



Region C Water Planning Group

February 10, 2020





ACTION ITEMS





A. Approval/Adoption of *2021
Initially Prepared Region C
Water Plan*

Kevin Ward
Region C Chair

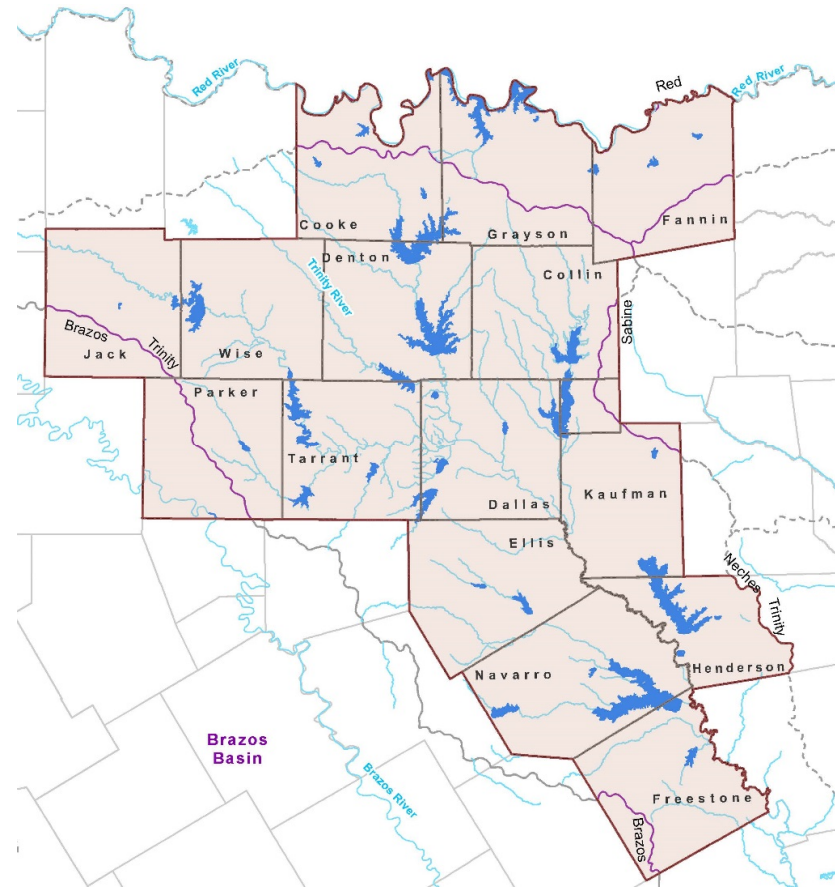


Chapter 1

Description of Region

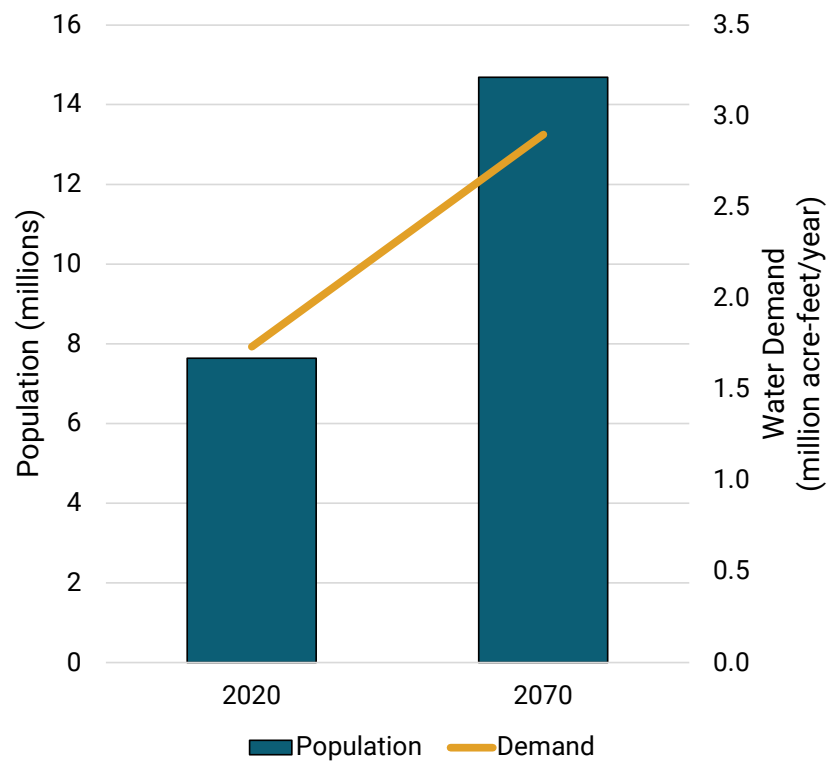
Region C at a Glance

- **2016 Population:** 7.2 Million
- **26%** of State's Population
- **31%** of State's Economy
- **9%** of State's Water Use
- **53** Cities over 20,000 population
- **90%** of Demand Met by Surface Water



