

Semiannual Water Management Report

July-December 2015

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Water Management Semiannual Report July – December 2015

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About the cover:

A well drilling contractor performs a 24-day pump test on a Vista Ridge pilot well. Abengoa drilled four wells in 2015 to sample and test the aquifers that will supply water for the Vista Ridge project.

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Introduction

San Antonio Water System (SAWS) is pleased to present the Water Management Plan Semiannual Report to San Antonio City Council. This report is a requirement of Chapter 34 of the Municipal Code, Section 34-1349 and is submitted to City Council twice each year, covering the January through June and July through December time frames.

SAWS was created by an act of the City Council in May 1992, through Ordinance 75686. The District Special Project (DSP) was authorized in October 2011 by City Ordinance 2011-10-0845 to enable the transfer of assets, liabilities, rights, duties and obligations of the former Bexar Metropolitan Water District (BexarMet) to SAWS. Combined, SAWS and DSP serve approximately 1.74 million people which includes more than 482,000 water connections and nearly 430,000 wastewater connections. The service area covers 927 square miles primarily in Bexar County and in limited areas of Atascosa, Medina and Comal counties.

This report documents the water resources activities pertaining to the implementation of San Antonio Water System's long-term planning efforts, with focus on the period of July 1 through December 31, 2015. The report will:

- Review the progress on the Water Management Plan,
- Provide a status report on the utility's water production at year's end,
- Recap the water supplies developed and costs during the reporting period,
- Provide an update on the acquisition of additional water supplies,
- Summarize revenues generated from the water supply fee, capital spending on water supply projects, and summarize the maintenance and operational expenses for completed projects, and,
- Outline the status on the awarding of contracts.

SAWS (including DSP) had a total potable demand of 233,929 acre-feet (AF) for all of 2015. Included in this total is 186,171 acre-feet of Edwards Aquifer production. One acre-foot of water is equal to 325,851 gallons. Our 2015 Edwards Aquifer supply accounted for 80 percent of the total potable demand.

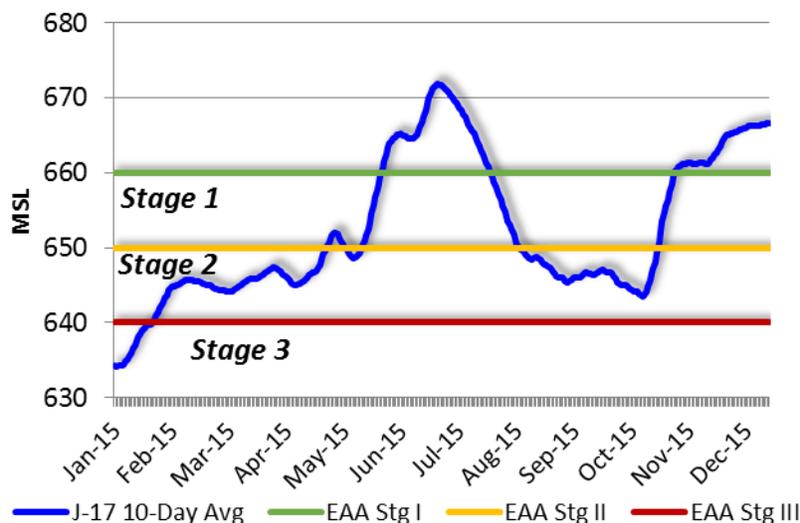
The current water supply portfolio consists of groundwater supplies from the Edwards Aquifer, the Trinity Aquifer in Bexar County, the Carrizo Aquifer in southern Bexar County and from Gonzales County for the Regional Carrizo Program. Additionally, groundwater is obtained from Carrizo Aquifer wells in Guadalupe and Gonzales counties via the Wells Ranch Project by Canyon Regional Water Authority (CRWA). SAWS surface water supplies include the Guadalupe-Blanco River Authority's Western Canyon Project (Canyon Lake), Medina Lake and River system, and CRWA's Lake Dunlap Project. In addition, SAWS maintains as part of its diversified water supply portfolio the largest direct recycled water system and the largest groundwater-based Aquifer Storage & Recovery (ASR) facility in the nation.

In 2015, SAWS experienced a 20 percent cumulative year-end regulatory cutback to its Edwards pumping permits. As a result of the community's investment in diversified water resources, water conservation programs, and adherence to applicable drought restrictions, SAWS customers were able to offset the need for deeper water restrictions.

Heavy rains during the spring of 2015 sent the Edwards Aquifer level skyrocketing. As the 10-day average water level of the aquifer went above 660 feet mean sea level (msl), SAWS advised the City Manager that it would be appropriate to end drought restrictions for the time being. Per City ordinance, the San Antonio City Manager announced the end to water restrictions effective Wednesday, June 10, 2015. The City of San Antonio had been at some level of water restrictions since 2011, and had been in Stage II restrictions since 2012. On June 25, the water level in the Edwards Aquifer J-17 monitoring well hit 673 feet elevation.

