



# **NTMWD's Water Supply Update**

**Collin County Commissioner's Court  
December 15, 2014**

**“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.”*

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- 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.”

City	1950	1960	1970	1980	1990	2000	2010	2014
Garland	10,291	38,501	81,437	138,857	180,635	215,768	226,876	231,700
Mesquite	1,684	27,526	55,131	67,053	101,484	124,523	139,824	142,210
Plano	2,115	3,695	17,872	72,331	127,885	222,030	259,841	269,330

## NTMWD Historical / Projected Population

Year	1956	1961	1974	1994	2014	2040	2070
Area Population	32,000	60,000	200,000	800,000	1,600,000	2,500,000	3,700,000





# 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 suburb for education in America”*
  - Plano
- *“Best cities for first-time home buyers”*
  - Allen, Frisco, Plano, McKinney, Richardson, Garland





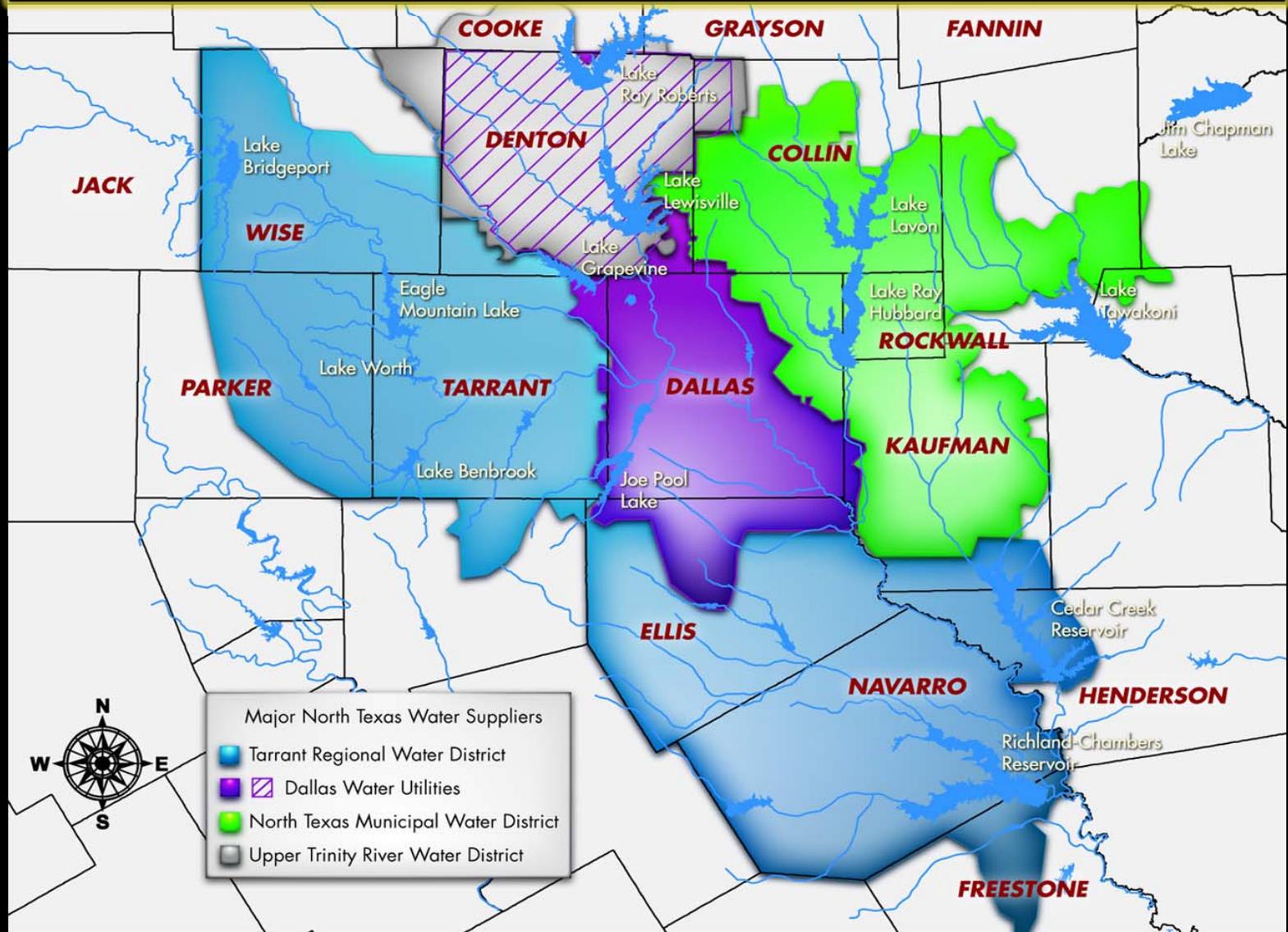
# Growth

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





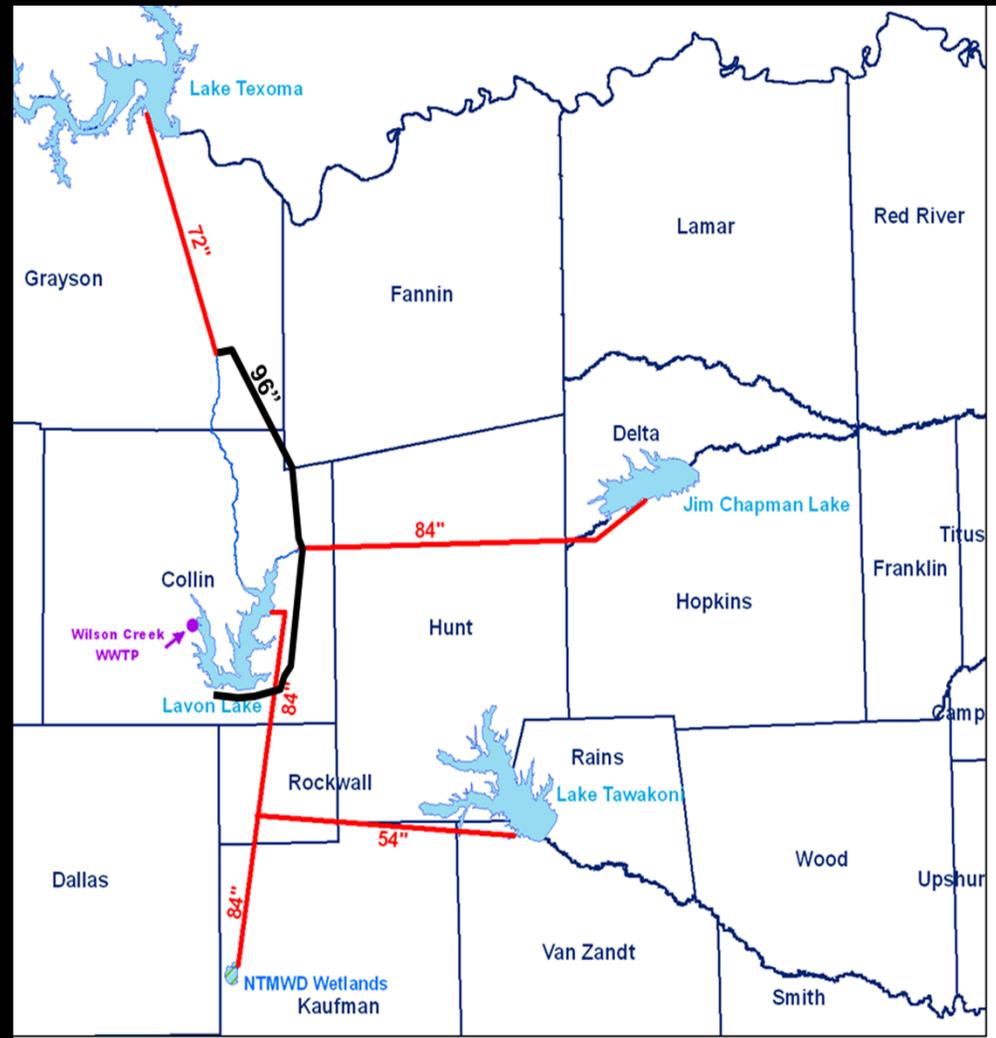
# Major North Texas Water Providers





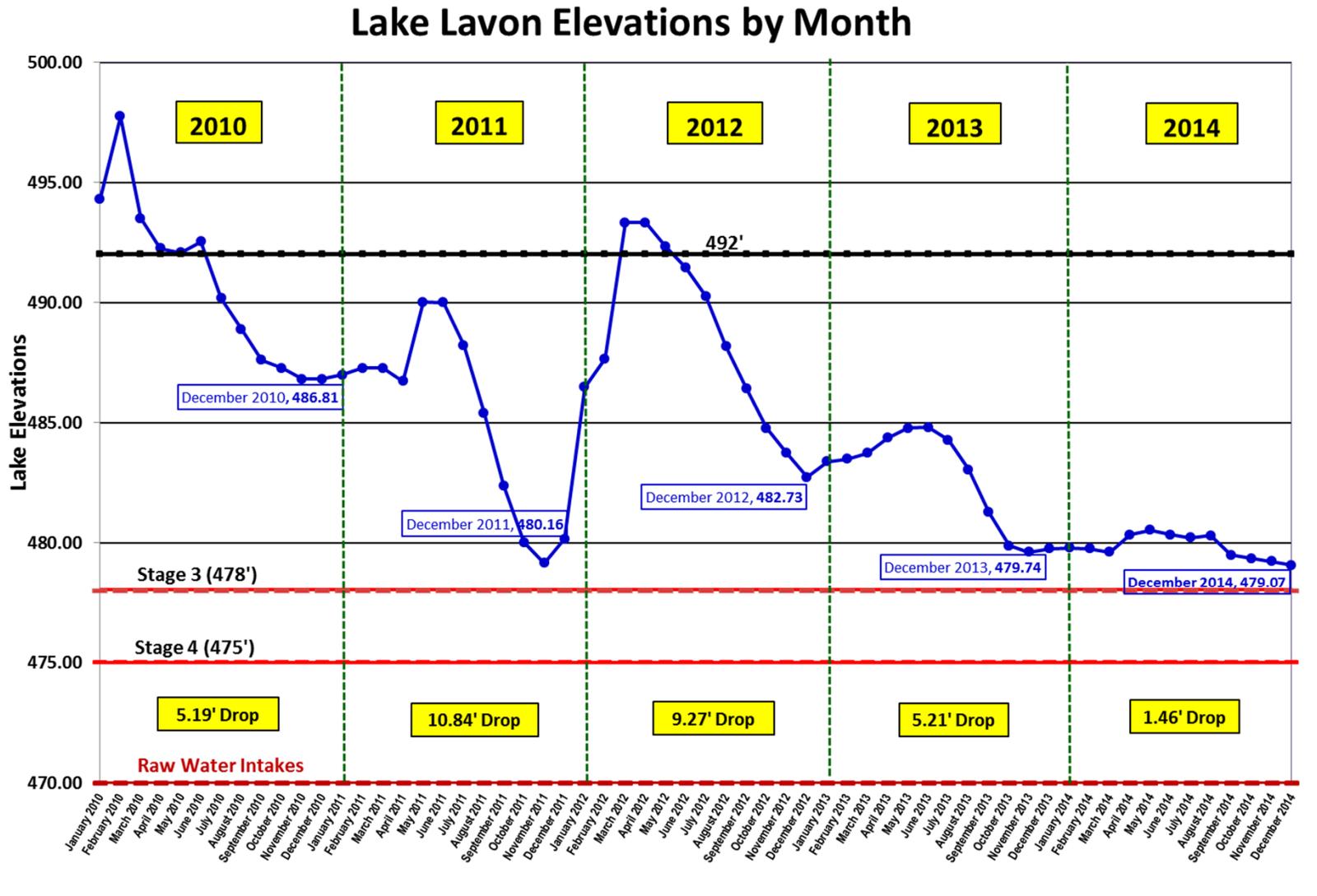
# Regional Water System

- **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





# Lake Lavon Elevations by Month



Elevation drop does not include flood pool > 492'





