



# Board of Directors Meeting

April 16, 2024





## **Pledge of Allegiance**

I pledge allegiance to the flag of the United States of America, and to the republic for which it stands, one nation under God, indivisible, with liberty and justice for all.

## **Pledge of Allegiance to the Texas Flag**

Honor the Texas flag; I pledge allegiance to thee, Texas, one state under God, one and indivisible.

Agenda Item 2:

Public Comment



Agenda Item 3:  
**Consider Approval of the Minutes from the Meeting  
Held on March 19, 2024**

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Agenda Item 4:  
**Presentation by Iris Bruton, Executive Director of  
Trinity Collaborative, Inc.**

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Agenda Item 5:

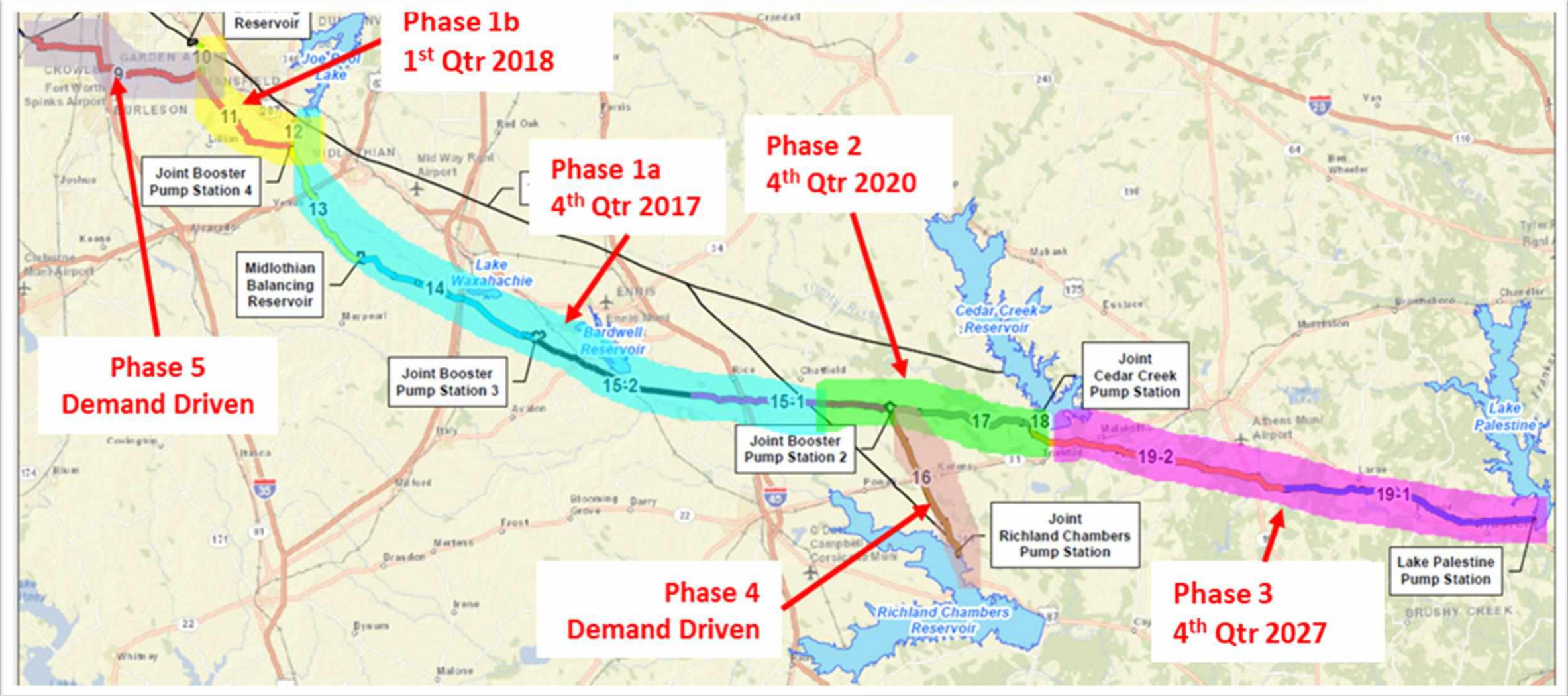
**Consider Approval of Contract with BAR Constructors, Inc. for Dallas Phase 3 Opencut Pipeline Section 19-2 Part A of the Integrated Pipeline Project**

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*Ed Weaver, IPL Program Manager*



# Integrated Pipeline Layout and Phases



# Integrated Pipeline Program





Agenda Item 6:

**Consider Approval of Contract Amendment with HDR Engineering, Inc. for Section 19-2 Construction Phase Services of the Integrated Pipeline Project**

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*Ed Weaver, IPL Program Manager*



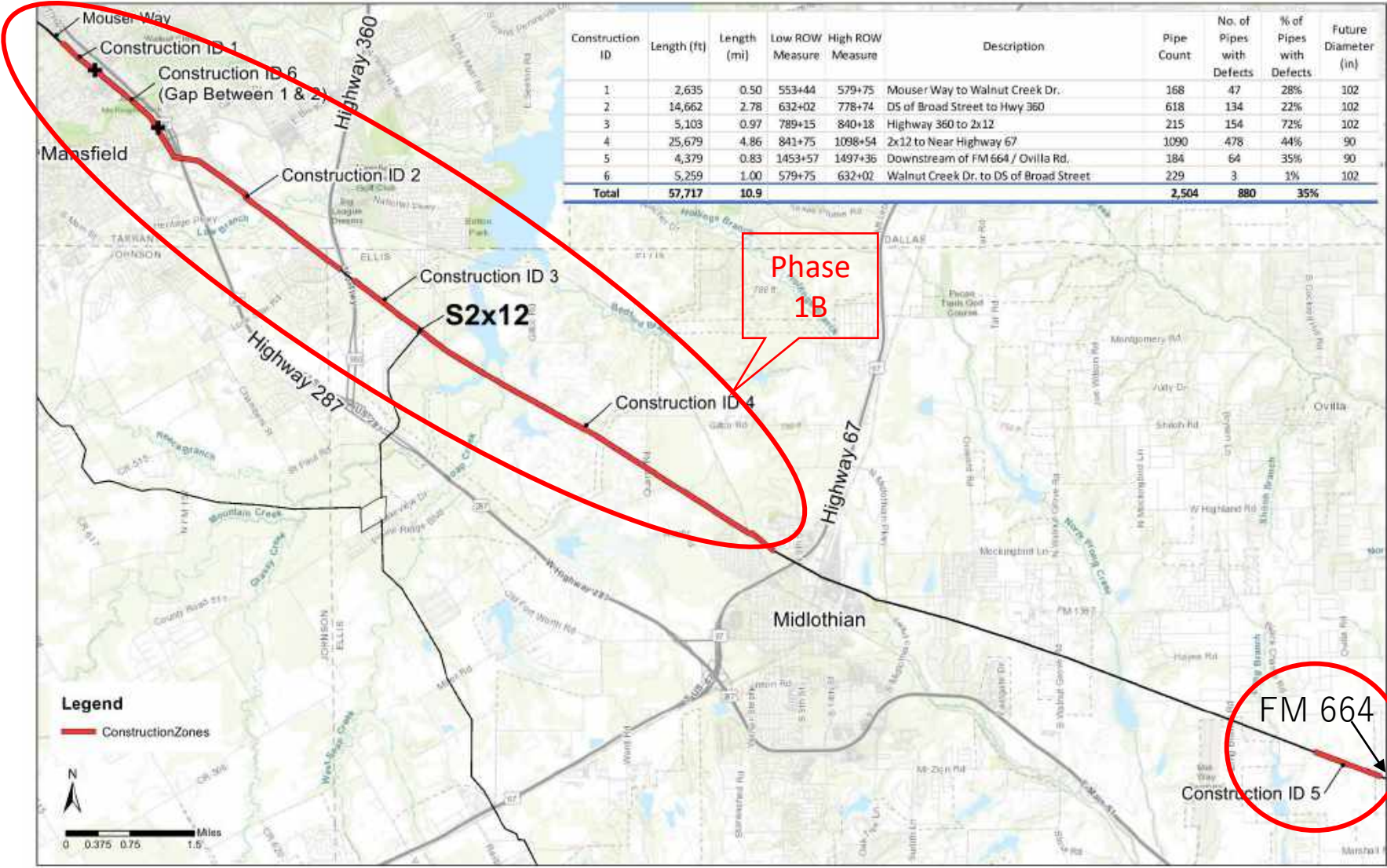
Agenda Item 7:

**Consider Approval of Contract Amendment with Black & Veatch Corporation for Engineering Services Related to Procurement and Construction Phases for the Cedar Creek Pipeline Replacement Project in the Mansfield to Waxahachie Area and Additional Transient Analysis Services**

*Jason Gehrig, Infrastructure Engineering Director*



# Cedar Creek Pipeline Replacement Project Area

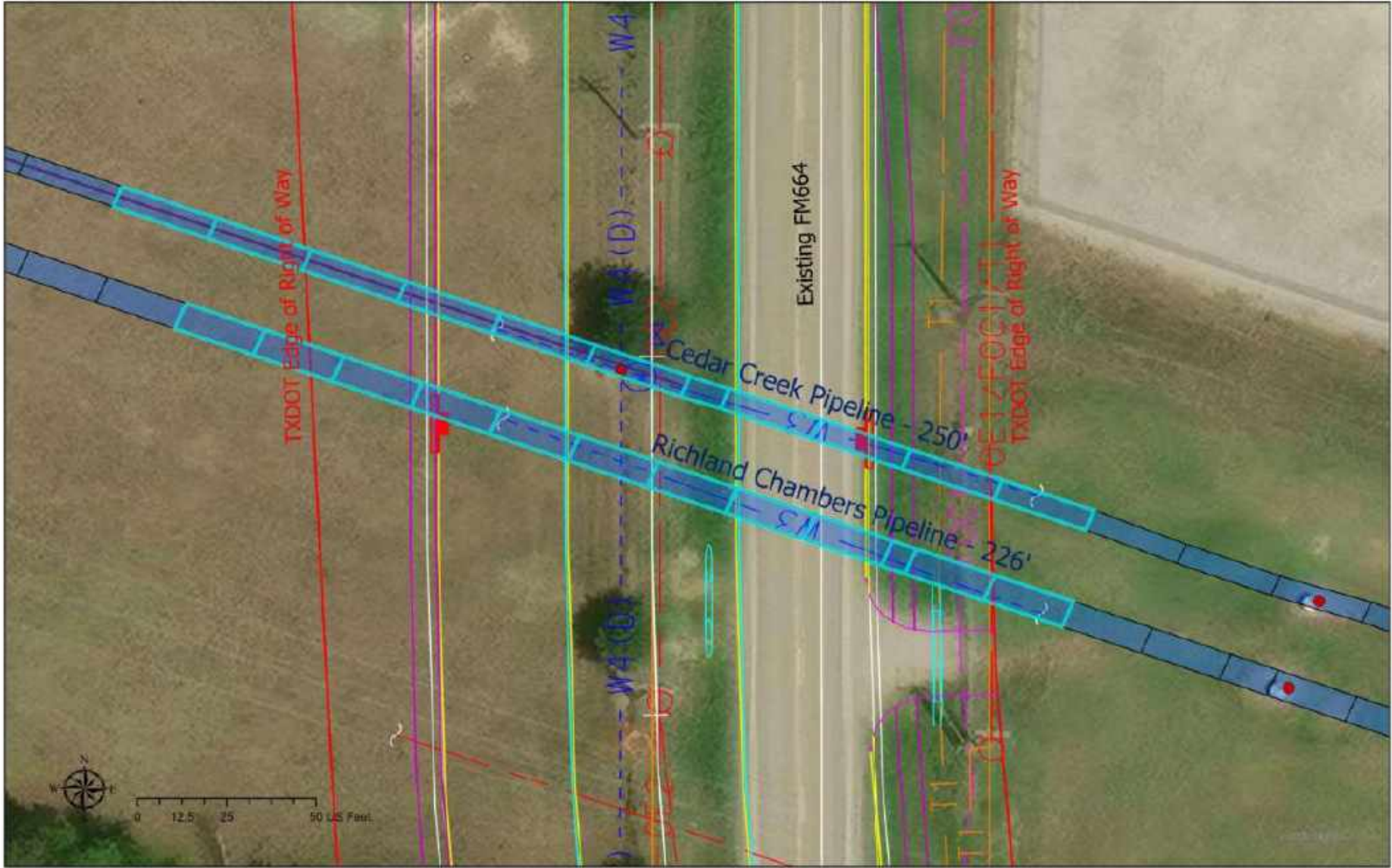


Phase 1B

Phase 1A

FM 664

# Phase 1A - FM 664 Highway Expansion & Construction ID #5



# Construction Phase Engineering Services



## Construction Phase Services

- Continued Project Management Services and Support
- Coordination with Owner's Project Team and Construction Manager
- Construction Meeting Attendance
- Site Visits
- Submittal Reviews
- Record Drawings to Conform to Construction Records

**Construction Phase Engineering  
Services for Phase 1A & 1B**

Item 8:

**Consider Approval of Contract with Freese and Nichols, Inc. for Engineering Design Services for Mary's Creek Indirect Water Reclamation Project and Second Cell of the Eagle Mountain Balancing Reservoir**

