

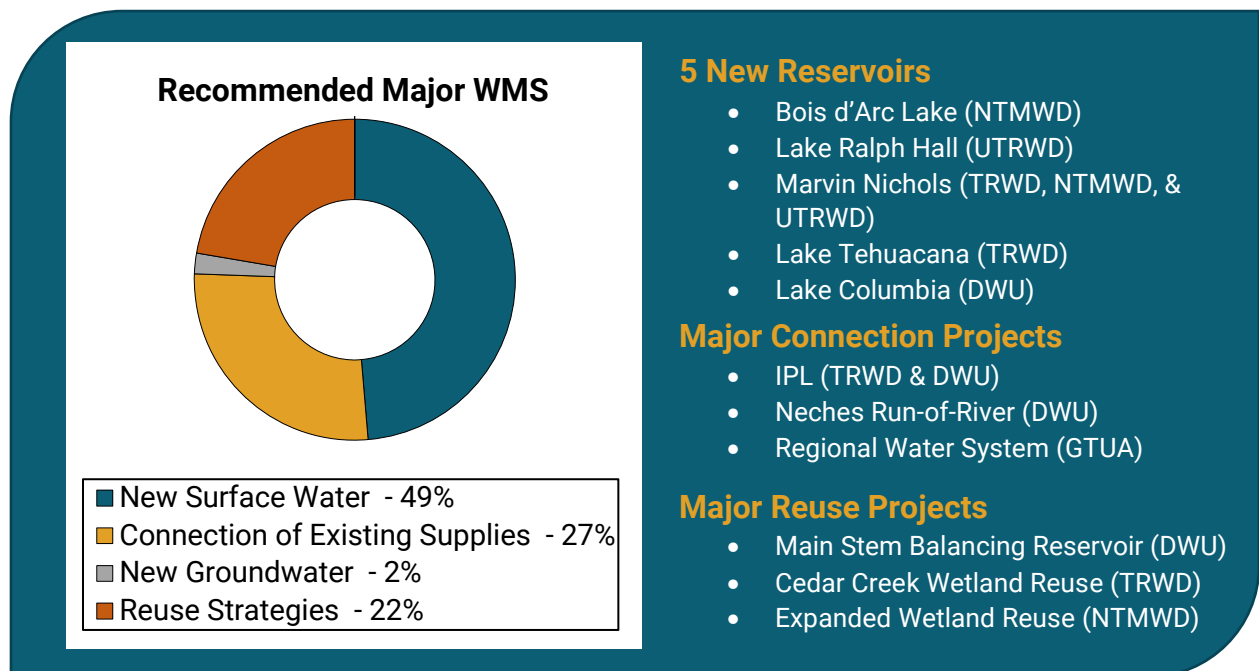
# 5F Chapter 5 Summary

## 5F.1 Chapter 5 Summary

**Chapter 5** presents the water management strategies (WMS) that were evaluated to meet the identified water needs in Region C for the 2021 Regional Water Plan. Municipal demands make up most of the Region C demands and most of the recommended WMS meet the increased municipal demands associated with the projected population growth in the coming decades.

Conservation and reuse are extremely important in Region C. The region has already made great strides in reducing water demands and expects to further reduce demands in the future. In addition to previous conservation savings and projected savings included in demand projections, conservation strategies will reduce demand by over 200,000 acre-feet per year by 2070. However, these demand reductions are not enough to meet the water needs caused by the region’s growing population. Development of new supplies will be required, and infrastructure projects are needed to connect to existing and future water sources.

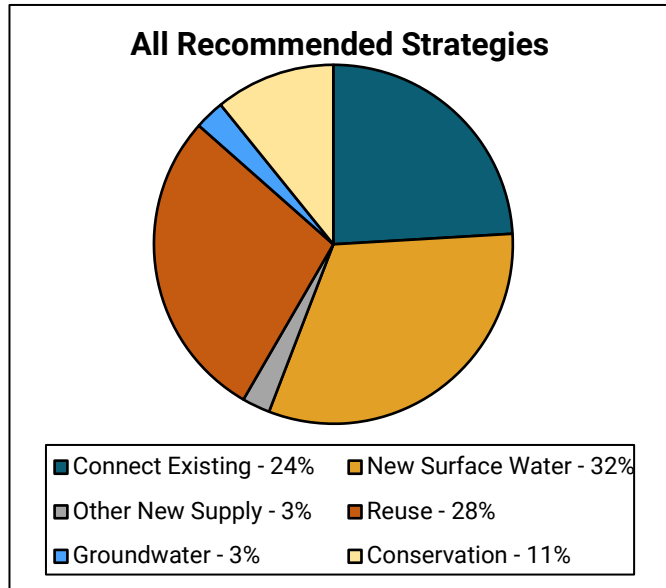
Most of the additional supply for Region C will be developed by the Region’s major water providers (DWU, NTMWD, TRWD, UTRWD, TRA, and Fort Worth), and major water management strategies (generally, strategies that provide 30,000 acre-feet per year or more) account for about 82% percent of the total additional supplies for the region.



