City of Dallas

2024 Long Range Water Supply Plan Update

City Council Briefing
December 3, 2025

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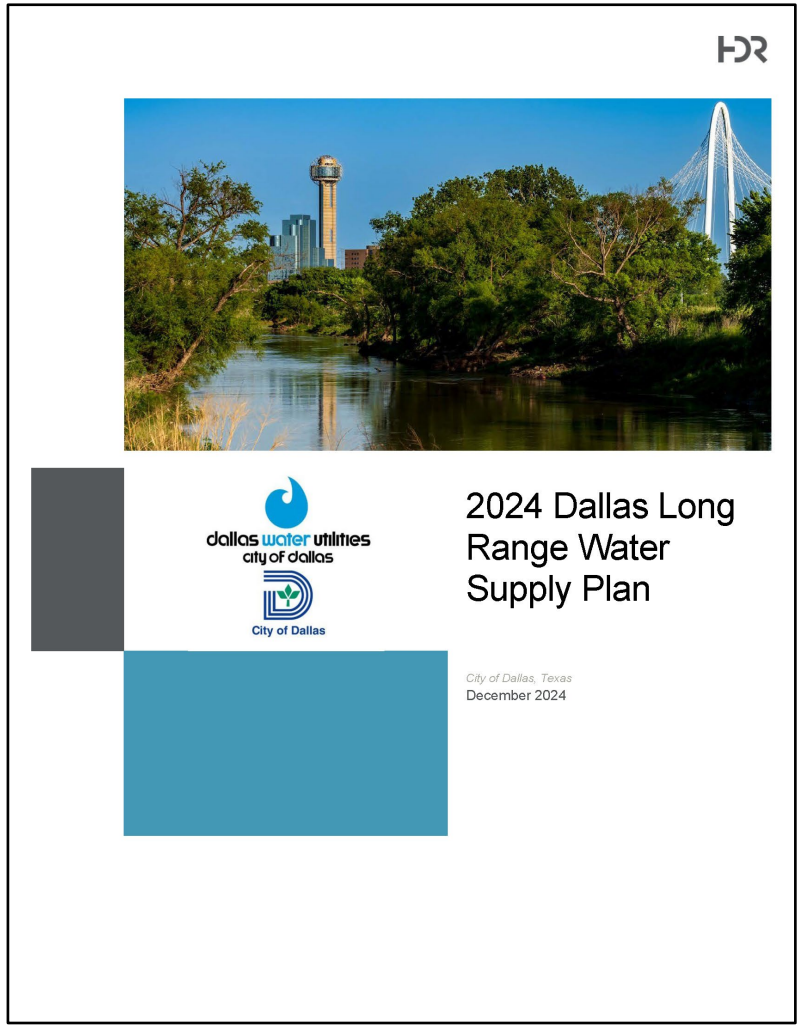
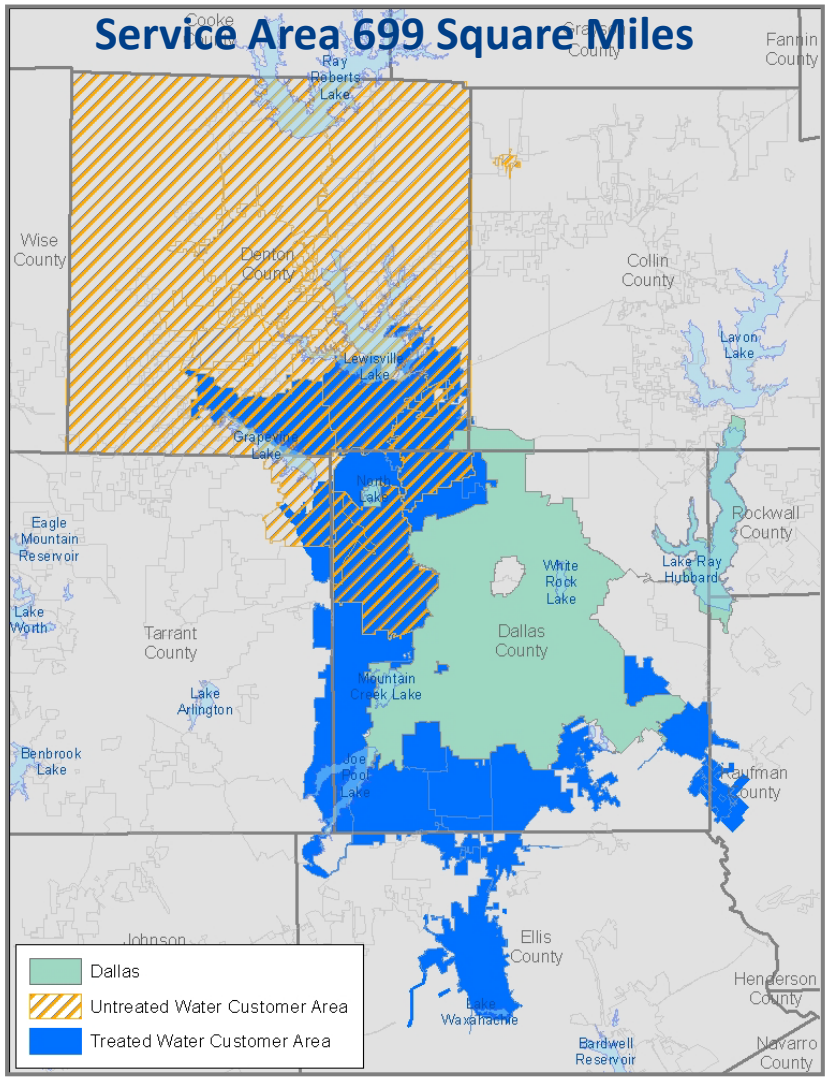
Dallas Water Utilities
City of Dallas

Overview

- DWU Water Supply System
- State and Regional Water Planning
- DWU Water Supply Planning
- 2024 Long Range Water Supply Plan
  - Recommended Strategies
  - Alternative Strategies
- Next Steps



