

**CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA **REVISED****

May 11, 2021, 6:00 p.m.

Webex Link:

<https://auroragov.webex.com/auroragov/j.php?MTID=mac56f99038cd2485aa1953bb9af18739>

Public Participation through call in number (listen only)

720-650-7664

Access code: 187 930 8570

Members: Janet Marlow - Chair, Angie Binder -Vice Chair, Jay Campbell, Tom Coker, Brandy DeLange, Richard Eason, William Gondrez, David Patterson, Mike Spatter

- |     |  |  |                  |
|-----|--|--|------------------|
| 1.  | Approval of Minutes – April 13, 2021                 | Chair                                    | 6:00 p.m.        |
| 2.  | Introductions/Public Invited to be Heard             | Chair                                    | 6:05 p.m.        |
| 3.  | New/Old Business                                     | Chair                                    | 6:10 p.m.        |
| 4.  | Communications Update                                | Greg Baker                               | 6:15 p.m.        |
| 5.  | Quarterly Financial Report – First Quarter 2021      | Jo Ann Gidding                           | 6:20 p.m.        |
| 6.  | Fitz-Peoria Stormwater Outfall Project Update        | Swirvine Nyirenda/<br>Sarah “Sam” Miller | 6:30 p.m.        |
| 7.  | Water Conservation overview & Annual Report          | Tim York                                 | <b>6:50 p.m.</b> |
| 8.  | Review Follow-Up Questions Generated at this Meeting | Chair                                    | 7:20 p.m.        |
| 9.  | Confirm Next Meeting – Tuesday, June 8, 2021         | Chair                                    | 7:25 p.m.        |
| 10. | Adjourn  | Chair                                    | 7:30 p.m.        |

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**CITIZENS' WATER ADVISORY COMMITTEE (CWAC) MINUTES**  
April 13, 2021, 6:00 p.m.  
Webex

Members Present: Janet Marlow (Chair), Angie Binder (Vice-Chair), Tom Coker, Richard Eason, David Patterson, William Gondrez, Mike Spatter, Brandy DeLange

Absent: None

Staff Present: Marshall Brown, Greg Baker, Jo Ann Giddings, Alex Davis, Sandy Moore

Visitors Present: None.

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The meeting was called to order at 6:03 p.m.

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**1. Approval of Minutes – February 9, 2021**

The February 9, 2021 minutes were approved.

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**2. Introductions/Public Invited to be Heard**

There were none.

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**3. New/Old Business**

William Gondrez stated he is running for Aurora City Council in Ward I.

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**4. Communications Update**

G. Baker stated that several weeks ago, the United States Forest Service (USFS) released their decision memo of a categorical exclusion for the Homestake Partners' geo-tech exploration work in Homestake Valley. The final authorization is expected in 30 days. Sometime in late July or August there will be ten borings for the project within USFS land as part of analysis of alternatives under the Eagle River Memorandum of Understanding (ERMOU).

G. Baker stated that we received the State Engineers report concerning our pilot release with Homestake Reservoir in September 2020. The cities of Colorado Springs, Aurora, and Pueblo released a combined total of 1600-acre feet of water to the project. There was a voluntary release of water from the Homestake Reservoir into the Eagle River for tracking and learning purposes. In the future, water may be called on in the Colorado River. The water was difficult to track to

the Colorado state line. The report identified the need for improvements in the monitoring and diversions going downstream that could be accomplished.

G. Baker stated, the snowpack is down by fifteen percent over the previous week. The reservoirs are between 62 percent and 63 percent of capacity, which is on the lower side of normal. With the reservoirs at this level and with Prairie Waters online, it is unlikely we will need to increase water restrictions this year.

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## **5. Service Line Warranties Follow-Up Discussion**

M. Brown stated, there have been changes in the homeowner's insurance industry regarding service lines. More insurance companies are providing an additional rider for coverage, and the cost of the riders are competitive. Staff is not going to recommend going forward with a service line warranty partnership. The updated information will be provided to the Water Policy Committee.

D. Eason stated, the Inner-City County and Managers Association (ICMA) had presented a questionnaire on the issue. From the responses received, about one-half of the entities were satisfied with the program, and the other half were not.

M. Brown stated, some cities had let their partnerships lapse.

T. Coker stated, he had asked United Services Automobile Association (USAA) to consider offering this type of coverage.

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## **6. Colorado's Interstate Compacts**

A. Davis presented information about Colorado's Interstate Compacts allocating water in multiple river basins throughout Colorado. The presentation covered some foundational information and focused on the river basins of the most significance to the City of Aurora.

A. Binder asked, during a severe drought, who makes the decisions for the State of Colorado? A. Davis replied, the State Engineer is responsible for administering water and meeting the obligations of the compacts. The Water Conservation Board is responsible for water policy in the State of Colorado. Both agencies work closely together and report to the Director of National Resources, who works closely with the Attorney General's Office and Governor's Office.

W. Gondrez asked, why the tribal agreements had not been mentioned? A. Davis replied, she was not as familiar with the tribal agreements. The federal government, each state and tribe have a different process for determining their water rights.

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## 7. Public Relations Overview

G. Baker presented a historical and current overview of the Public Relations Division. The Public Relations Division has three sections; Public Affairs, Environmental Education and Outreach, and Water Conservation. Environmental Education and Outreach, and Water Conservation will present on their functions later in the year and will include their annual reports.

G. Baker reviewed, following the drought in the years of 2002-2003, Water Conservation efforts were moved from Operations to Public Affairs to allow for program expansion. The Public Affairs Division has the responsibility to preserve and enhance Aurora Water's reputation with our customers, governance body, and external stakeholders. Public Affairs leads in the development and implementation of the Department's public outreach goals, by advising management on strategies, objectives, guidelines, and policies. This includes both internal and external communications, marketing, media relations, and executive communications. There is a collaboration with the regional partners, to provide constant messaging on common issues.

A. Binder suggested it might be helpful to know what other cities and jurisdictions have looked at with conservation measures. G. Baker replied, Aurora Water already has a robust conservation program in place. G. Baker also stated, he would ask Tim York to look at Las Vegas, Nevada's proposed ordinance to re-use water and review if there might be something, we could use either now or in the future.

B. DeLange asked, what the strategic approach in communications with direct potable re-use water with the state water plan is? G. Baker replied, this is engrained for Aurora Water's culture, Reusability is something most utilities are not looking at, mostly due to perception issues as well as water rights limitations and cost. There are currently been meetings at the state level regarding perception issues and continuing education on the subject. The public has a greater comfort and trust level now than in it has in the past.

B. DeLange stated, it would be interesting to see how water rights can also be related to reusing water as well. G. Baker stated, the least expensive water is the water you already own.

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## 8. Discuss CWAC Quarterly Report to WPC In January

J. Marlow reviewed the CWAC Quarterly Report to the Water Policy Committee (WPC) with the CWAC Committee and asked if anyone had any recommendations.

D. Eason asked if there should be a change to the Developmental Revenue percentage? G. Baker replied, he would discuss the issue with Jo Ann Giddings. G. Baker stated, J. Giddings had sent a message confirming the information is accurate.

J. Marlow stated, the CWAC Quarterly Report presentation is on April 21, 2021.

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## 9. Review Follow-Up Question Generated at this Meeting

There were none.

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**10. Confirm Next Meeting – Tuesday, April 13, 2021**

J. Marlow confirmed the next meeting Tuesday, May 11, 2021

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**11. Adjourn**

The meeting was adjourned at 7:50 p.m.

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Janet Marlow, Chair  
Citizens' Water Advisory Committee

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Submitted by Sandy Moore  
Administrative Specialist, Aurora Water


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**To:** Citizens' Water Advisory Committee

**Through:** Marshall P. Brown, General Manager, Aurora Water 

**From:** JoAnn Giddings, Deputy Director Water Financial Administration 

**Date:** May 11, 2021

**Subject:** Quarterly Financial Report – First Quarter March 2021

**Highlights**

Combined operating revenues (Water, Sewer, and Stormwater): Through the First quarter were 4% lower than plan and 3.2% higher than the first quarter of 2020. The increase from 2020 is due to customer growth since no rate increases were adopted in 2021.

Combined Development revenues (Water, Sewer, and Stormwater) in the First quarter of 2021 were 59% higher than plan and 3% higher than for the same period in 2020.

Operating expenses (Water, Sewer, and Stormwater combined), excluding debt service, are under the plan by \$2.9 million or 9.1 percent. This variance is mainly driven by lower than anticipated expenses in Supplies and Services due to the timing of Professional Services contracts and Purchased Vehicle and Equipment replacement, lower than anticipated Utilities for Homestake and Pumping electricity costs, offset by a \$1.0 million increase for a Transit Oriented Development payment. Operating expenses, excluding debt service, were relative the same as 2020 for the same period. Statements showing the budget to actual results and the year to year comparison can be found at the end of this memo on pages 8 and 9. Capital details can be found on pages 5 and 6.

**Water, Sewer, and Stormwater as of End of First Quarter**

Item	YTD Plan	2021	2020	Q1 2021 vs YTD Plan	Year Over Year Difference
Operating Revenue	\$40,083,488	\$38,317,431	\$37,209,379	(\$1,766,057)	\$1,108,052
Development Revenue	7,926,987	12,566,204	12,200,152	4,639,217	366,052
Interest Income	659,997	910,729	1,401,308	250,732	(490,579)
<b>Total Revenue</b>	<b>\$48,670,472</b>	<b>\$51,794,364</b>	<b>\$50,810,839</b>	<b>\$3,123,892</b>	<b>\$983,525</b>
Operating Expense	(\$31,914,499)	(\$29,006,682)	(\$29,070,800)	(\$2,907,817)	(\$64,118)
Capital Projects	(23,701,694)	(14,393,085)	(13,864,199)	(9,308,609)	528,886
Debt Service	(7,038,726)	(9,253,168)	(9,231,271)	2,214,442	21,897
<b>Total Expense</b>	<b>(\$62,654,919)</b>	<b>(\$52,652,935)</b>	<b>(\$52,166,270)</b>	<b>(\$10,001,984)</b>	<b>\$486,665</b>



### Cash Balances

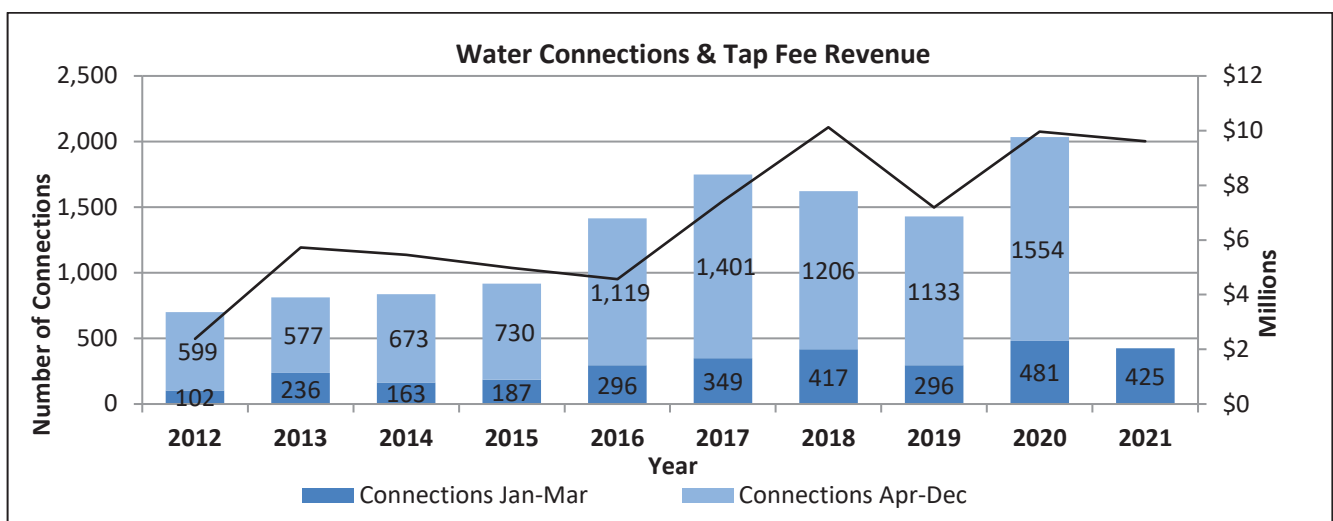
The total cash in the Water Fund decreased in the First quarter of 2021 by \$17.1 million. The decrease is typical for the first quarter due to seasonally lower operating revenues in the first quarter of the year. Total cash in the Wastewater Fund decreased by \$0.1 million in the First quarter. Reserves detail and cash balances are shown in the table below.