There are over 250 recommended strategies and 35 alternative strategies for Region C providers. The greatest amount of new supplies for Region C will be developed from surface water, reuse and connecting to existing sources.

In total, by 2070 Region C is expected to conserve over 200,000 acre-feet per year and develop over 1,670,000 acre-feet per year of new supplies.

**Table 5F.1** shows the recommended strategy volumes by strategy type for the region. **Table 5F.2** shows the capital cost of strategies.



**Table 5F.1 Recommended Strategy Volumes by Strategy Type**

WWP or WUG	Values in Ac-Ft/Yr					
	Connect Existing Supplies	New Surface Water	Other New Supplies	Reuse	Ground-water	Conservation
DWU	101,555	56,000	47,250	158,388		72,870
Fort Worth				14,527		32,591
NTMWD	230,119	285,124		76,290		44,428
TRWD	56,676	188,594		188,762	37,000	68,958
TRA						2,985
UTRWD	8,848	65,060		31,469		8,487
GTUA	35,872					4,418
Corsicana	11,210					847
Counties <sup>a</sup>	6,230			55,003	12,893	202,676
<b>Totals</b>	<b>450,510</b>	<b>594,778</b>	<b>47,250</b>	<b>524,439</b>	<b>49,893</b>	<b>202,676</b>

<sup>a</sup>Counties include all wholesale water providers or water user groups that are not major or regional water providers.

**Table 5F.2 Recommended Strategies Capital Costs**

WWP or WUG	Capital Cost Including Conservation	Capital Cost Without Conservation
Dallas	\$5,136,772,907	\$5,119,839,000
Fort Worth	\$2,190,881,589	\$1,995,030,000
NTWMD	\$10,035,421,000	\$10,035,421,000
TRWD	\$6,310,640,000	\$6,310,640,000
TRA	\$0	\$0
UTRWD	\$2,142,573,000	\$2,142,573,000
GTUA	\$589,173,000	\$589,173,000
Corsicana	\$103,736,621	\$103,116,000
<b>Total</b>	<b>\$26,509,198,117</b>	<b>\$26,295,792,000</b>
Counties <sup>a</sup>	\$4,038,120,107	\$3,705,547,000
<b>Totals</b>	<b>\$30,333,912,107</b>	<b>\$30,001,339,000</b>

<sup>a</sup>Counties include all wholesale water providers or water user groups that are not major or regional water providers.

### 5F.1.1 Unmet Water Needs

Region C worked closely with water providers to meet the projected needs identified in the plan. However, there were some instances where the projected needs could not be met. In most cases this was because there are insufficient groundwater resources to meet projected irrigation and mining demands. TWDB rules require the use of Modeled Available Groundwater (MAG) supplies for regional planning, and these MAG supplies were significantly less than historical use in several Region C counties. For Freestone Steam Electric Power, projected demands appear to exceed current contract and water right availability, and the facility on which the demands are based is no longer operating. Therefore, a water management strategy was not developed to meet all of the projected need. A summary of the unmet needs in the region is shown on **Table 5F.3**.

**Table 5F.3 Unmet Needs Summary**

WUG	County	Values in Ac-Ft/Yr					
		2020	2030	2040	2050	2060	2070
Irrigation	Ellis	(747)	(729)	(711)	(701)	(692)	(684)
Irrigation	Fannin	(2,243)	(2,226)	(2,210)	(2,202)	(2,194)	(2,186)
Mining	Fannin	(502)	(279)	(56)	(56)	(56)	(56)
Mining	Freestone	(4,335)	(4,103)	(4,239)	(4,274)	(4,344)	(4,570)
Steam Electric Power	Freestone	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)	(6,766)
Mining	Kaufman					(58)	(226)
Mining	Navarro	(217)	(262)	(306)	(596)	(830)	(1,100)
<b>Total</b>		<b>(14,810)</b>	<b>(14,365)</b>	<b>(14,288)</b>	<b>(14,595)</b>	<b>(14,940)</b>	<b>(15,588)</b>

## 5F.2 Texas Water Development Board Required Tables

The Texas Water Development Board requires summary tables showing specific information on all water management strategies. Those tables can be found in **Appendix D** of this report. The tables are based on information from the Texas Water Development Board online planning database (DB22) and reflect the most current information in the database at the time of the printing of this report. Due to limitations associated with DB22, Region C would like to review the DB22 data and make subsequent adjustments if there are any significant differences between DB22 and the actual strategies described in this plan. These adjustments should be allowed without TWDB requiring an errata or amendment to the plan. There may be slight numerical differences between DB22 and this printed regional water plan due to rounding associated with the regional water plan preparation and online data entry. In any instances where numbers in the regional water plan and the online planning database differ by an inconsequential amount, the data in the online planning database (DB22) shall take precedence over the associated number in the regional water plan for the purpose of development of the State Water Plan and for the purposes of TWDB financing through the State Water Implementation Fund for Texas (SWIFT) fund.