While abundant spring rains provided significant recharge for the Edwards Aquifer, levels could not be maintained during the summer as dry conditions returned. The 10-day average water level dropped to 659.5 ft msl, requiring a return to Stage I water restrictions effective on July 31. The aquifer level continued to drop quickly below 650, triggering Stage II restrictions on August 15. Hot, dry conditions persisted through August and into September. The Edwards Aquifer water levels continued a slow downward trend through October 23 when the 10-day average hit a low point of 643.6 ft msl. Heavy rains returned in late October and November, refilling the aquifer and returning water levels to Stage I by October 31. The 10-day average exceeded 660 ft msl on November 9. The San Antonio City Manager, in consultation with SAWS President/CEO, declared the end to Stage II drought restrictions effective December 2. At year's end, the aquifer level continued to rise, reaching 666.7 ft msl on December 31. Year-round watering rules were in effect at the end of 2015.

2015 Edwards Aquifer Levels



SAWS long-term planning efforts call for the implementation of four new planned water supplies (Brackish Groundwater Desalination Program, Expanded Bexar County Carrizo Aquifer, acquisition of additional Edwards Aquifer Water Rights and the Vista Ridge Project). The four supplies would add up to an additional 110,937 acre-feet per year of firm water supply by the year 2026.

- In 2014, SAWS and Abengoa officials signed a 54-inch diameter pipe to celebrate the launch of the new Vista Ridge water project. The proposal is for a long-term supply of water that will be delivered by 2020 and provide San Antonio up to an additional 50,000 acre-feet of water annually (or 20 percent of SAWS annual demand) from a non-Edwards Aquifer source. Under the proposal, Abengoa Vista Ridge has secured sufficient water rights in Burleson and Milam Counties, northeast of Austin, and will develop the wellfield and construct the pipeline to San Antonio.
- SAWS broke ground for its Brackish Groundwater Desalination (BGD) program in South Bexar County in July 2014. Construction on Phase I continued through the year and is scheduled for completion in 2016. Phase I will deliver a desalination plant capable of producing up to 12 million gallons of drinking water per day by treating moderately salty groundwater from the Lower Wilcox Aquifer.

Together, the capital costs of these four proposed projects, including the construction of the Water Resources Integration Program, would total approximately \$740 million. The new Vista Ridge project is projected to add \$147 million of capital costs to support the integration of the Vista Ridge water into the distribution system.

These four proposed projects will be funded by the Water Supply Fee, which is a multi-year funding mechanism for the development, construction and management of additional water supply. Since its implementation in 2001, the Water Supply Fee has generated over \$1.1 billion to support the expansion and diversification of SAWS' water supply portfolio. The funds generated from the Water Supply Fee have been used to fund capital investments, operating and maintenance expenses, and debt service associated with new water supply projects. SAWS' capital investment in water supply projects since 2001 totals over \$1 billion.

The timing of these planned water supplies may be altered due to revised planning assumptions as anticipated for the next Water Management Plan. Although originally scheduled for construction to begin in 2017, the Expanded Bexar County Carrizo Aquifer program has been delayed until at least 2021.

The next section of this report will discuss the status and progress of SAWS' water supply portfolio at the end of 2015.

Water Supply Summary

This section summarizes the status and activities for each water resource project for 2015.

Supply	2015 Delivery (AF)	Status
Edwards Aquifer Supplies <i>Groundwater supply</i>	186,171	<ul style="list-style-type: none"> 2015 beginning of year permit was 288,824 AF In May 2015, inventory increased to 289,101 AF through increasing the volume under lease and return of water from the Edwards Aquifer Authority's groundwater trust as part of the Edwards Aquifer Habitat Conservation Plan (EAHCP) 2015 end of year permit was 288,916 AF Regulatory cutback of 20%
Medina Lake and River System <i>Surface water supply</i>	513	<ul style="list-style-type: none"> Medina Lake was at 3.3% capacity on January 1, 2015. On July 20, the lake was at 75.6% capacity as a result of abundant spring rains. The lake levels had declined to 63.9% at year's end.
Direct Recycled Water <i>Recycled water</i>	11,599 (CPS not included) <ul style="list-style-type: none"> 6,019 (commercial/industrial customers) 5,580 (river flow) 	System total capacity: 35,000 AF <ul style="list-style-type: none"> 10,000 acre-feet assigned to CPS Energy System Supply: 25,000 AF <ul style="list-style-type: none"> o Contracted 12,999 AF o Available supply: 12,001 AF
Trinity Aquifer <i>Groundwater supply</i>	11,625	<ul style="list-style-type: none"> Delivery increased due to significant recharge during the year
Canyon Regional Water Authority <i>Surface/Groundwater supply</i>	3,893	<ul style="list-style-type: none"> Canyon Regional was working to transition its disinfection method which will allow SAWS to receive additional water in the future
Canyon Lake <i>Surface water supply</i>	9,038	<ul style="list-style-type: none"> Canyon Lake continued to deliver a steady, reliable water supply