Chapter 2

Population and Demand Projections

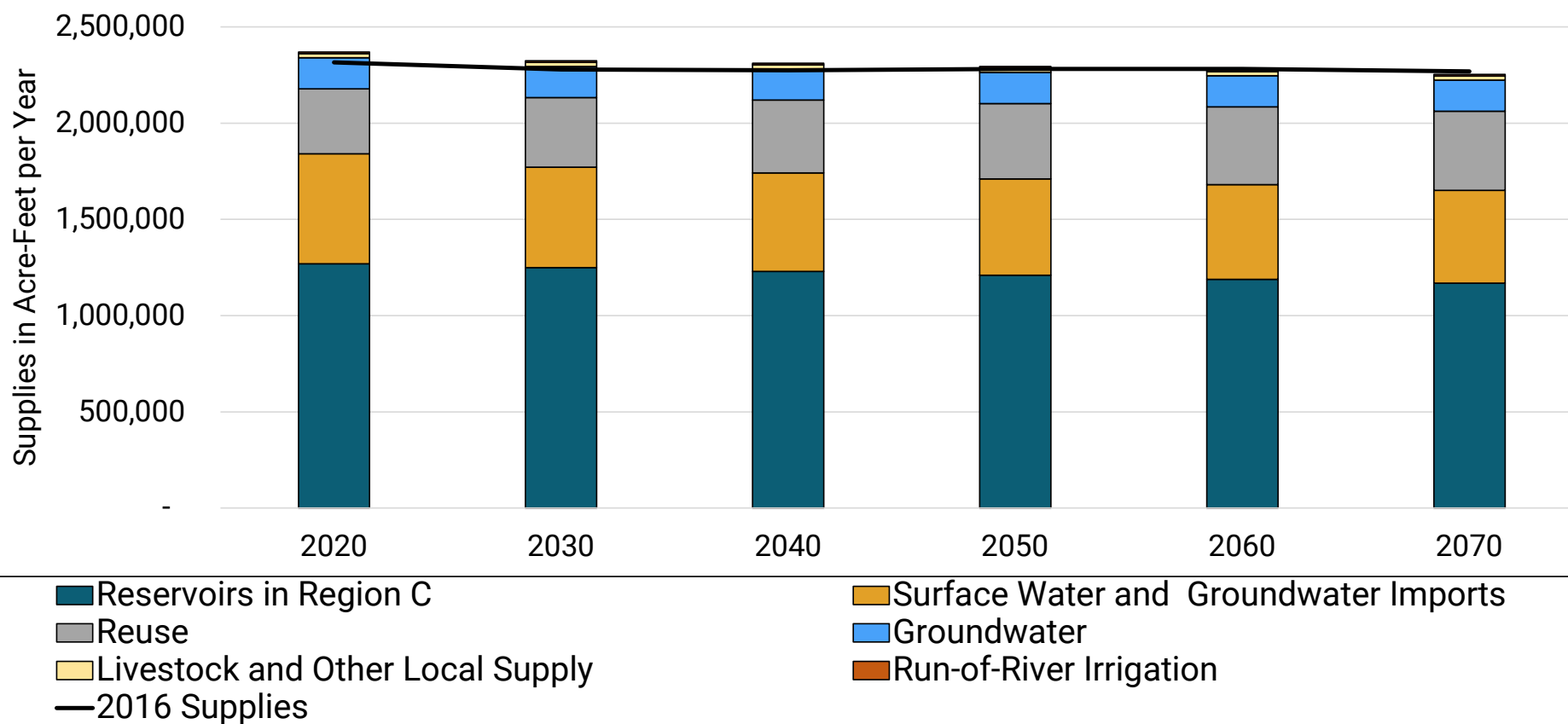


Population & Demand at a Glance

- Population almost **doubles** by 2070
- Population growing **300+ people/day**
- **90%** of Demand is Municipal
- ~25% of State's population
- 10% of State's demand

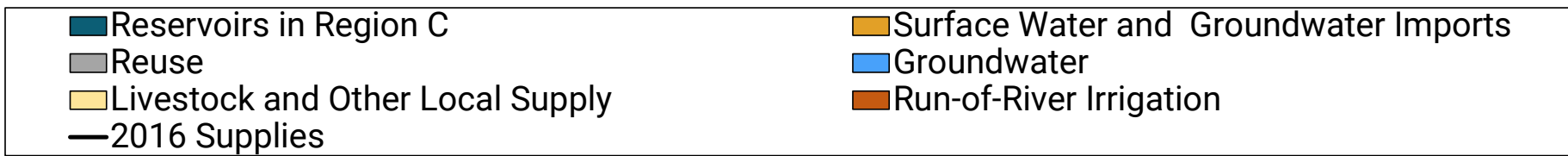
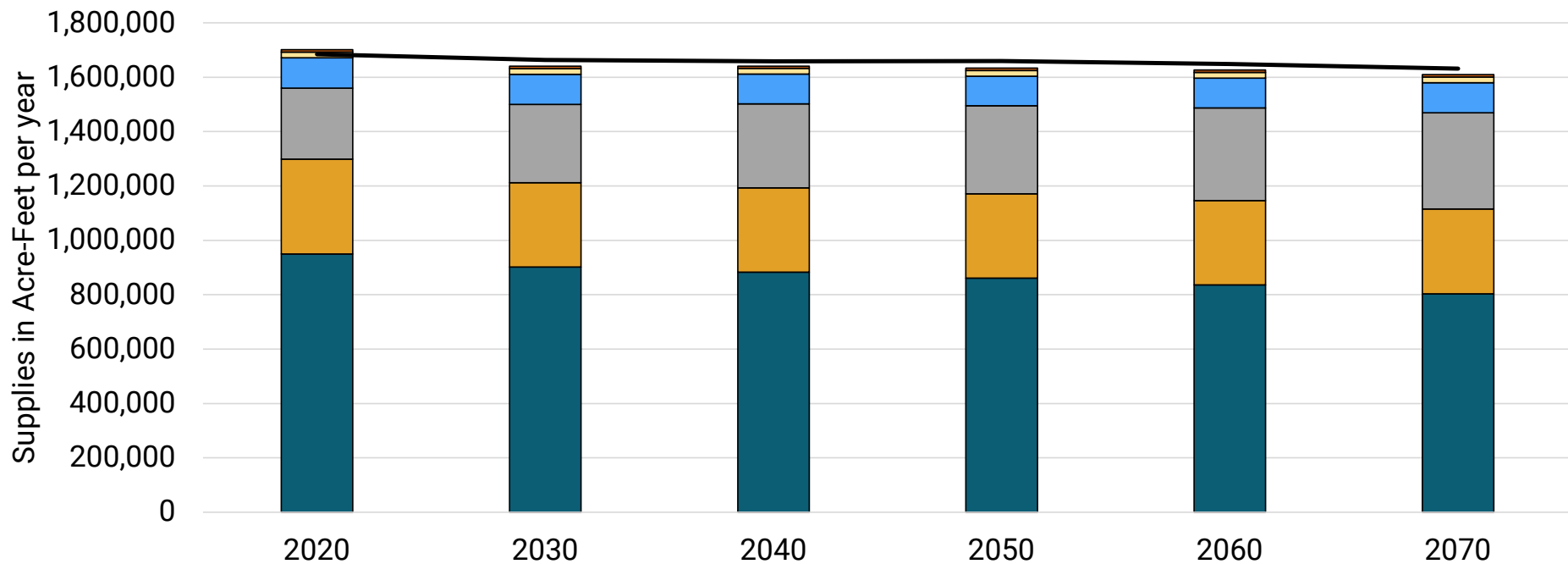
Chapter 3

