NTMWD’s Water Supply Update

Plano Chamber of Commerce
Public Policy Committee
February 10, 2015

“Regional Service Through Unity ... Meeting our Region’s Needs Today and Tomorrow”
History of NTMWD

From our founding 10 Member Cities:

“We decided we were all in this together. We couldn’t do it separately.”

- 1951 - Created by Texas Legislature to Provide Water Service
- 1956 - Began Providing Treated Water
- 1970s - Expanded to Wastewater Service
- 1980s - Expanded to Solid Waste Service
Excerpts from *Gift of Water, Legacy of Service*

Population Growth

“…an outburst of suburban growth that would rank the area, over much of the next quarter-century, among the fastest-growing in the nation.”

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</thead>
<tbody>
<tr>
<td>Garland</td>
<td>10,291</td>
<td>38,501</td>
<td>81,437</td>
<td>138,857</td>
<td>180,635</td>
<td>215,768</td>
<td>226,876</td>
<td>231,700</td>
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<tr>
<td>Mesquite</td>
<td>1,684</td>
<td>27,526</td>
<td>55,131</td>
<td>67,053</td>
<td>101,484</td>
<td>124,523</td>
<td>139,824</td>
<td>142,210</td>
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<tr>
<td>Plano</td>
<td>2,115</td>
<td>3,695</td>
<td>17,872</td>
<td>72,331</td>
<td>127,885</td>
<td>222,030</td>
<td>259,841</td>
<td>269,330</td>
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NTMWD Historical / Projected Population

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<tbody>
<tr>
<td>Area</td>
<td>32,000</td>
<td>60,000</td>
<td>200,000</td>
<td>800,000</td>
<td>1,600,000</td>
<td>2,500,000</td>
<td>3,700,000</td>
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Basic Services Led to Self-Actualization

- “Fastest growing cities in the U.S.”
  - Frisco, McKinney
- “Best Texas cities to raise a family”
  - Allen, Frisco, McKinney, Richardson, Rockwall, Wylie
- “McKinney #1 Best Place to Live in America”
  - Money Magazine, 2014
- “Best suburbs for education in America”
- “Best cities for first-time home buyers”
  - Allen, Frisco, Plano, McKinney, Richardson, Garland
Growth

Water supply infrastructure is the driving force of community & business vitality.
Regional Water System

- **Entities Served:** 61 cities, towns, municipal utility districts, special utility districts and water supply corporations

- **Supply Sources:**
  - Lavon Lake
  - Jim Chapman Lake
  - Lake Texoma
  - Lake Tawakoni
  - Lake Bonham
  - East Fork Raw Water Supply Project (Wetland)

- **Fully Ozonated WTP Capacity:** 806 MGD
  - Wylie: 770 MGD
  - Tawakoni: 30 MGD
  - Bonham: 6 MGD
NTMWD’s Trifecta
… led to toughest watering restrictions in the region

**CONCERNS**

1. Denied Access
   - Loss of 28% Water Supply
2. Long-Term Drought
3. Regional Growth

**SOLUTIONS**

- Texoma back online
- Rain to replenish reservoirs
- New norm of conservation
- New reservoir will meet growth demands
Thanks to our Cities and Consumers

Comparison of Member City Water Use and Goal
November 2014

Cumulative Use (Percent of Goal)

Month

- Allen
- Farmersville
- Forney
- Frisco
- Garland
- McKinney
- Mesquite
- Plano
- Princeton
- Richardson
- Rockwall
- Royse City
- Wylie

Goal

Use up To Goal  Use Over Goal
Figure 4E.8
Recommended Water Management Strategies for North Texas Municipal Water District

- Demand and Supply in Acre-Feet per Year
- Bars represent different water sources:
  - Oklahoma
  - Toledo Bend Phase 1
  - Marvin Nichols
  - Additional Lake Texoma
  - Lower Bois d’Arc Creek Res.
  - Main Stem PS
  - Renewed interim GTUA
  - Conservation (Wholesale Customers)
  - Upper Sabine Basin
  - Interim GTUA
  - East Fork Reuse
  - Lake Bonham
  - Wilson Creek Reuse
  - Lake Chapman
  - Lake Texoma
  - Lake Lavon

- Line graph shows projected demands and losses.

- Data spans from 2010 to 2060.
Proposed Lower Bois d’Arc Creek Reservoir

First major reservoir to be constructed in Texas in the last 30 years
Three Purposes of the Reservoir

Vital New Source for Fannin County & NTMWD

• Provide water for Fannin County

• Supplement water supply for NTMWD Member Cities & Customers through 2040

• Provide recreational opportunities
Lower Bois d’Arc Creek Reservoir
“First major reservoir to be constructed in Texas in the last 30 years”

Location: Fannin County, TX
Area: 16,526 acres
Supply: 113 MGD
Average/Max Depth: 22/70 ft
Lake Elevation: 534 ft msl
Owner & operator: NTMWD
Cost: $992M

- Permitting Completed 2015
  - Water Rights
  - USACE 404
- Planned to start construction 2015
- Delivering treated water 2020
## Current Cost Estimates

<table>
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<tr>
<th>Project Component</th>
<th>Cost Estimate</th>
<th>Expenditures</th>
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<tbody>
<tr>
<td>Reservoir</td>
<td>$413 M</td>
<td>$110 M</td>
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<tr>
<td>- Land</td>
<td></td>
<td></td>
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<tr>
<td>- Dam</td>
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<tr>
<td>- Intake</td>
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<td>- PS</td>
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<tr>
<td>- Conflicts</td>
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<tr>
<td>- Permitting</td>
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<tr>
<td>- Mitigation</td>
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<tr>
<td>WTP (70 MGD) &amp; Terminal Storage</td>
<td>$249 M</td>
<td>$.2 M</td>
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<td>90-inch Raw Water Pipeline</td>
<td>$185 M</td>
<td>$4.4 M</td>
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<td>High Service PS &amp; Pipeline</td>
<td>$145 M</td>
<td>$0 M</td>
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<td><strong>TOTAL</strong></td>
<td><strong>$992 M</strong></td>
<td><strong>$114.6 M</strong></td>
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Closing Thoughts

- Must overcome challenges to secure future water supplies - requires greater degree of cooperation and collaboration
- Conservation is our new norm - “All-in together”
- Continue to modify our landscaping practices - achieve win-win
- Encourage STEM for our youth - they are our future solutioneers
- Maintain the passion - future of Texas depends on safe water!
www.water4otter.org