  - Input on relative importance of evaluation criteria for supply portfolios
- Public meeting 2:  
Results of screening of options
- Public meeting 3:  
Supply portfolios to be evaluated
- Public meeting 4:  
Results of portfolio screening

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- **DISCUSSION / Q&A**