Available Water Supply (Total Water Supplies)



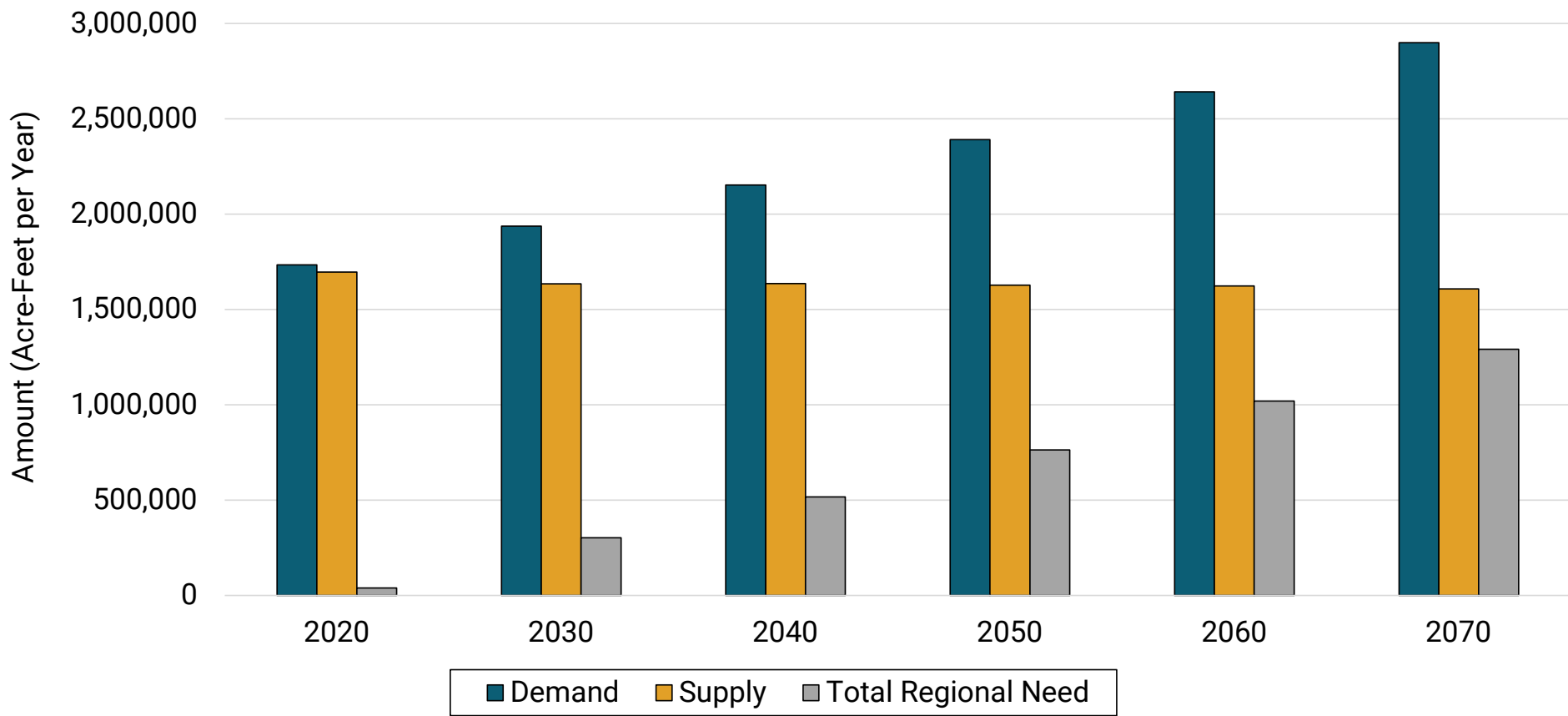
Chapter 3

Available Water Supply (Connected Supplies)