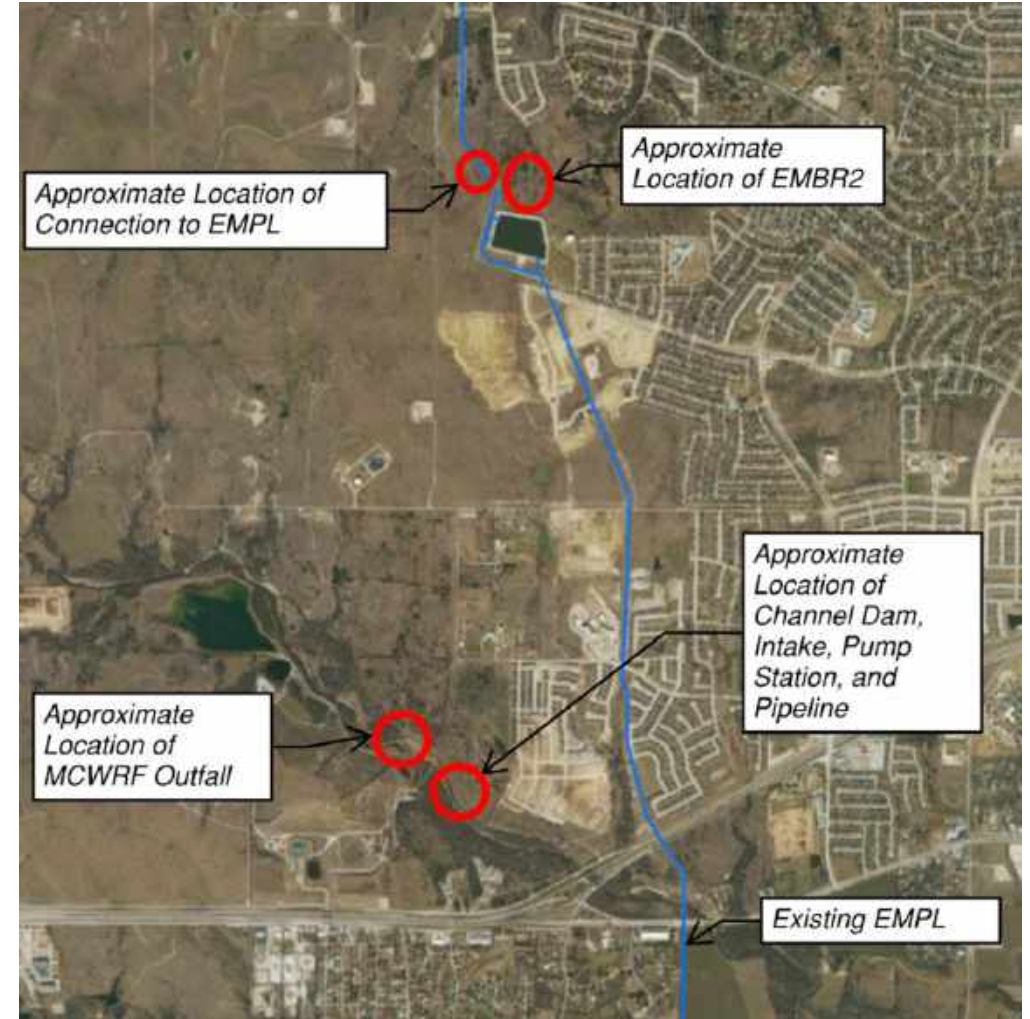
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Jason Gehrig, Infrastructure Engineering Director

# Mary's Creek Indirect Water Reclamation Project and the Second Cell of the Eagle Mountain Balancing Reservoir

## Overview

- City of Fort Worth Building MCWRF to Support Growth
- Settlement Agreement to Reclaim Treated Water
- Resilience and Redundancy at EMBR Allowing Maintenance Elsewhere
- Improves Quality of Life
- Increases Water Supply
- Good Stewardship of Environment
- Meets Rapid Growth in the Area



Agenda Item 9:

**Consider Approval of Contract with Freese and Nichols, Inc. for Environmental Permitting Services for Mary's Creek Indirect Water Reclamation Project and the Second Cell of the Eagle Mountain Balancing Reservoir**

*Darrel Andrews, Environmental Director*





Agenda Item 10:

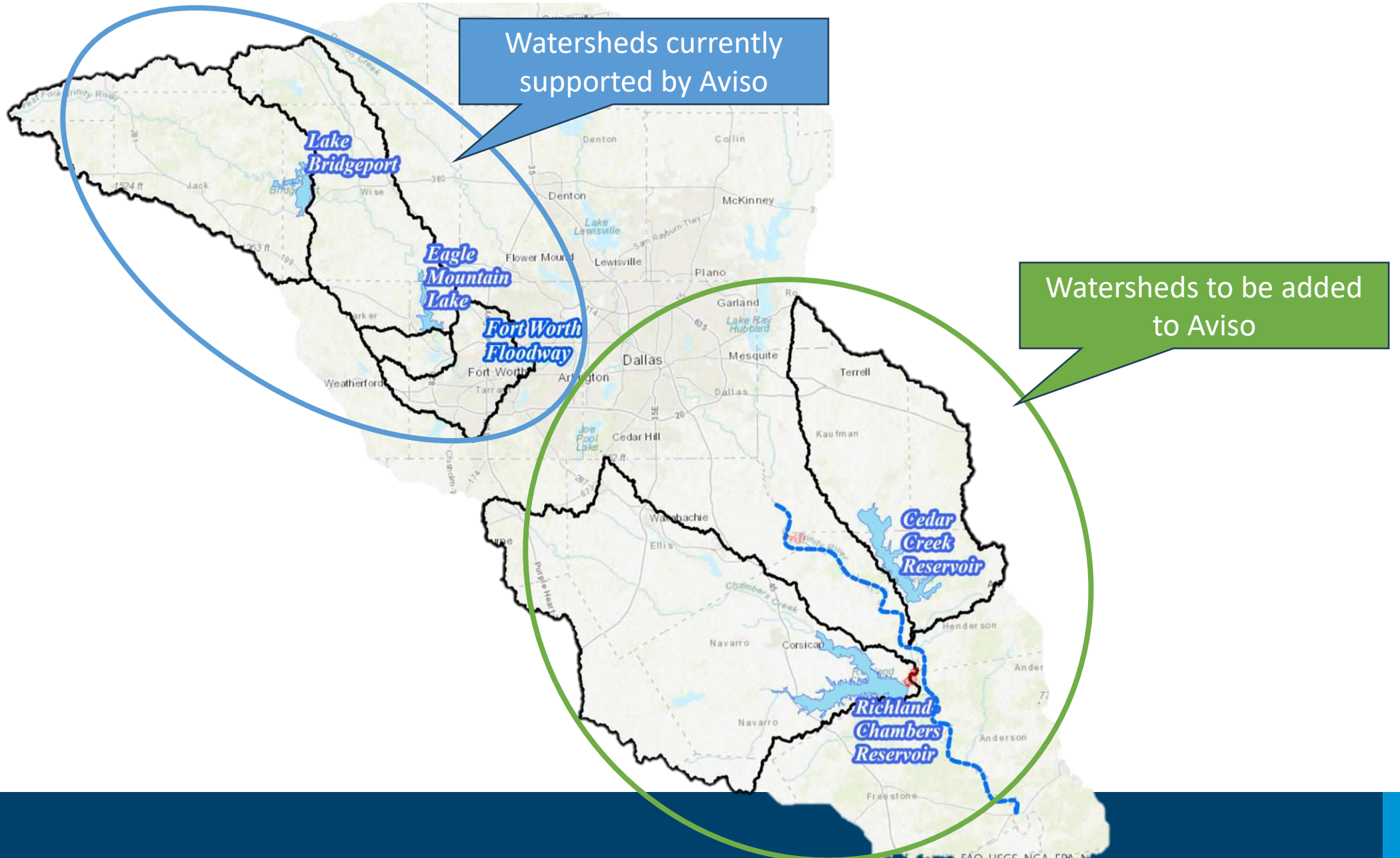
**Consider Approval of Contract with HDR Engineering, Inc. to Incorporate Cedar Creek and Richland-Chambers into Aviso Forecasting System**

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*Zachary Huff, Water Resources Engineering Director*



# Cedar Creek & Richland-Chambers Aviso Incorporation



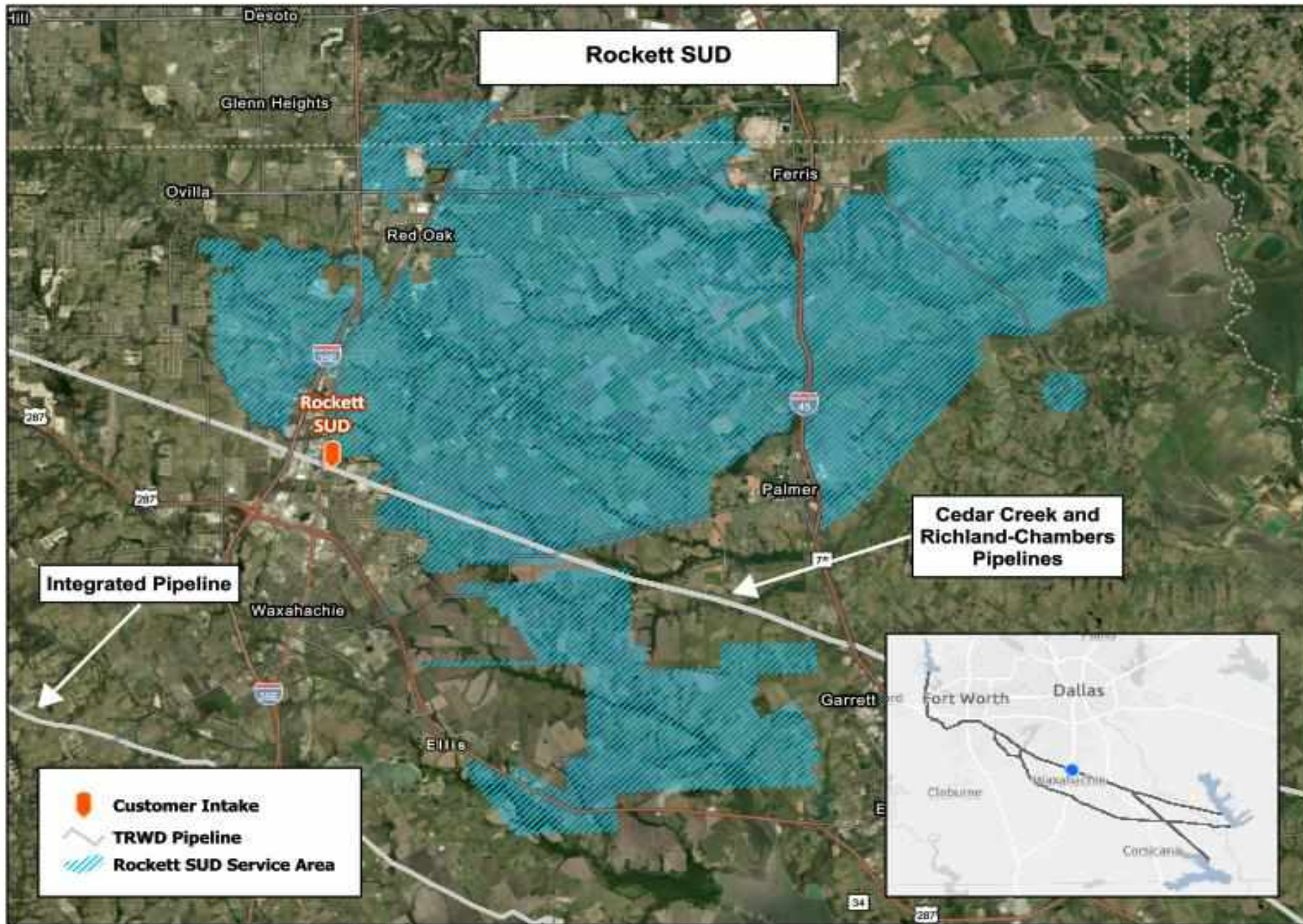
Agenda Item 11:

**Consider Approval of Second Amendment to Additional Party Raw Water Supply Contract with Rockett Special Utility District**

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*Zachary Huff, Water Resources Engineering Director*





Agenda Item 12:

**Consider Approval and Adoption of 2024 Water Conservation and Drought Contingency and Emergency Water Management Plan**

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Linda Christie, *Government Affairs Director*



# 2024 Water Conservation and Drought Contingency and Emergency Water Management Plan Update

Description	Year	Gallons Per Capita Per Day (GPCD)
Previous 5-Year GPCD Average	2014-2018	162
Previous 5-Year GPCD Goal	2019-2023	158
Current 5-Year GPCD Average	2019-2023	151
New 5-Year Goal	2028	150
New 10-Year Goal	2033	146

# 2024 Water Conservation Plan Update

## Propose to Continue:

- Customer City Support
- Regional and Local Partnerships
- Programs to reduce outdoor water waste
- Community education and outreach

## Looking Ahead:

- Update the Strategic Water Conservation Plan
  - Include a cost-benefit analysis
  - Define program approach over next 10 years
- Work with our customers to improve outdoor water waste through ordinances and new programs

# 2024 Drought Contingency and Emergency Water Management Plan Update

## Update Includes:

- No significant changes from the 2019 plan
- Added “Emergency Water Management” to title of plan
- Added language to describe:
  - Entering a stage due to extended, unsustainable stress on the system
  - Flexibility of additional actions in later stages



Agenda Item 13:

**Consider Approval of Resolution Authorizing the Issuance, Sale, and Delivery of Tarrant Regional Water District, a Water Control and Improvement District, Water Revenue Refunding and Improvement Bonds, Series 2024, Pledging Revenues for the Payment of the Bonds, Approving an Official Statement, and Authorizing Other Instruments and Procedures Relating Thereto**