Dallas Water Utilities (DWU) Overview

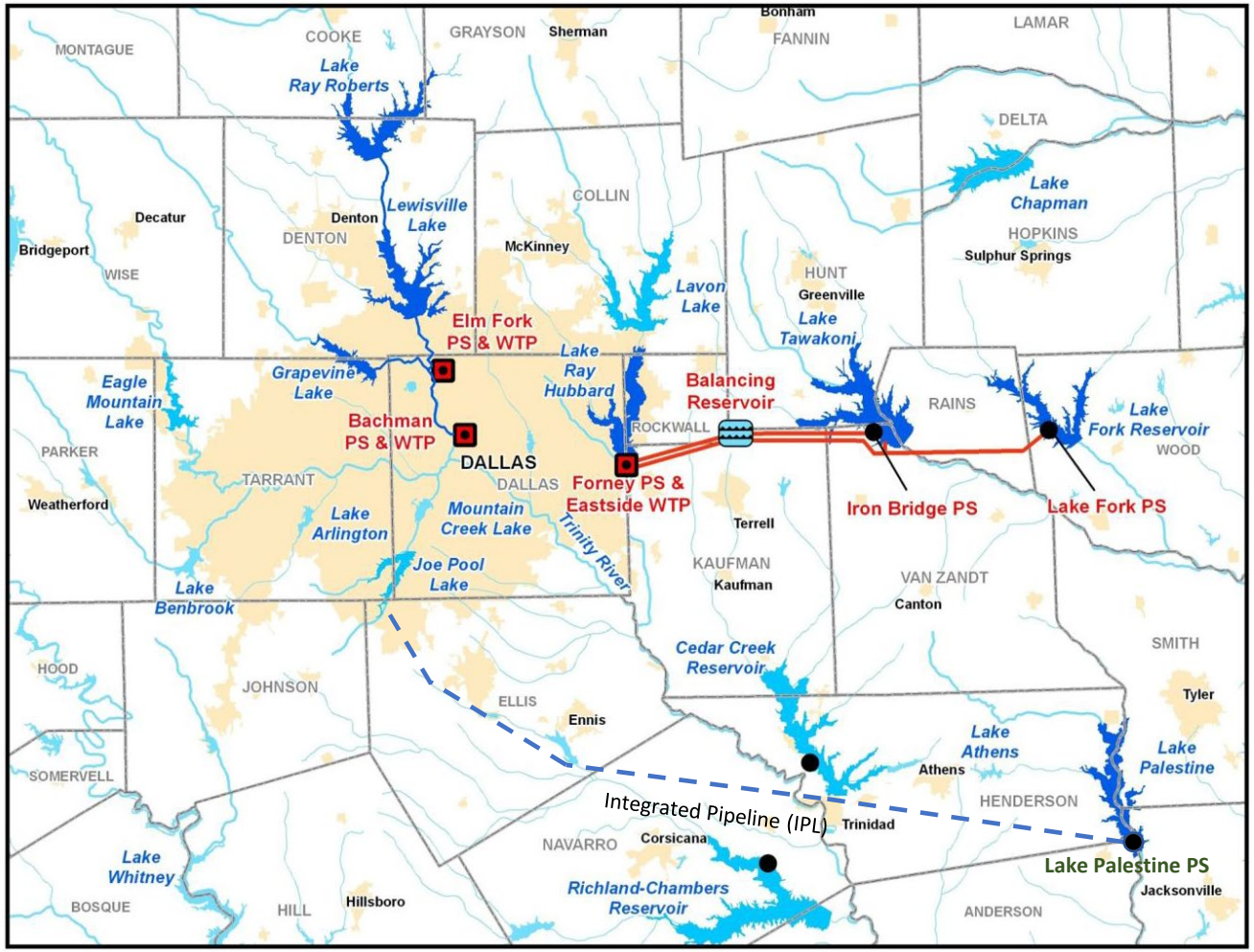


- Established by City Charter in 1881
- Operates under Dallas City Codes: 49, 51 and 19
- Regional provider of water, wastewater, stormwater and flood control services
- Fiscal Year 2025 net capital water and wastewater assets of $6.45 B
- Funded from wholesale and retail water and wastewater revenues and stormwater fees (receives no tax dollars)
- Approximately 1,600 employees
- Combined operating and capital budgets of $1.38B

Fiscal Year 2025-26 Budgets

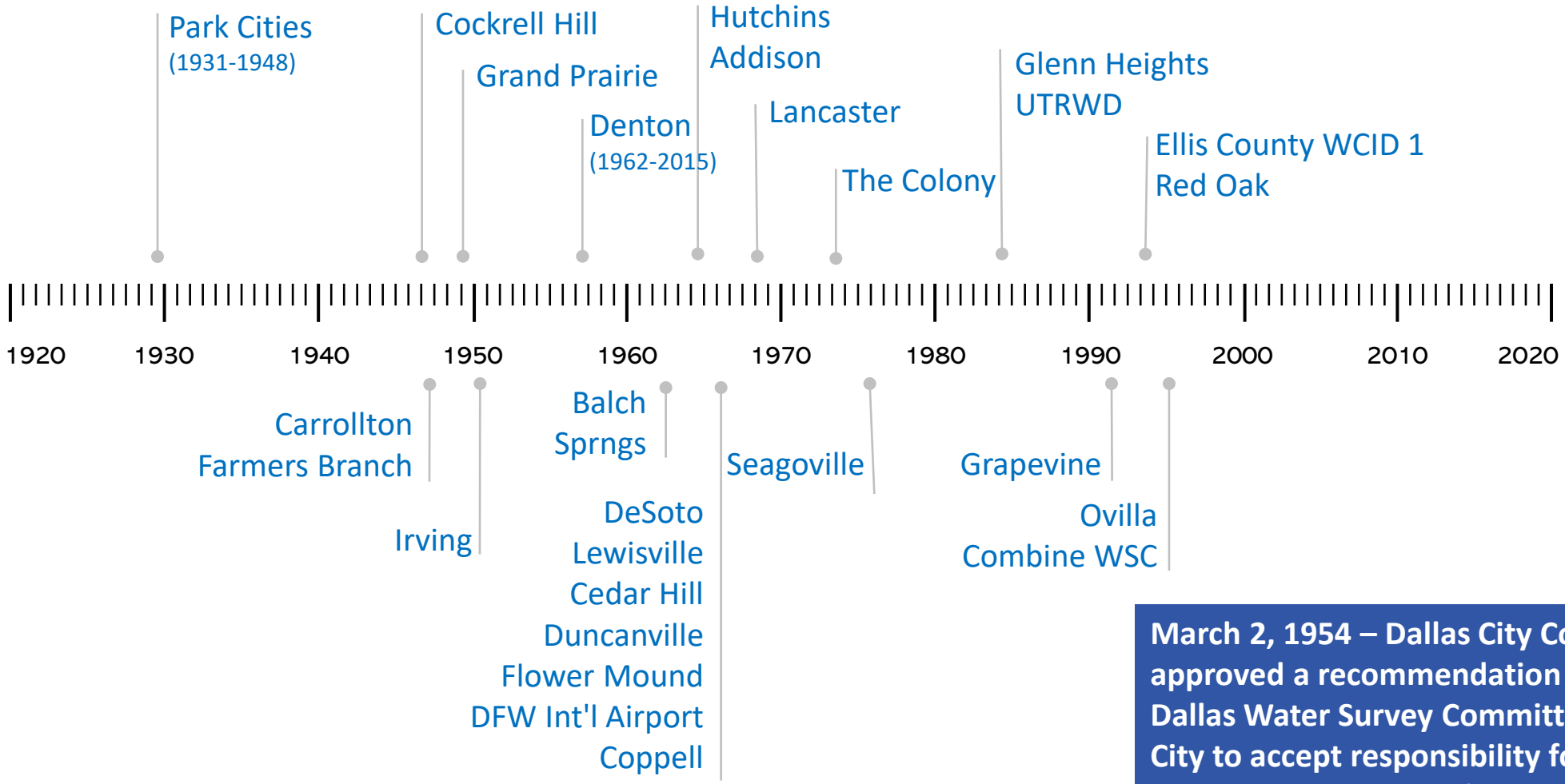
Budget	DWU	SDM	Total
Operations	$880.9 M	$90.6 M	$971.5 M
Capital	$355.0 M	$55.0 M	$410.0 M
Total	$1,235.9 M	$145.6 M	$1,381.5 M