Chapter 4

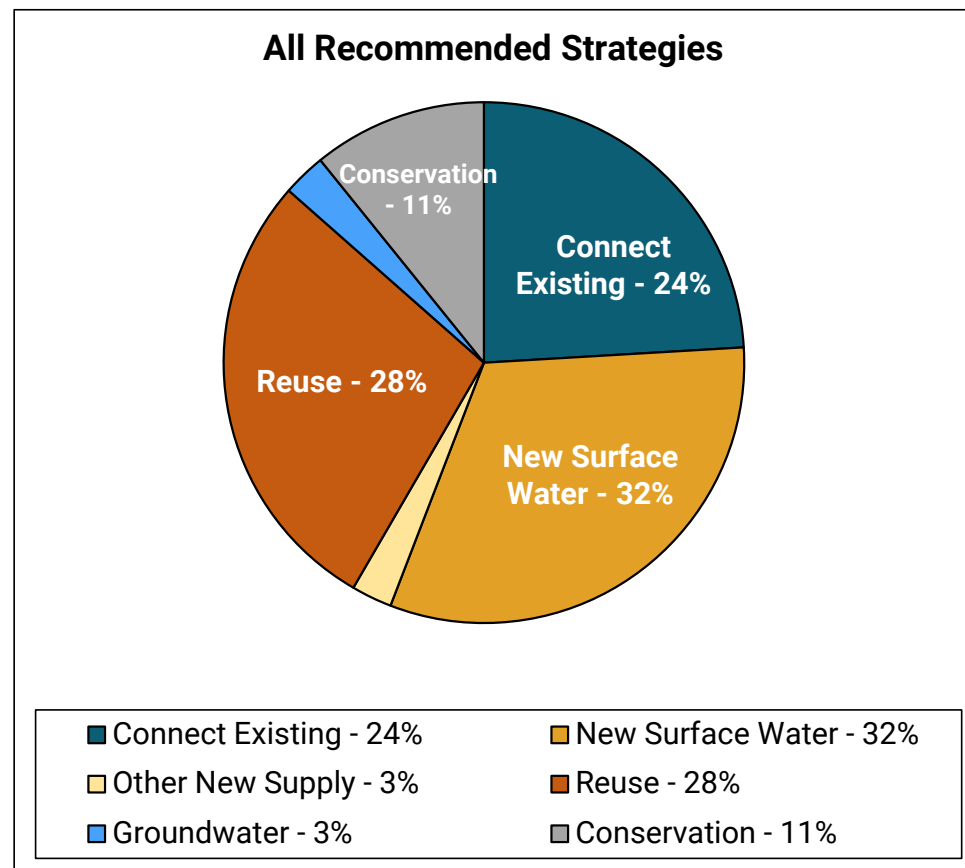
Needs



Chapter 5

Water Management Strategies

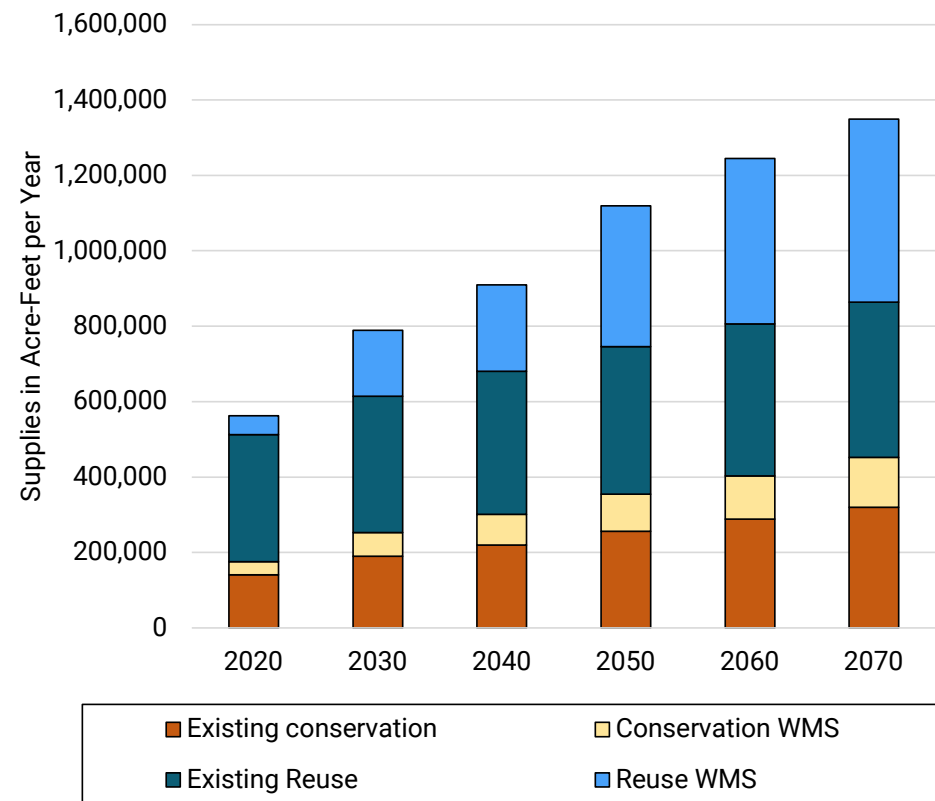
- 259 Recommended Strategies
- 35 Alternative Strategies
- Total Supply from WMS
 - 1.87 Million acre-feet per year
 - 39% Conservation and Reuse



Chapter 5

Conservation and Reuse

- Conservation and Reuse
 - 731,000 af/y existing supplies
 - 618,000 af/y future supply
- Major Reuse Strategies
 - Main Stem Balancing Reservoir
 - Cedar Creek Wetlands
 - Expanded Reuse
 - TRA Sources
 - NTMWD Sources
 - UTRWD Sources

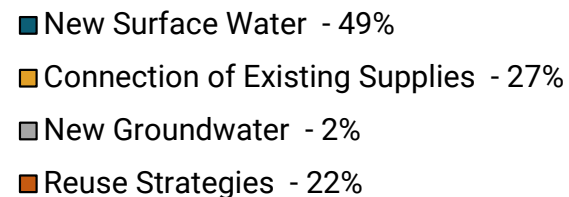
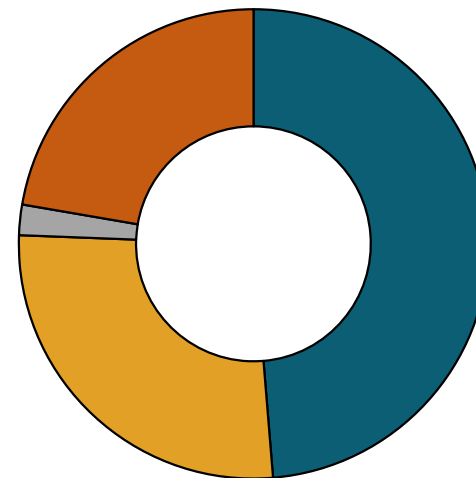


Chapter 5

Major Water Management Strategies

- Major WMS (>30,000 af/y)
 - Account for 82% of WMS Supplies
- 5 New Reservoirs:
 - Bois d'Arc Lake
 - Lake Ralph Hall
 - Marvin Nichols
 - Lake Tehuacana
 - Lake Columbia
- Major Connection Project:
 - IPL (Palestine)