Supply	2015 Delivery (AF)	Status
Twin Oaks Aquifer Storage and Recovery Groundwater Supply	SAWS Edwards water from ASR storage to customer: 5,840 SAWS Edwards water to storage: 9,135	<ul style="list-style-type: none"> Total stored Edwards water at year-end: 88,897 AF EAHCP Edwards water to storage totaled 12,075 AF at year-end
Carrizo Aquifer (Bexar County) Groundwater Supply	3,542	<ul style="list-style-type: none"> Production occurred January through April, and July
Regional Carrizo Program Groundwater Supply	13,307	<ul style="list-style-type: none"> Includes SAWS Buckhorn wellfield production in Gonzales County plus water purchased from Schertz-Seguin Local Government Corporation



Planned Projects (2012-2020)	Status
Additional Edwards Aquifer <i>Groundwater supply</i> (Acquisition)	<ul style="list-style-type: none"> • See comments on Current Edwards leasing/purchases above
Expanded Carrizo (Bexar County) <i>Groundwater Supply</i> (Design)	<ul style="list-style-type: none"> • Project Kickoff Meeting was held on October 24, 2014 with the design team • Aquifer modeling efforts and Phase I design were completed in 2015 • 7,000 acre-feet per year (AFY) • Current planning does not call for development prior to 2021
Brackish Groundwater Desalination Program <i>Brackish Groundwater</i> (Construction)	<ul style="list-style-type: none"> • Groundbreaking for construction of plant took place on July 2, 2014 • Construction of the treatment plant, conveyance system, and Phase I production and injection wells continued through 2015 • Plant will be on line in 2016
Abengoa Vista Ridge <i>Groundwater</i> (Contract, Design)	<ul style="list-style-type: none"> • AVR has made progress on several tasks needed to reach financial close, and kick off the construction phase. AVR has acquired virtually all rights of entry in the effort to acquire easements and finalize the pipeline alignment. • AVR's well drilling subcontractor drilled four test wells for the purpose of sampling water in the two aquifers from which water will be produced • Laboratory testing has confirmed the water is within expected parameters. • Two pilot wells were constructed and 24 to 36-day pumping tests were performed to understand the response and local characteristics of the source aquifers • AVR performed hydraulic analysis to optimally site the project's three (3) pump stations, determine the size of pipe required, and calculate electrical loads for pumping the water

Planned Mid-Term Projects (2021-2039)	Status
<p>Conservation Programming <i>Water Conservation</i></p>	<ul style="list-style-type: none"> • Programming to maintain dry year consumption at 135 gallons per capita per day (GPCD) beyond 2020 • 2015 demand was approximately 120 GPCD, largely due to a few large rainfall events
<p>Brackish Groundwater Desalination Program Phases II and III <i>Brackish Groundwater Supply</i></p>	<ul style="list-style-type: none"> • Future phases will deliver up to an additional 20,160 AFY of water, for a project total of up to 33,600 AFY • Timing of future phases may be altered due to ongoing planning that SAWS regularly conducts • Hydrologic modeling has been conducted to determine the amount of additional Wilcox Aquifer production and number of wells that could be supported • This analysis also considers the limits set by the Desired Future Conditions (DFCs) for Groundwater Management Area 13 (GMA13)
<p>Expanded Carrizo (Bexar County) Project Phases II and III <i>Groundwater Supply</i></p>	<ul style="list-style-type: none"> • Phases II and III are anticipated to provide an additional 7,000 AF annually for each phase, by 2022 and 2027. Timing and yield may be altered due to current planning process



Featured Projects

Abengoa Vista Ridge – Regional Water Supply

Project Status: Planned Project for 2012-2020; Project approved, contract signed

Water Supply: Groundwater, Carrizo and Simsboro Aquifers in Bureson and Milam Counties

Background:

Following SAWS Board approval on September 29, 2014, and San Antonio City Council's approval on October 30, 2014, Mayor Ivy Taylor, SAWS Chairman Berto Guerra, and SAWS President/CEO signed a contract with Abengoa Vista Ridge (AVR) on November 2, 2014 to bring a new water supply of 50,000 AFY (16.3 billion gallons annually) to San Antonio. The agreement calls for AVR to build and operate wells and a pipeline system to pump groundwater from Bureson County to San Antonio for a period of 30 years. In exchange, SAWS will pay a fixed unit price for water produced and made available plus all operating and maintenance costs. At the end of the contract term, the wellfield and pipeline system ownership will transfer to SAWS.