City of Dallas One Water



ASSETS	CUSTOMERS
WATER • 7 reservoirs, (6 connected) • 5,088 miles of water mains • 3 water treatment plants (900 MGD capacity) • 29 pump stations, 10 elevated and 12 ground storage tanks	**2.6 million treated water customers** • 1.3 million – Retail (City of Dallas) • 1.3 million – Wholesale • 23 wholesale treated water • 4 wholesale untreated water
WASTEWATER • 2 wastewater treatment plants (280 MGD capacity) • 4,088 miles of wastewater main • 15 wastewater pump stations	**320,000+ retail customer accounts** • 11 wholesale wastewater
STORMWATER • 8 major storm water pump stations (5.3 BGD capacity) • 1,886 miles of storm sewers • 30 miles of levees • 34,800 acres of floodplain	**300,000 storm water accounts** • 265,979 Residential • 29,470 Commercial

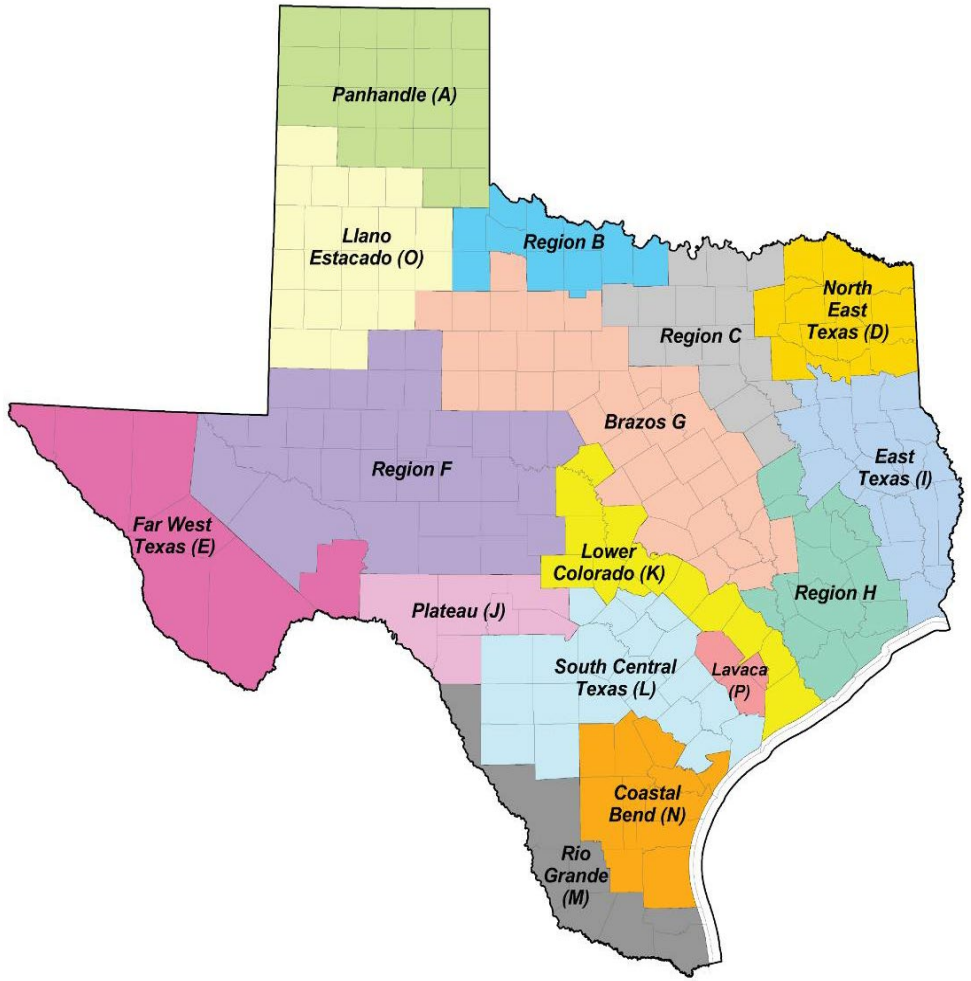
DWU: Wholesale Water Customers



March 2, 1954 – Dallas City Council approved a recommendation by the Dallas Water Survey Committee for the City to accept responsibility for providing water supplies to all of Dallas County