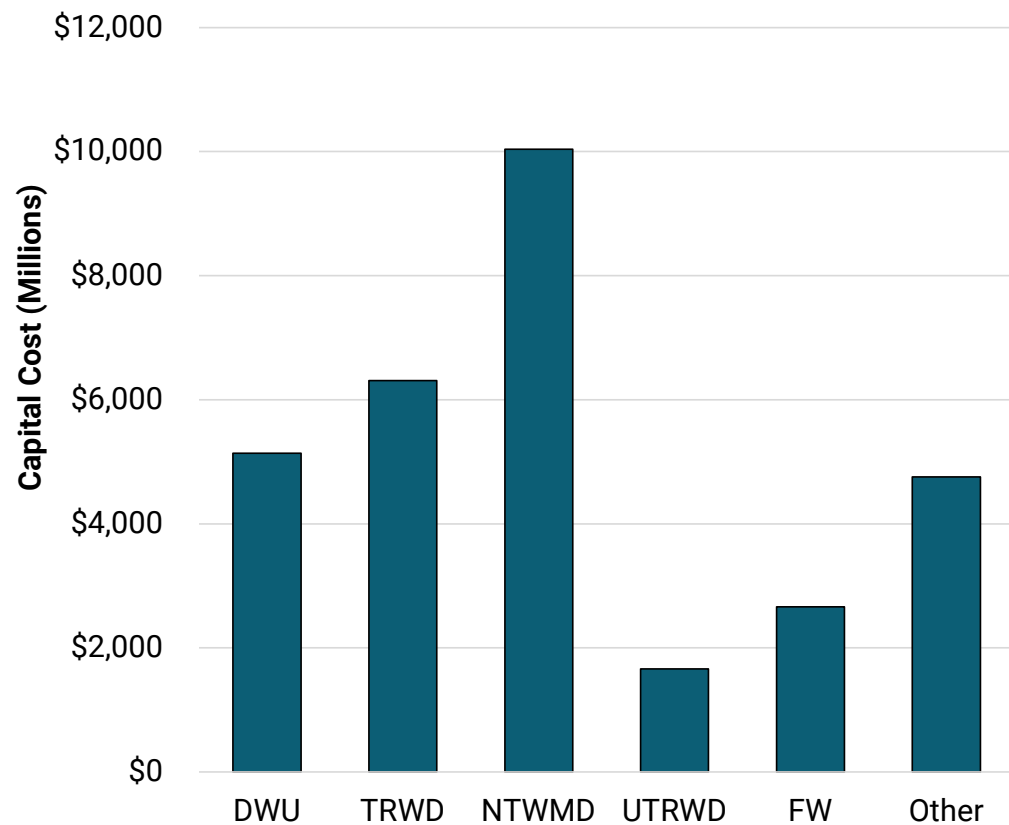
Recommended Major WMS



Chapter 5

Water Management Strategy Costs

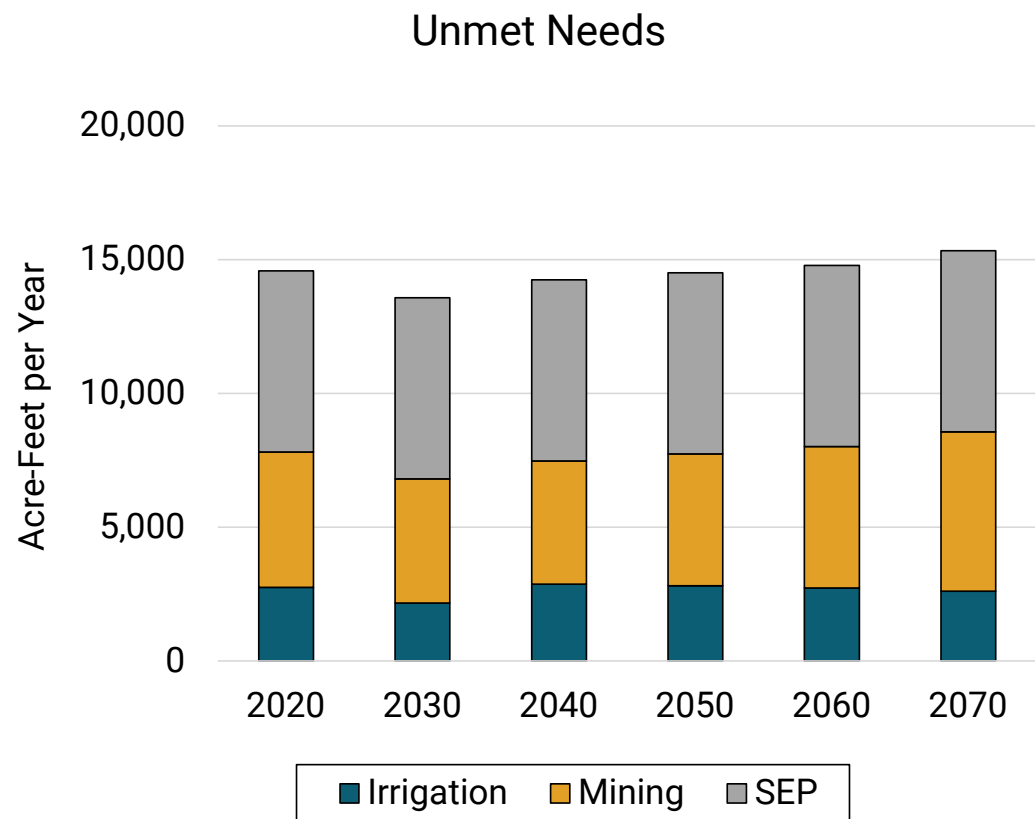
- Total Capital Cost
 - \$30 Billion
- 84% Cost is for MWWPs
- Other:
 - Regional WWPs
 - \$0.7 billion
 - WUGs/WWPs
 - \$4 billion



Chapter 5

Unmet Needs

- 7 Water User Groups
 - Irrigation
 - Ellis, Fannin
 - Mining
 - Fannin, Freestone, Kaufman, Navarro
 - SEP
 - Freestone



Chapter 6

Impacts of Strategies

- Impacts on:
 - Water Quality
 - Moving water from Rural and Agricultural areas to Urban areas
 - Third Party impacts
 - Invasive and Harmful Species
- Consistent with long-term protection of state resources
- Socio-economic impacts of not meeting water needs

Chapter 6

Impacts on Water Quality

- Selected Key Parameters
- Analyzed Water Quality
- Ranked by WMS's effect on water quality

Strategy Type	Range of Anticipated Impacts on Key Water Quality Parameters
Existing Surface Water Sources	Low to Medium
Existing Groundwater Sources	Low to Medium Low
New Surface Water Sources	Low to Medium
New Groundwater Sources	Medium Low to Medium
Direct Reuse	Low/Positive
Indirect Reuse	Medium
Conservation	Low
Other	Low

Key Water Quality Parameters Selected for 2021 Region C Plan

- Surface Water:
 - Ammonia-nitrogen
 - Nitrate-nitrogen
 - Total phosphorous
 - Chlorophyll-a
 - Total dissolved solids (TDS)
 - Chloride **NEW**
 - Sulfate **NEW**
- Groundwater
 - TDS
 - Chloride **NEW**
 - Sulfate **NEW**