*Sandy Newby, Chief Financial Officer*

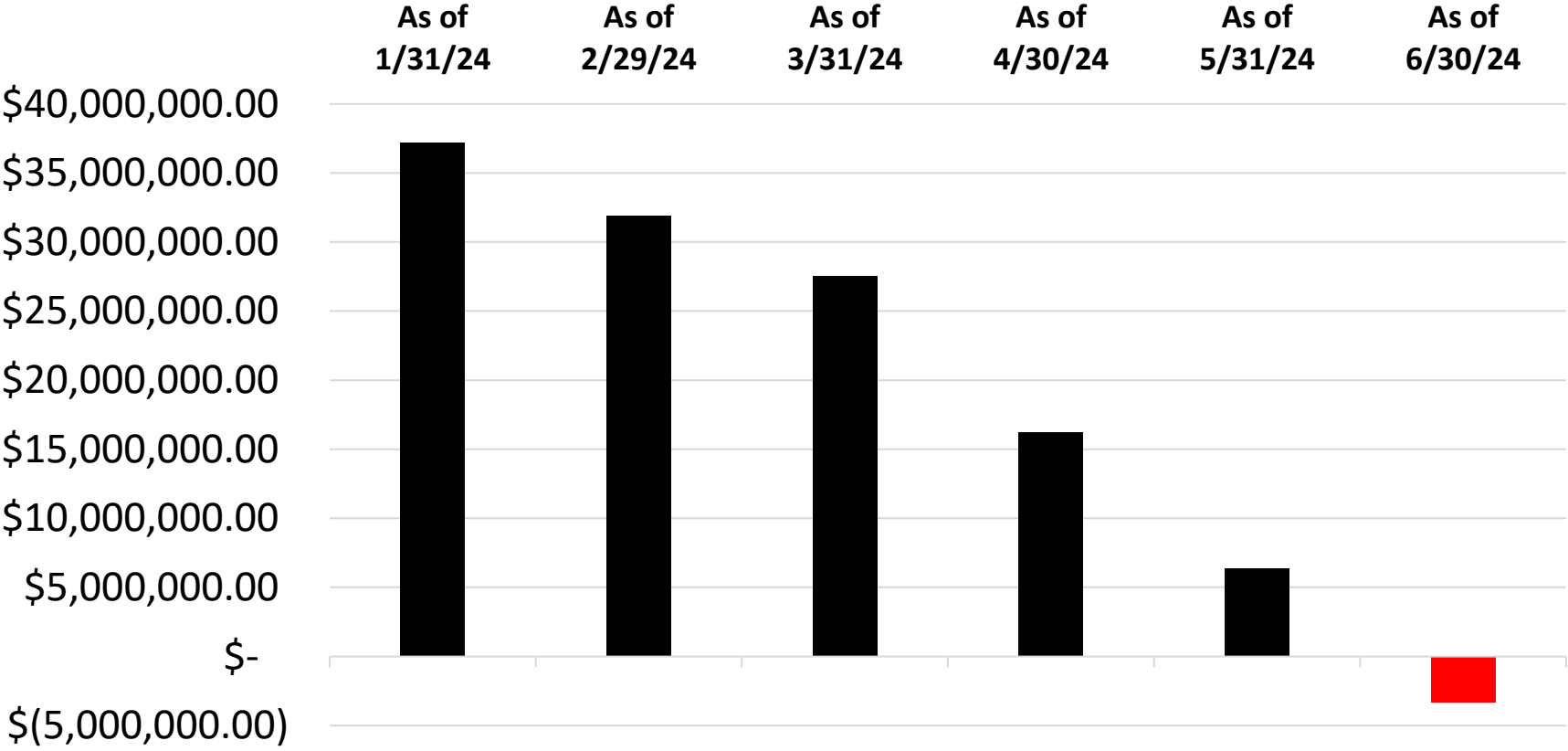


# 2024 Proposed Bond ISSUE Breakdown



- New Projects - \$100 million
- Potential Refunding through Tender or Escrow - \$477.79 million max
  - \$125.43 million – 2020 Bonds Outstanding
  - \$352.36 million – 2020B Bonds Outstanding
  - If 25% successful tenders – potential savings of \$12.7 million over the life of the bonds
  - Potential \$4.6 million savings due to escrowing bonds to maturity

# Current Bond Funds Expected to be Available



*Note: Current Bond Funds are remaining from 2022 Bond Issue.*

# 2024 Proposed \$100 million Bond Uses



- New & Replacement Pipeline Projects
  - Design & Construction
  - \$30 million
- New Operations Facility
  - Design & Construction Year 1
  - \$30 million
- Employee & Public Safety Projects (ie. Chemicals & Electrical)
  - Design & Construction
  - \$15 million
- KBR Phase 3 – Cell 1&2 Modification
  - Completion of project in FY 2025
  - \$12 million
- Cedar Creek Wetlands
  - Continued Design
  - \$10 million

Agenda Item 14:  
**Discussion of Fiscal Year 2025 Budget Goals and Capital  
Improvement Plan**

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Dan Buhman, *General Manager*



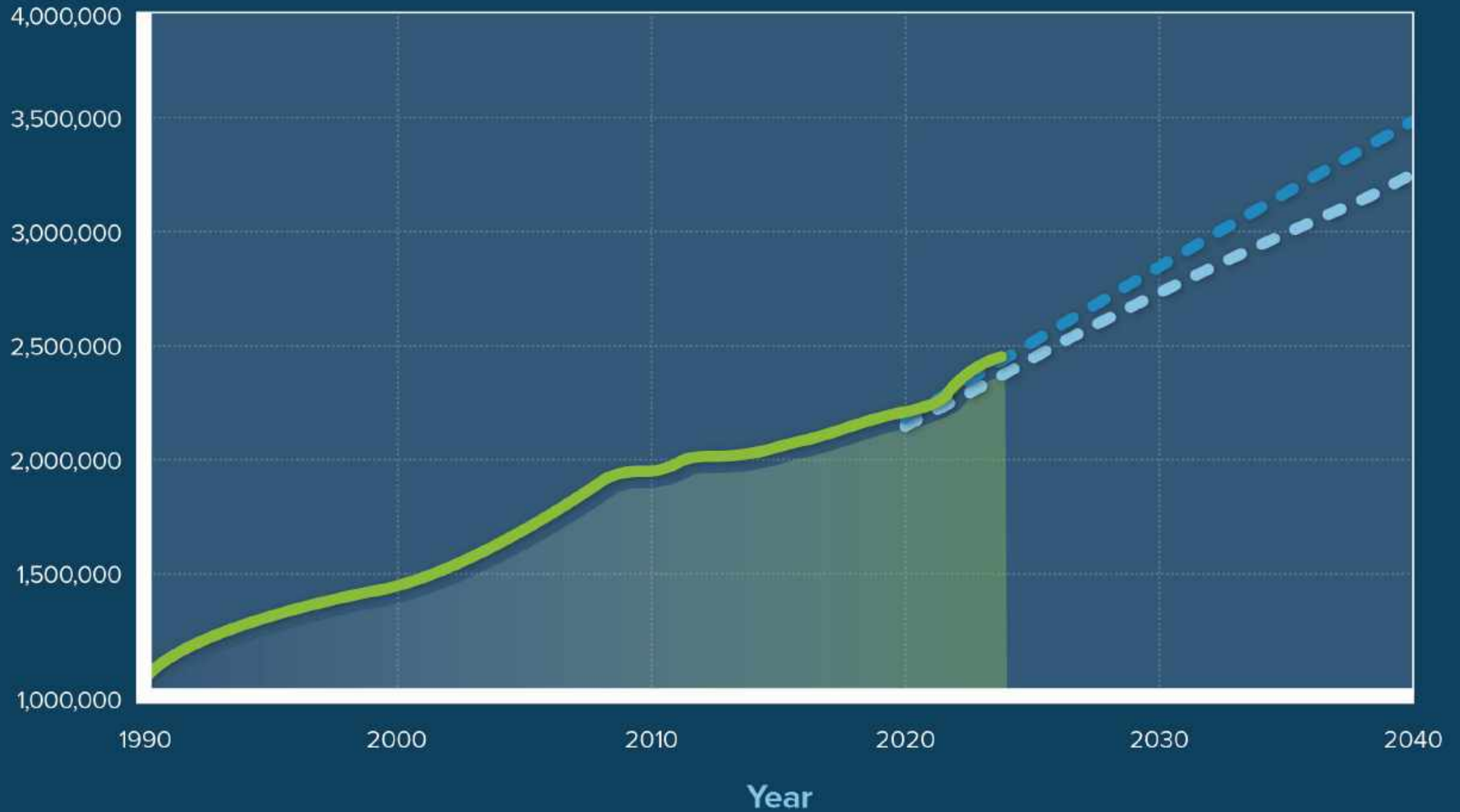
# Tarrant Regional Water District 2024 Capital Improvement Plan