	<b>Water</b>	<b>Wastewater</b>
<b>Total Cash</b>	<b>\$167.4M</b>	<b>\$84.7M</b>
<b>Reserve &amp; Commitment Type</b>		
Debt Service Policy Reserve (next fiscal year debt payment)	\$25.3M	\$4.7M
Operating Reserve (25% of adopted operating budget excl debt service)	\$16.9M	\$13.9M
Water Resources Reserve (\$20 Million)	\$20.0M	
Capital Reserve (0.5% of Net Fixed assets)	\$9.3M	\$3.2M
Capital and Operating Encumbrances	\$142.7M	\$67.7M
Pass-Thru Commitments (METRO and CC Basin)		\$3.2M
WISE Liability to Denver Water	\$5.0M	
<b>Total Reserves and Commitments</b>	<b>\$219.2M</b>	<b>\$92.7M</b>
<b>Cash after Reserves &amp; Commitments</b>	<b>\$-51.8M</b>	<b>\$-8.1M</b>

The negative available cash balances are due to increases in encumbrances for SEAM and other capital projects. Aurora Water is in the process of issuing debt to fund the SEAM construction which will reverse this temporary negative available cash.

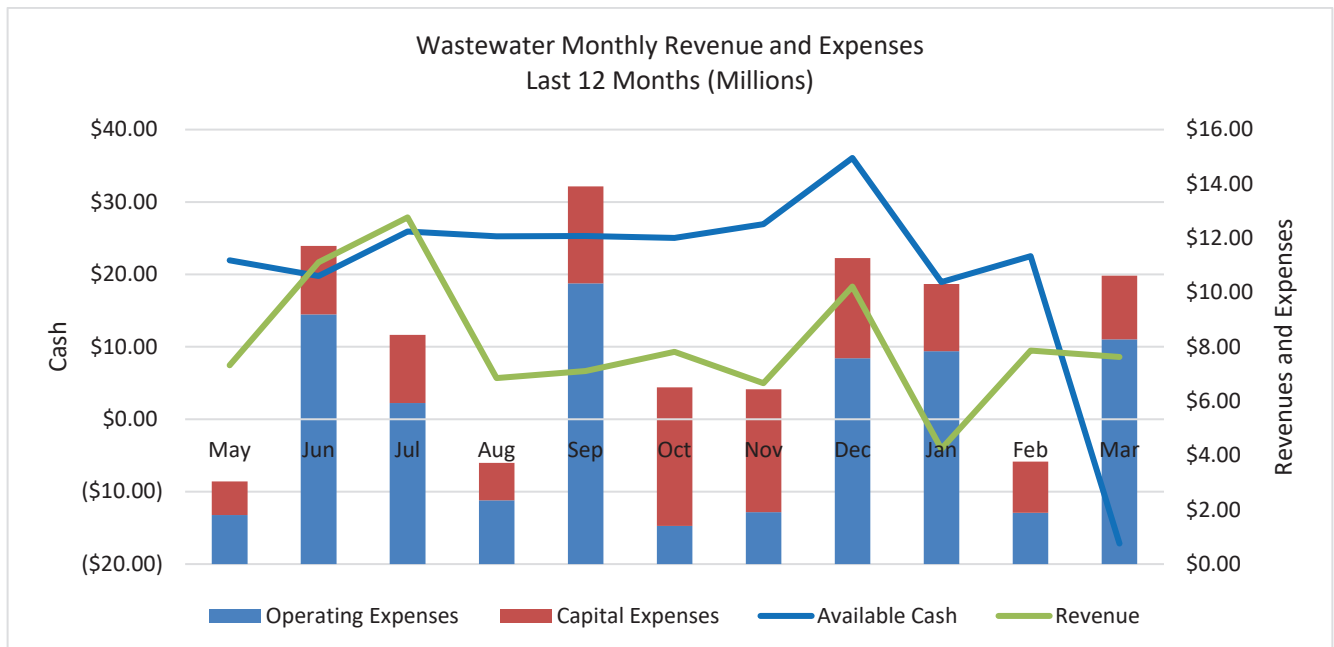
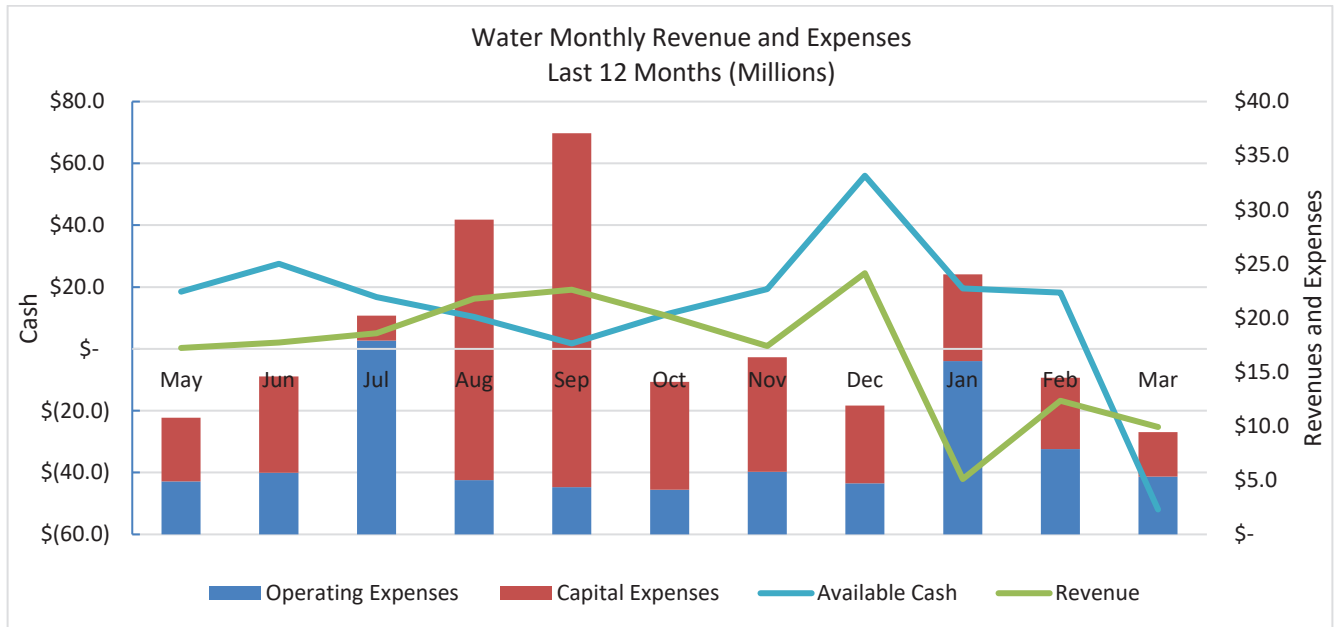
### Water Connections

The total number of water connections (single-family, commercial, irrigation and multi-family) and the corresponding Water Connection Fee revenue for 2012-2021 are shown on the following graph. The number of water connections through the First quarter of 2021 decreased by 56 connections or 12 percent compared to the first quarter of 2020. Total water connection fee revenues through the First quarter of 2021 were \$350 thousand (3.5 percent) lower than for the same period in 2020. The overall growth due to development is still above the ten-year average.

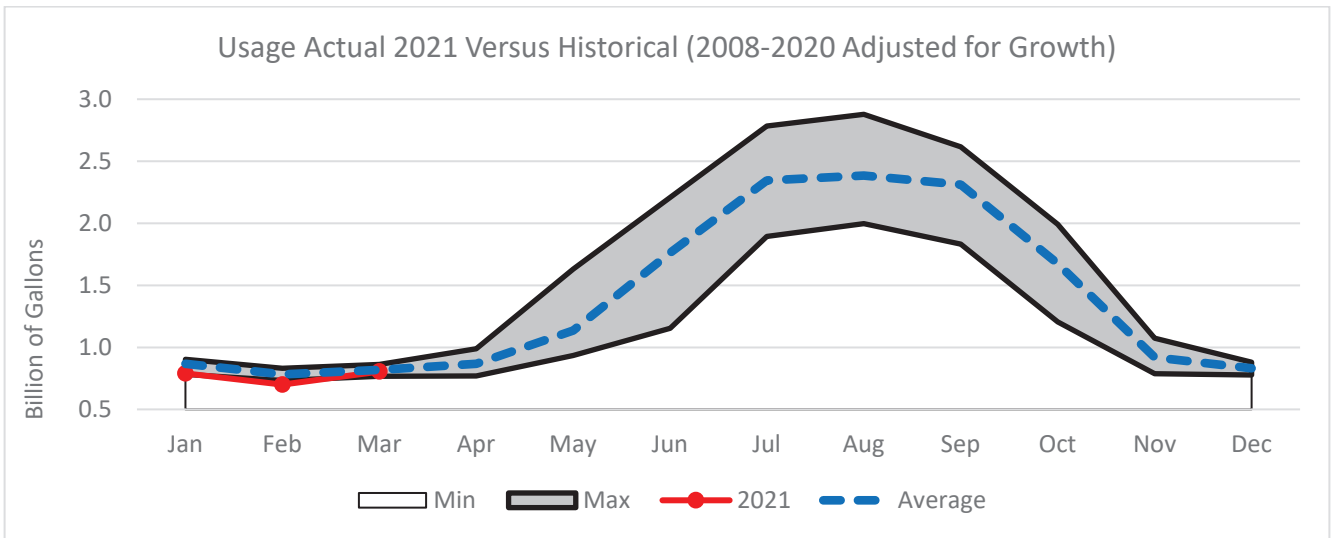
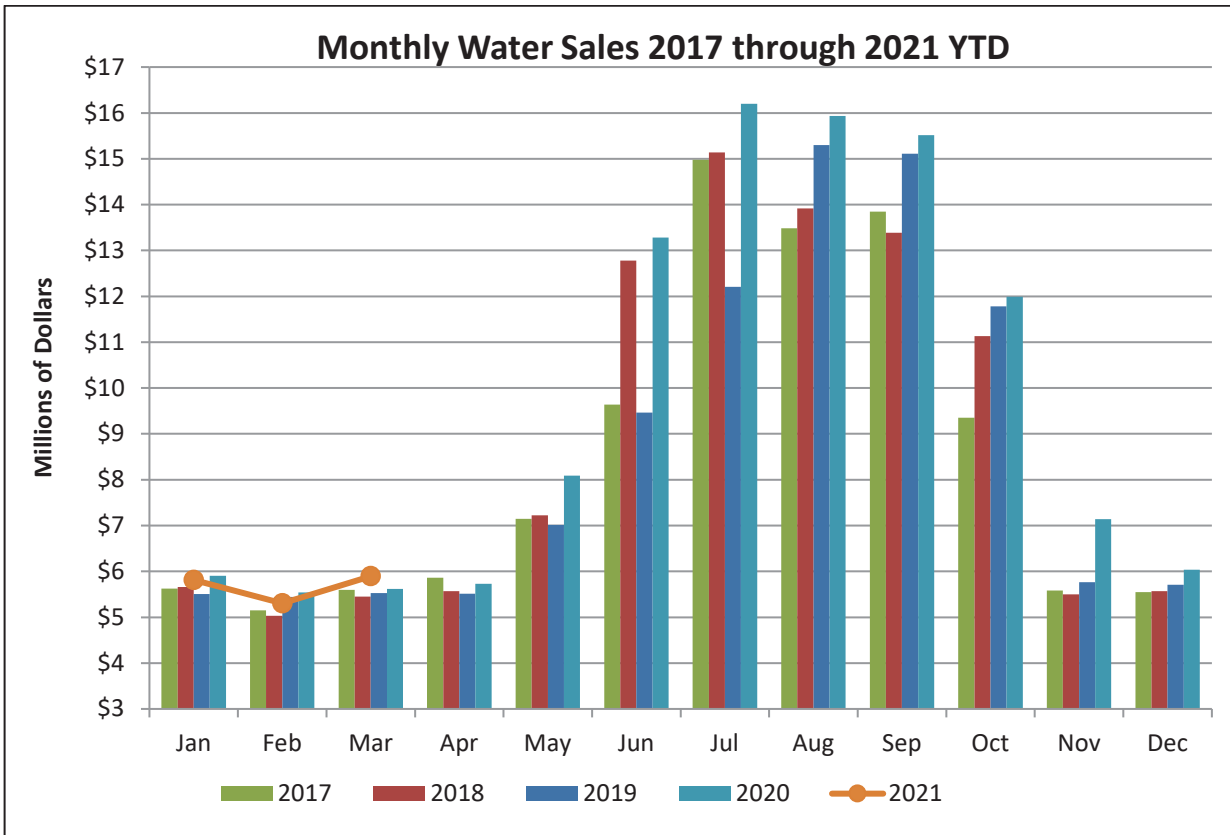


