



c/o San Antonio River Authority  
P.O. Box 83998C  
San Antonio, Texas 78283-998C

(210) 227-1373 Office  
(210) 302-3692 Fax  
www.RegionLTexas.org

**EXECUTIVE COMMITTEE**

- Suzanne Scott  
*Chair / River Authorities*
- Tim Andruss  
*Vice-Chair / Water Districts*
- Gary Middleton  
*Secretary / Municipalities*
- Kevin Janak  
*At-Large / Electric Generating Utilities*
- Adam Yablonski  
*At-Large/ Agriculture*

**VOTING MEMBERS**

- Pat Calhoun  
*Counties*
- Gene Camargo  
*Water Utilities*
- Rey Chavez  
*Industries*
- Will Conley  
*Counties*
- Curt Campbell  
*GMA 9*
- Blair Fitzsimons  
*Agriculture*
- Charlie Flatten  
*Environmental*
- Vic Hilderbran  
*GMA 7*
- Russell Labus  
*Water Districts*
- Glenn Lord  
*Industries*
- Doug McGookey  
*Small Business*
- Dan Meyer  
*GMA 10*
- Con Mims  
*River Authorities*
- Kevin Patteson  
*River Authorities*
- Iliana Peña  
*Environmental*
- Robert Puente  
*Municipalities*
- Steve Ramsey  
*Water Utilities*
- Weldon Riggs  
*Agriculture*
- David Roberts  
*Small Business*
- Roland Ruiz  
*Water Districts*
- Diane Savage  
*GMA 13*
- Greg Sengelmann  
*Water Districts*
- Heather Sumpter  
*GMA 15*
- Thomas Taggart  
*Municipalities*
- Dianne Wassenich  
*Public*

April 5, 2018

Jeff Walker  
Executive Administrator  
Texas Water Development Board  
P.O. Box 13231  
Austin, Texas 78711

**RE: Adoption of Minor Amendment to the 2016 South Central Texas Regional Water Plan**

Dear Mr. Walker,

At its February 15, 2018, meeting, the South Central Texas Regional Water Planning Group (SCTRWPG) adopted the San Antonio Water System (SAWS) proposed minor amendment to the 2016 South Central Texas Regional Water Plan (RWP).

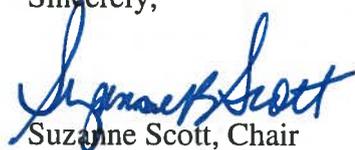
The SCTRWPG recommended the Advanced Meter Infrastructure (AMI) water management strategy as part of SAWS's water conservation goals in the 2016 RWP. However, as noted in the enclosed letter from Mr. Puente, dated October 24, 2017, the capital costs for the AMI water management strategy project were not included in the database for the 2017 State Water Plan (DB17). Therefore, the adopted minor amendment incorporates the capital cost for the AMI water management strategy project as originally portrayed in the 2016 RWP, in the DB17. Once the appropriate capital costs are added to the state database via the subsequent amendment to the 2017 State Water Plan, SAWS will be eligible to seek State funding options.

The enclosed addendum details the modifications made to the 2016 RWP. Additionally, San Antonio River Authority (SARA) staff has electronically transmitted an Excel spreadsheet containing the data necessary for updating Database 17 (DB17) to TWDB's Region L representative, Ron Ellis. For your records, please also find the enclosed updated prioritization of water management strategies included in the 2016 RWP.

On behalf of the SCTRWPG, I am requesting Texas Water Development Board adoption of a corresponding amendment to the 2017 State Water Plan to reflect the recently adopted modifications of the 2016 RWP.

Should your office require any additional information from the Planning Group related to this request, please contact Cole Ruiz (cruiz@sara-tx.org), Steve Raabe (sraabe@sara-tx.org), or me (sbscott@sara-tx.org).