# Growth

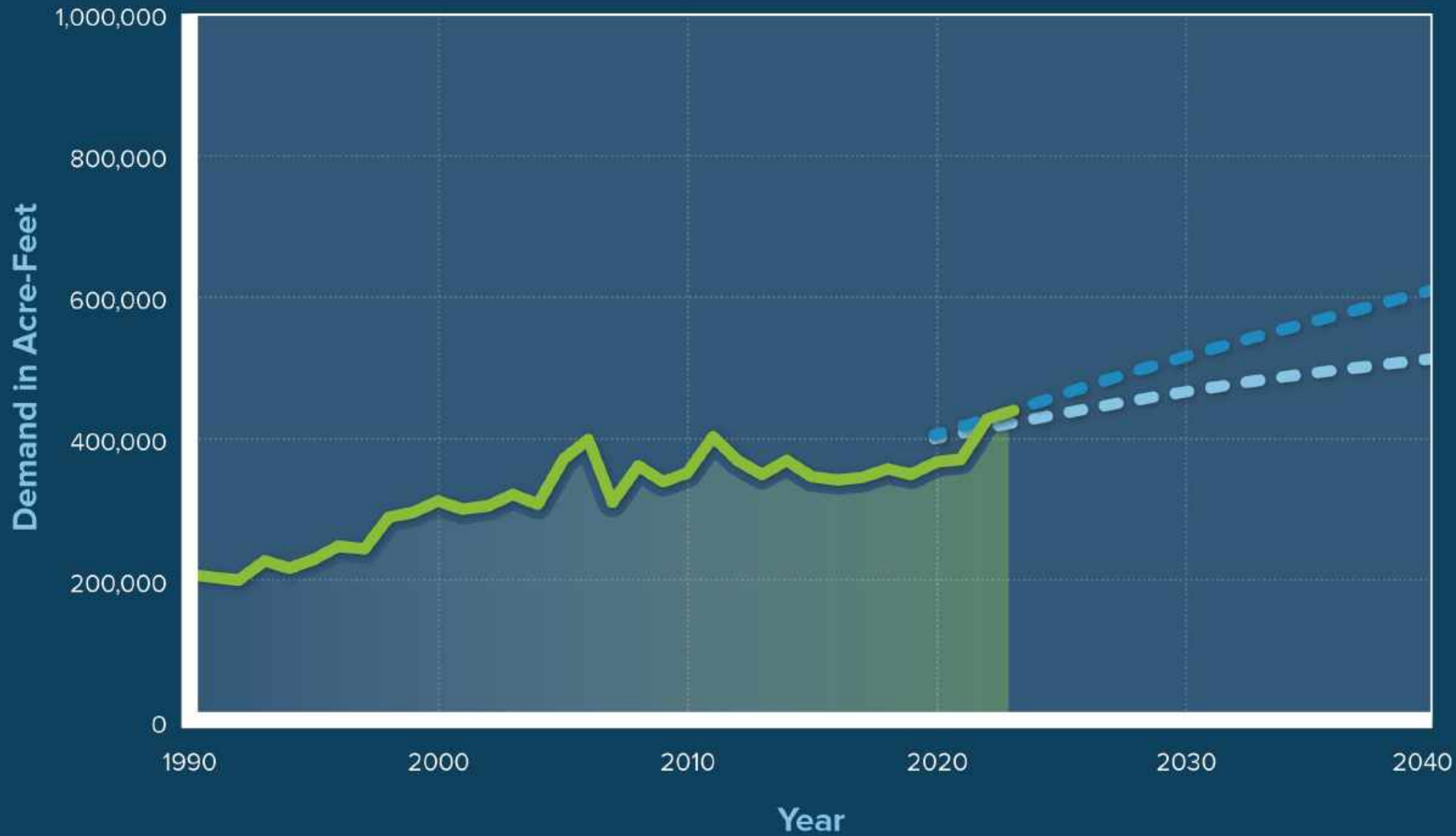


# TRWD PROJECTED vs ESTIMATED POPULATION SERVED

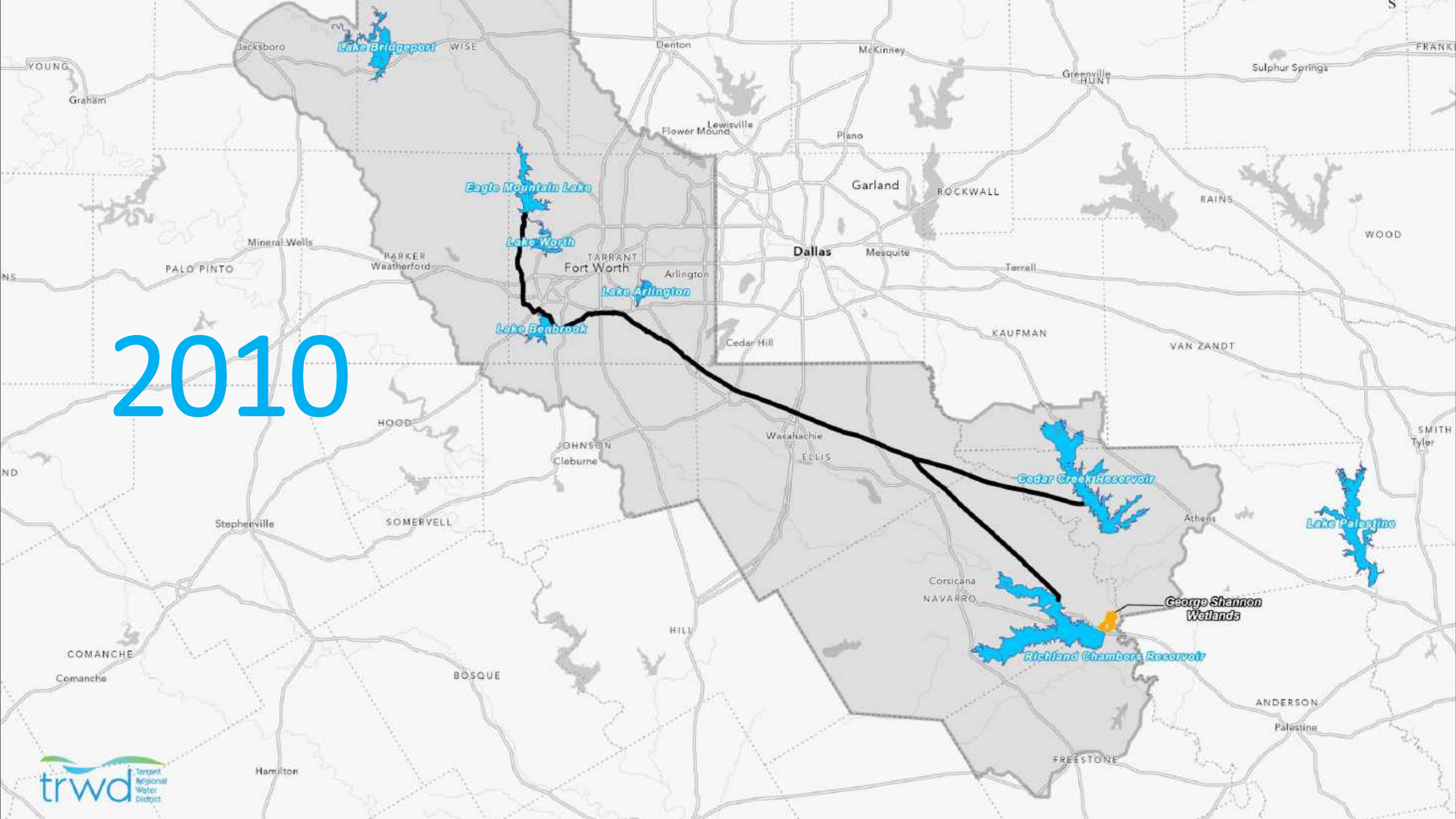




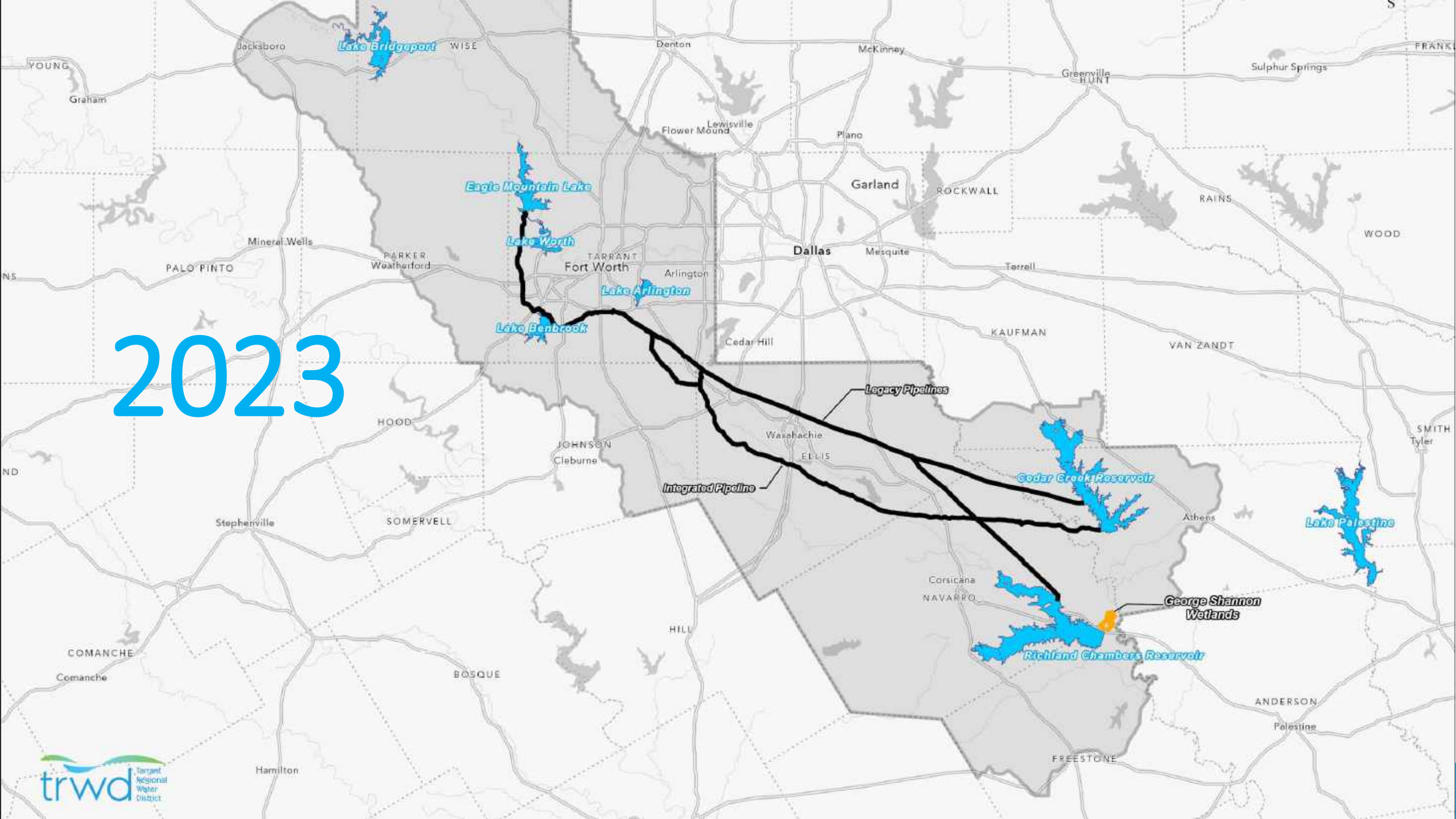
# HISTORICAL USE & DEMAND PROJECTIONS



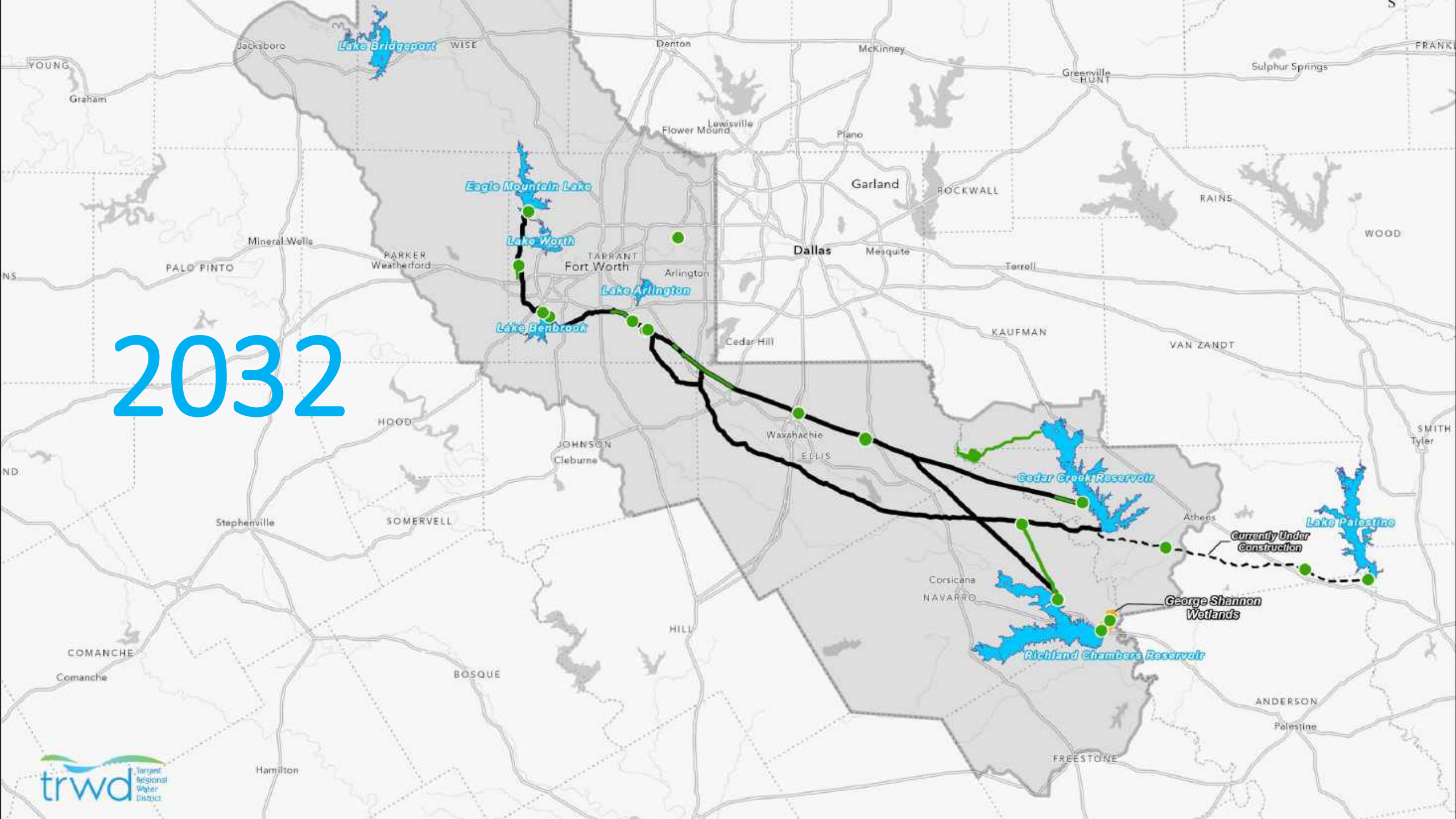
# 2010



# 2023



# 2032



# Aging Infrastructure



# Pipeline Systems

System	Age (Years)
Cedar Creek System	54
Kennedale Balancing Reservoir	51
Richland Chambers System	40
<b>Benbrook Connection</b>	<b>28</b>
<b>Eagle Mountain Connection</b>	<b>18</b>
<b>Integrated Pipeline</b>	<b>0-10</b>

# Reservoirs

Reservoir	Age (Years)
Bridgeport	92
Eagle Mountain	92
Cedar Creek	60
Richland Chambers	40

# Other Facilities

Facility	Age (Years)
Eagle Mountain Facilities	64
FW Operations Facilities	64
Cedar Creek Facilities	59
Bridgeport Facilities	52
Richland Chambers Facilities	35
Administration Office	23
Vic Henderson Building	15
Annex	11

