**2021 Revenue, Expenses and Cash Flow**

The following graphs present a summary of the last 12 months of monthly revenues, expenses, and cash flow.



The actual cash balances are not negative. The encumbrances are subtracted from the cash for purposes of determining the cash available. Staff is currently working on a bond issue of \$120 million in Water and \$60 million in Wastewater. This will return the available cash balances to positive.



## Overall Capital Plan

### Capital Projects Spending as of 03/31/2021

Program	Working Budget*	YTD Spending Plan	YTD Actual Spend	Encumbered**
<u>Water CIP</u>				
Operations & General Management	93,426,820	1,835,191	812,122	81,249,926
Pumping	5,545,383	946,414	126,055	4,400,790
SOS Other	48,526,089	952,025	357,608	5,570,658
SOS Storage	32,008,338	397,354	485,242	11,494,654
SOS Water	35,933,508	1,862,983	5,001,917	9,551,274
Transmission & Distribution	36,793,119	3,890,259	2,430,330	12,316,271
Treatment	41,496,533	6,151,193	1,961,695	13,727,320
<b>Water Total</b>	<b>293,729,790</b>	<b>16,035,419</b>	<b>\$11,174,969</b>	<b>\$138,310,893</b>
<u>Sewer CIP</u>				
Collection	38,261,034	2,172,867	1,258,686	11,315,160
Operations & General Management	43,988,797	1,961,247	1,243,073	32,911,514
<b>Sewer Total</b>	<b>\$82,249,831</b>	<b>\$4,134,114</b>	<b>\$2,501,759</b>	<b>\$44,226,674</b>
<u>Stormwater CIP</u>				
Stormwater	33,791,299	3,145,686	565,774	11,852,631
Operations & General Management	19,943,556	386,475	150,583	18,322,533
<b>Stormwater Total</b>	<b>53,734,855</b>	<b>\$3,532,161</b>	<b>\$716,357</b>	<b>\$30,175,164</b>
<b>Wastewater Total</b>	<b>135,984,686</b>	<b>\$7,666,275</b>	<b>\$3,218,116</b>	<b>\$74,401,838</b>
<b>Water &amp; Wastewater Total</b>	<b>\$429,714,476</b>	<b>\$23,701,694</b>	<b>\$14,393,085</b>	<b>\$212,712,731</b>

\*Working budget includes adopted budget, carry forward, transfers, lapsed appropriations, and supplementals.

\*\*Encumbered amounts are PO contracts that may carry multiple years.

## Capital Projects Spending

Total capital spending in the Water Fund through the First quarter was \$11.2 million, which was \$4.9 million less than the year-to-date spending plan of \$16.0 million. This is due to timing differences in anticipated spending. The Griswold Water Plant Renovation project is \$2.6 million less than planned. This variance can be attributed to Phase II construction of the Raw Water Vault project impacted by COVID-19 related delays and the Solids Handling System Improvements project experiencing delayed geotechnical/surveying efforts. The Contact Basin Construction Project at Wemlinger Purification Facility is \$1.3 million less than planned due to unforeseen project conditions and changes in scope from hydraulic profile issues. In addition, the South East Area Maintenance Facility (SEAM) is \$0.9 million less than planned due to minor delays caused by permitting. These delays are slightly offset by

opportunistic spending on Water Rights Acquisitions related to Farmer's Ditch. Many of the projects in the Water Fund are encumbered for a total of \$138.3 million.

Through the First quarter, total capital spending in the Wastewater Fund was \$3.2 million, which was \$4.4 million less than the spending plan of \$7.7 million. There are also timing differences of anticipated spending in the Wastewater Fund.

In the Stormwater program, the Peninsula Townhomes Construction project is \$1.3 million less than plan due to contracting issues delaying the retainage release. In addition, the Fitzsimons Peoria Stormwater Outfall Project is \$0.9 million less than planned. This can be attributed to less expenditures than anticipated in phase 4 and 5 of the project. The South East Area Maintenance Facility (SEAM) is \$0.6 million less than planned also due to minor delays caused by permitting. Many of the projects in the Wastewater Fund are encumbered for a total amount of \$74.4 million.

## Capital Improvement Project of the Quarter Spinney Caretaker Houses Replacement

Spinney Mountain Reservoir, located in Park County, Colorado, is part of the Aurora Water mountain supply system and was constructed in July 1982. There are two caretakers at Spinney Mountain reservoir responsible for maintaining operations and must live onsite to perform the required duties. There were two modular caretaker homes built with the original reservoir project construction. The homes degraded significantly over the last forty years due to the harsh weather conditions, outdated construction specifications, energy inefficiencies and outdated electrical and water systems.

A council approval was awarded for the reconstruction of the two Spinney caretaker homes in May of 2018. Because the contractor was unable to bond both houses simultaneously, the contractor was awarded one half of the council approved amount to construct the first house. The first house was completed in early 2020, which allowed for the existing two houses to be demolished. For the last year, new house #1 has been occupied, and the City rented a house for the other caretaker for the duration of the second house construction. The second house was bid and awarded in the late summer of 2020 and is now occupied.

Each caretaker home is a single-family residence of approximately 2,724 square feet (not including garage). The City Caretakers at Spinney Mountain now have safe, new housing allowing them to concentrate on running Spinney Mountain Dam and their duties.



## 2021 Financial Comparison

The following table presents a comparison of budget to revenues and expenses through the First quarter for the year 2021.

WATER as of 03/31/2021				
Revenues & Expenses	Working Budget*	YTD Plan	YTD Actual (Accrual Basis)	% Actual to Plan
Operating Revenue	\$134,055,574	\$22,150,686	\$20,276,356	-8%
Development Revenue	34,892,631	6,531,228	9,826,897	50%
Bond Proceeds and Restricted Assets	120,000,000	-	-	0%
Interest Income	1,900,000	474,999	625,610	32%
<b>Total Revenue</b>	<b>\$290,848,205</b>	<b>\$29,156,913</b>	<b>\$30,728,863</b>	<b>5%</b>
Operating Expense	(\$72,871,596)	(\$17,965,059)	(\$17,174,291)	-4%
Capital Projects	(293,729,790)	(16,035,419)	(11,174,970)	-30%
Debt Service	(22,857,980)	(5,714,495)	(9,000,400)	58%
<b>Total Expense</b>	<b>(\$389,459,366)</b>	<b>(\$39,714,973)</b>	<b>(\$37,349,661)</b>	<b>-6%</b>
<b>Net Revenue &amp; Expense</b>	<b>(\$98,611,161)</b>	<b>(\$10,558,060)</b>	<b>(\$6,620,798)</b>	
SEWER as of 03/31/2021				
Operating Revenue	\$51,239,954	\$12,081,114	\$11,961,676	-1%
Development Revenue	5,762,750	1,077,808	1,988,571	85%
Bond Proceeds and Restricted Assets	44,000,000	0	0	0%
Interest Income	526,360	105,000	168,686	61%
<b>Total Revenue</b>	<b>\$101,529,064</b>	<b>\$13,263,922</b>	<b>\$14,118,933</b>	<b>6%</b>
Operating Expense	(\$42,674,581)	(\$10,590,128)	(\$9,626,246)	-9%
Capital Projects	(82,249,831)	(4,134,114)	(2,501,759)	-39%
Debt Service	(2,523,396)	(630,849)	(101,382)	-84%
<b>Total Expense</b>	<b>(\$127,447,808)</b>	<b>(\$15,355,091)</b>	<b>(\$12,229,387)</b>	<b>-20%</b>
<b>Net Revenue &amp; Expense</b>	<b>(\$25,918,744)</b>	<b>(\$2,091,169)</b>	<b>\$1,889,546</b>	
STORMWATER as of 03/31/2021				
Operating Revenue	\$23,650,020	\$5,851,688	\$6,079,399	4%
Development Revenue	1,700,000	317,951	750,736	136%
Bond Proceeds and Restricted Assets	0	0	0	0%
Interest Income	320,000	79,998	116,433	46%
<b>Total Revenue</b>	<b>\$25,670,020</b>	<b>\$6,249,637</b>	<b>\$6,946,568</b>	<b>11%</b>
Operating Expense	(\$13,612,830)	(\$3,359,312)	(\$2,206,145)	-34%
Capital Projects	(53,734,855)	(3,532,161)	(716,356)	-80%
Debt Service	(2,773,526)	(693,382)	(151,386)	-78%
<b>Total Expense</b>	<b>(\$70,121,211)</b>	<b>(\$7,584,855)</b>	<b>(\$3,073,887)</b>	<b>-59%</b>
<b>Net Revenue &amp; Expense</b>	<b>(\$44,451,191)</b>	<b>(\$1,335,218)</b>	<b>\$3,872,681</b>	

\*Working budget includes adopted budget, carry forward, transfers, lapsed appropriations, and supplementals.

The following table presents a comparison of revenues and expenses through the First quarter for years 2021 and 2020.