# NTMWD's Trifecta

... led to toughest watering restrictions in the region

## CONCERNS



## SOLUTIONS

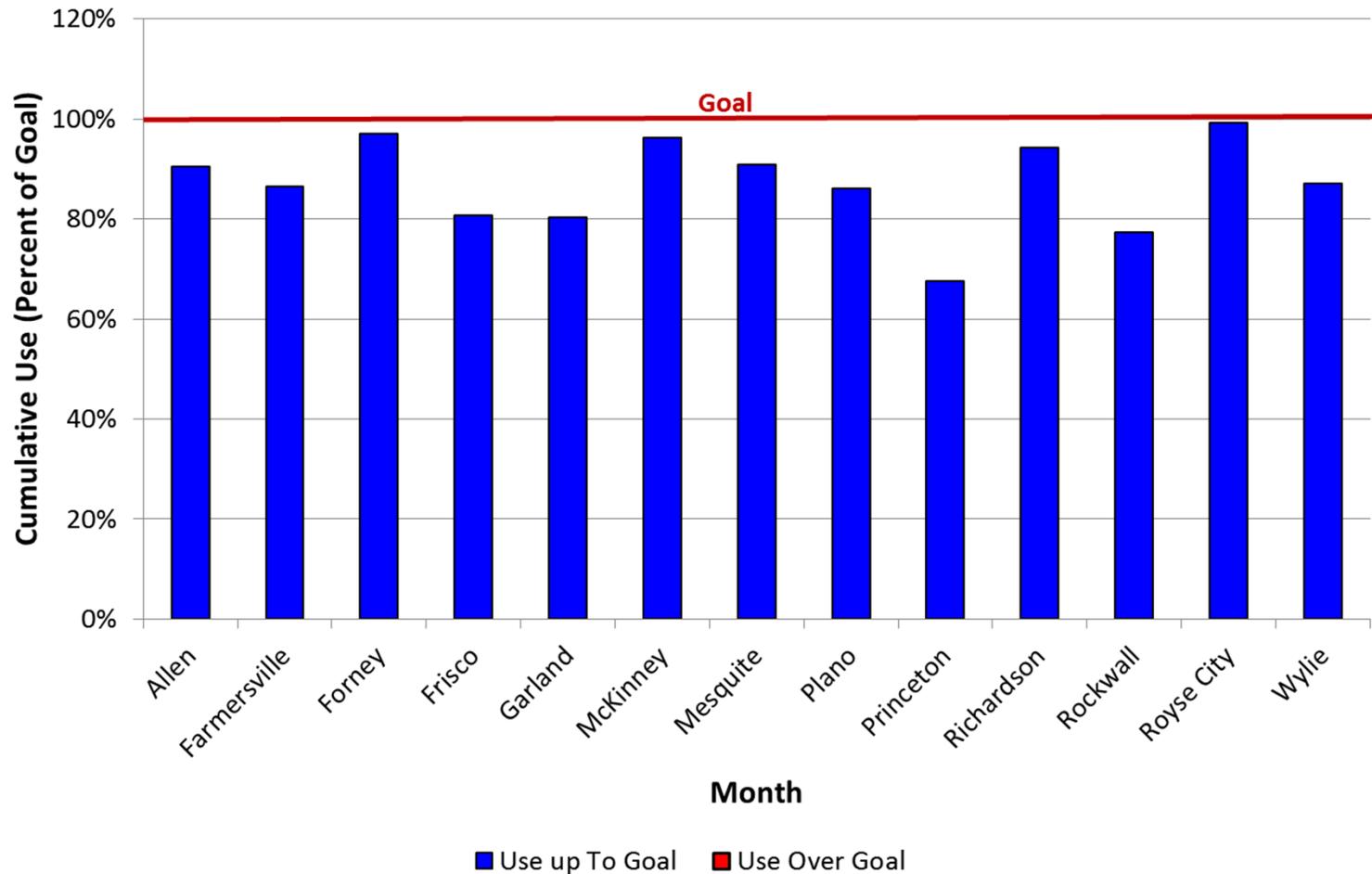
- Texoma back online
- Rain to replenish reservoirs
- New norm of conservation
- New reservoir will meet growth demands