# Emergency Preparedness and Resilience





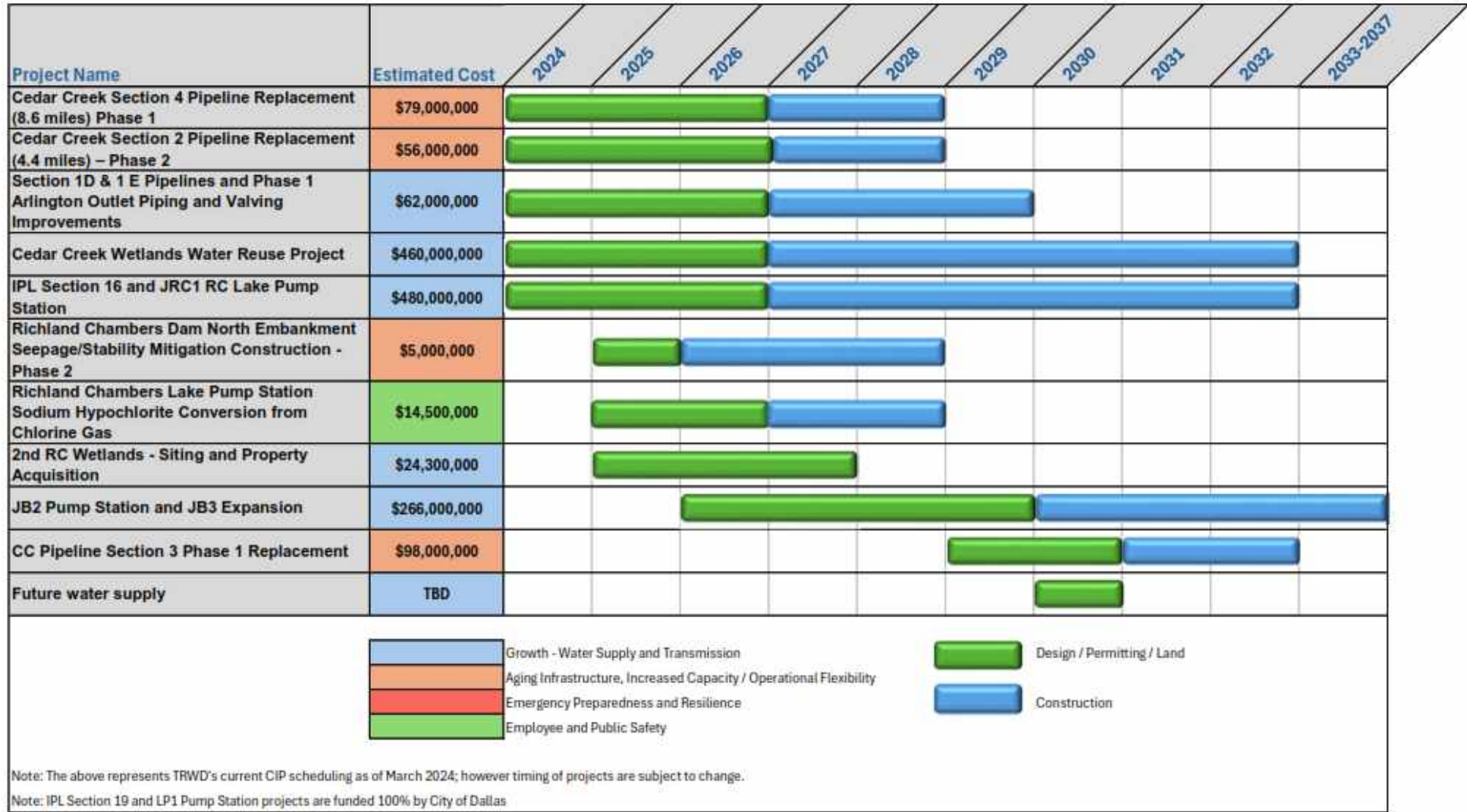
# Employee and Public Safety



# Capital Improvement Projects Schedule

Project Name	Estimated Cost	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033-2037
Kennedale Balancing Reservoir - Phase 3: Yard Piping and Modifications to Cells 1 & 2	\$48,000,000	█									
RC Lake Pump Station Backup Sodium Hypochlorite for Zebra Mussels and Pump Discharge Valve Hydraulic Actuators Installation	\$4,800,000	█									
RC2H Discharge Header Valve Installation	\$1,500,000	█									
IPL Section 19-1 and 19-2 Pipelines and Tunnels	\$660,000,000	█									
Aquifer Storage and Recovery (ASR) Demonstration Project	\$8,500,000	█									
IPL LP1 Lake Pump Station	\$235,000,000	█									
Cedar Creek Section 2 Pipeline Replacement – Phase 1 (11 miles including FM 664)	\$105,000,000	█									
Cedar Creek Pump Station Chlorine Demolition and Caustic Soda Improvements	\$1,700,000	█	█								
Operations Facility	TBD	█	█								
Arlington Outlet and Benbrook Outlet Dechlorination Facility Improvements	\$3,600,000	█	█								
Copper Ion Feed for Benbrook Lake Pump Station for Zebra Mussel Control	\$3,300,000	█	█								
RC3H Booster Pump Station Electrical Room Cooling Improvements	\$6,900,000	█	█								
Eagle Mountain Original Service Spillway Gate Structure Upgrades	\$5,000,000	█	█								
Kennedale Balancing Reservoir – Phase 4: Third Cell Construction	\$60,000,000	█	█								
Mary's Creek Indirect Water Reclamation Project	\$31,500,000	█		█							
Benbrook Pump Stations Backup Power	\$5,200,000	█		█							
Richland Chambers Lake Pump Station (RC1) Electrical Building with VFD	\$26,000,000	█		█							
Cedar Creek Lake Pump Station (CC1) Electrical Building with VFDs	\$22,000,000	█		█							
Eagle Mountain Balancing Reservoir 2 <sup>nd</sup> Cell	\$34,000,000	█		█							

# Capital Improvement Projects Schedule



7-year TRWD Capital  
Improvement Plan Total:  
\$1.5 billion

For More Project Information:

[www.trwd.com/cip](http://www.trwd.com/cip)



# 2025 Budget Goals and Drivers



# Purpose

- Share staff perspective
- Hear Board of Directors goals and budget drivers
- Staff prepare budget based on today's discussion
- Two budget workshops this year:
  - 1) General and Special Projects Funds
  - 2) Revenue Fund

# Staff Perspective

# Strategic Plan

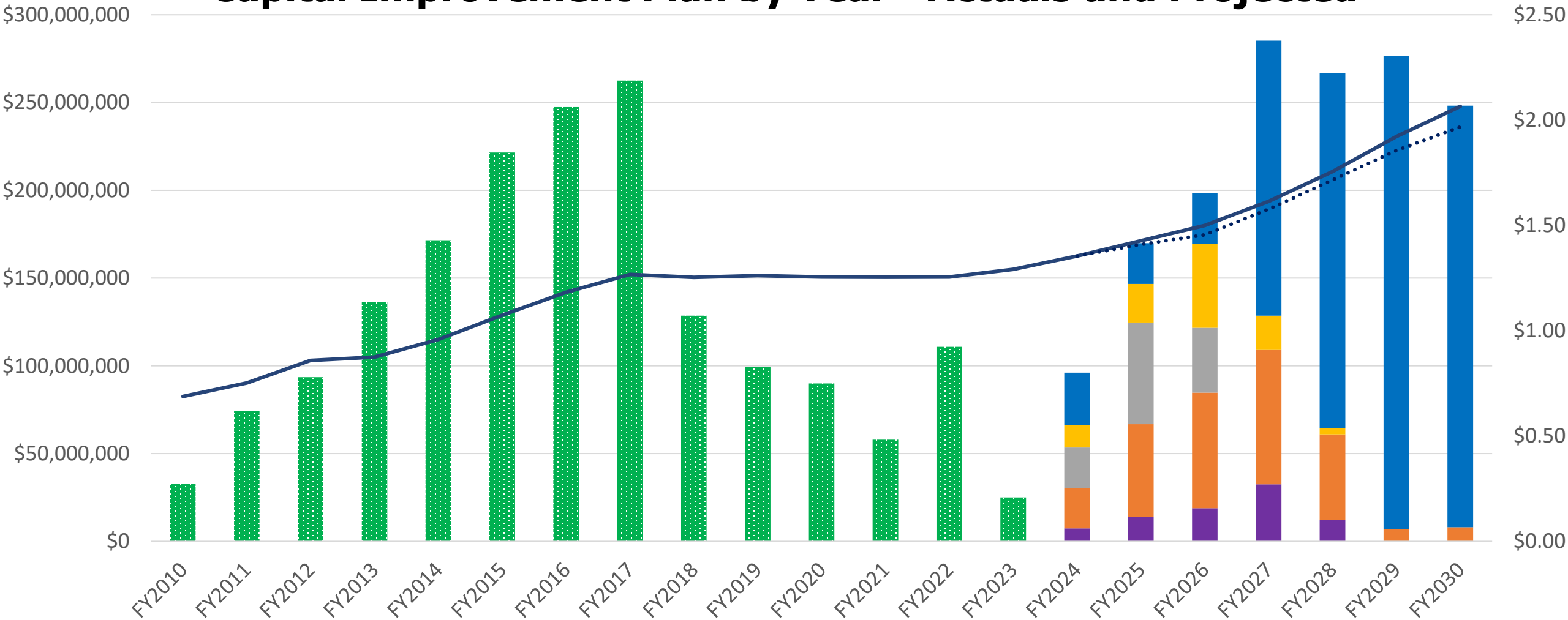
- Meet rapid community growth
- Central City Flood Control Project
- Panther Island
- Invest in our People
- Further Enhance Fiscal Responsibility
- Focus on Community Stewardship



# Revenue Fund

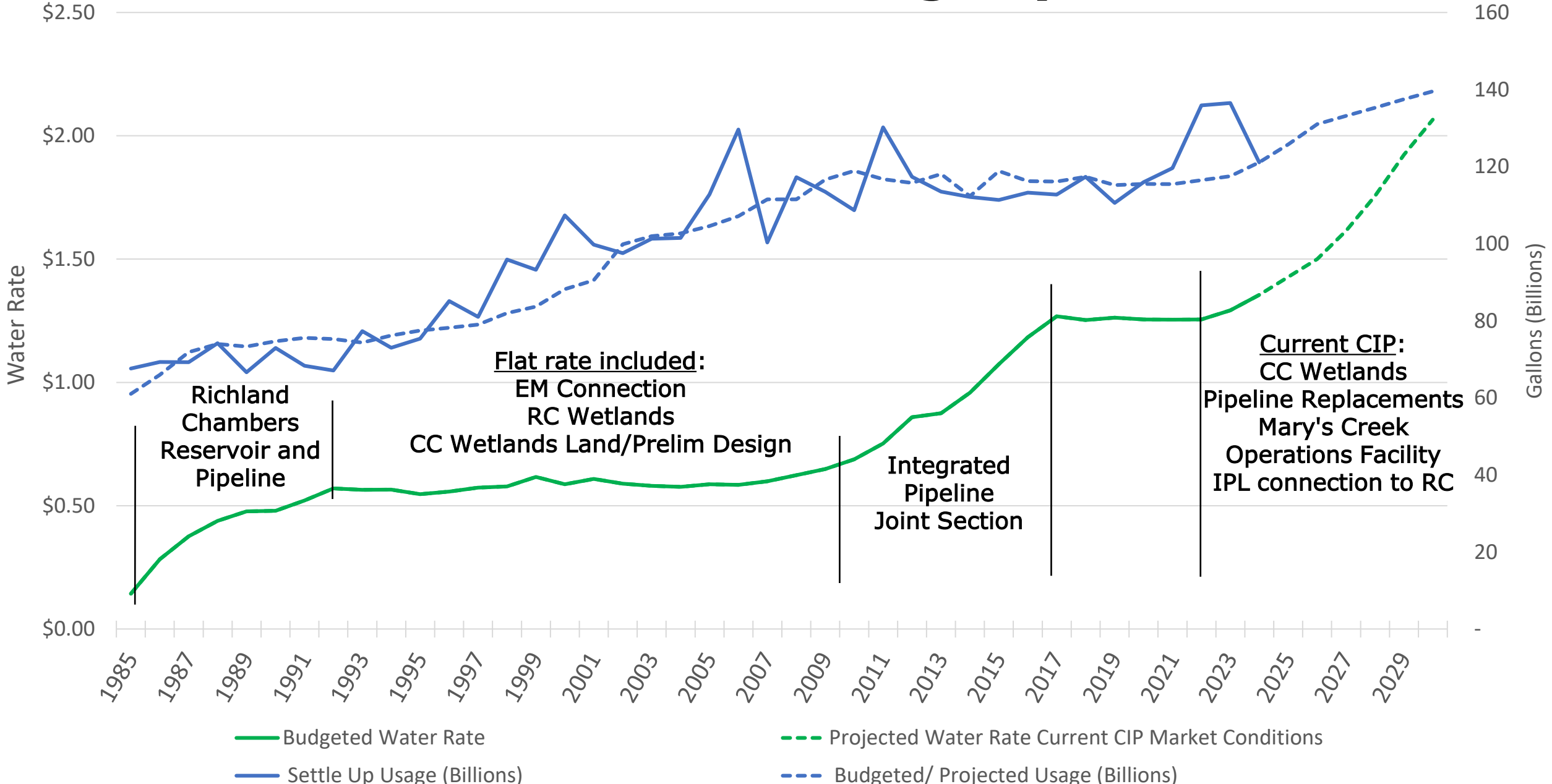
- Capital Improvement Program
  - Increased Debt service
  - Personnel for Design and Construction Management
  - Gearing up to maintain more infrastructure – personnel and equipment
- Facilities
  - Accommodate staff growth
  - Aging facilities

# Capital Improvement Plan by Year - Actuals and Projected



- Actual Capital Project Costs
- Aging Infrastructure, Increased Capacity / Operational Flexibility
- Emergency Preparedness and Resilience
- Budgeted/Projected Water Rate
- Employee & Public Safety
- New Operations Facility
- Growth - Water Supply and Transmission
- Projected Water Rate shown in FY24 Budget