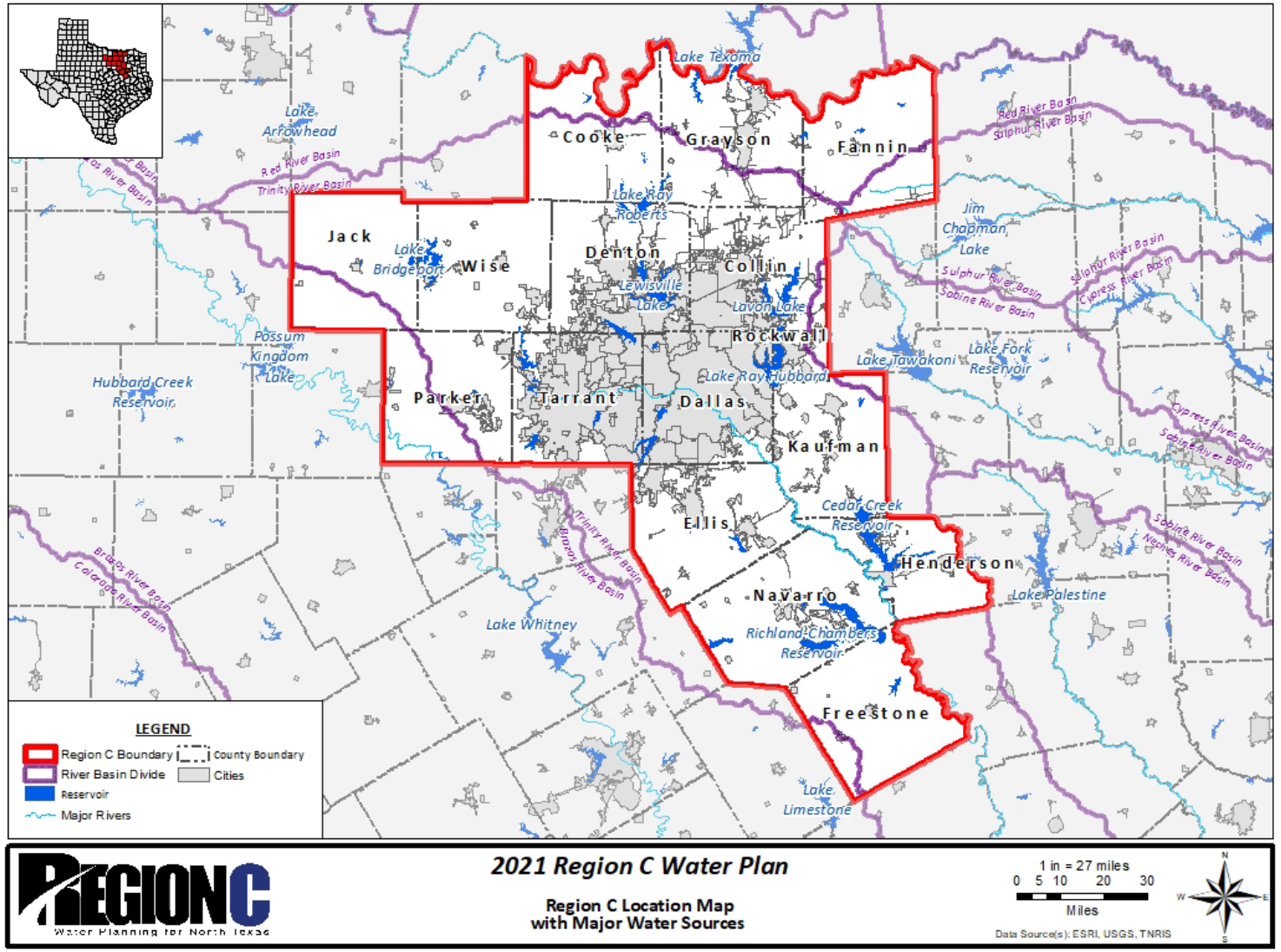
State & Regional Water Planning

- Senate Bill 1 in 1997 changed water supply planning throughout the State
  - Regional water planning groups established
  - Regional and State water plans required every five years
  - Local plans to be provided for Regional Water Plan
  - Dallas located in Region C
- 6th State Planning Cycle
  - DWU water management strategies provided to Region C in December 2024
  - Region C Water Plan submitted to Texas Water Development Board (TWDB) in October 2025
  - State Water Plan due to Governor and Legislature in 2027



Regional Water Planning: Region C

- 16 County Region
- 2021 population: 7.7 million
- ~26% of State's population
- 56 cities with populations > 20,000
- Located in the Trinity River Basin
- 26 Major Reservoirs
- 90% of Demand Met by Surface Water
- Population predicted to double by 2080

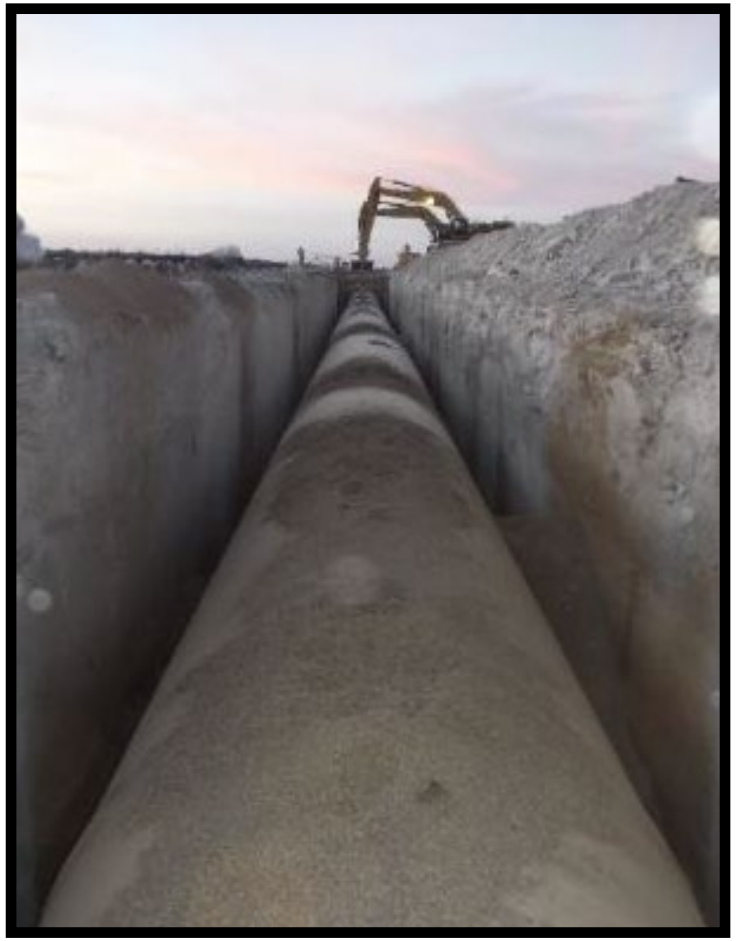


DWU History of Planning

- The current era of long-range water supply planning was in response to the drought of the 1950's
- The 1959 Plan was updated in 1975, 1989, 2000, 2005, and 2014
- As a result of the City's planning, the following lakes were constructed and/or contracted for:
  - Grapevine Lake(1952)
  - Lake Tawakoni (1964)
  - Lake Ray Hubbard (1973)
  - Ray Roberts Lake (1989)
  - Lewisville Lake (1955)
  - Lake Palestine (1971)
  - Lake Fork (1980)
- Dallas' 1959 Plan recommended that Dallas supply water to surrounding cities, becoming a regional provider
- Later studies encouraged aggressive water conservation and reuse, connecting existing reservoirs, and revising DWU's service area
- Long Range Water Supply Planning (LRWSP) update was completed and approved by Council in December 2024.