Sincerely,

  
Suzanne Scott, Chair

San Antonio River Authority, General Manager

Enclosure (4):

SAWS Amendment Request to 2016 Region L Plan 10.24.2017

SAWS Minor Amendment Addendum of Modified Pages

DB17 Data Updates (transmitted electronically only)

Prioritization Updates (transmitted electronically only)

Cc:

Robert Puente, San Antonio Water Systems, President and CEO

Donovan Burton, San Antonio Water Systems, Vice President Water Resources & Government Relations

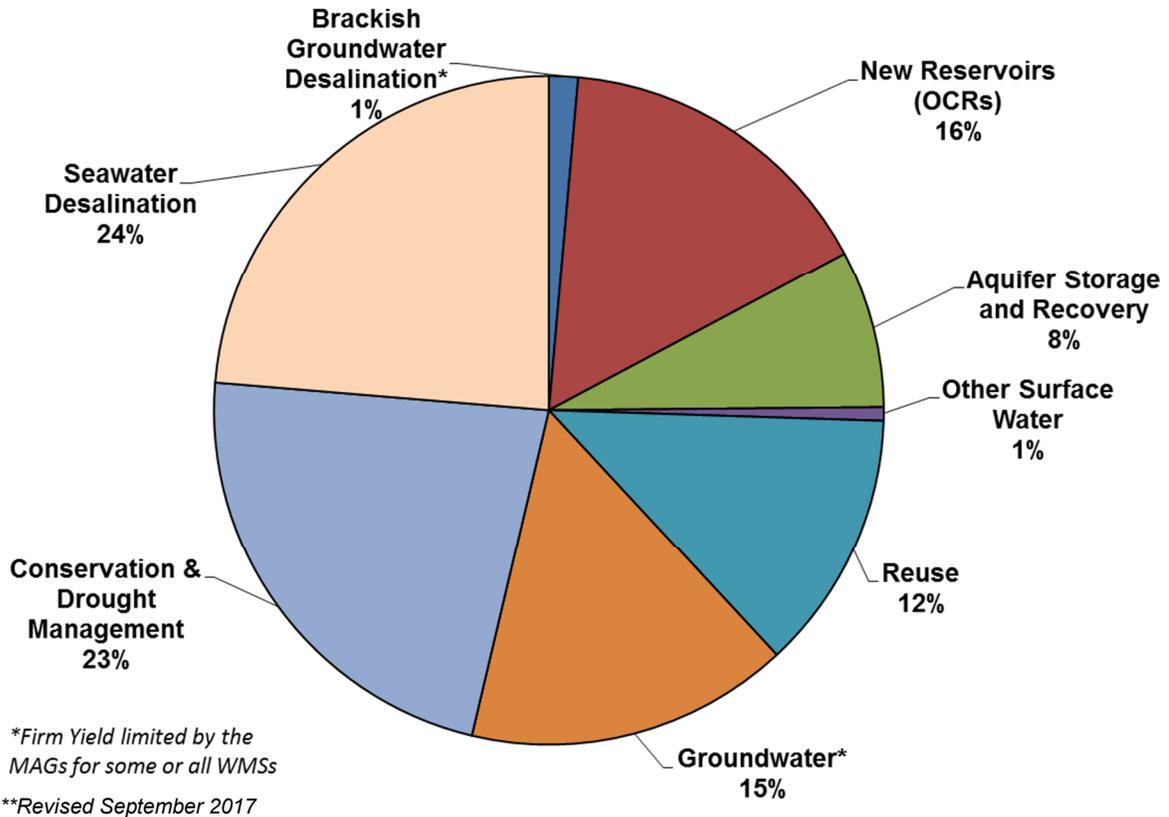
Ron Ellis, Texas Water Development Board, Regional Water Planning Project Manager

Brian Perkins, Black and Veatch, Integrated Water Supply Practice Lead

Steve Raabe, San Antonio River Authority, Director of Technical Services

recovery, groundwater desalination, seawater desalination, new off-channel reservoirs, new groundwater, and new surface water supplies. **Water management strategies recommended to meet projected needs in the South Central Texas Region could produce new supplies in excess of 787,777,000 acft/yr in 2070 and may be categorized by source as shown in [Figure ES-3](#).**

**Figure ES-3 Sources of New Supply**



Water management strategies emphasizing **conservation**, including drought management, comprise about 175,707 acft/yr (22 percent) of recommended new supplies at an estimated unit cost of \$684/acft/yr<sup>2</sup>. [This includes the SAWS Advanced Meter Infrastructure at \\$216/acft/yr.](#)

The 2016 SCTRWP includes the **reuse** in the form of the Direct Recycled Water Programs water management strategy at 97,763 acft/yr which could represent approximately 12 percent of the recommended new supplies.