# Water Rate and Usage by Year

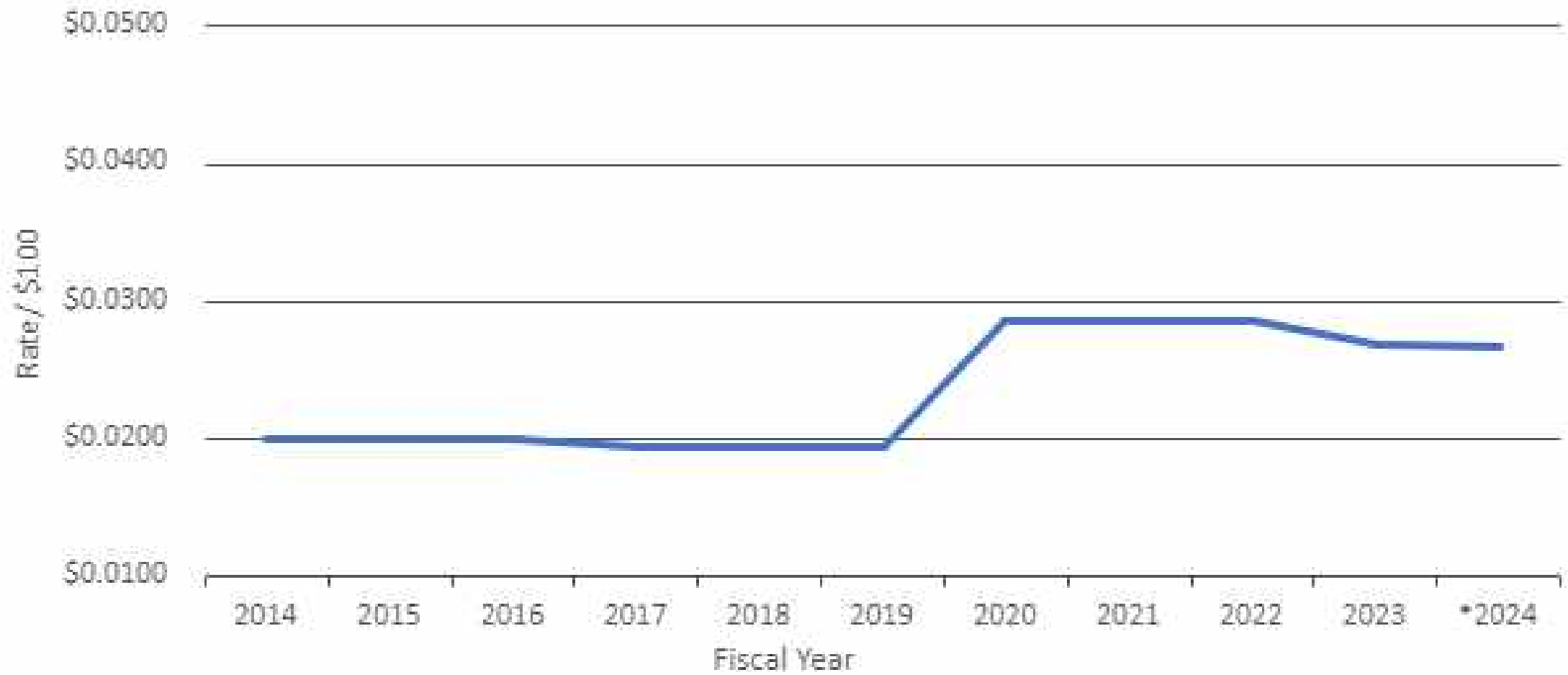


# Board of Directors Input

# General Fund

- Central City Flood Control Project Construction (in special projects fund) causes these expenditures in General Fund:
  - Construction Management (and future O&M) personnel
  - Flood fighting equipment
  - Support of new economic development organization for Panther Island
- New operations facility
- Additional flood control upstream of floodway
- Support of open space programming and management organization for Panther Island
- Recreation master plan implementation

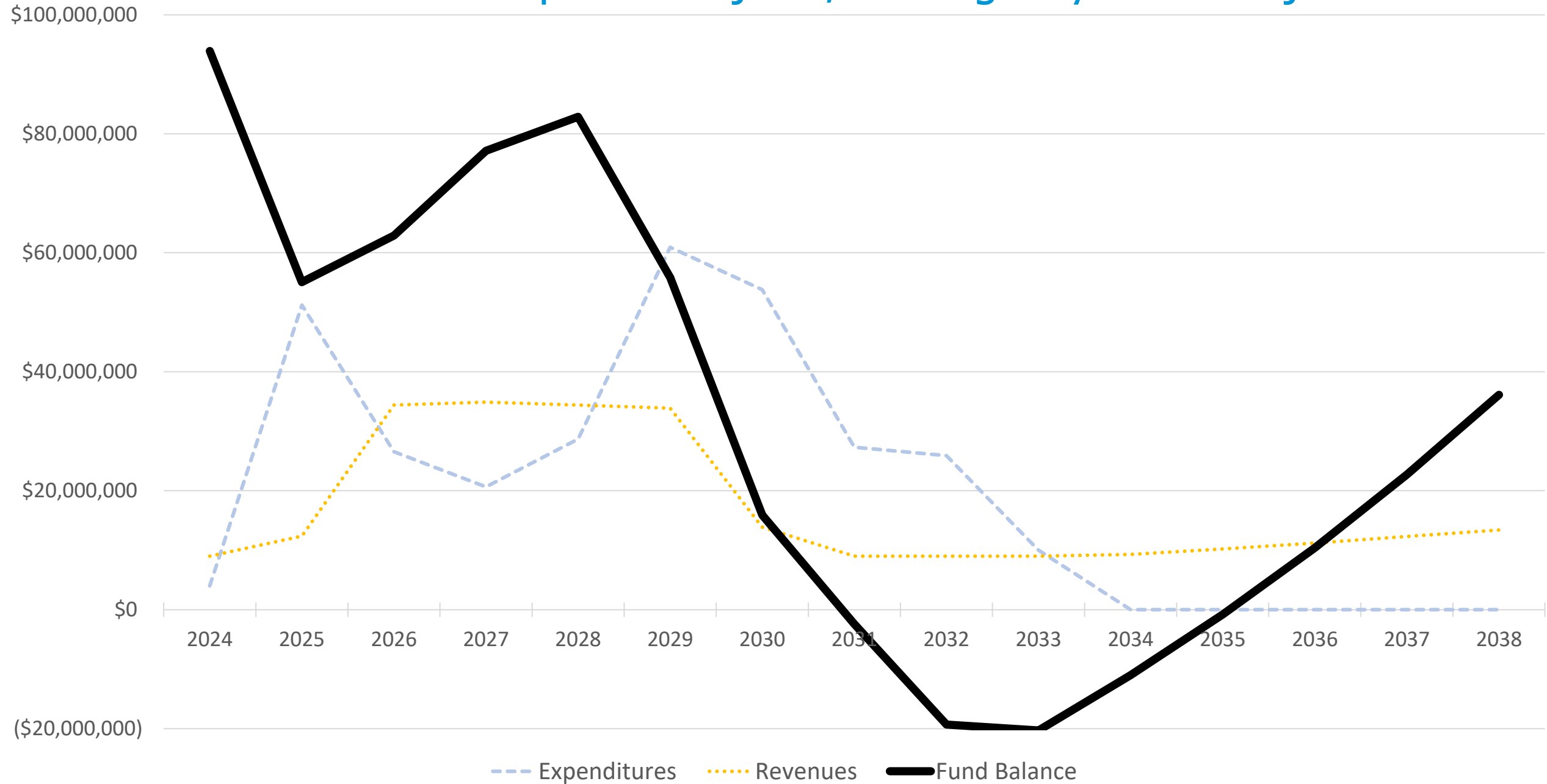
## Tax Rate History



# Special Project Fund

- Canals
  - Design and construction costs
  - Personnel needed to manage construction and O&M
  - O&M Costs
  - PID contributions
- Betterments
- Increasing local cash match

# Special Projects/Contingency Fund Projections





# Board of Directors Input

The background of the slide is a close-up photograph of water. It features a series of concentric, overlapping ripples that create a textured, shimmering effect. The water is a clear, light blue color, and the lighting highlights the individual droplets and bubbles, giving it a sense of depth and movement.

# **STAFF UPDATE**

## Water Resources and Planning Update

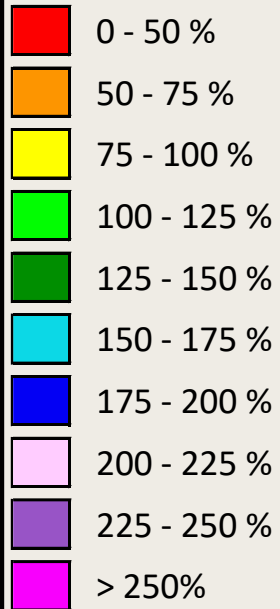
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Rachel Ickert, *Chief Water Resources Officer*

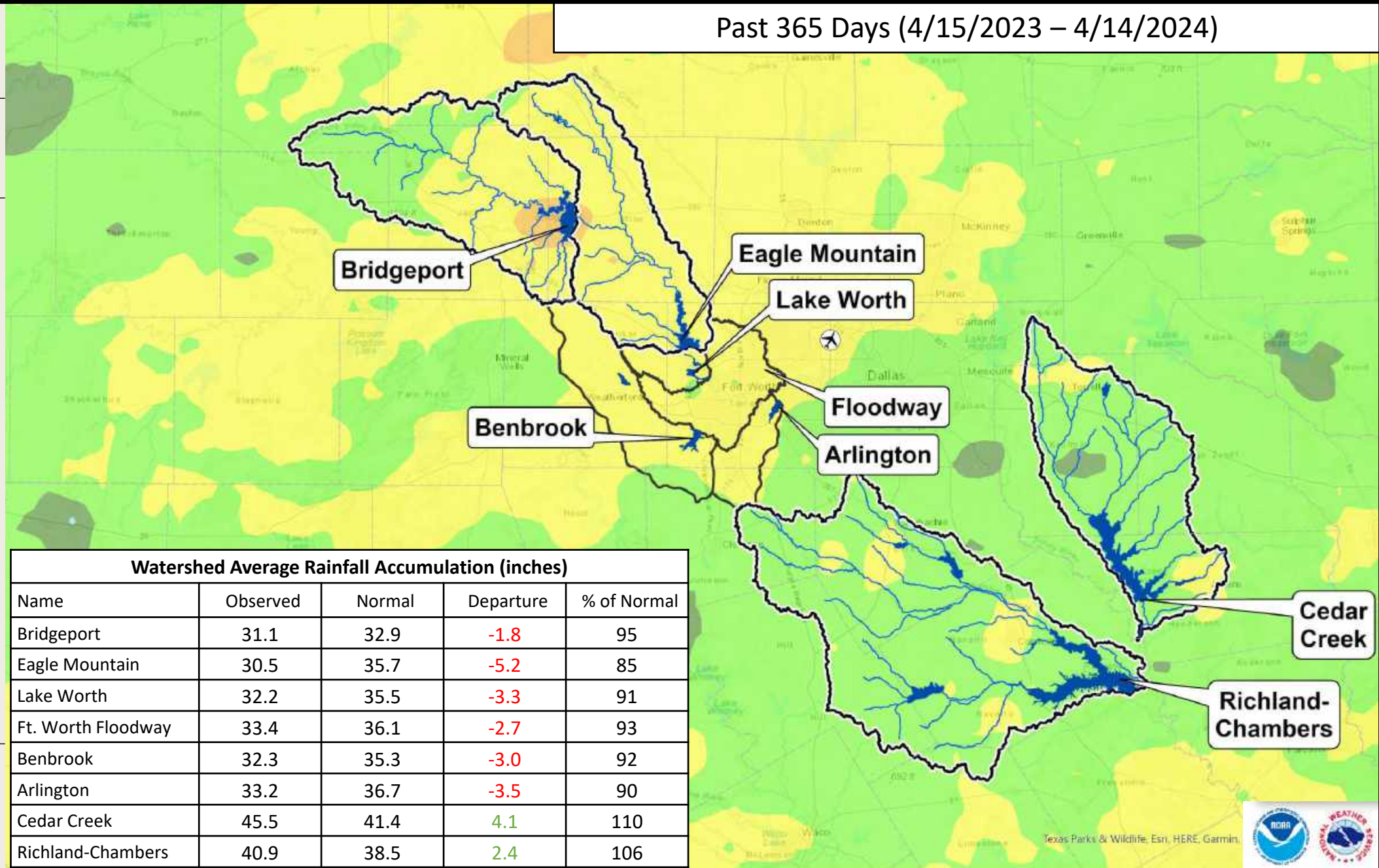
# Percent of Normal Rainfall



## LEGEND



Past 365 Days (4/15/2023 – 4/14/2024)



Watershed Average Rainfall Accumulation (inches)				
Name	Observed	Normal	Departure	% of Normal
Bridgeport	31.1	32.9	-1.8	95
Eagle Mountain	30.5	35.7	-5.2	85
Lake Worth	32.2	35.5	-3.3	91
Ft. Worth Floodway	33.4	36.1	-2.7	93
Benbrook	32.3	35.3	-3.0	92
Arlington	33.2	36.7	-3.5	90
Cedar Creek	45.5	41.4	4.1	110
Richland-Chambers	40.9	38.5	2.4	106

Precipitation totals are obtained from NOAA's NWS. The totals displayed are estimated by the WGRFC. The data is processed and displayed using ESRI ArcGIS.

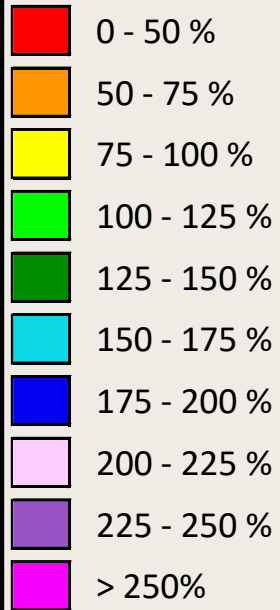
Texas Parks & Wildlife, Esri, HERE, Garmin.