The project is divided into three phases: Development, Construction, and Operations. The contract signing initiated the Development Phase involving permitting, easement acquisition, and the sale of bonds necessary to finance construction of the system. After financing is secured, the contract allows for up to 4½ years for the Construction Phase to be completed. Thereafter, the Operations Phase will begin and continue for 30 years.

A second agreement with the owner of the groundwater leases gives SAWS the right to continue producing water for an additional 30-year term beginning upon the transfer of system ownership to SAWS. In combination, both agreements will provide over 60 years of contracted water supply. The financial attractiveness of this project will continue during the second term when the price of water drops to a fraction of the first-term price.

Activities this Period:

AVR has established the pipeline alignment and completed the right-of-entry process for acquisition of easements through 472 parcels needed for the pipeline. Boundary surveys and geotechnical studies have begun, and some offers representing a third of total easement acquisition cost have been extended.

AVR's well drilling subcontractor drilled four test wells for the purpose of sampling water in the two aquifers from which water will be produced. Laboratory testing has confirmed the water quality is within the expected range. Additionally, two pilot wells were constructed and 24- to 36-day pumping tests were performed to understand the response and local characteristics of the source aquifers.

AVR also performed hydraulic analysis to optimally locate the project's three (3) pump stations, determine the size of pipe required, and calculate electrical loads for pumping the water. The preliminary layout of infrastructure within the pump station and delivery point sites has been completed.

The Central Texas Regional Water Supply Corporation, an entity formed by AVR to acquire easements and contract for design and construction of the system has been designated by TCEQ as a Public Water System. AVR has submitted a Nationwide Permit Preconstruction Notice (PCN) to the US Army Corp of Engineers documenting jurisdictional determination, biological assessments, and cultural resources investigations.

On November 25, AVR's parent company, Abengoa S.A., filed for creditor protection in its home country of Spain. Though AVR was established as a bankruptcy-remote company, its reliance on Abengoa S.A. for financing during development phase of the project has forced it to pause work and seek an equity investor to move the project forward. In conjunction with SAWS management, AVR has been negotiating with equity investors who would finance and take an 80 percent controlling share in the Project Company. Such change in control will require consent of SAWS Board.

SAWS solicited engineering firms to serve as Technical Advisor in assisting with the oversight of the Project Company's execution of the development, design, construction and operation of the project. A contract with the Technical Advisor is expected in advance of the project reaching financial close.

Contingent upon successful restructuring of the Project Company, AVR has indicated its goal to reach financial close and begin construction of the project by September 2016.

Brackish Groundwater Desalination Program

Project Status: Planned project for 2012-2020; Construction stage (Phase I)

Water Supply: Brackish groundwater, Lower Wilcox Aquifer, southern Bexar County

Background:

SAWS is currently developing a Brackish Groundwater Desalination (BGD) program in southern Bexar County, which is designed to help meet the city's water demand while reducing dependence on the Edwards Aquifer. The Texas Water Development Board (TWDB) has confirmed that a vast supply of brackish groundwater exists in our region and has yet to be developed. As directed by legislation that passed in 2015 (HB 30), the TWDB is conducting further studies of brackish groundwater across the State, including the San Antonio region, and will have further data before the next legislative session. The South Central Texas Regional Water Planning Group (Region L) has identified brackish groundwater as a supply source to meet future demand.



When completed, the desalination facility will generate 13,440 AFY from the Lower Wilcox Aquifer in Phase I. The plant will be located at the existing Twin Oaks Aquifer Storage & Recovery site owned by SAWS. The well sites will also be located on SAWS property. Future phases will deliver an additional 20,160 acre-feet per year of water for a project total of 33,600 acre-feet per year. However, the timing of additional phases of the brackish desalination program may be altered due to SAWS' ongoing planning efforts.

The cost per acre-foot of all three phases of the program is estimated at \$1,138 not including the cost to integrate the water into SAWS distribution system. As of December 31, 2015, SAWS has invested \$143.1 million in capital improvement for the BGD Program. The desalination facility location at the ASR site is close to the brackish water source and also near the areas for brine disposal. Once treated, the water will taste the same as Edwards Aquifer water and will blend with the rest of the tap water in our system. Total cost of the desalination plant (all phases) when complete is estimated at \$411 million. While this supply of water is more expensive than Edwards Aquifer water, it is plentiful and unaffected by drought conditions.