Chapter 6

Impacts on Moving Water to Urban Areas

- Focused on connections to existing supplies and new reservoirs
- Types of Impacts:
 - Transfer of water rights from agricultural to other uses (none in Region C)
 - Removal of agriculture through inundation from new reservoirs
 - *Bois d'Arc Lake – 16,641 total acres*
 - *Ralph Hall – 7,568 total acres*
 - *Tehuacana – 15,000 total acres*
 - *Marvin Nichols – 66,103 total acres*
 - *Columbia – 10,133 total acres*
 - Changes in stream flow immediately downstream of a new reservoir
 - Increased water level fluctuations at existing lakes as more water is used

Chapter 6

Other Impacts

- Instream Flows
 - Environmental flow needs built into yield analyses.
- Water Level Fluctuations
 - Low impact on habitat and agricultural activities.
- Third Party
 - Recent economic studies for Bois d'Arc Lake and Marvin Nichols Reservoir show significant net economic benefit to local region
- Invasive and Harmful Species
 - Zebra mussels, giant Salvinia, golden algae
 - Specific measures are included as part of strategies to prevent migration of harmful species

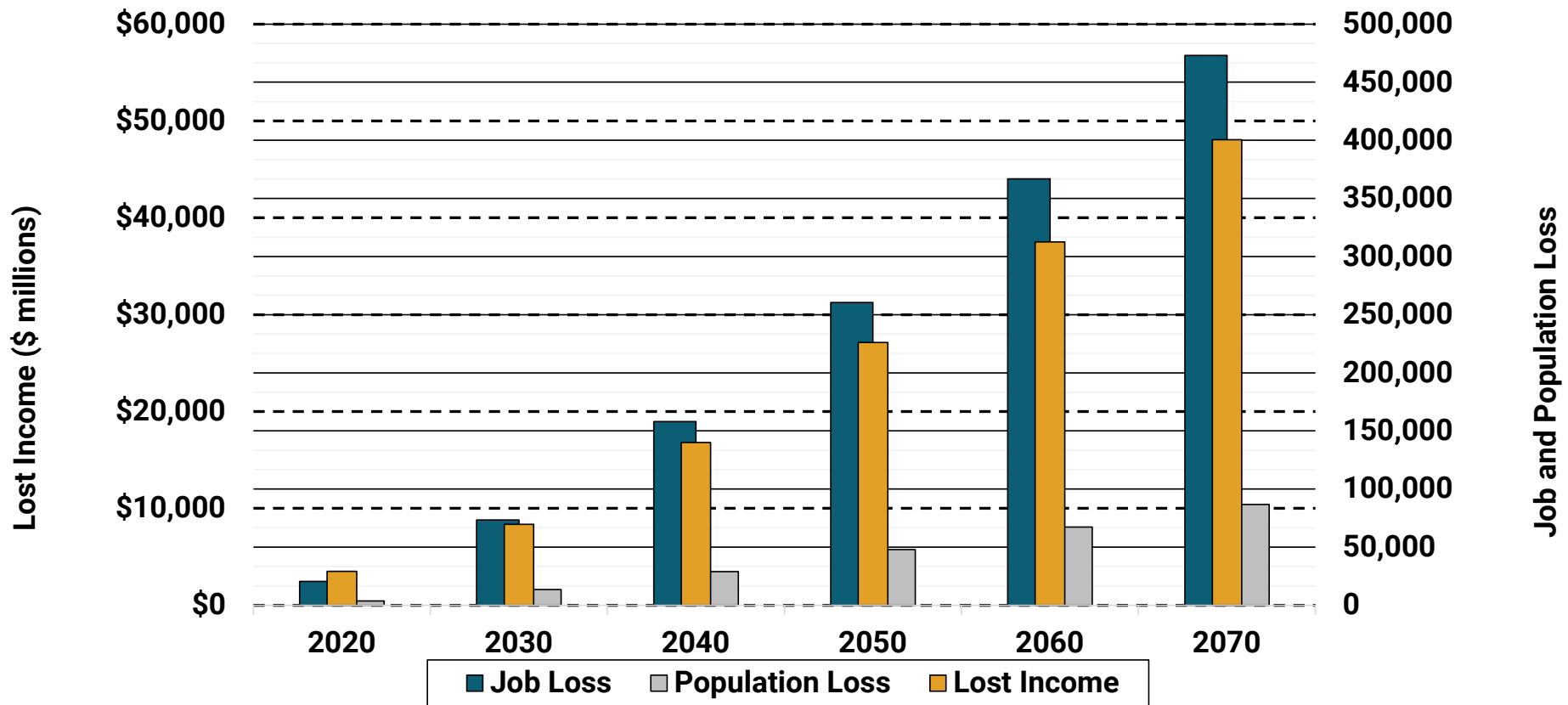
Chapter 6

Consistency with Protection of State's Resources

- Water Resources
 - Respected existing surface water rights
 - TCEQ-approved WAMs
 - Honored MAG values for groundwater
- Agricultural Resources
 - Respected existing agricultural water use
- Natural Resources
 - Identified potential impacts to natural resources
 - Considered during evaluation of each strategy