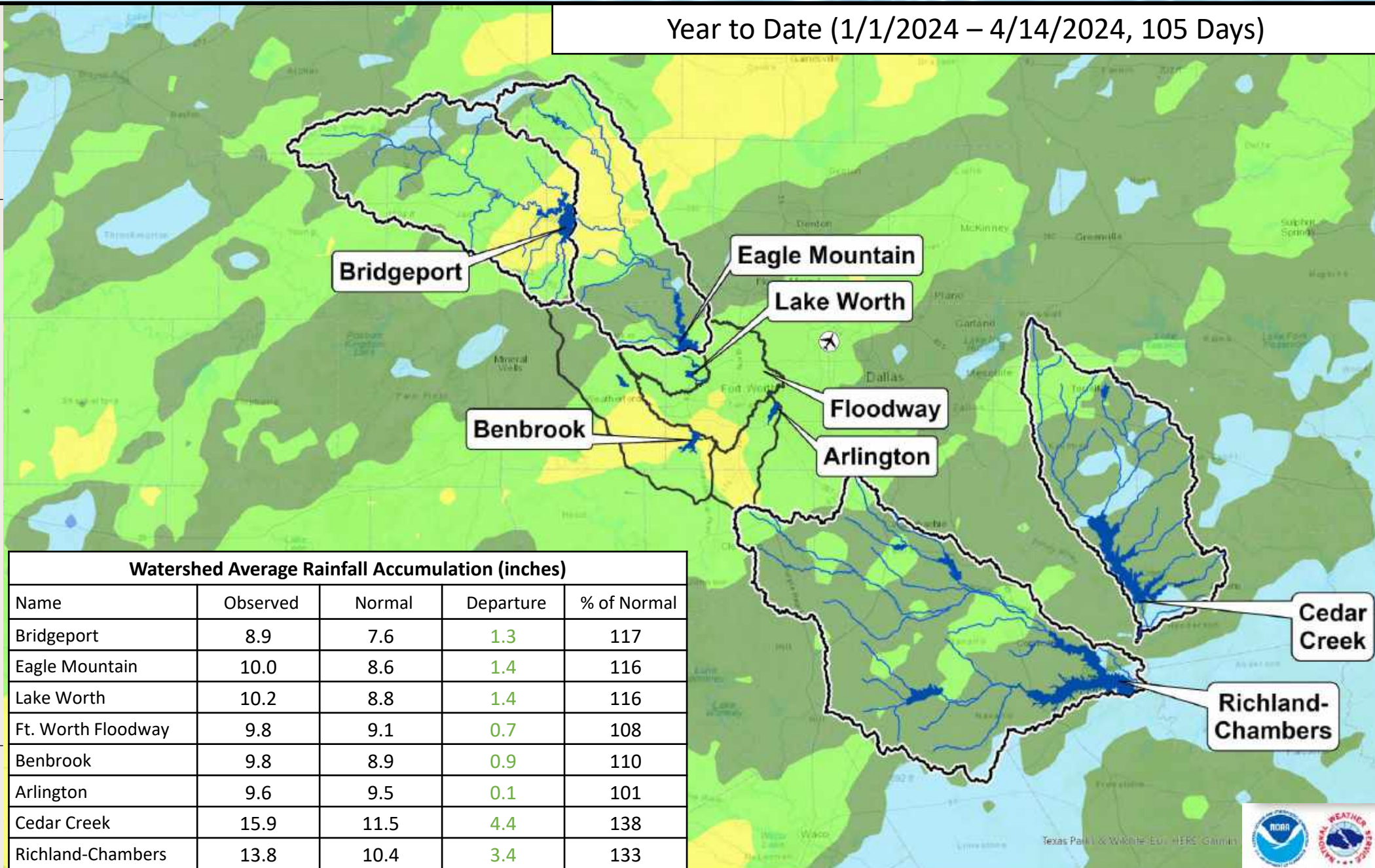
# Percent of Normal Rainfall



## LEGEND



Year to Date (1/1/2024 – 4/14/2024, 105 Days)



Watershed Average Rainfall Accumulation (inches)				
Name	Observed	Normal	Departure	% of Normal
Bridgeport	8.9	7.6	1.3	117
Eagle Mountain	10.0	8.6	1.4	116
Lake Worth	10.2	8.8	1.4	116
Ft. Worth Floodway	9.8	9.1	0.7	108
Benbrook	9.8	8.9	0.9	110
Arlington	9.6	9.5	0.1	101
Cedar Creek	15.9	11.5	4.4	138
Richland-Chambers	13.8	10.4	3.4	133

Precipitation totals are obtained from NOAA's NWS. The totals displayed are estimated by the WGRFC. The data is processed and displayed using ESRI ArcGIS.

Texas Park & Wildlife Dept. HERE Garmin



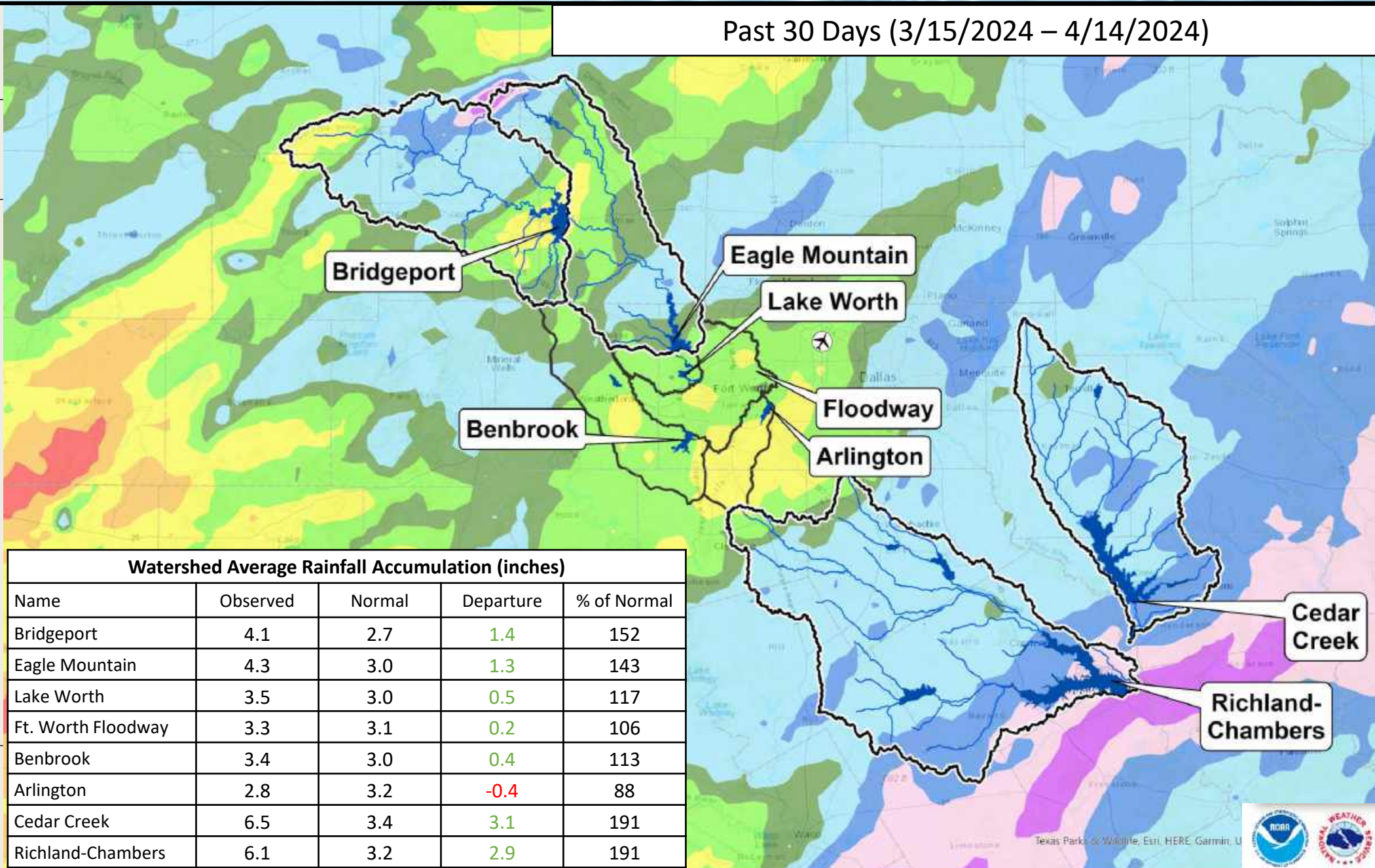
# Percent of Normal Rainfall



## LEGEND

- 0 - 50 %
- 50 - 75 %
- 75 - 100 %
- 100 - 125 %
- 125 - 150 %
- 150 - 175 %
- 175 - 200 %
- 200 - 225 %
- 225 - 250 %
- > 250%

Past 30 Days (3/15/2024 – 4/14/2024)



Watershed Average Rainfall Accumulation (inches)				
Name	Observed	Normal	Departure	% of Normal
Bridgeport	4.1	2.7	1.4	152
Eagle Mountain	4.3	3.0	1.3	143
Lake Worth	3.5	3.0	0.5	117
Ft. Worth Floodway	3.3	3.1	0.2	106
Benbrook	3.4	3.0	0.4	113
Arlington	2.8	3.2	-0.4	88
Cedar Creek	6.5	3.4	3.1	191
Richland-Chambers	6.1	3.2	2.9	191

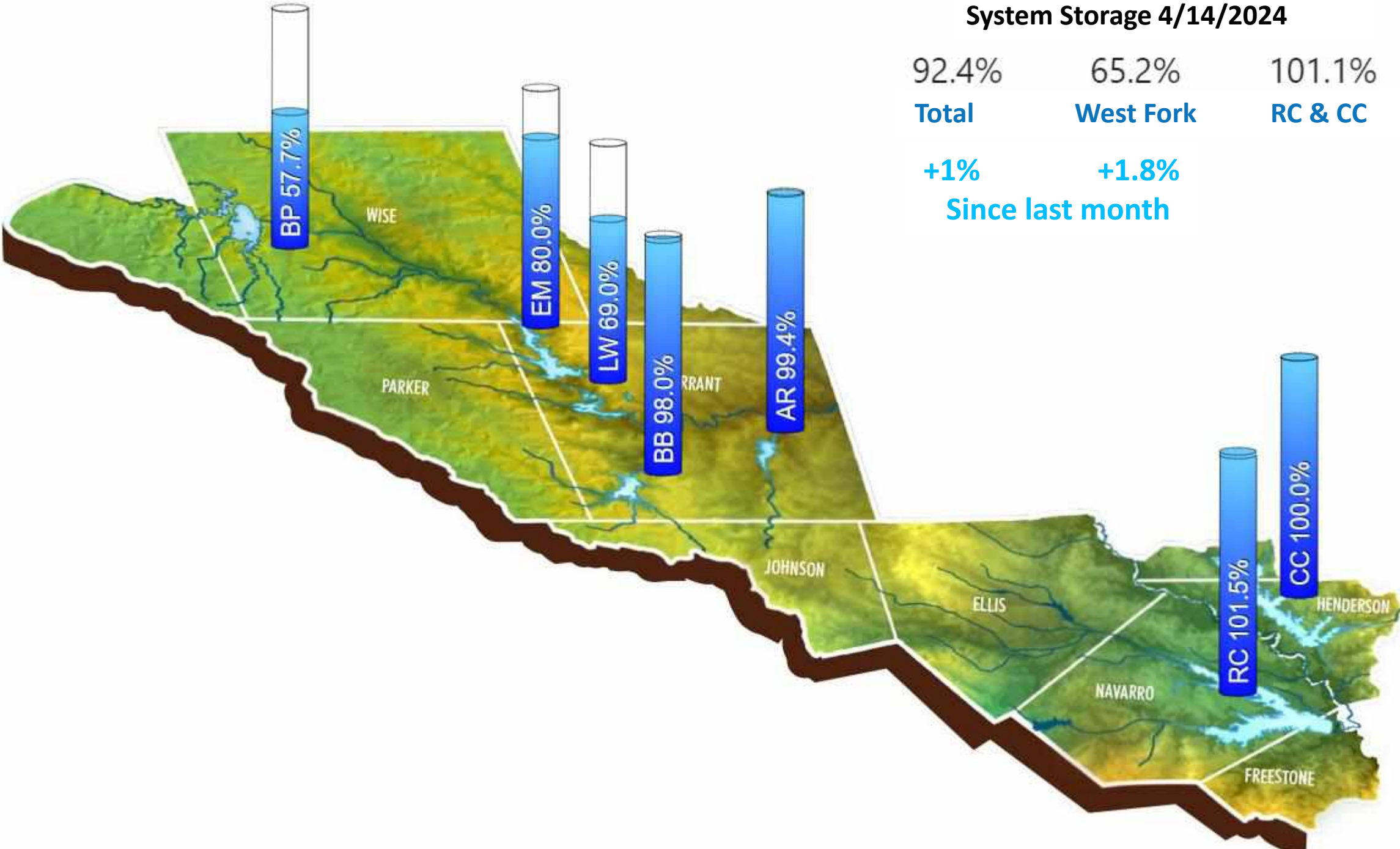
Precipitation totals are obtained from NOAA's NWS. The totals displayed are estimated by the WGRFC. The data is processed and displayed using ESRI ArcGIS.