Filtration gallery under construction for Brackish Groundwater Desalination Project

Activities This Period:

Currently, construction of the production well field, pipelines, reverse osmosis treatment plant, and injection wells is in progress. Construction of the project was approximately 80 percent complete as of the end of 2015.

Non-Revenue Water (NRW)

SAWS continues to work with consultant Water Systems Optimization, Inc. (WSO), a proven national and international leader in water loss control, utility metering and supply side conservation to develop cost-effective water loss controls and optimize utility management.

SAWS continues to educate policy makers and customers that NRW is more than just water lost. There are many legitimate business uses of water (such as firefighting, line flushing, etc.) that are vitally important to the health and safety of the community, which do not generate revenue.

SAWS is currently undertaking proactive leak detection between 2015 and 2018 to increase the prior goal from covering 20 percent of SAWS water distribution system annually to covering 50 percent of the system annually. SAWS is using both internal and external teams to complete this work. This effort will be a cost effective way to both reduce real water loss, and identify areas within the system which may need additional leak detection efforts in future years.

SAWS has also been able to leverage a partnership with the Edwards Aquifer Authority (EAA) that would help SAWS advance leak repairs discovered by increasing leak detection vigilance. EAA is to provide \$18.6 million over the next five years for this purpose. This is a *win-win* for SAWS and the region, and has achieved widespread support.

Activities This Period:

During the second half of 2015, SAWS and WSO worked on three major tasks:

- Random sampling of customer meters to ensure accuracy of mechanical devices. Effective utilities randomly test a portion of meters within their system to help manage meter performance.
- Analysis of large meter accuracy. Because 25 percent of all the utility's consumption is delivered to a small amount of meters representing about 0.5 percent of the total meter population, SAWS prioritizes the testing of these meters.
- Testing production meters to ensure accurate reporting. SAWS recognizes that production meters are just as important as customer meters.

With continued assistance from WSO and EAA, SAWS staff will work on further implementing strategies of a water loss control program. Additionally, in 2017, SAWS plans to commission a third party independent review of SAWS water loss control programs.



SAWS Loss Control Consultant retrieves high resolution data from customer meter, in order to ensure meter accuracy