Chapter 6

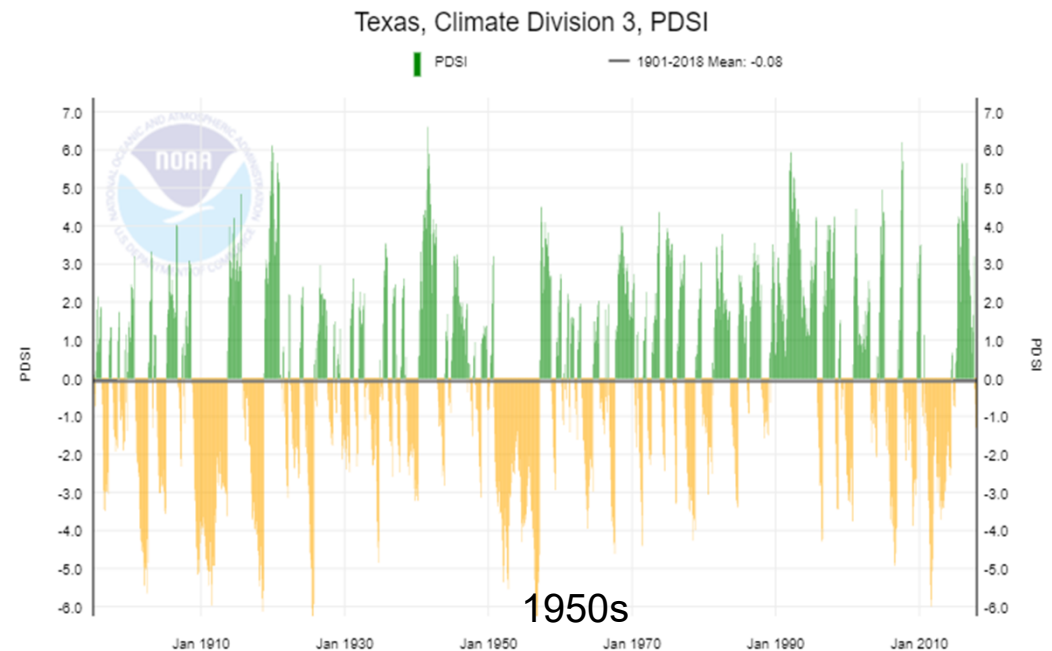
Impact of Not Meeting Needs



Chapter 7

Drought Response

- Drought of Record
 - 1950's for most
 - 2011-2015 for Sulphur Basin
 - **NEW!** Chapman yield reduced 7%
 - Sulphur Basin future reservoir yields reduced 24%
- Current Preparation for Drought
 - Regional Coordination
 - 63 Drought Plans



Chapter 7

Drought Response

- Emergency Interconnections
- Drought Triggers and Responses
 - Surface Water: Follow DCP
 - Groundwater: U.S. Drought Monitor
- Drought Management WMS
 - No official drought strategies recommended
 - Zero reliable supply
 - Not long-term savings
 - Usually not implemented until well into drought
 - Allows for safety factor in case of demand greater than expected



Chapter 8

Unique Stream/Reservoir & Legislative Recommendations

- No Unique Stream Segments Recommended
- 7 Reservoir Sites Recommended for Unique Designation

- Bois d'Arc Lake
- Lake Ralph Hall
- Marvin Nichols
- Tehuacana
- Columbia
- Fastrill
- George Parkhouse North

Currently Legislatively
Designated



Chapter 8

Unique Stream/Reservoir & Legislative Recommendations

- 24 Policy and Legislative Recommendations
 - RWP Process (7)
 - TCEQ Policy/Water Rights (2)
 - Funding (9)
 - Technical Research (1)
 - State/Federal Programs (5)



Chapter 9

Infrastructure Financing

- To be Included in Final Plan
- Survey to be conducted this summer
- Asks providers how they will pay for projects
- TWDB uses info for SWIFT planning

Chapter 10

Public Participation and Plan Adoption

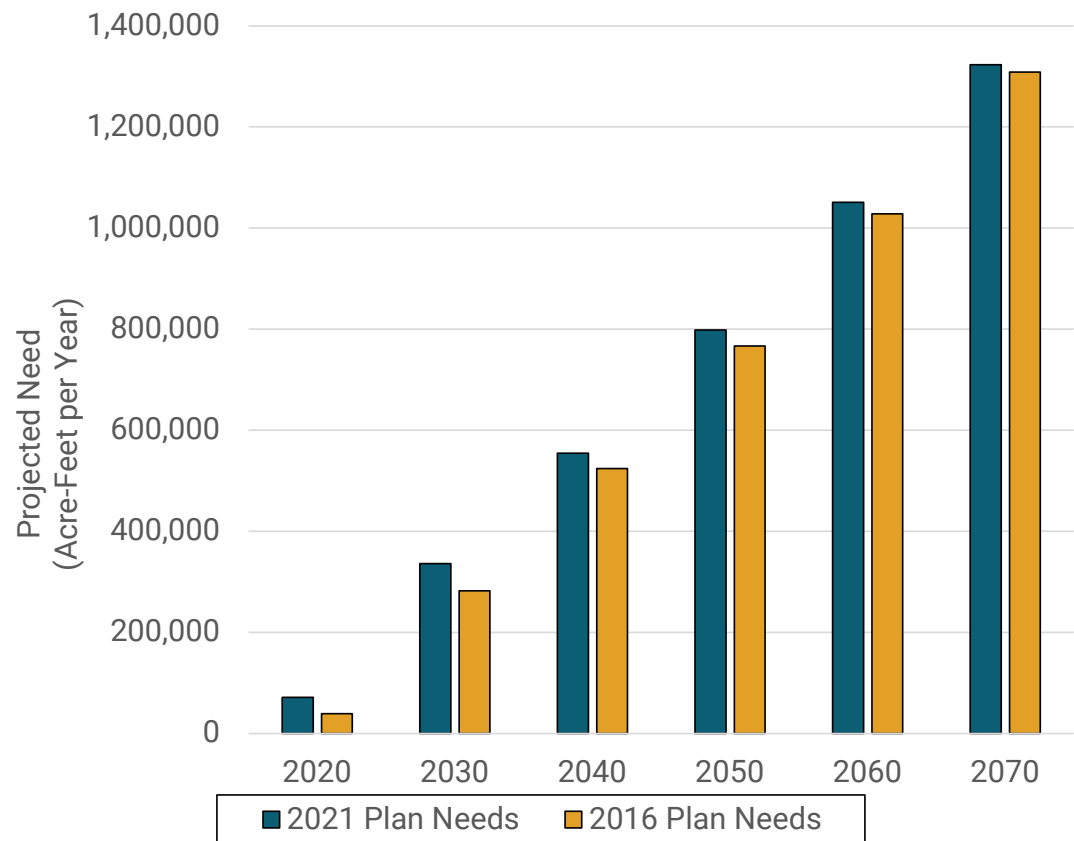
Public Participation Elements

- Outreach to the Public
 - RWPG Meetings
 - www.regioncwater.org
 - Media/ Press releases
 - Outreach to Water Suppliers
 - Surveys/Emails
 - Meetings/Teleconferences
 - Review of Published Documents
 - Outreach to Adjoining Regions
 - Region C/D Coordination
 - Regional Liaisons
 - Adoption Process
 - Public Hearing
- Region C Planning Group
 - 22 Members
 - 13 Interests
 - 10 RCWPG Meetings (to date)
 - Over 50 unique news outlets
 - Reports on Region C providers, supplies, strategies