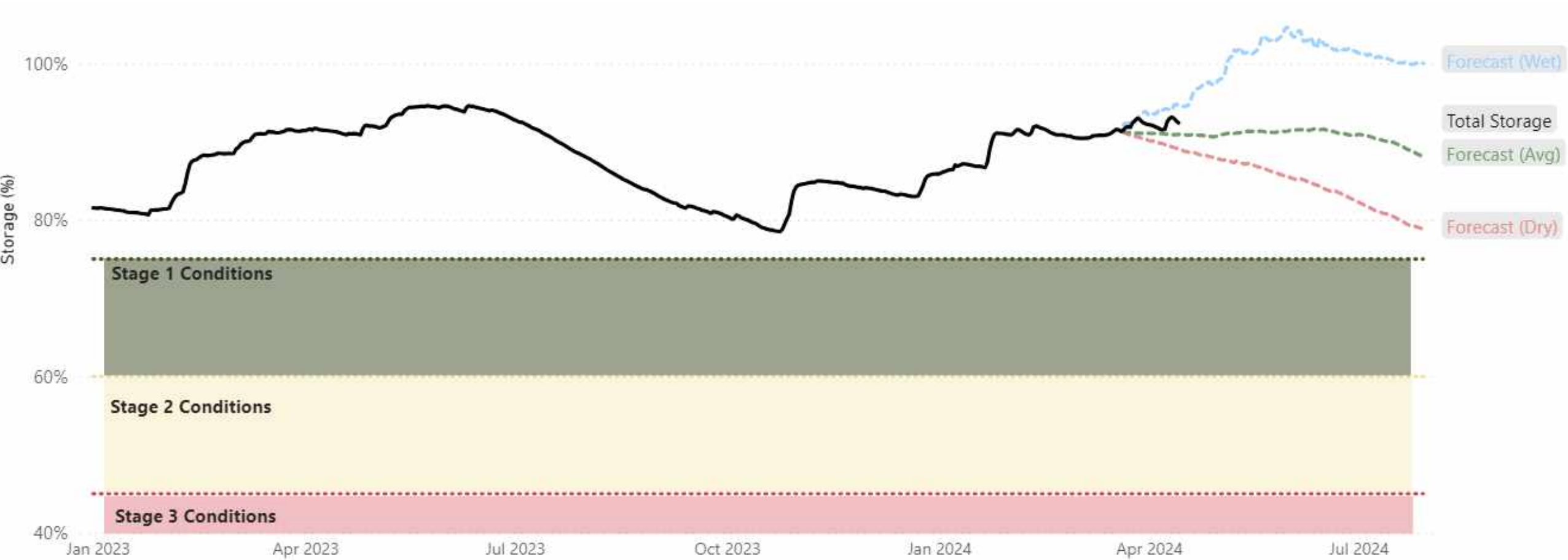
### System Storage 4/14/2024

92.4%	65.2%	101.1%
<b>Total</b>	<b>West Fork</b>	<b>RC &amp; CC</b>

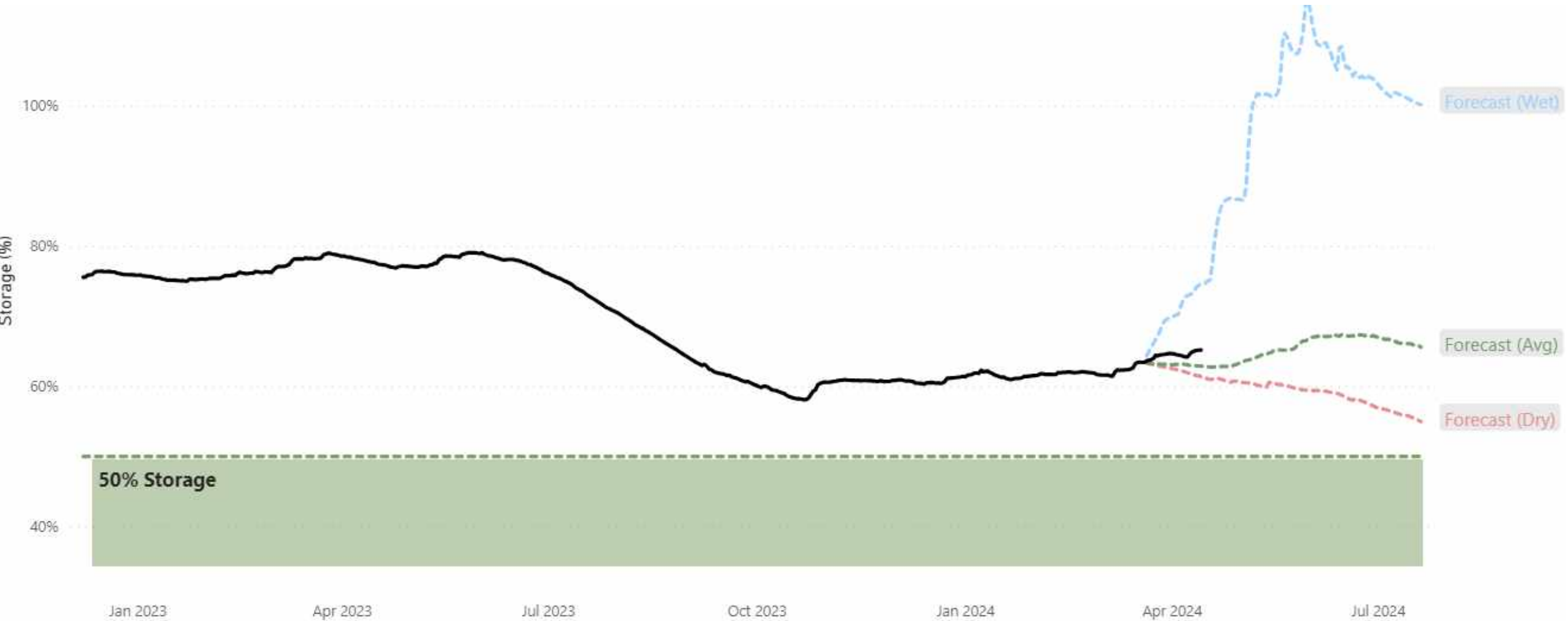
**+1%**      **+1.8%**  
**Since last month**



# Historic and Projected Total Water Supply Storage



# Historic and Projected Bridgeport + Eagle Mountain Water Supply Storage

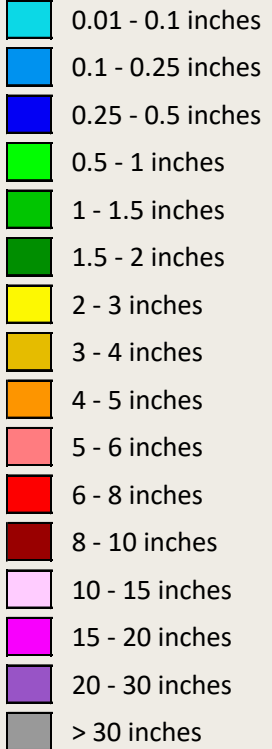




# Rainfall Forecast



## LEGEND



Precipitation forecast is obtained from NOAA's NWS and provided by the Weather Prediction Center (WPC). The data is processed and displayed using USACE Met-Vue software

**Note on QPF** - QPFs depict the amount of liquid precipitation expected to fall during a specified time period in the future. Because precipitation can vary significantly over short distances, QPFs are reported as the expected "areal average" on a 20-kilometer (12.4 mile) grid. Several factors contribute to QPF estimates, including the current state of the atmosphere, modeled pressure systems, satellite trends, and manual adjustments made by forecasters.

## 17APR2024 (WED) - 21APR2024 (SUN) Duration: 5 Days



### Main Takeaway



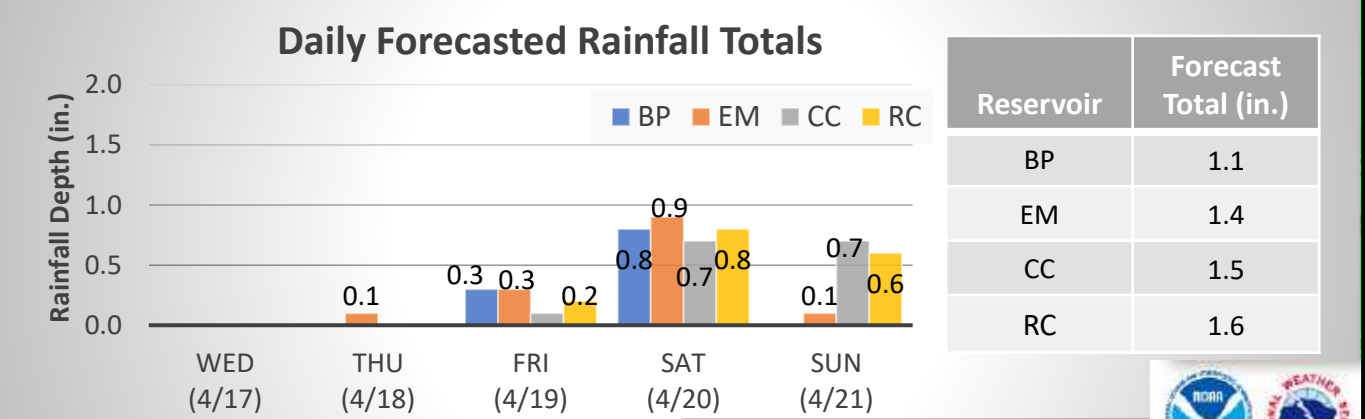
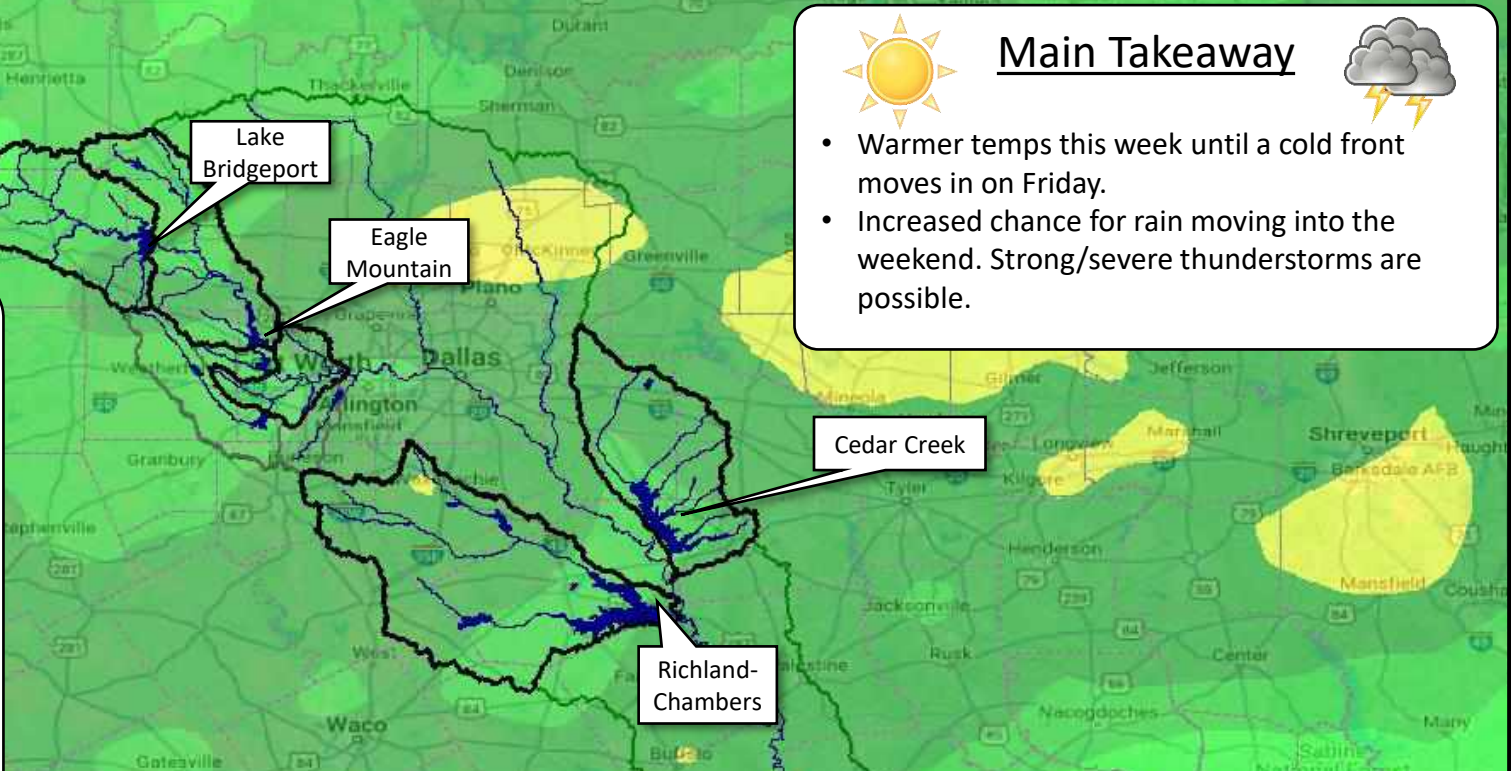
- Warmer temps this week until a cold front moves in on Friday.
- Increased chance for rain moving into the weekend. Strong/severe thunderstorms are possible.

### 8 to 14 Day Outlook

Above normal temperatures and above normal precipitation. (Apr 22- Apr 28)

**Temperature**

**Precipitation**



NWS Forecast Time: 2024-04-15 1200 GMT



Agenda Item 16:  
**Executive Session**

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Agenda Item 17:

**Consider Consent to Voluntary Annexation of 5.621 Acres of TRWD-Owned Land Described as 262 CUAD IRR CO; 1280 R M WYATT and Identified by Ellis County Appraisal District Property ID 261510 into the City of Grand Prairie, Texas**

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*Stephen Tatum, General Counsel*



Agenda Item 18:

**Consider Approval of Revised Electric Service Agreement with the Navarro County Electric Cooperative related to Settlement of Cause No: D-1-GN-23-003173, *TRWD v. Navarro County Electric Cooperative*, in the 201st District Court in Travis County, Texas**

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Stephen Tatum, *General Counsel*



Agenda Item 19:  
**Future Agenda Items**

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Agenda Item 20:  
**Schedule Next Board Meeting**

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May 21, 2024 at 9:00 AM



Agenda Item 21:  
**Adjourn**

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