



Regional Solutions to Improve Water Resource Efficiency

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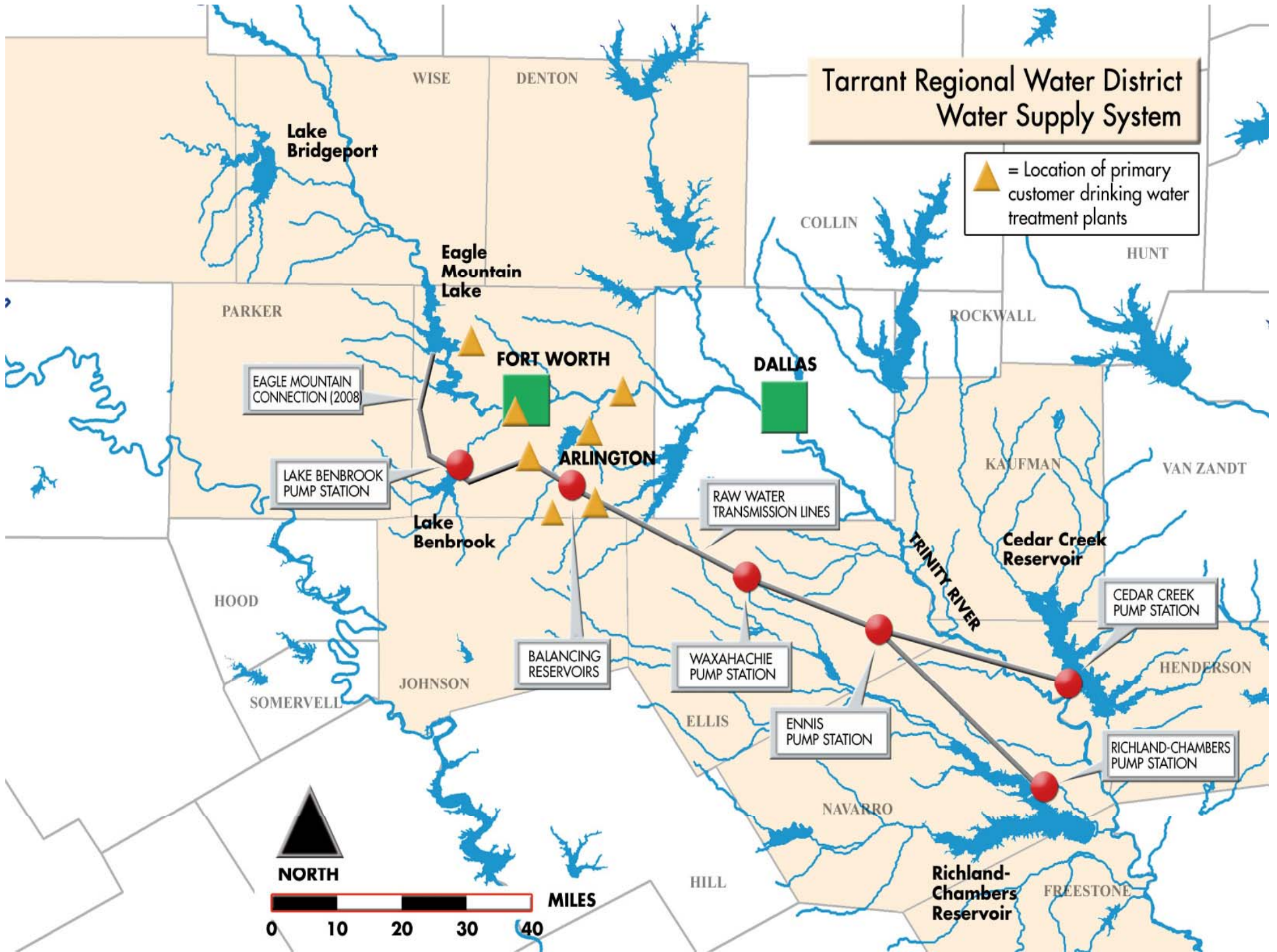
Engineering Services Director