**Year-to-date Comparison to Prior Year (Water, Sewer and Stormwater)**

<b>WATER First Quarter Comparison</b>			
<b>Revenues &amp; Expenses</b>	<b>2021</b>	<b>2020</b>	<b>% Change</b>
Operating Revenue	\$20,276,356	\$20,443,032	-1%
Development Revenue	9,826,897	10,124,507	-3%
Interest Income	625,610	994,502	-37%
<b>Total Revenue</b>	<b>\$30,728,863</b>	<b>\$31,562,041</b>	<b>-3%</b>
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Operating Expense	(\$17,174,291)	(16,006,952)	7%
Capital Projects	(11,174,970)	(9,178,836)	22%
Debt Service	(9,000,400)	(9,018,025)	0%
<b>Total Expense</b>	<b>(\$37,349,661)</b>	<b>(\$34,203,813)</b>	<b>9%</b>
<b>Net Revenue &amp; Expense</b>	<b>(\$6,620,798)</b>	<b>(\$2,641,772)</b>	

<b>SEWER First Quarter Comparison</b>			
Operating Revenue	\$11,961,676	\$11,206,981	7%
Development Revenue	1,988,571	1,675,675	19%
Interest Income	168,686	245,941	-31%
<b>Total Revenue</b>	<b>\$14,118,933</b>	<b>\$13,128,597</b>	<b>8%</b>
-			
Operating Expense	(\$9,626,246)	(\$10,715,564)	-10%
Capital Projects	(2,501,759)	(2,399,803)	4%
Debt Service	(101,382)	(117,382)	-14%
<b>Total Expense</b>	<b>(\$12,229,387)</b>	<b>(\$13,232,749)</b>	<b>-8%</b>
<b>Net Revenue &amp; Expense</b>	<b>\$1,889,546</b>	<b>(\$104,152)</b>	

<b>STORMWATER First Quarter Comparison</b>			
Operating Revenue	\$6,079,399	\$5,559,366	9%
Development Revenue	750,736	399,970	88%
Interest Income	116,433	160,865	-28%
<b>Total Revenue</b>	<b>\$6,946,568</b>	<b>\$6,120,201</b>	<b>14%</b>
-			
Operating Expense	(\$2,206,145)	(\$2,348,284)	-6%
Capital Projects	(716,356)	(2,285,560)	-69%
Debt Service	(151,386)	(95,864)	58%
<b>Total Expense</b>	<b>(\$3,073,887)</b>	<b>(\$4,729,708)</b>	<b>-35%</b>
<b>Net Revenue &amp; Expense</b>	<b>\$3,872,681</b>	<b>\$1,390,493</b>	



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# MEMORANDUM




City of Aurora

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**To:** Citizens' Water Advisory Committee

**Through:** Marshall P. Brown, General Manager, Aurora Water   
Sarah Young, Deputy Director for Planning & Engineering, Aurora Water \_\_\_\_\_

**From:** Swirvine Nyirenda, Planning Services Manager, Aurora Water \_\_\_\_\_

**Date:** May 12, 2021

**Subject:** Fitzsimons Peoria Stormwater Outfall Project – CWAC Update

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## **Purpose:**

In keeping with Aurora Water's mission statement to "Enhance and protect the quality of life for Aurora citizens by providing safe, dependable and sustainable water, sewer and stormwater services, today and in the future," Aurora Water is executing the Fitzsimons-Peoria Stormwater Outfall Project, which will upgrade stormwater conveyance capacity in the Fitzsimons-Peoria corridor to meet current city standards in a cost-effective and timely manner, while minimizing community impacts and ensuring safety through project completion at the end of 2021. The project will include the installation of approximately 13,000 feet of pipe ranging in diameters from 18 inches to 96 inches and all associated Stormwater appurtenances. These improvements will provide flood protection from the 100-year storm event to 230 residences and 40 businesses.

## **Background:**

The existing storm drainage basin and infrastructure are generally located along Peoria Street between 6<sup>th</sup> Avenue and the Sand Creek Outfall, located in Sand Creek Park. The existing storm drain infrastructure was installed in the 1970's and was designed to convey the two-year storm event. This does not meet current Aurora Water standards, so improvements are necessary to convey the 100-year storm event. Historic flooding, the redevelopment of the Fitzsimons Army Medical Center and subsequent neighborhood revitalization are also driving the need to improve storm drain conveyance capacity.

In 2012, the City of Aurora's Public Works Department prepared a Preliminary Drainage Report establishing the need for improvements. Recommendations made in that report were confirmed in a follow-up Preliminary Design Report prepared by Stantec Engineers in 2016. The City retained BT Construction and Carollo Engineers to move the project through final design and construction of the necessary improvements.

There are numerous technical complexities associated with the design and implementation of the project. Some of the most notable issues are budget and schedule (the corridor is very dynamic and evolving at a rapid pace); the construction footprint and sequencing will inconvenience the traveling public and businesses; major sub-surface utilities will need to be relocated; there are numerous stakeholders, both internal and external; and

finally, the existing stormwater conveyance system must be maintained/remain operational during construction. Bearing in mind all these complexities the city decided to deliver the project using an alternative delivery method; Construction Manager/General Contractor (CM/GC) where the contractor is selected early in the design process to minimize the design, constructability, cost and schedule uncertainties.

The City resolved to construct the project in five phases or work packages. The work Packages are envisioned as follows (please see attached map for further details):

- WP#1 – Colfax Avenue Lateral and Crossing
- WP#2 – Fitzsimons Parkway and RTD crossing to Sand Creek Outfall
- WP#3 - Fitzsimons Pkwy Parallel and future Racine Street
- WP#4 - Montview Blvd and Peoria Street between Colfax and Montview Boulevard
- WP#5 – Peoria Street between Colfax and Quari Court and 13th Avenue

The table below is an estimated scope schedule and cost for the work:

	Diameter	Length	Budget	Constructed Cost	Schedule	
Work Package1	18-84"	2,710-lf	\$ 6,907,465.95	\$ 6,648,803.31	4/Q '18	2/Q '19
Work Package (2&3)	48"-84"	3,780-lf	\$ 6,820,369.00	\$ 5,651,251.84	1/Q '19	2/Q '20
Work Package4	84-96"	3,530-lf	\$ 10,794,840.00	\$ 10,382,669.87	2/Q '19	2/Q '20
Work Package5	66-84"	3,510-lf	\$ 8,599,223.85		1/Q '20	2/Q '21

**\$ 33,121,899.30**

Work packages 1, 2, 3 and 4 have been completed. Work packages (2&3) had one change order (in the amount of \$133,475.60 – well under the project contingency) for the removal of asbestos containing materials that were encountered during construction. Additionally, the City coordinated design and construction of Work Packages 2&3 with the Fitzsimons Redevelopment Authority (FRA). The revised design resulted in an increase of developable area on the Anschutz campus. The FRA cost participated in the construction of the work packages in the amount of \$1,883,750.61.

Work package 5 is approximately 15% completed and is anticipated to be completed by the end of the year.

**Question:**

Informational item only. No action required.

Attachments:

Fitzsimons Peoria Stormwater Outfall Project Vicinity Map

cc: File copy

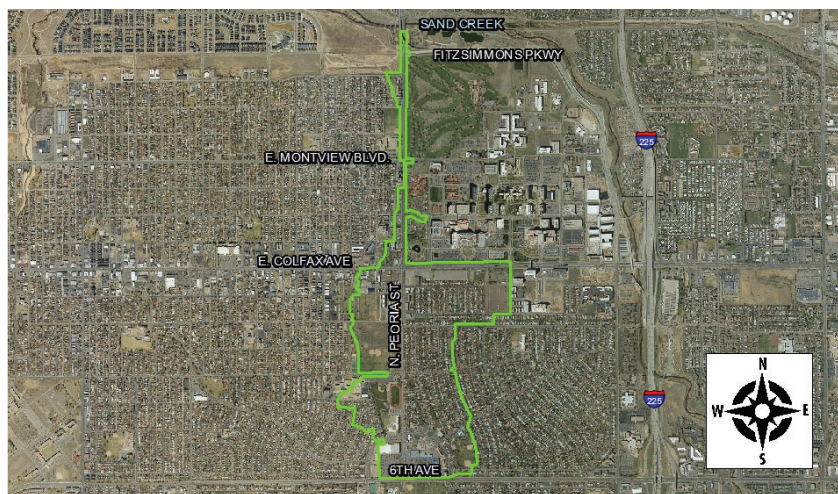
# Fitzsimons - Peoria Stormwater Outfall Project

Citizens' Water Advisory Committee  
(Update)  
May 11, 2021



1

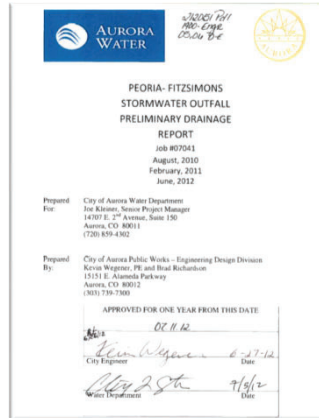
## PROJECT OBJECTIVES



2

# Design Criteria Summary

- Storm Frequencies
  - Minor storm (2-year)
  - Major storm (100-year)
- Street Flow
  - Minor storm (no curb overtopping)
  - Major storm (<12")



Fitzsimons - Peoria Stormwater Outfall Project  
Preliminary Drainage Report



Prepared for:  
Aurora Water  
15151 E. Alameda Parkway, Ste. 4400  
Aurora, CO 80012  
(720) 859-4300



Prepared by:  
Stantec Consulting Services Inc.  
2000 S. Colorado Blvd., Ste. 2-300  
Denver, CO 80222  
(303) 759-4058

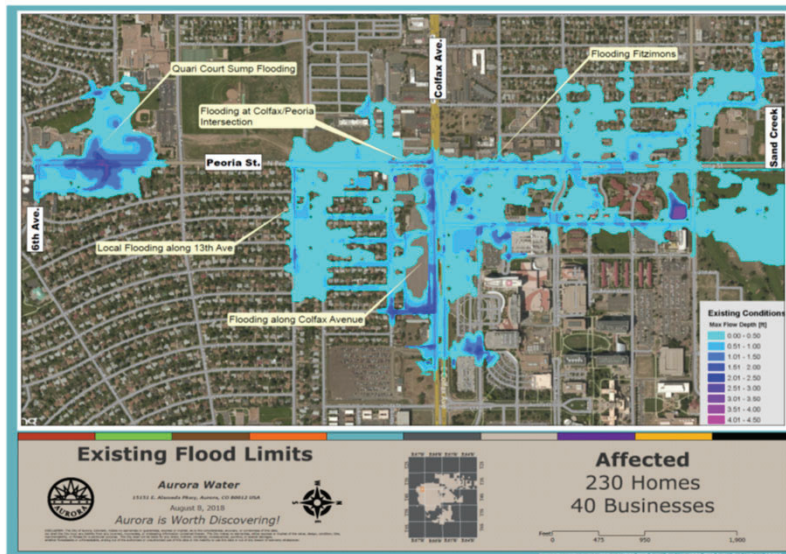


October 31, 2014



3

# Existing Flood Limits



Existing Flood Limits



Aurora Water  
15151 E. Alameda Parkway, Aurora, CO 80012  
August 8, 2010  
Aurora is Worth Discovering!