# Thanks to our Cities and Consumers

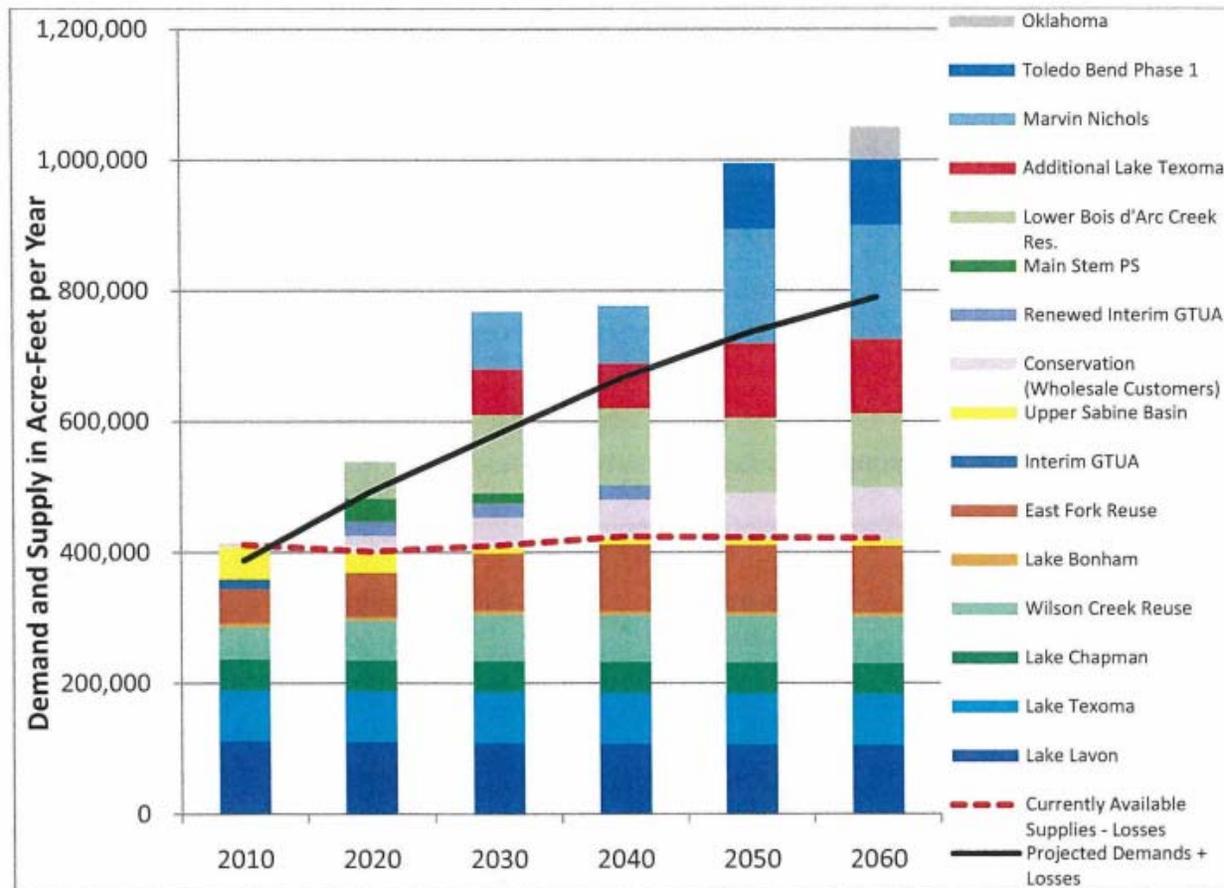
Comparison of Member City Water Use and Goal  
November 2014





# 2012 State Water Plan for NTMWD

Figure 4E.8  
Recommended Water Management Strategies for North Texas Municipal Water District





# **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

<u>Project Component</u>	<u>Cost Estimate</u>	<u>Expenditures</u>
• Reservoir <ul style="list-style-type: none"><li>– Land</li><li>– Dam</li><li>– Intake</li><li>– PS</li><li>– Conflicts</li><li>– Permitting</li><li>– Mitigation</li></ul>	\$413 M	\$110 M
• WTP (70 MGD) & Terminal Storage	\$249 M	\$.2 M
• 90-inch Raw Water Pipeline	\$185 M	\$4.4 M
• High Service PS & Pipeline	\$145 M	\$0 M
<b>TOTAL</b>	<b>\$992 M</b>	<b>\$114.6 M</b>





# LBCR Overall Timeline

Activity	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Environmental Studies & Permitting		■	■	■	■	■	■	■	■	■	■						
Land & Easement Acquisition				■	■	■	■	■	■	■	■						
Dam & Reservoir Design										■	■						
Pipeline, Pump Station & WTP Design										■	■	■	■				
Dam & Reservoir Construction												■	■	■			
WTP & Pipeline Construction														■	■	■	
Reservoir Impoundment															■	■	■
Delivering Water																	■





# We need this Reservoir!

The growth that ranked NTMWD's service area among the fastest growing regions in the nation for the past 50 years is projected to continue for the next 50 years

- First in Texas in 30 years
- Meets our growth needs through 2040





# Legislative Agenda

- NTMWD Legislation
  - Red River Boundary Commission
    - Extension of time for HB 3212 (83R)
  - Transfer of Exotic Species through Water Systems
    - State “Lacey Act” Regulations
- Other Legislation
  - “Open Access to Water Act”
    - Van Taylor – SB 109 (84R)
    - Jeff Leach – HB 201 (84R)
  - Water Rights Streamlining
    - Impose statutory timelines on TCEQ
    - Applicants can fund 3<sup>rd</sup> party contractor to assist TCEQ’s review





# 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!





HI! I'M OTIS THE OTTER!  
THE WATER YOU USE AT YOUR  
HOME COMES FROM MY HOME  
AT LAVON LAKE. CAN YOU HELP  
SAVE SOME WATER FOR ME?  
THANKS! 



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