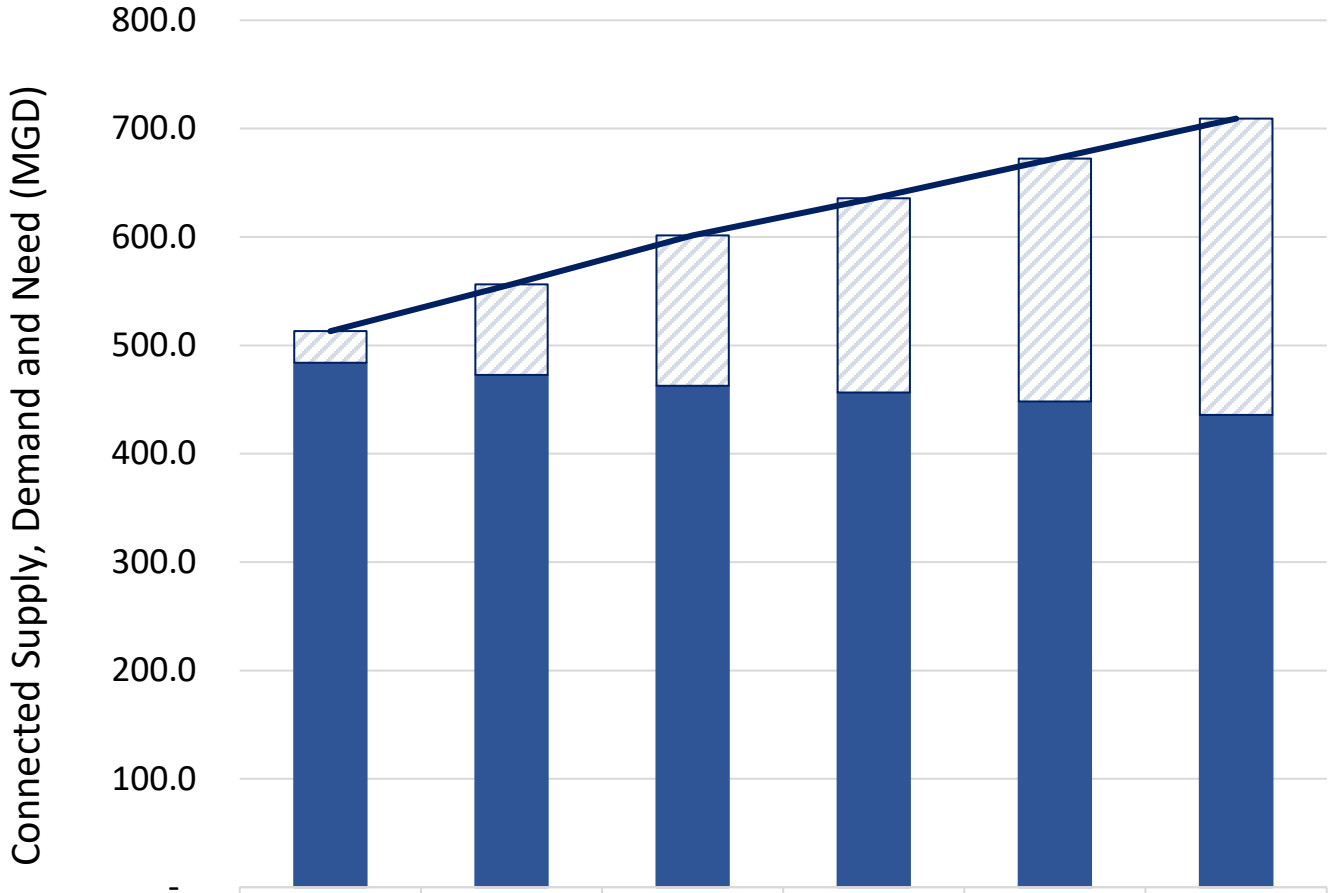
DWU Planning Guidelines

- **Dallas plans to have enough reservoir firm yield to meet water demands during a drought equivalent to the 1950s drought of record**
- Firm Yield - maximum amount of water that can be supplied from a reservoir during the drought of record
- Dallas' ranking for new water supply sources based on:
  - Costs (capital construction and O&M), efficiency, environmental impact, likelihood for implementation, treatability
- Supplies located closer to the City are generally less expensive
  - Lower infrastructure and energy costs
- Working with other area water providers to achieve greater economies of scale and thus reduce costs



Installation of 108-inch pipe along IPL Section 17

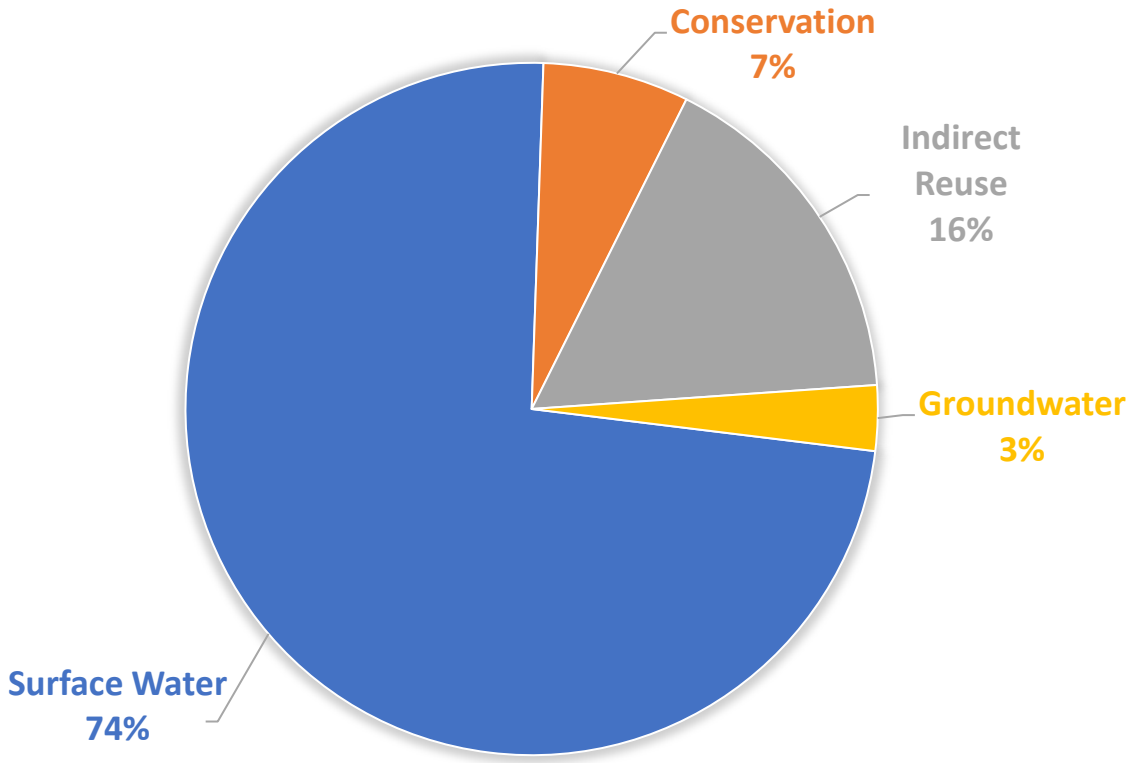
2024 LRWSP: Water Supply Needs



	2030	2040	2050	2060	2070	2080
Need	29.00	83.60	139.00	179.50	223.90	273.50
Supply	484.1	472.8	462.6	456.4	448.4	435.8
Demand	513.1	556.4	601.6	635.9	672.3	709.3