Chapter 11

Comparison to 2016 Plan

- Similar Population, Demand, and Supplies
- ~ 50 Removed and New WUGs
- Major Water Provider Designation
- New Drought of Record in Eastern Part of State



Chapter 11

Major Strategies Changes since 2016 Plan*

- **Implemented:**

- NTWMD Main Stem Pump Station, TRA Central WWTP Reuse diversion to East Fork Wetlands, & Dredge Lavon Lake
- Tarrant Regional WD Integrated Pipeline

- **Changed:**

- More Conservation (including twice/week water restrictions)
- Marvin Nichols and Wright Patman stand-alone
- TRA Central WWTP Reuse to different uses
- Dallas/NTWMD – Elm Fork Swap
- Toledo Bend – moved to 2080

**Not exhaustive list*



Chapter 11

Major Strategies Changes since 2016 Plan*

- **New:**
 - GTUA - Regional Water System
 - TRWD - Purchase reuse water from TRA Central WWTP
 - TRWD - Groundwater
 - Sherman - Connection to Collin-Grayson Municipal Alliance
 - Sale of 10 MGD to Region G entity (Cleburne)
 - Multiple Providers - Additional Reuse and ASR

**Not exhaustive list*



Approve/Adopt IPP

- Consider approval of posted IPP, with:
 - Minor formatting or editorial changes
 - Addition of database tables
 - Addition of ongoing Socio-Economic Study on Impacts of Marvin Nichols Reservoir (Attachment to Appendix J); study to be complete in early April
 - Singular list of Potentially Feasible Water Management Strategies (Appendix F, currently in table format by county)



D. Update on Region C-D Coordination

Kevin Ward
Region C Chair



C-D Coordination

- Subcommittees met for a 3rd time on January 14, 2020
- Proposed Agreements presented by both regions
- No agreements made thus far



DISCUSSION ITEMS





A. Infrastructure Financing Survey and Report

Freese and Nichols, Inc.



Infrastructure Financing Survey and Report

- Purpose – assist TWDB in planning for SWIFT funding
- Process –
 - Consultants have entered all strategies and projects into TWDB's database
 - TWDB will generate a survey using database
 - Survey will be sent to all water providers who have strategy/project with capital cost
 - Survey asks if/when SWIFT funding will be needed
 - Consultants to tabulate survey responses into Chapter 9



B. Prioritization Task

Freese and Nichols, Inc.



Prioritization

- Purpose – assist TWDB in prioritizing SWIFT funding
- Process –
 - Consultants have entered all strategies and projects into TWDB's database
 - TWDB will generate list of strategies/projects using database
 - Regional Chairs developed scoring system (in 2011)
 - Consultants to use scoring system to score/rank projects

Prioritization Scoring System

- Max Score = 1000
- 5 Categories of Questions
 - Decade of Need (40%)
 - Project Feasibility (10%)
 - Project Viability (25%)
 - Project Sustainability (15%)
 - Project Cost Effectiveness (10%)

Criteria 1 - Decade of Need

(40% or 400 Points)

- *1A - What is the decade the RWP shows the project comes online?*
- *1B - In what decade is initial funding needed?*

Criteria 2 – Feasibility

(10% or 100 Points)

- *2A - What supporting data is available to show that the quantity of water needed is available (models, etc)?*
- *2B - If necessary, does the sponsor hold necessary legal rights, water rights and/or contracts to use the water that this project would require?*
- *2C - What level of engineering and/or planning has been accomplished for this project?*
- *2D - Has the project sponsor requested (in writing for the 2021 Plan) that the project be included in the Regional Water Plan?*

Criteria 3 – Viability

(25% or 250 Points)

- *3A - In the decade the project supply comes online, what is the % of the WUG's (or WUGs') needs satisfied by this project?*
- *3B - In the final decade of the planning period, what is the % of the WUG's needs satisfied by this project?*
- *3C - Is this project the only economically feasible source of new supply for the WUG, other than conservation?*
- *3D – Does this project serve multiple WUGs*

Criteria 4 – Sustainability

(15% or 150 Points)

- *4A – Over what period of time is this project expected to provide water?*
- *4B – Does the volume of water supplied by the project change over the regional water planning period?*

Criteria 5–Cost Effectiveness

(10% or 100 Points)

- *5A – What is the expected unit cost of water supplied by this project compared to the median unit cost of all other recommended strategies in the region's current RWP?*



C. Schedule Update

Amy Kaarlela
Freese and Nichols, Inc.



Schedule

- IPP Due to TWDB – March 3, 2020
- Distribution of plan to county clerks and libraries
- Public Hearing – May 13, 2020; 6pm, Bob Duncan Center, 2800 Center Street, Arlington
- Public comments deadline, 60 days after Public Hearing
- State Agency comments deadline, 90 days after Public Hearing
- Final Plan Due to TWDB – October 14, 2020, including:
 - Infrastructure Financing Report
 - Prioritization of Projects in 2021 Plan



Other Discussion

- A. Updates from the Chair
- B. Report from Regional Liaisons
- C. Report from Texas Water Development Board



Region C TWDB Update Feb 10, 2020

Recent Communications from TWDB

- Potential Interregional Conflict Letter (January 13, 2020)
- Interregional Planning Council Status (January 17, 2020)
- Items for Administratively Complete IPP (January 21, 2020)
- RWPG Chairs Conference Call (January 27, 2020)
- RWP grant funding letter (January 28, 2020)
- Interactive SWP info sheet (January 30, 2020)



Other Discussion

- D. Report from Texas Department of Agriculture
- E. Report from Texas Parks and Wildlife Department
- F. Report from Texas State Soil & Water Conservation Board
- G. Other Reports





Other Discussion

- H. Confirm Date and Location of Next Meeting
- I. Public Comments





Adjournment





Thank you for attending.

Materials are available at
www.regioncwater.org