Affected  
230 Homes  
40 Businesses



4

## Project Challenges

- **Financing/Budget**
- **Schedule**
  - Corridor is dynamic and rapidly developing
- **Traffic Congestion**
  - Cannot maintain 2 lane traffic in either direction on Peoria
- **Business Disruption**
- **Sand Creek Park Disruption**
- **Sub-Surface Utilities**
- **Life Safety**
- **Storm Water Conveyance**



5

## Project Delivery Mechanism

### CM/GC (BT Construction)

- Contractor is part of the design team – rigorous constructability review
- GMP ascertained early – maybe 60-70% design (external third-party review)
- Better schedule and construction risk mitigation

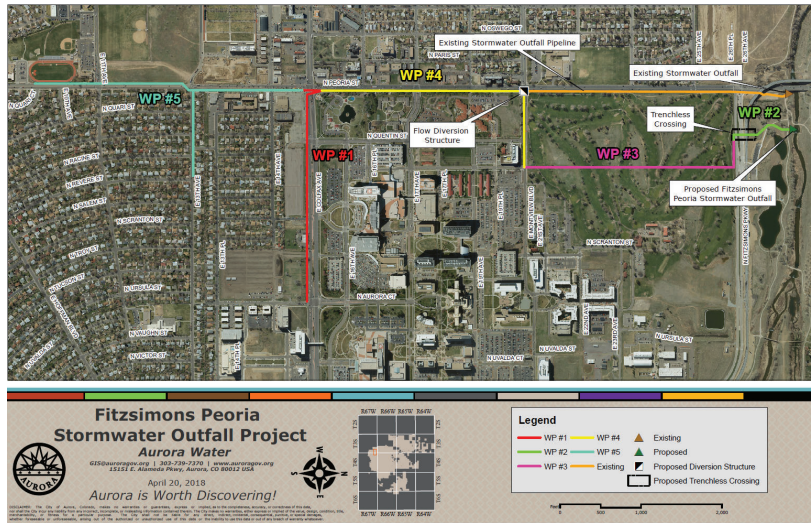
### Construction Phasing

- **Work Package 1: Colfax Crossing and Lateral**
- **Work Package 2: Fitzsimons Parkway Crossing and Outfall**
- **Work Package 3: Montview to Fitzsimons Parkway**
- **Work Package 4: Colfax to Montview**
- **Work Package 5: South of Colfax**



6

## Construction Phasing



7

## Initial Cost Estimate and Schedule

	Diameter	Length	Estimate	Schedule	
Work Package1	18-84"	2,710-lf	\$ 6,907,465.95	4/Q '18	2/Q '19
Work Package2	48"	815-lf	\$ 3,727,510.50	1/Q '19	2/Q '20
Work Package3	84"	2,965-lf	\$ 3,092,859.00	1/Q '19	4/Q '20
Work Package4	84-96"	3,530-lf	\$10,794,840.00	2/Q '19	2/Q '20
Work Package5	66-84"	3,510-lf	\$ 8,599,223.85	1/Q '20	2/Q '21
			<b>\$33,121,899.30</b>		



8

## Work Package 1 - completed

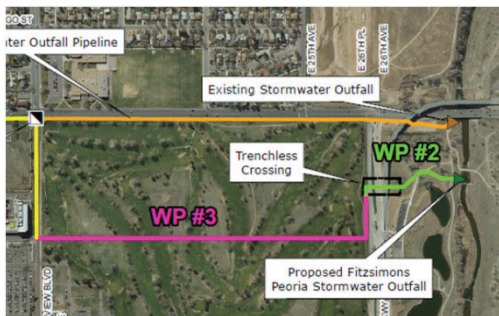


Budget	Contract Price	Constructed Cost
\$ 6,907,465.95	\$6,651,310.00	\$6,648,803.31



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## Work Package 2&3- Completed



Cost participation by FRA  
\$1,883,750.61

Budget	Contract Price	Constructed Cost
\$ 6,820,369.20	\$5,486,654.23	\$5,651,251.84*



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## Work Package 4 - completed



Budget	Contract Price	Constructed Cost
\$ 10,794,840.00	\$ 10,644,717.78	\$10,382,669.87



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## Work Package 5



Anticipated Completion Date:  
November, 2021

Budget	Contract Price	Constructed Cost
\$ 8,599,233.85	\$ 7,968,717.56	



12

## Update on WP 5

Construction is 15% Complete  
Issues: Utility Relocation Issues

### Traffic Updates

- One lane of NB Peoria will be closed until around late May
- 13<sup>th</sup> Ave intersection with Peoria will be closed for about 3 weeks around early June
- SB Peoria South of 13<sup>th</sup> Avenue will have one lane closed until the late November (end of project).



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## Questions

[www.Fitz-Peoria.org](http://www.Fitz-Peoria.org)

Aurora Water  
Fitzsimons-Peoria Stormwater Outfall Project  
Partnering Meeting  
March 14, 2018



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**To:** Citizens' Water Advisory Committee

**Through:** Marshall P. Brown, General Manager, Aurora Water \_\_\_\_\_  
 Greg Baker, Manager of Aurora Water Public Relations \_\_\_\_\_

**From:** Tim York, Water Conservation Supervisor TY

**Date:** April 29, 2021

**Subject:** Water Conservation Annual Report

---

**Purpose:**

Each year the Water Conservation staff provides an update on programs and projects from the previous year. Staff will provide CWAC with an update on programs showing the water savings for the year of 2020 indoor programs and the year 2019 outdoor programs. The Staff will present highlights of 2020 programs and update CWAC on changes for 2021. While the included document shows data on each specific program, the presentation will focus on the overall numbers, touching on specific highlights and points of interest.

**Action Required:**

No action at this time is required. This presentation is purely informative in nature.

**Cc: File Copy**

# Water Conservation Programs

*Citizens' Water Advisory Committee – May 11, 2021*

*Tim York*

*Water Conservation Supervisor*



1

## Agenda

- Program History & Team
- Conservation Programs Overview
- 2020 Program Performance Analysis
- *What's next?*



2

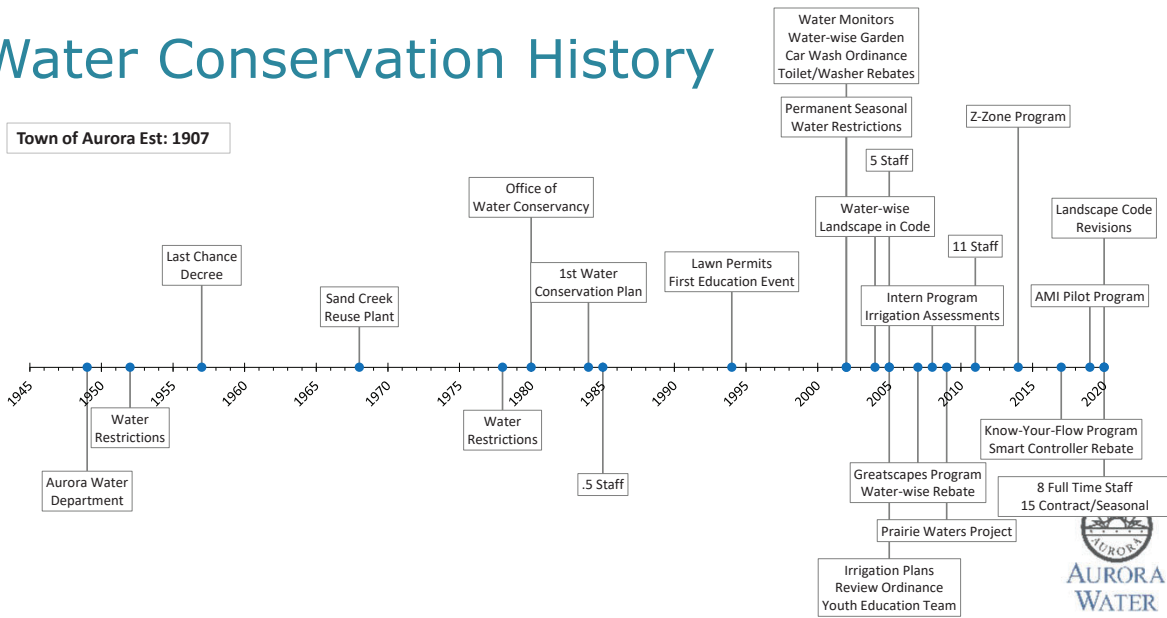


Aurora's Water Conservation team is one of seven platinum recognized teams in the country, and the only one in Colorado.



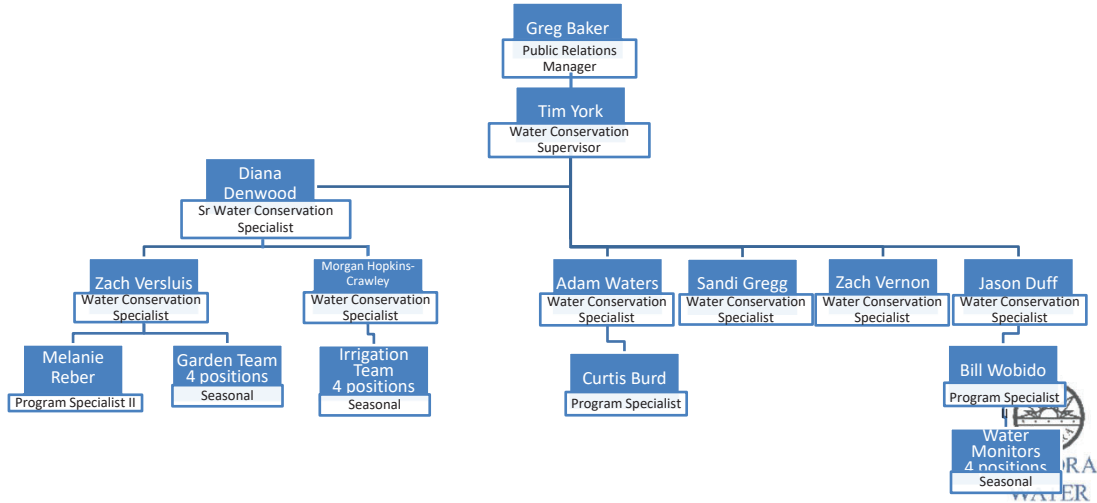
3

## Water Conservation History



4

## Meet the Team!



5

## Programs Included: 2020 Indoor

- Multi-family and HOA
- Commercial, Industrial and Institutional (CII)
- Indoor Water Assessments (IWA)
- Know Your Flow (KYF)
- Toilet Rebate
- Large Property Toilet Rebate
- Low-Income Water Efficiency Program (LIWEP)



6



## Programs Included: 2019 Outdoor

*\*Analysis for outdoor programs requires data from a full irrigation season after customer participation; as a result, outdoor analysis shows 2018 participants.*

- Conservation Education Classes
- Water-wise Design Consultation
- Know Your Flow
- Outdoor Water Assessment (OWA) Large and Commercial
- OWA Residential
- Irrigation Rebate
- Smart Controller Rebate
- Water-wise Landscape Rebate Residential
- Water Wise Rebate Large and Commercial
- Large Property Watering Variance Program



7

## Conservation Programs Overview



8

## Coronavirus Impact on Programs

- **Not Impacted**
  - UHET Toilet Rebate
  - Irrigation Rebates
  - Weather Based Controller Rebate
- **Minimally Impacted**
  - Indoor Water Assessments
  - Conservation Education Classes
  - Water-wise Garden
- **Highly Impacted or Cancelled**
  - Outdoor Water Assessments
  - Water Management Plan enforcement



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## Toilet Rebates

- 1.6 gpf or greater to 0.8 gpf toilets
  - Up to \$100 per toilet
  - 2 per household per 10 years; Multi-family units also eligible
- Low Income Program:
  - Up to 2 toilets, 2 showerheads, 3 aerators free
  - Labor included
  - Income based (60% median or LEAP qualified)



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## Water Use Assessments

- Free
- Specialist reviews fixtures, behavior
- Works with customer to identify:
  - Fixture shutoffs
  - Main water shutoff
  - Opportunities to reduce water use



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## Water-wise Landscape Rebate

### Residential

- Z-Zone Landscape: \$4,500
- Low Water-use Landscape: \$3,000
- Materials only, min. 500 square feet
- Performance based payback
- Backyards are ineligible

### Commercial/Multi-Family

- Same options with rebate value dependent on conservation analysis.