Water management strategies that simultaneously develop **fresh groundwater** supplies and limit depletion of storage in regional aquifers comprise about 16 percent of recommended new supplies and include:

<sup>2</sup> \$684/acft/yr is an average cost of municipal water conservation. Actual unit costs vary from WUG to WUG and from decade to decade.

reduction in the South Central Texas Region by 96,288 acft/yr in the year 2070 at unit costs ranging from \$681 per acft/yr to \$770 per acft/yr. [One specific Water Management Strategy Project is the SAWS Advanced Meter Infrastructure.](#) Volume II, Chapter 5.2.1 includes a detailed discussion of this water management strategy.

## 5.1.2 Drought Management

The TWDB has adopted the SCTRWPG's general methodology for estimating the economic impacts associated with implementation of drought management as a water management strategy. Application of this methodology for regional water planning purposes has facilitated comparison of drought management to other potentially feasible water management strategies on a unit cost basis (Chapter 5.2.2). The SCTRWPG has found, and the San Antonio Water System (SAWS) has demonstrated, that water user groups having sufficient flexibility to focus on discretionary outdoor water use first and avoid water use reductions in the commercial and manufacturing use sectors may find some degrees of drought management to be economically viable and cost-competitive with other water management strategies. Recognizing that implementation of appropriate water management strategies is a matter of local choice, the SCTRWPG recommends due consideration of economically viable drought management as an interim strategy to meet near-term needs through demand reduction until such time as economically viable long-term water supplies can be developed. Hence, new demand reductions associated with the 5 percent drought management scenario are shown at year 2020 for each municipal water user group with projected needs for additional water supply at year 2020. A total demand reduction of 2,839 acft/yr in 2020 was calculated for 28 WUGs at an average unit cost of \$1,431/acft/yr. Volume II, Chapter 5.2.2 includes a detailed discussion of this recommended water management strategy.

## 5.1.3 Facilities Expansions

Several WUGs are interested in projects to expand major components of their existing infrastructure (facilities) so they can continue to provide a safe and reliable water supply to their customers during the planning period. These facilities expansions are considered to be independent of any potential water management strategies to acquire a new water supply, and instead are intended to address expected future improvements to the water system, such as the installation of new water transmission facilities or additional water treatment. Volume II, Chapter 5.2.3 summarizes the expansions associated with this recommended water management strategy. Eleven facilities expansion projects are identified for nine entities. The capacities of the projects range from 672 acft/yr to 84,000 acft/yr.

## 5.1.4 Direct Recycled Water Programs

The Direct Recycled Water Programs water management strategy involves direct reuse of reclaimed municipal wastewater for non-potable uses such as irrigation of golf courses, parks, and open spaces of cities, landscape watering of large office and business complexes, cooling of large office and business complexes, steam-electric power plant cooling, process or wash water for mining operations, irrigation of farms that produce livestock feed and forage, irrigation of farms that produce sod, ornamentals, and landscape plants, and for instream uses such as riverwalks and waterways. This strategy

**Table 5.4-2. Recommended Water Supply Plan for SAWS**

	<b>2020 (acft/yr)</b>	<b>2030 (acft/yr)</b>	<b>2040 (acft/yr)</b>	<b>2050 (acft/yr)</b>	<b>2060 (acft/yr)</b>	<b>2070 (acft/yr)</b>
Projected Need (Shortage)	110,677	133,837	158,902	188,236	217,630	244,956
<b>Recommended Plan</b>						
Municipal Water Conservation	15,974	10,704	6,901	7,284	8,004	2,792
EAHCP <sup>1</sup>	0	0	0	0	0	0
Brackish Wilcox Groundwater for SAWS	5,622	5,622	5,622	5,622	5,622	5,622
Expanded Local Carrizo	5,500	5,500	5,500	5,500	5,419	5,419
Vista Ridge Project	19,442	24,240	28,711	32,685	34,894	34,894
Expanded Brackish Wilcox Project	0	0	0	0	0	0
Direct Recycled Water Programs	5,000	5,000	5,000	15,000	25,000	40,000
Water Resources Integration Pipeline <sup>2</sup>	0	0	0	0	0	0
Drought Management	14,674	38,517	55,536	59,877	64,184	68,190
Advanced Meter Infrastructure	<u>5,598</u>	<u>5,598</u>	<u>5,598</u>	<u>5,598</u>	<u>5,598</u>	<u>5,598</u>
Seawater Desalination (75 MGD)	0	0	0	84,023	84,023	84,023
CPS Direct Recycle Pipeline	50,000	50,000	50,000	50,000	50,000	50,000
<b>Total New Supply</b>	<b><u>121,809</u></b>	<b><u>145,180</u></b>	<b><u>162,867</u></b>	<b><u>265,588</u></b>	<b><u>282,743</u></b>	<b><u>296,538</u></b>
<sup>1</sup> Includes all elements of the HCP (VISPO, conservation, SAWS ASR & Irrigation Transfers, and Critical Period Stage V).						
<sup>2</sup> Systems and pipelines have no associated firm yield, but are necessary to deliver new sources of supply to SAWS customers.						