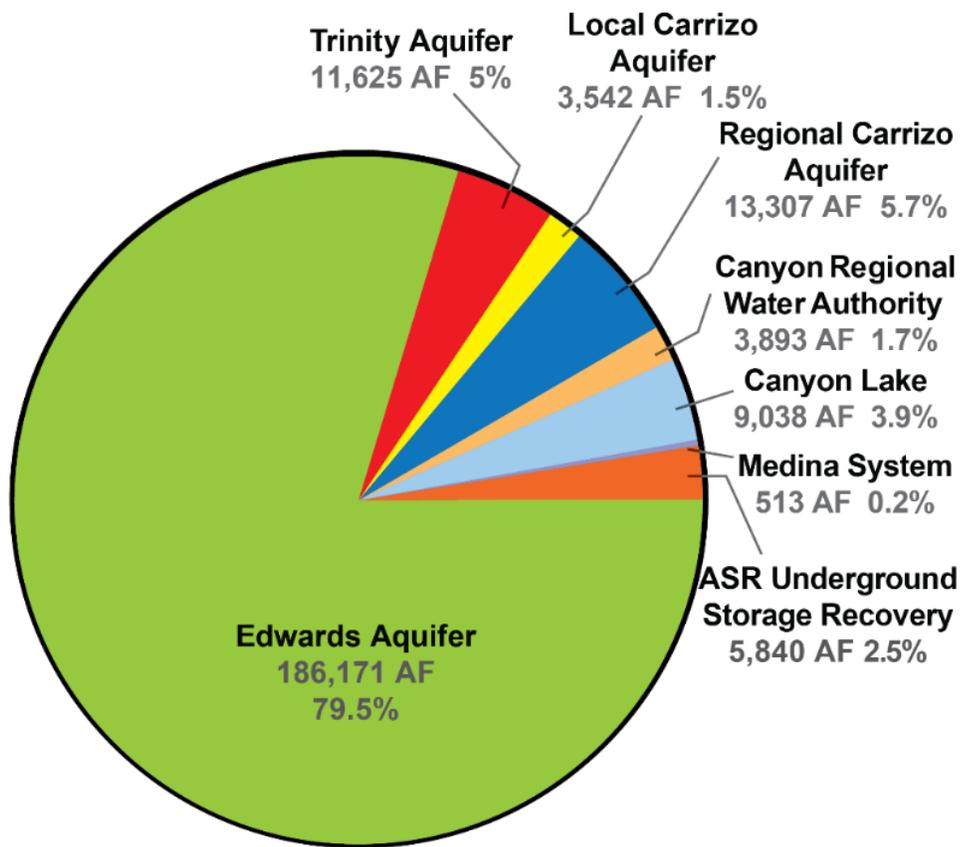


Delivery to Customers

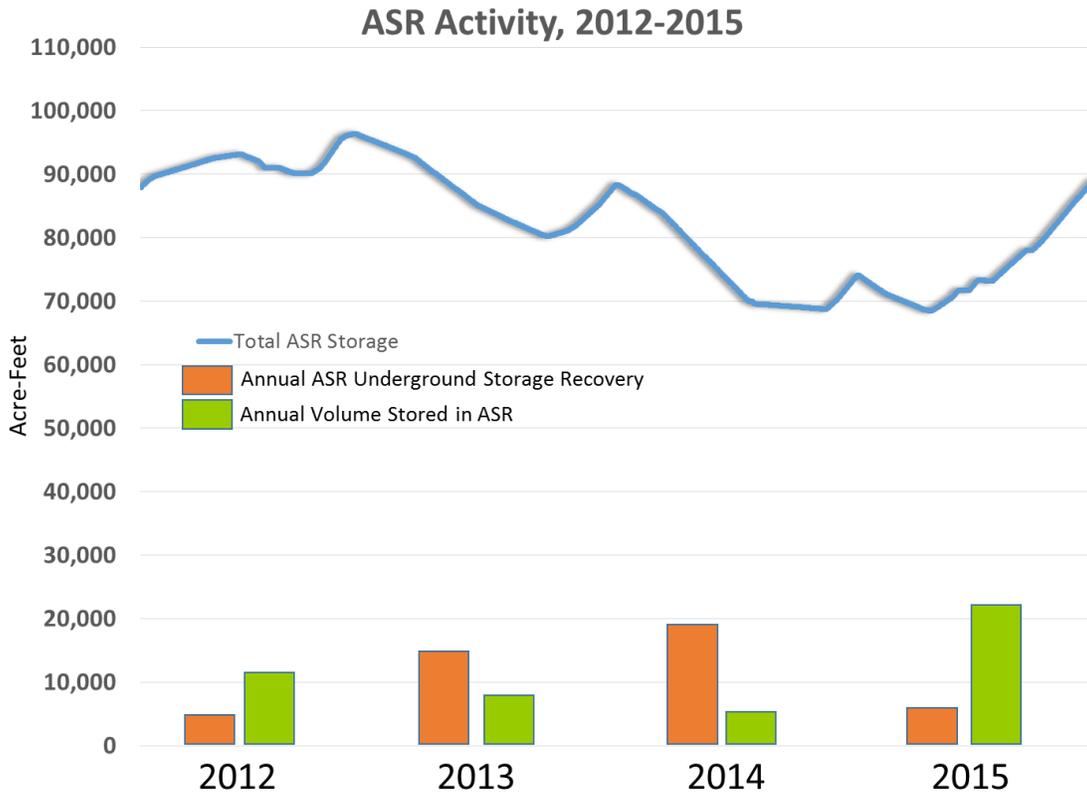
In 2015, SAWS delivered a total potable supply to customers of 233,929 AF. This includes the demand of DSP. This does not include 21,210 AF of Edwards water stored in ASR in 2015, which brought the total net volume of water stored in ASR to 88,897 AF at the end of 2015. ASR storage consisted of 12,075 AF of Edwards Aquifer water that was stored in SAWS Aquifer Storage & Recovery Twin Oaks facilities (ASR) as part of the storage agreement for the Edwards Aquifer Authority Habitat Conservation Plan (EAHCP), and 9,135 AF that was stored for SAWS customers.

SAWS total potable demand was supplied by water sources shown in the chart below.

SAWS Potable Water Delivery in 2015



SAWS Aquifer Storage and Recovery storage volume has remained in excess of 70,000 acre-feet over the last four years, and was a key tool in minimizing drought impacts during the drought of 2011-2015. Historic storage volume and annual storage and recovery amounts are shown in the graph below.



Financial Report

Integration of Bexar Metropolitan Water District Assets, Operations and Personnel

In November 2011, 74 percent of voters in the Bexar Metropolitan Water District (BexarMet) voted to dissolve the utility and transfer the responsibility for its assets and operations to SAWS. The election was authorized by the Texas Legislature through Senate Bill (SB) 341, adopted in May 2011. Effective January 28, 2012, the assets, liabilities, rights, duties and obligations of BexarMet were transferred to an entity known as the San Antonio Water System District Special Project (SAWS DSP). Management and control of SAWS DSP is vested SAWS Board in accordance with the District Special Project Ordinance. SAWS DSP will be reported as a discrete component unit of the City of San Antonio until full integration with SAWS has been completed. Full integration with SAWS will be considered to have occurred when the rates paid by SAWS DSP customers for water service are the same as those paid by SAWS customers and no SAWS DSP debt remains outstanding.