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## Irrigation Assessments

- Free assessment of irrigation system
- Detailed, personal reports
- Customer is eligible for irrigation rebate
  - Not required for smart controller or rain sensor rebate



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## Irrigation Rebates

- Residential HE Components
  - \$9 per pop-up (max 50)
  - \$12 per rotor (max 50)
  - \$6 per nozzle (max 50)
  - Spray to drip conversion, \$75 per zone (max 3)
- Commercial/Multi-family
  - \$100 per zone up to 150 zones



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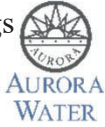
← Smart Attributes  
Zone 1: Zone 1

**Zone Smart Watering Details**

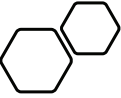
- Soil Type      Clay Loam
- Plant Type      Cool Turf
- Sprinkler Type      Spray
- Sun/Shade      Partial Shade
- Slope      0-3%
- Head Count      7 Spray heads
- Catch Cups      0 cups configured
- Watering Schedule

## “Smart” Technology Rebates

- Rain Sensors
  - Wired/wireless
- Residential
  - Up to \$200 for controllers
  - Single payment
- Commercial/Multi-family
  - Dependent on cost and potential savings
  - Max rebate of \$50K
  - Multi-year payback




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## Greatscapes

Income qualified

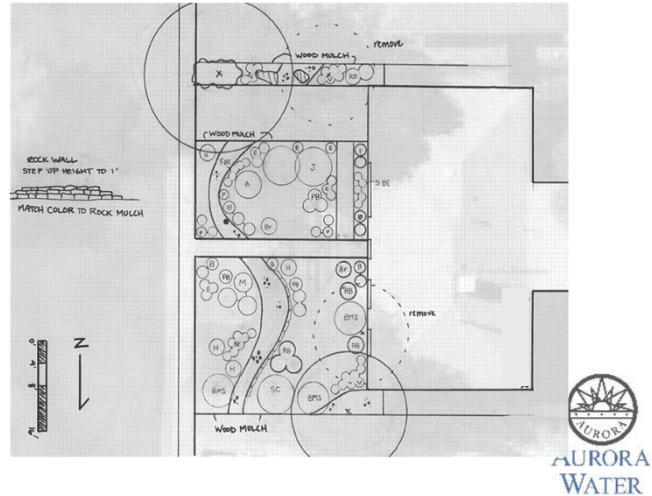
- Free water-wise landscape design and installation
  - No irrigation
- Community Works
  - Non-profit career prep and placement
- Partnership allows us to reach more residents
- \$35K budget
  - Approximately 9 residents/year



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## Landscape Designs

- Free
- 2 hour session with landscape designer
- Homework required
- Allows homeowners to become familiar with effort level



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## Community Gardens

- 24 active community gardens
  - 16 public, 10 on city property
- Aurora Community Garden Network
  - Meet twice annually
  - Service projects and educational events



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## Water Management Plan

Water monitors look for non-compliance/water waste issues.

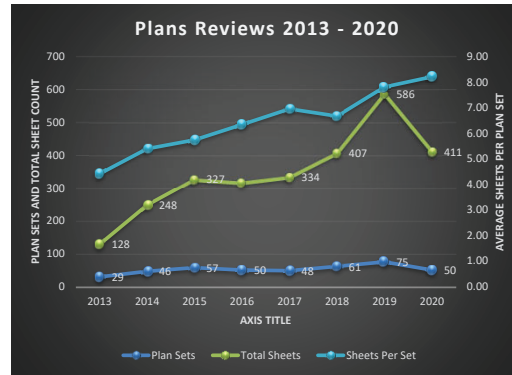
Educate customers on best practices.

- No watering more than 3 days/week or between 10am-6pm
- Permit required for sod/seed installation  $\geq 250$  sq. ft.
- Must repair or discontinue use of broken systems which cause excessive water waste.

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## Irrigation Plans Review

- Non single-family irrigation design plans review
  - Hydraulic integrity
  - Components
  - Layout



21

## Soil and Irrigation Inspections

- New irrigation systems and soil amendment inspections
  - Material standards
  - Plan conformance
  - Quantity
  - Till depth



22





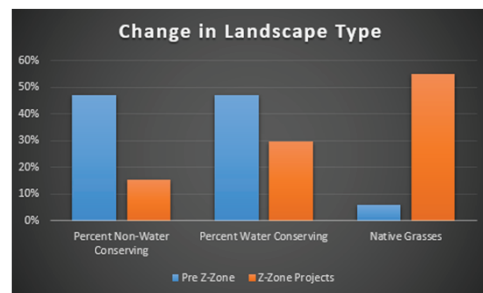
## Conservation in New Development

- Z-Zone Tap Fee for Irrigation Meters
  - No Fee for native grass areas
  - 3 year allocation for establishment of plant material
  - Allocation is reduced by volume of water assigned to the Z-Zone areas
  - If exceeded, Capital Recovery fee added

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## Conservation in New Development

- Z-Zone Program
  - 72 total projects
  - 163.5 million gallons saved/year projected
- Water-wise front yard tap fee credit
- Conservation and Planning work together to ensure water-wise practices are implemented in new code.



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Sustainably beautiful...

25

# KNOW YOUR FLOW

- Educate residents on efficient water use
- 1,449 participants
- Weekly watering times during irrigation season
- Monthly water use report
  - Recommended water use vs. actual water use

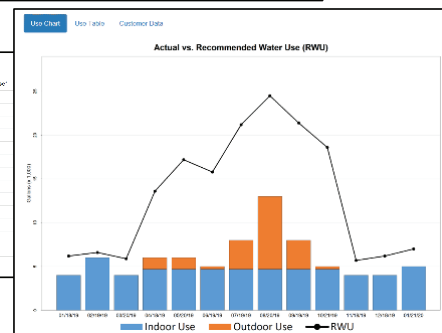
[www.aurorgov.org/KnowYourFlow](http://www.aurorgov.org/KnowYourFlow)

Use Chart Use Table **Customer Data**

The information below is used to calculate your household's recommended water use. Visit this [website](#) for more information on the calculation methods, and please call (720.850.4375) or e-mail us if any information below has changed.

- Billing Period: 12/18/19 to 01/21/20
- Number of Days: 34
- Number of people: 5
- Square feet of turf grass: 4773
- Square feet of water-wise landscape: 201

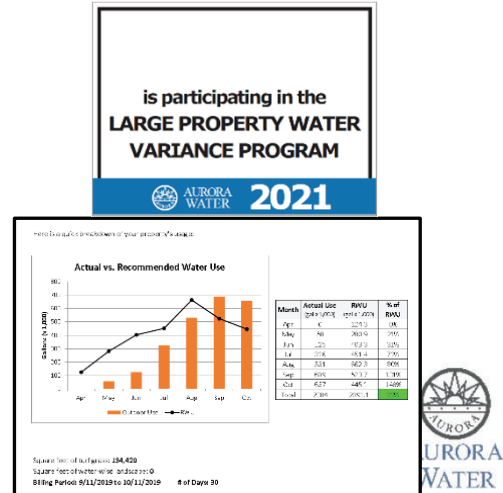
Household	Use Type	Customer Data	Read Period	Total Use*	Total RWU**	Indoor Use*	Indoor RWU**	Outdoor Use*	Outdoor RWU**
12/18/19 - 01/21/20	4	6.2	4	6.2	0	0	0	0	0
01/18/19 - 02/19/19	2	6.0	2	6.0	0	0	0	0	
02/18/19 - 03/20/19	4	5.0	4	5.0	0	0	0	0	
03/18/19 - 04/19/19	5	1.6	5	1.6	0.7	0.9	0.9	1.5	
04/18/19 - 04/29/19	5	1.2	5	1.2	0.7	0.9	0.9	1.2	
05/20/19 - 06/19/19	2	15.8	2	15.8	0.7	0.2	0.2	0.3	
06/17/19 - 07/19/19	2	21.2	2	21.2	0.7	0.2	0.2	0.3	
07/18/19 - 08/20/19	63	31.5	7	7	0.5	0.5	0.5	0.5	
08/18/19 - 09/19/19	8	71.4	7	7	0.7	0.9	0.9	0.9	
09/17/19 - 10/21/19	3	16.0	3	16.0	0.7	0.9	0.9	0.9	
10/20/19 - 11/19/19	4	5.7	4	5.7	0	0	0	0	
11/18/19 - 12/18/19	4	6.2	4	6.2	0	0	0	0	
12/18/19 - 01/21/20	5	7	5	7	0	0	0	0	
<b>Total (last 12 months)</b>	<b>75</b>	<b>181.7</b>	<b>15.2</b>	<b>25.0</b>	<b>15.1</b>				



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## Variance Program

- Variance to days per week, not watering window
- Monthly report card
- Commercial
- HOA Common Space
- Residential greater than 20K square feet



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## Classes

- Non in-person classes for 2020
- Online – Virtual and Recorded
- Topics:
  - Landscape conversion
  - DIY projects
  - Understanding water use
  - Much more

[www.aurorawater.org/waterclasses](http://www.aurorawater.org/waterclasses)



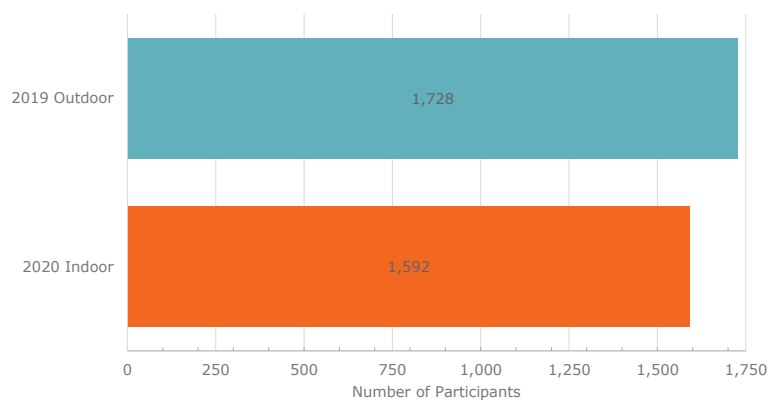
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# 2020 Program Performance Analysis