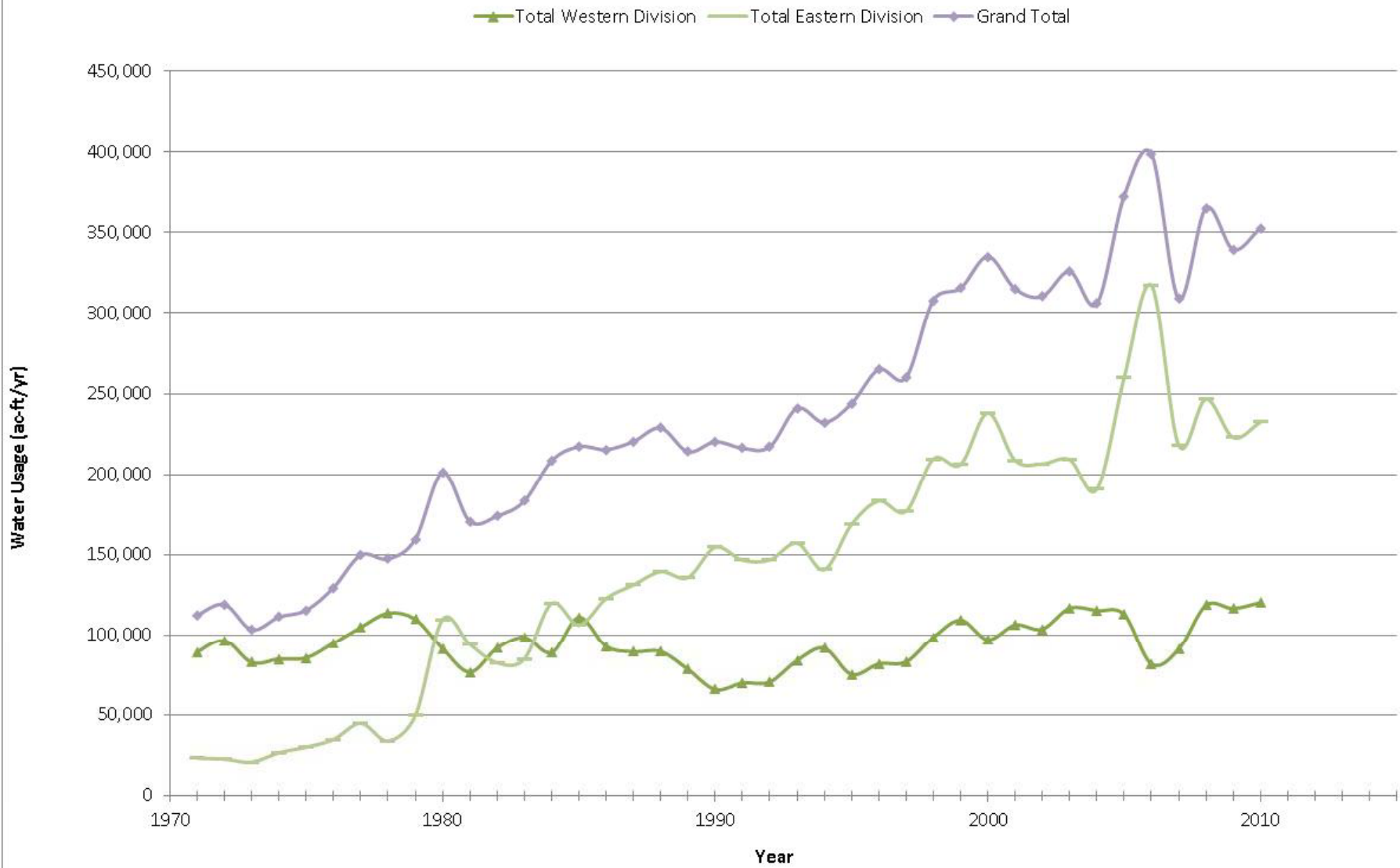
TRWD Water Supply

- TRWD has developed a system of lakes and pipelines and provides only untreated Water.
- TRWD provides water to 70 cities in eleven counties.
(Denton, Ellis, Freestone, Henderson, Jack, Johnson, Kaufman, Navarro, Parker, Tarrant, Wise)
- Current service population is 1.8 million; projected to increase to 4.3 million by 2060.
- Fort Worth, Arlington, Mansfield and the Trinity River Authority are our four primary wholesale customers, making up 92% of our sales





Total Historic Water Demands Within The District Service Area



North Texas Water Limited Supply

- The DFW area is in the headwaters of the Trinity River – all local water was developed by the 1970s.
- Several agencies supply water to the area
- New supplies have been developed and are imported using long, high volume transmission systems.
- The region's next significant sources are much further away (100 miles plus)
- Cooperation among the agencies has begun and will be necessary to complete these new systems
- NTMWD and Irving have a transmission system from Lake Chapman
- TRWD and Dallas has begun a joint 150 mile, \$2.3 billion transmission system from Palestine



North Texas Water Supply Planning

- Agencies in the DFW have begun cooperative projects together and plan as a group
- Texas's statewide water plan provides a forum for integrated plans over larger areas
- The DFW area's plan includes water from Oklahoma
- Challenges for regional and interstate planning:
 - The emotion of water – us versus them
 - Identifying the needs for environmental health and local supply in the future to determine available water quantities to export
 - Cooperation among agencies and funding these projects through the group





TRWD Water Conservation

- TRWD, working with our customers and Dallas, have a vigorous water conservation program.
 - Ordinances banning watering 10 am to 6 pm
 - Inclining block rate structures for retailers
 - Expanded leak detection programs
 - Television and printed ads
- The program started in 2004. Last year the program was effective in saving about 8 billion gallons, enough water to serve Hurst, Euless and Bedford for a year.
- The Lawn Whisperer is our spokesman in this year's ad campaign



THE
Lawn Whisperer
Says



*“It’s a drought
out there.”*

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Tarrant
Regional
Water
District



North Texas Water Supply - Reuse

- TRWD, Dallas and NTMWD all have projects for indirect reuse – returning wastewater flowing down the Trinity to a wetland then back to a supply reservoir
- By 2030, this will make up almost 1/4 of the entire TWRD supply
- Los Colinas's canal system is reuse water
- Numerous golf courses in the area use reclaimed wastewater for irrigation
- Fort Worth has just completed a 12.5 mgd reclaimed water pipe from their Village Creek WWTP to the DFW airport that will supply Fort Worth, Euless, Arlington and the airport.





North Texas Water Supply – Next Steps

- TRWD, Dallas and NTMWD all have major joint projects for our next water supply
- All the DFW agencies need to evaluate water sharing to optimize our sources and reduce energy required for water delivery
- TRWD and Dallas are studying water sharing now
- Overdrafting of local sources that are refilled by transmission systems needs to be evaluated. This will face hurdles in the permitting process but can reduce water delivery energy requirements
- Seasonal pool elevations of the USCOE reservoirs is another possible source of local water. The reallocation process for the COE makes this a long and expensive process.



North Texas Water Supply – Solution

- Efficiency through conservation
- Reuse
- Maximize use of local sources
- Optimized regionalization without regard for political boundaries