SAWS has been tasked with rebuilding a water utility that was facing severe financial and budgetary constraints, infrastructure needs, non-firm water sustainability, relatively high water rates, relatively low employee compensation, lack of appropriate employee resources due to layoffs, and a generally poor relationship with the public. Through concerted efforts during 2012 and 2013, SAWS resolved most of the challenges facing the prior utility.

In February 2016, SAWS refunded all outstanding DSP debt and dissolved the DSP entity. The last step to full integration is expected to occur effective January 1, 2017 when SAWS and former DSP customers will all pay the same rates.

Water Supply Fee

On Oct. 19, 2000, the San Antonio City Council via Ordinance #92753 approved a funding mechanism for the construction and development of additional water resources to meet projected water demands for the City of San Antonio and Bexar County for the next 50 years.

The Water Supply Fee assists in funding expenditures for the development of new water resources to include all operating, maintenance, research and development, and capital costs (including debt service when capital expenditures are debt funded). As mentioned earlier, SAWS has the largest direct recycled water systems in the nation, which reduces the need for additional

water supplies and therefore reduces the size of the Water Supply Fee.

The Water Supply Fee is tiered for residential and irrigation customers. A residential customer using the average of 7,092 gallons in a month will pay a total Water Supply Fee in 2015 of \$9.75. The Water Supply Fee per 100 gallons in 2015 for each customer class is summarized below.

RATE CLASS	Usage Blocks Gallons	Assessed Fee RATE PER 100 GALLONS
<i>Residential</i>	First 5,985	\$0.1285
	Next 6,732	\$0.1858
	Next 4,488	\$0.2622
	Over 17,205	\$0.4589
<i>General</i>	All blocks	\$0.1976
<i>Wholesale</i>	All blocks	\$0.1976
<i>Irrigation</i>	0 Gallons	\$0.0000
	Next 6,732	\$0.1976
	Next 10,473	\$0.2622
	Over 17,205	\$0.4976



On November 19, 2015, City Council approved a 9.3 percent increase in the Water Supply Fee effective for water used beginning January 1, 2016. This increase was necessary to provide funding for the operation of the brackish desalination plant, as well as to improve SAWS credit metrics. At the same time, maximum Water Supply Fee rate adjustments were approved for 2017 through 2020. These adjustments will provide sufficient funding related to expanding the Water Resources Integration Program pipeline all the way to Anderson Pump Station, and other capital improvements necessary to integrate Vista Ridge water by 2020.

These rate adjustments also provided the financial assurance that SAWS would have sufficient revenues to purchase 50,000 AFY of Vista Ridge water by 2020. The assurance was a necessary step toward achieving Financial Close under the Vista Ridge contract.

Water Supply Fee Financial Reports

The following tables provide an accounting of the collection and uses of the Water Supply Fee since its inception in 2001.

San Antonio Water System Sources and Uses of Funds Water Supply 2001 - 2015 <i>(\$ in Millions)</i>	
Water Supply Fee	\$1,115.08
Operating Transfer from Water Delivery	151.03
Non-operating income & Other	64.85
Recycle Water Revenues	57.96
Water Supply Impact Fees	112.48
Bond Proceeds	823.50
Water Supply O&M	(604.09)
Debt Service	(445.20)
Capital Funding	<u>(1,017.87)</u>
Funds Provided	<u>257.75</u>
Restrictions on Cash	139.88
Designations on Cash	<u>59.51</u>
Unrestricted/Undesignated Funds	<u>\$ 58.36</u>

San Antonio Water System
Operating & Maintenance Expenditures
2001 - 2015
(\$ in Millions)

Operating and Maintenance Costs	
Western Canyon Project - GBRA	\$ 80.61
Oliver Ranch - Lease Payments & Production Costs	21.86
BSR - Lease Payments & Production Costs	5.05
Regional Carrizo - Water Sales Agreements & Other ³	43.87
Brackish Desalination	1.32
Edwards - Lease Expense & Other	59.68
Aquifer Storage & Recovery Project	39.09
Aquifer Protection & Compliance	31.91
Vista Ridge ⁵	0.59
Recycled Water Operations	36.24
Conservation Program - net loss	7.27
Stormwater program - net loss	3.71
LCRA - Study Period and Other, Net of Cash Recovery ⁴	19.37
Lower Guadalupe Water Supply Project	6.26
Simsboro Aquifer	4.41
Recharge Initiative	0.80
Other Water Resources Cost	14.43
Facilities Maintenance	20.53
Communication & Outreach	10.88
Legal - Water Law	7.53
Billing & Collections	42.73
Finance & Information Systems	38.83
Corporate Facilities	10.42
Human Resources, Safety, Other Benefits ¹	30.93
Other Support Services ²	29.12
Transfer to COSA	<u>36.65</u>
Total Operating & Maintenance	<u>\$ 604.09</u>

¹ Includes workers compensation and dependent and retiree health insurance.