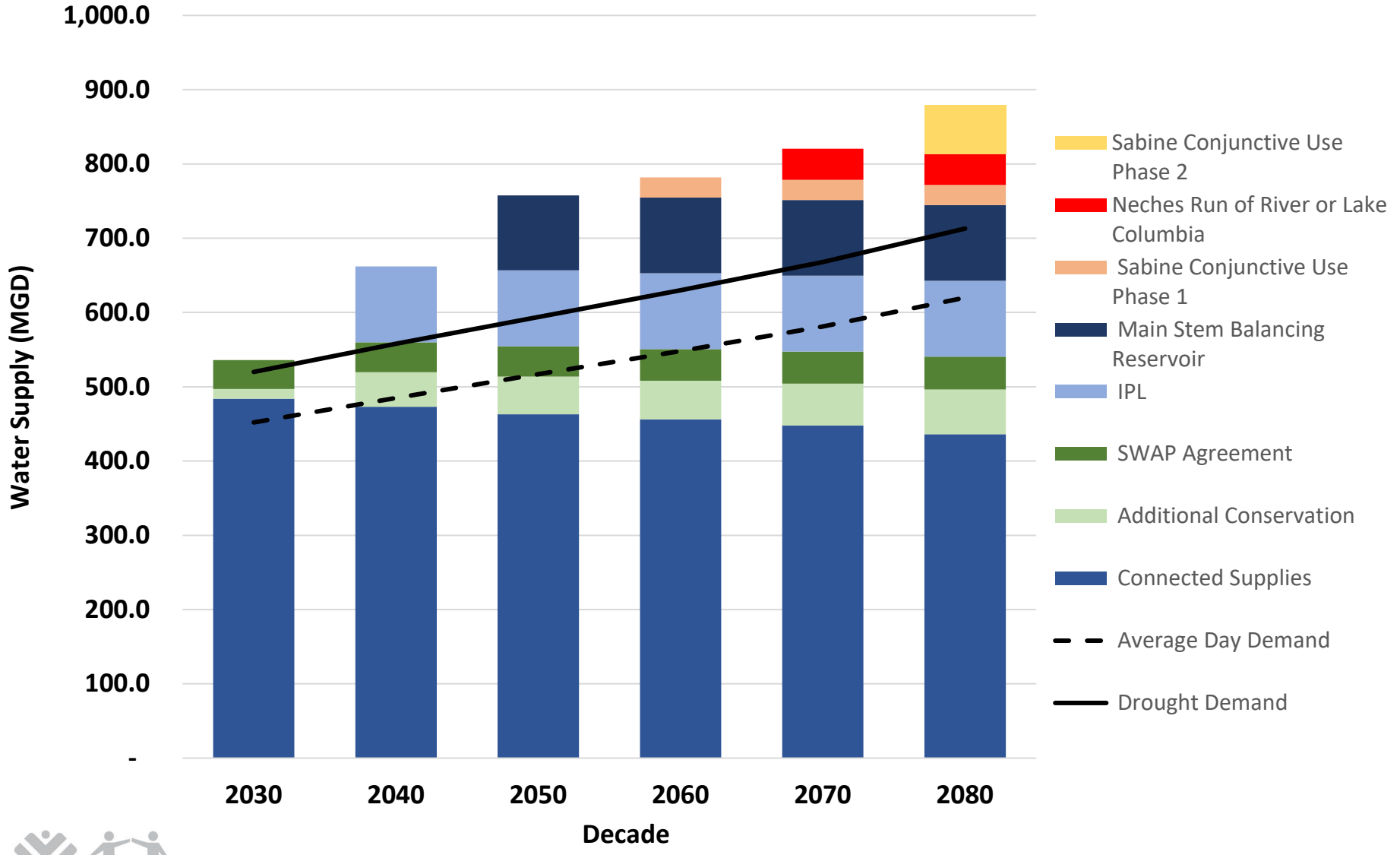
2024 LRWSP: Key Points

- System average day water demands reduced by 6.3% or approximately 45.5 million gallons per day (MGD), due to conservation and leak detection programs
- Connected firm yield reduced over time due to sedimentation and increased evaporation from higher temperatures
- Projected supply deficit beginning in 2040, if new supply is not connected
- 2024 LRWSP Recommended Strategies to meet 2080 DWU system demands consist of:
  - 13% additional conservation
  - 33% indirect reuse
  - 23% connection to existing water supplies
  - 25% new surface water
  - 6% groundwater



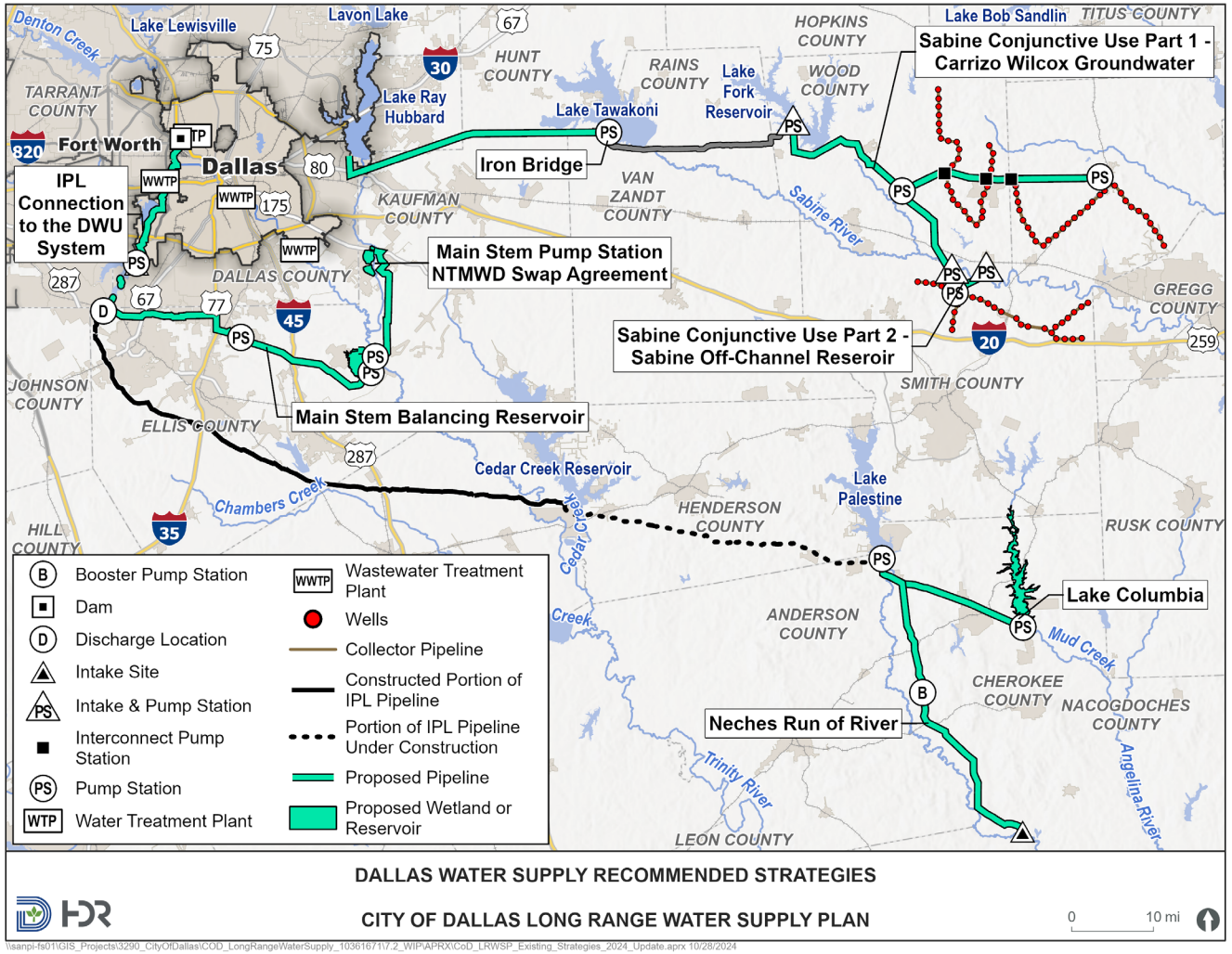
2080 Water Supply Portfolio
(Including Existing Supplies and Recommended Strategies)