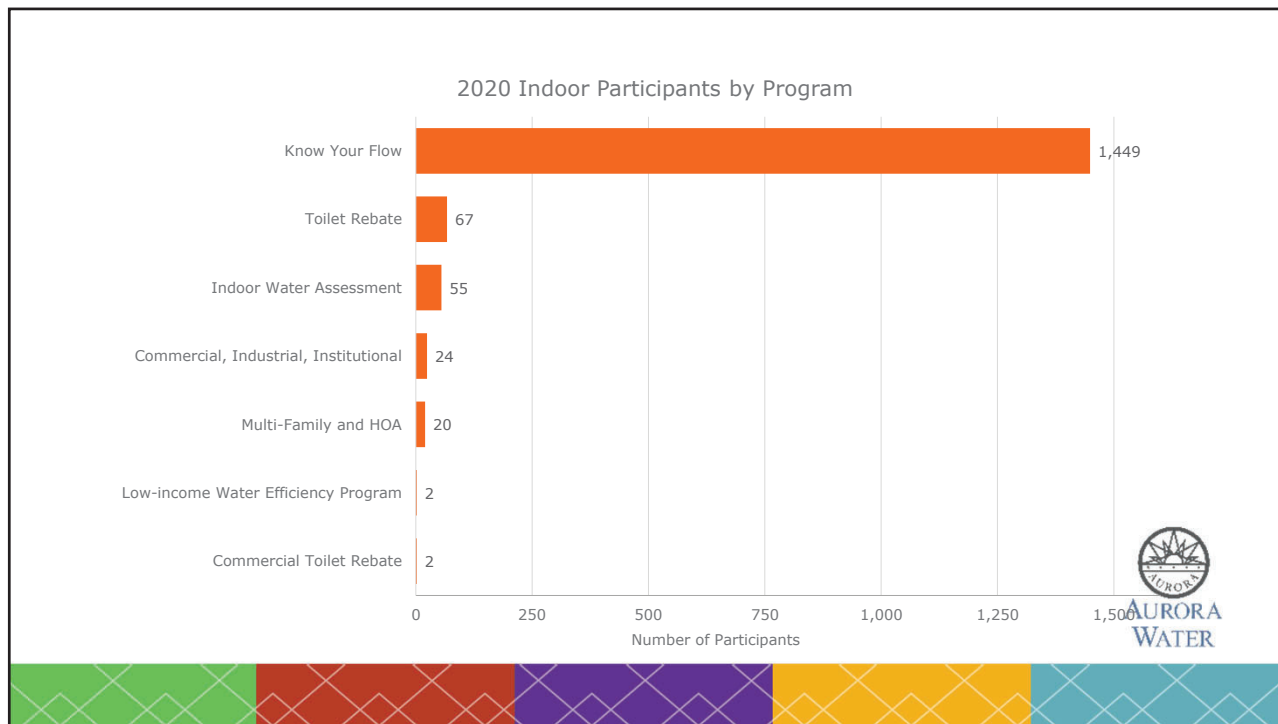


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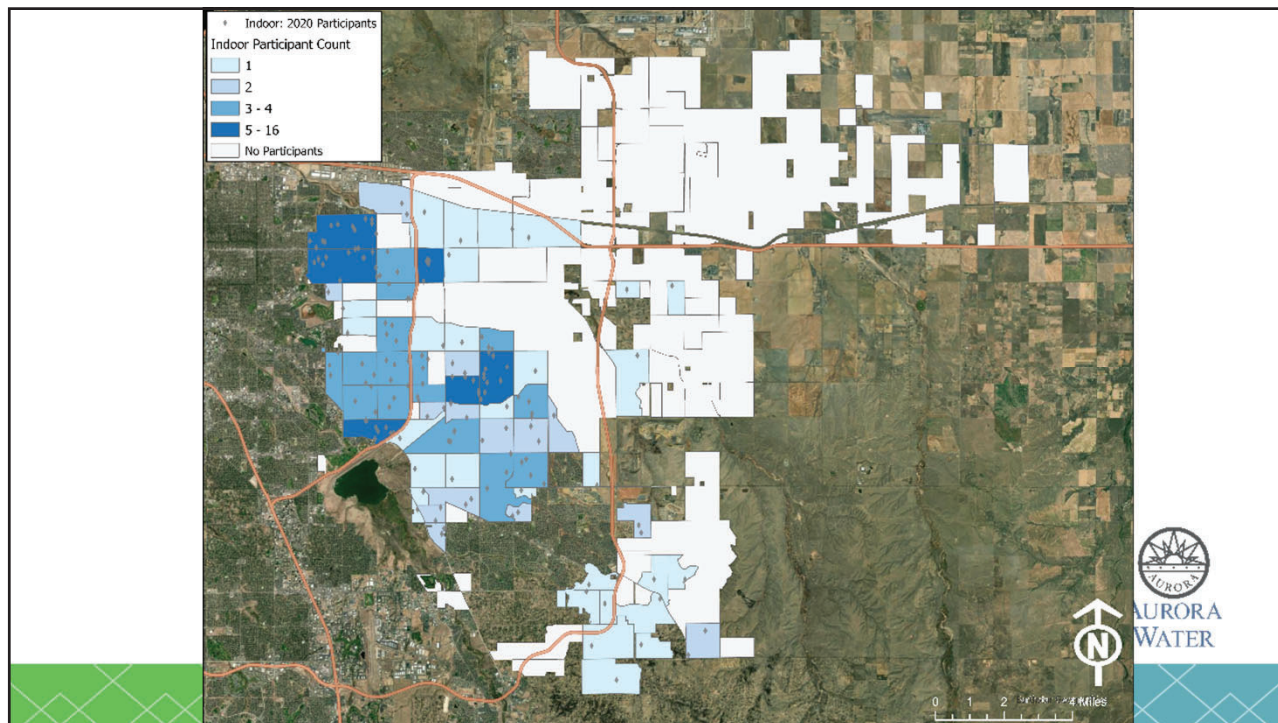
Program Participants