² Includes executive management, Board of Trustees, Internal Audit, Legal (corporate) and other miscellaneous.

³ Includes a \$12.4 million write-off of pipeline design costs made obsolete with the agreement with Schertz Seguin Local Government Corporation to transport water from Gonzales County to SAWS.

⁴ Total program cost net of cash recovered from LCRA settlement.

⁵ Development Stage costs paid by SAWS.



San Antonio Water System
Water Supply Capital Spending
2001 - 2015
(\$ in Millions)

	FUNDING		
	Pay-as-you-go	Debt	Total
Water Supplies:			
Non-Edwards Water Supplies			
Western Canyon Project - GBRA	\$ 3.31	\$ 10.87	\$ 14.18
Trinity Aquifer Projects (Oliver Ranch/BSR)	12.49	-	12.49
Local Carrizo	1.31	13.52	14.82
Brackish Desalination	39.88	103.22	143.11
Regional Carrizo	55.82	63.77	119.59
Aquifer Storage & Recovery Project (ASR)	2.17	245.71	247.87
Expanded Carrizo	0.44	0.23	0.67
Recycled Water System	1.19	84.92	86.11
Total Non-Edwards	116.60	522.24	638.84
Edwards Aquifer Water Rights	87.52	153.18	240.70
Total Water Supply Capital Spending	204.12	675.41	879.53
Other Capital Spending:			
Integration	28.84	74.51	103.35
Unallocated Project Overhead	1.84	-	1.84
Land, Buildings & Equipment	27.85	5.29	33.14
	58.54	79.80	138.33
Total Capital Spending	\$ 262.66	\$ 755.21	\$ 1,017.87

San Antonio Water System Cash Restrictions/Designations Water Supply 2001 - 2015 (\$ in Millions)	
Restrictions on Cash:	
Operating Reserve	\$ 15.04
Reserve Fund	19.14
Construction Funds:	
Bond Funds ¹	68.30
Impact Fees ²	<u>37.40</u>
	139.88
Designations on Cash:	
Future Reserve Fund deposits	-
PGA Monitoring/WQEE	2.72
Interest Mitigation Fund ³	17.51
2013 & Prior CIP program (cash funds)	<u>39.28</u>
	59.51
Unrestricted/Undesignated Funds	<u>58.36</u>
Total Water Supply Funds Available	<u>\$ 257.75</u>

¹ Represents bond proceeds currently on hand. These proceeds have all been committed to be used on existing projects.

² Represents unspent impact fees. These have all been committed to fund CIP projects in the 2015 & prior CIP program or they will be used to help fund future CIP programs.

³ Represents funds accumulated as a result of favorable variances in debt service. Funds may be used for CIP or to otherwise reduce debt service costs.



Glossary

AF	Acre-Foot (325,851 gallons)
AFY	Acre-Feet per year
ASR	Aquifer Storage & Recovery Facility / underground storage facility
BGDP	Brackish Groundwater Desalination Program
BMA	Bexar-Medina-Atascosa Improvement District #1
BMWD	Bexar Metropolitan Water District
BSR	Bulverde Sneekner Ranch
CCN	Certificate of Convenience and Necessity
CRWA	Canyon Regional Water Authority
DFC	Desired Future Condition
DOR	Drought of Record
DSP	District Special Project (former BexarMet)
EAA	Edwards Aquifer Authority
EAHCP	Edwards Aquifer Habitat Conservation Plan
EOY	End of Year
GBRA	Guadalupe-Blanco River Authority
GCD	Groundwater Conservation District
GPCD	Gallon Per Capita Per Day
HB	House Bill
HCP	Habitat Conservation Plan
MGD	Million Gallons per Day
OR	Oliver Ranch
RCP	Regional Carrizo Project
RFCSP	Request For Competitive Sealed Proposals
SAWS	San Antonio Water System
SB	Senate Bill
SSLGC	Schertz-Seguin Local Government Corporation
TWDB	Texas Water Development Board
WMP	Water Management Plan WSC Water Supply Corporation
WTPA	Water Transmission and Purchase Agreement

Firm Yield – The volume of water which can be produced from a defined source during a repeat of the drought of record under existing regulatory, legal, contractual, hydrological or infrastructure constraints.

Desired Future Condition – Defined by Title 31, Part 10, §356.10 (6) of Texas Administrative Code as "the desired, quantified condition of groundwater resources (such as water levels, spring flows or volumes) within a management area at one or more specified future times as defined by participating groundwater conservation districts within a groundwater management area as part of the joint planning process."

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