2024 LRWSP: Needs Met with New Supplies



2024 LRWSP Recommended Strategies

Recommended Strategies	MGD	Decade
Additional Conservation	60.5	2030-2080
Main Stem Pump Station – NTMWD Swap Agreement (Reuse supply in Lake Ray Hubbard)	44.2	2030
IPL Connection to the DWU System	102.0	2040
Main Stem Balancing Reservoir	102.0	2050
Sabine Conjunctive Use Part 1 – Carrizo Wilcox GW	27.0	2060
Neches Run-of-River or Lake Columbia	48.0	2070
Sabine Conjunctive Use Part 2 – Off Channel Reservoir	66.0	2080



2024 LRWSP Alternative Strategies

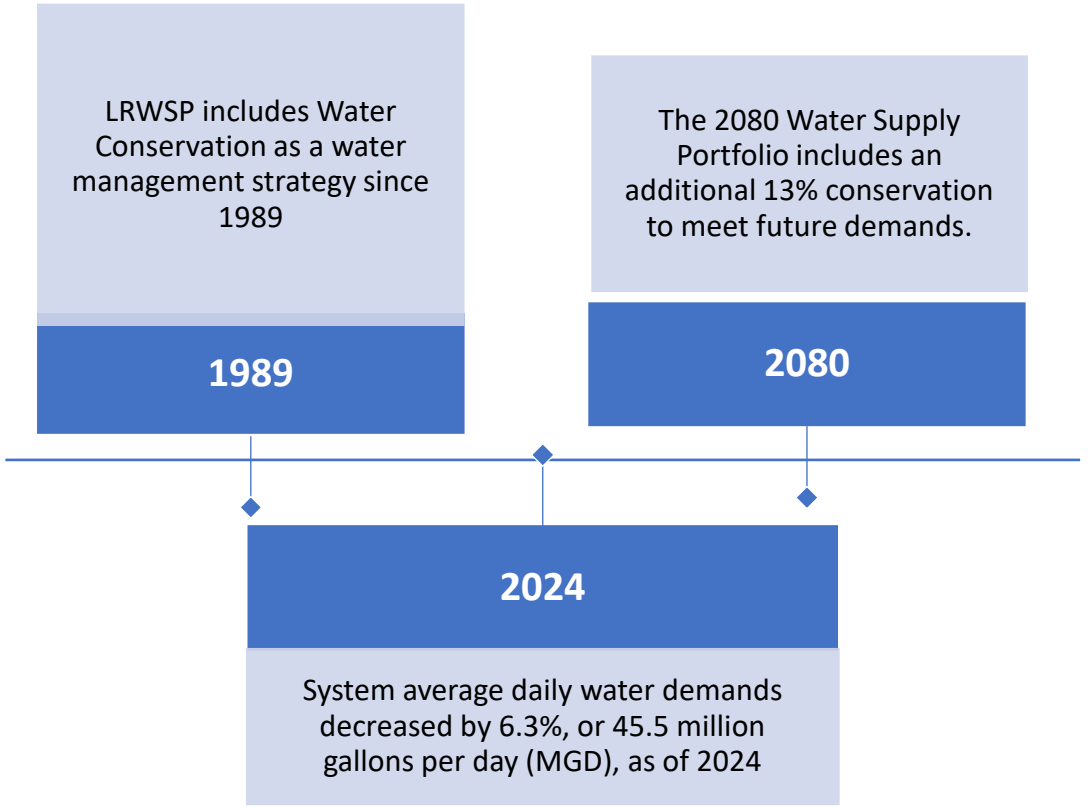
Alternate Strategies	Yield (MGD)
Sulphur Basin Project – High Yield	71.2
Sulphur Basin Project – Low Yield	62.8
Interstate – Little River – Millwood Lake (Ark)	268
Toledo Bend Reservoir (SRA TX)	89
Interstate – Toledo Bend Reservoir (SRA LA)	179
Red River Off Channel Reservoir	82
Interstate – Kiamichi River (OK)	268
Lake Texoma Desalination	130

2024 LRWSP Strategies

Near Term Implementation

Recommended Strategy - Additional Conservation

- One of the most cost-efficient water management strategies
- Involves actions by both DWU and its customers to reduce water use and system losses
- DWU updated its 2024 5-year conservation plan to maximize water savings
- Recommended efforts are expected to save additional 60.5 MGD over the 50-year planning period.



Additional Conservation Initiatives

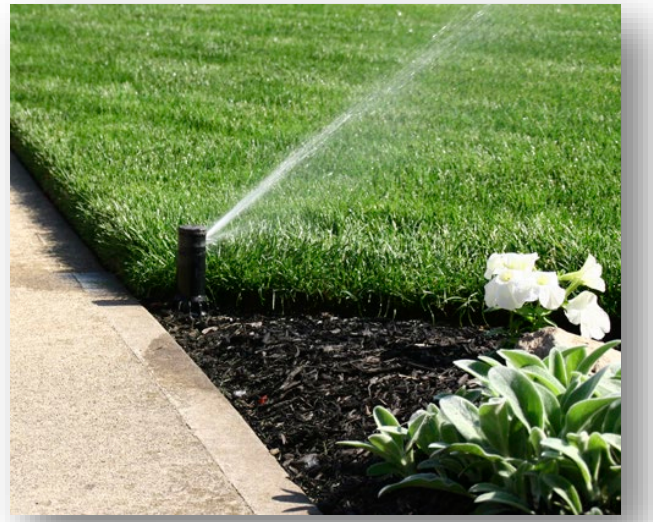
Pilot Irrigation Rebate – New Initiative

- Address outdated irrigation systems
  - Encourage customers to make water-efficiency changes to their systems through ongoing education efforts
- Pilot Irrigation Rebate
  - Complement irrigation system check-up program and water-wise landscape seminars
  - Offer incentives up to $3,000 rebate for
    - Drip irrigation equipment
    - Spray heads with more efficient distribution patterns
    - Zone Conversion
- Projected average water savings of 4 MG/Yr