Estimated costs of the recommended plan to meet the SAWS projected needs are shown in [Table 5.4-3](#) ~~Table 5.4-3~~.



**Table 5.4-3. Recommended Plan Costs by Decade for SAWS**

<i>Plan Element</i>	<i>2020</i>	<i>2030</i>	<i>2040</i>	<i>2050</i>	<i>2060</i>	<i>2070</i>
<b><i>Municipal Water Conservation</i></b>						
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—
<b><i>Advanced Meter Infrastructure</i></b>						
Annual Cost (\$/yr)	<u>\$1,209,168</u>	<u>\$1,209,168</u>	<u>\$1,209,168</u>	<u>\$1,209,168</u>	<u>\$1,209,168</u>	<u>\$1,209,168</u>
Unit Cost (\$/acft)	<u>\$216</u>	<u>\$216</u>	<u>\$216</u>	<u>\$216</u>	<u>\$216</u>	<u>\$216</u>
<b><i>Drought Management</i></b>						
Annual Cost (\$/yr)	\$5,235,016	\$25,564,017	\$49,759,715	\$53,650,066	\$57,508,305	\$61,098,462
Unit Cost (\$/acft)	\$357	\$664	\$896	\$896	\$896	\$896
<b><i>Brackish Wilcox Groundwater for SAWS</i></b>						
Annual Cost (\$/yr)	\$7,247,000	\$7,247,000	\$2,755,000	\$2,755,000	\$2,755,000	\$2,755,000
Unit Cost (\$/acft)	\$1,289	\$1,289	\$490	\$490	\$490	\$490
<b><i>Expanded Local Carrizo</i></b>						
Annual Cost (\$/yr)	\$3,850,000	\$3,850,000	\$2,541,000	\$2,541,000	\$2,504,000	\$2,504,000
Unit Cost (\$/acft)	\$700	\$700	\$462	\$462	\$462	\$462
<b><i>Vista Ridge Project</i></b>						
Annual Cost (\$/yr)	\$42,325,000	\$52,770,000	\$23,112,000	\$26,311,000	\$28,090,000	\$28,090,000
Unit Cost (\$/acft)	\$2,177	\$2,177	\$805	\$805	\$805	\$805
<b><i>Expanded Brackish Wilcox Project</i></b>						
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—
<b><i>Direct Recycled Water Programs</i></b>						
Annual Cost (\$/yr)	\$2,290,000	\$2,290,000	\$720,000	\$2,160,000	\$3,600,000	\$5,760,000
Unit Cost (\$/acft)	\$458	\$458	\$144	\$144	\$144	\$144
<b><i>Water Resource Integration Pipeline</i></b>						
Annual Cost (\$/yr)	—	—	—	—	—	—
Unit Cost (\$/acft)	—	—	—	—	—	—
<b><i>Seawater Desalination</i></b>						
Annual Cost (\$/yr)	—	—	—	\$227,949,000	\$227,949,000	\$94,849,000
Unit Cost (\$/acft)	—	—	—	\$2,713	\$2,713	\$1,129
<b><i>CPS Direct Recycle Pipeline</i></b>						
Annual Cost (\$/yr)	\$2,500,000	\$2,500,000	\$500,000	\$500,000	\$500,000	\$500,000

Unit Cost (\$/acft)	\$50	\$50	\$10	\$10	\$10	\$10
---------------------	------	------	------	------	------	------