Additional Conservation Initiatives

Time of Day Watering and Cool Season Grasses – Updated Restrictions

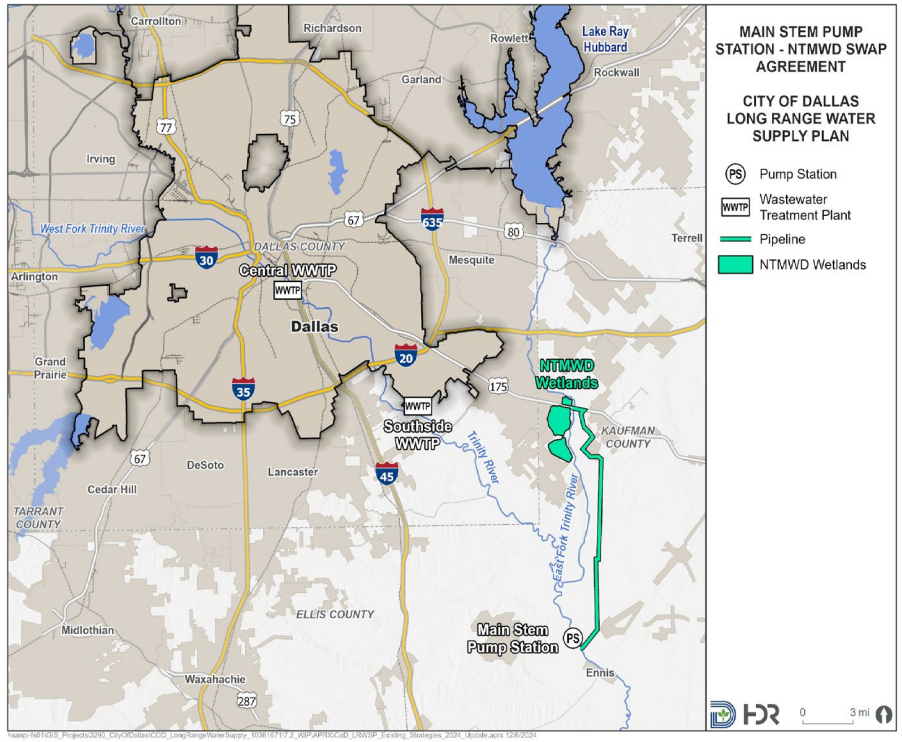
Current Restriction:	Updated Restriction:
• No watering between 10am and 6pm from April 1 to October 31 • *City of Dallas,* Chapter 49, § 21.1.1	• No watering between 10am and 6pm **all year** • Prohibit variances for cool season grass establishment • Ordinance consideration – Spring 2026



Recommended Strategy – Swap Agreement (2030)

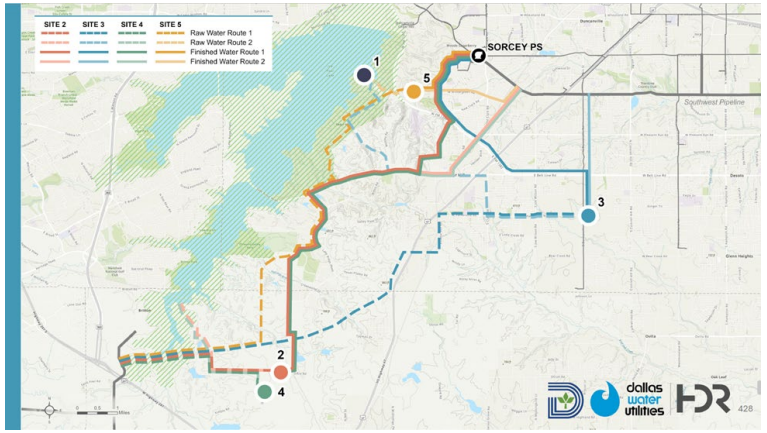
North Texas Municipal Water District Swap

- DWU swaps its treated wastewater effluent for NTMWD's. Allows DWU to use more water stored in existing reservoirs (Hubbard, Lewisville, Ray Roberts) rather than releasing it downstream.
- NTMWD Main Stem Pump Station diverts DWU's return flows to their East Fork wetlands, fulfilling DWU's side of the swap.
- This provides 39.0 MGD in 2030, rising to 44.2 MGD in 2080. The final step needed is the finalization of the swap agreement.
- Discussions with NTMWD planned for 2026



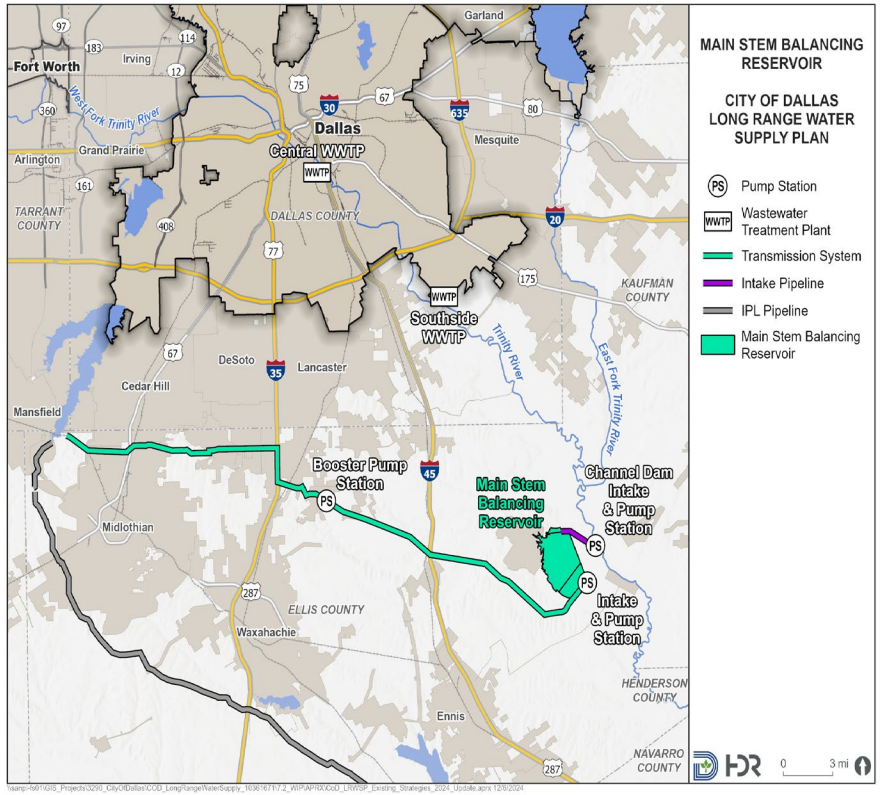
Recommended Strategy – IPL to DWU System (2040)

- DWU is contracted for 53.73% of yield in Lake Palestine, up to a maximum of 102 MGD
- Integrated Pipeline (IPL) is a joint project with Tarrant Regional (TRWD). DWU has a 150 MGD capacity share in this pipeline, scheduled for completion in 2028
- Additional infrastructure is required to connect IPL to the Dallas water system. Evaluation complete by end of 2025. Engineering to start in 2026, construction completion by 2040



Recommended Strategy – Main Stem Balancing Reservoir (2050)

- DWU has a permitted right to divert and reuse its effluent from the Central and Southside WWTPs.
- ~300,000 acre-feet reservoir required to store and provide natural treatment for these return flows.
- Water will be pumped to a DWU water supply system and/or swapped. This strategy is anticipated to provide up to 102 MGD by 2050.
- Feasibility Study will kick-off in 2026.



Next Steps

- Implement enhanced water conservation measures:
  - Pilot Irrigation Rebate Program – Spring 2026
  - No watering between 10am and 6pm year around – Fall 2026
  - Prohibit variances for cool season grass establishment – Fall 2026
- Finalize SWAP Agreement with NTMWD
- Complete IPL to Dallas Delivery Alternative Evaluation and begin engineering for infrastructure improvements
- Begin Main Stem Balancing Reservoir Feasibility Study
- Continue to evaluate alternative strategies

Questions

The mural that won the 2004 water conservation contest is displayed in the east entrance of Dallas City Hall.