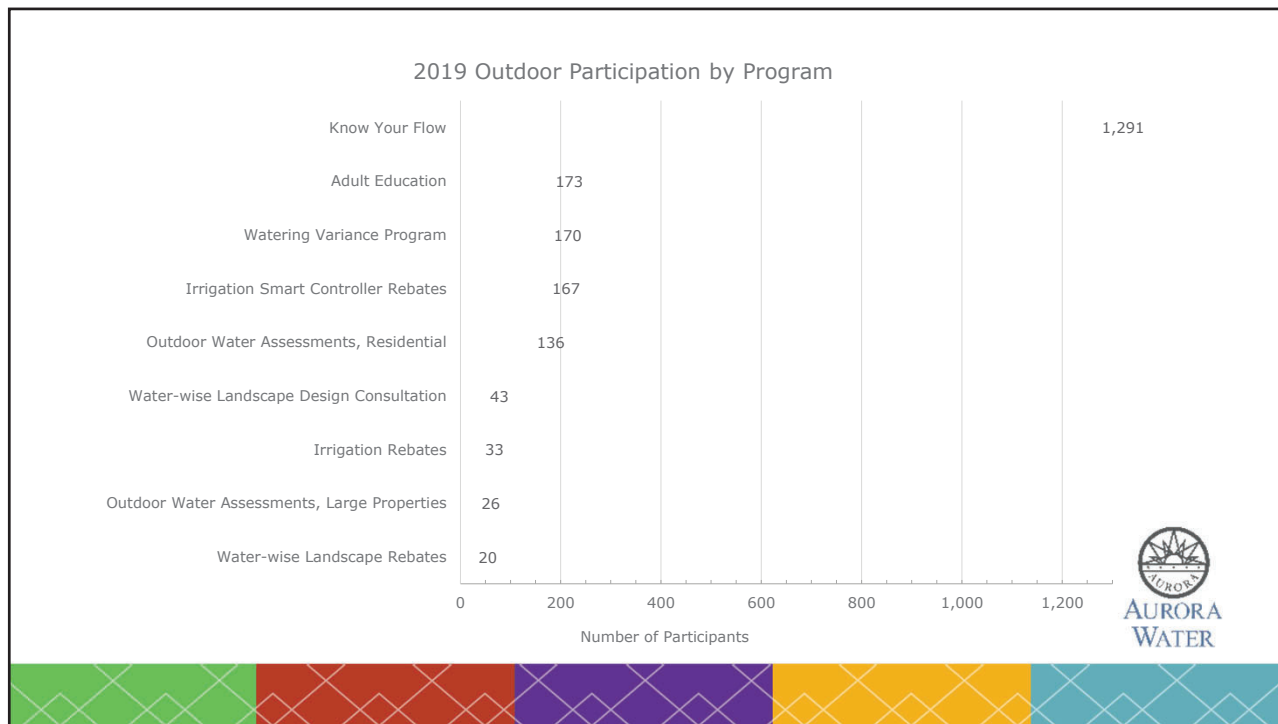
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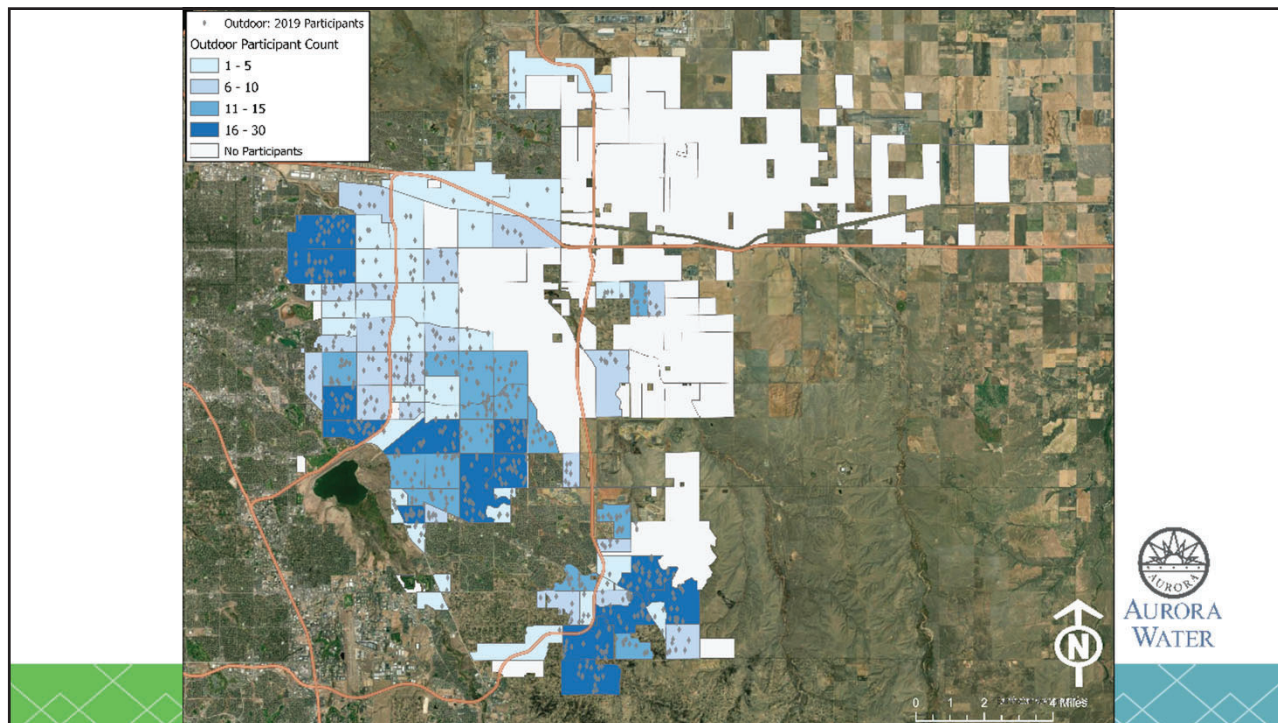
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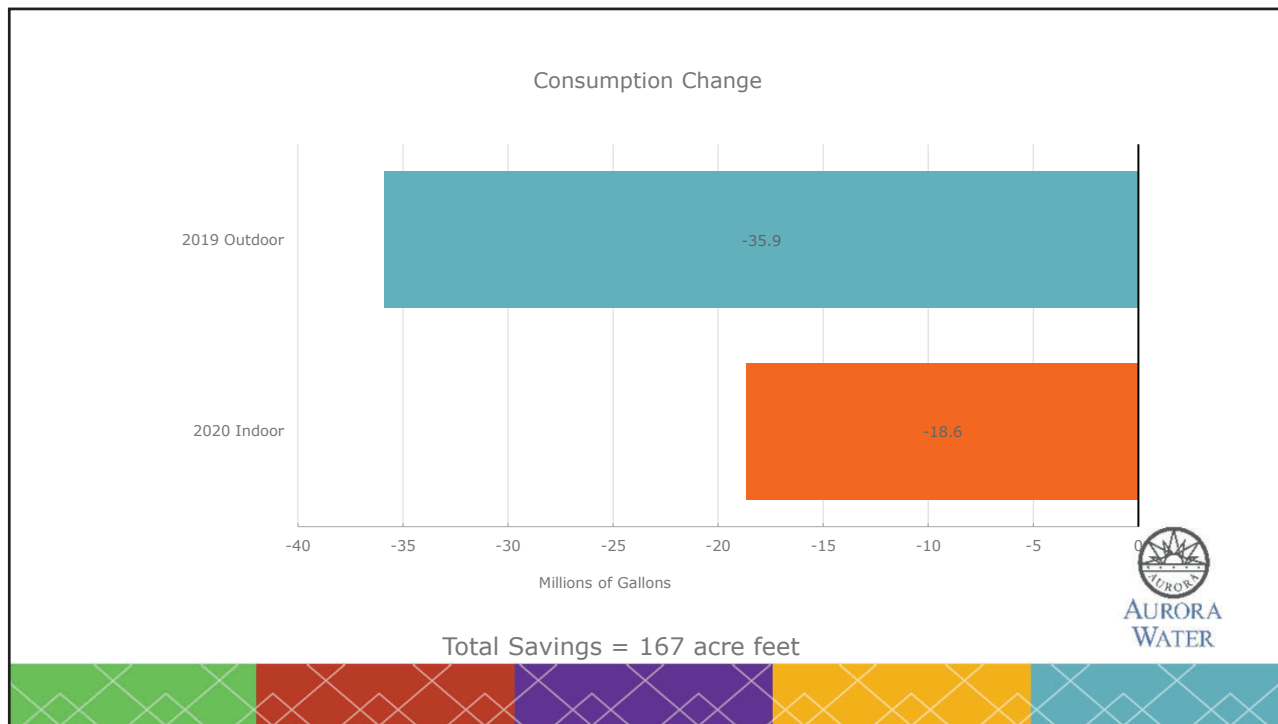
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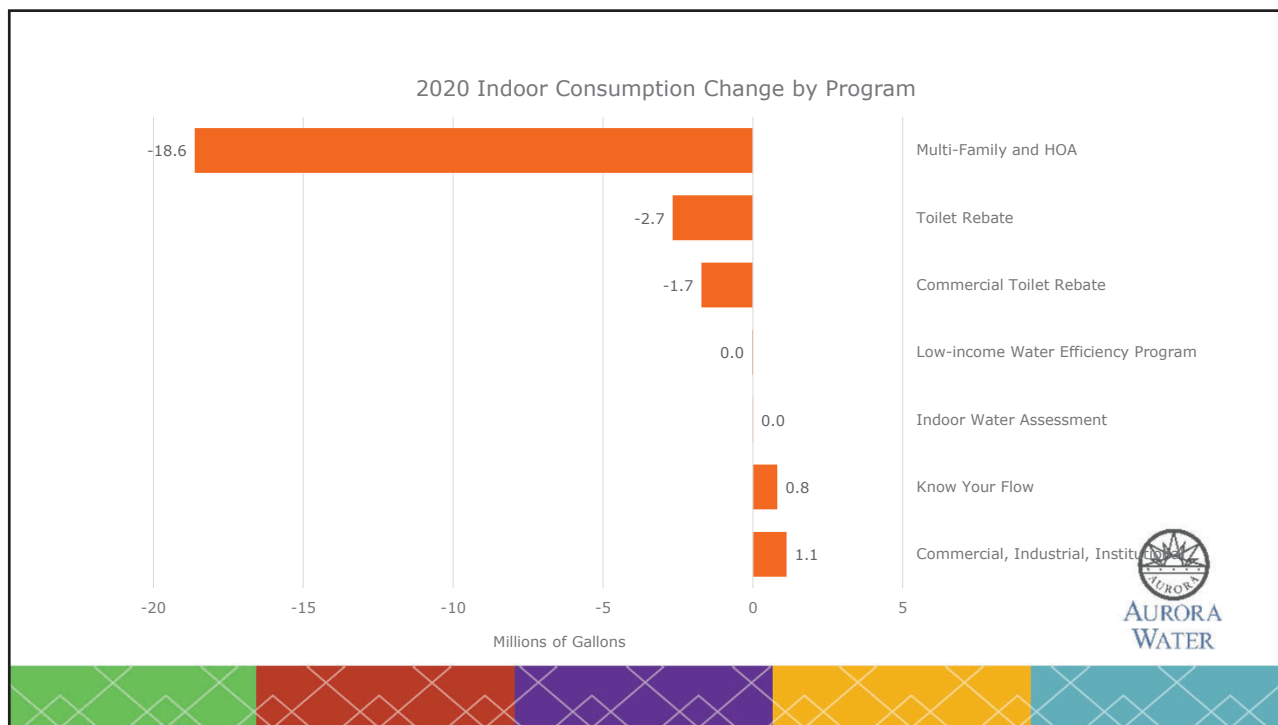
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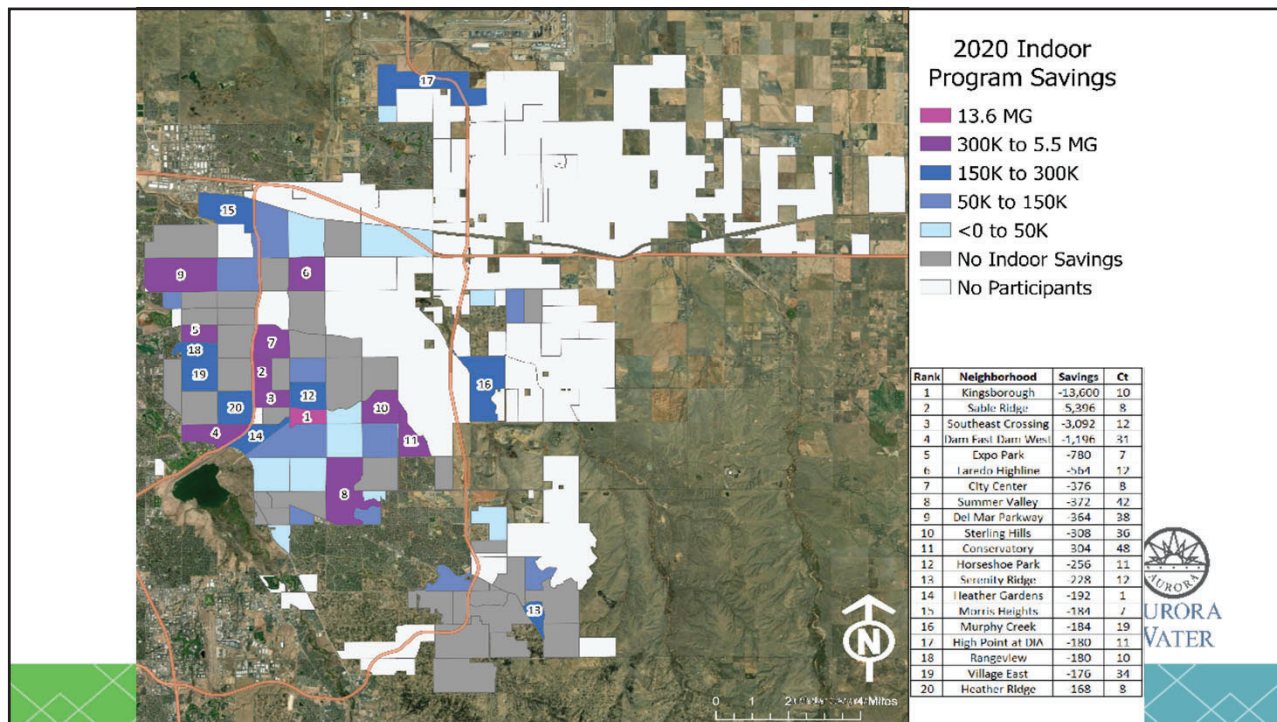
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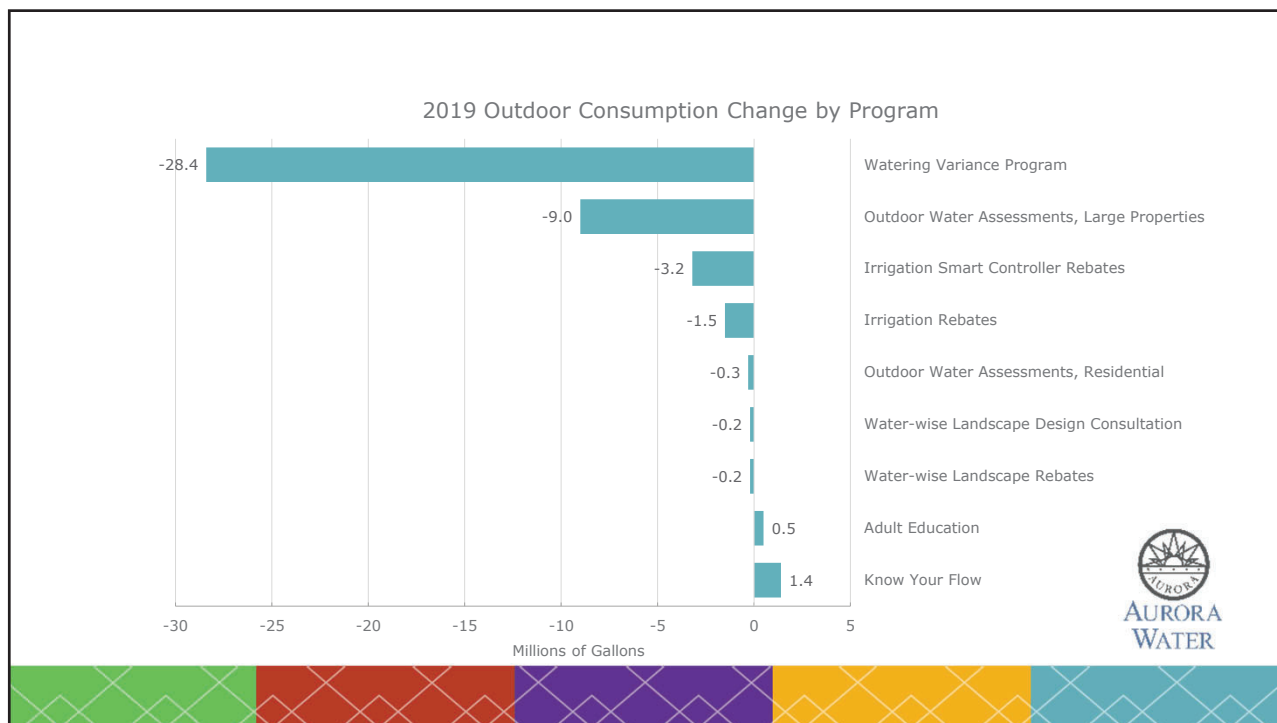
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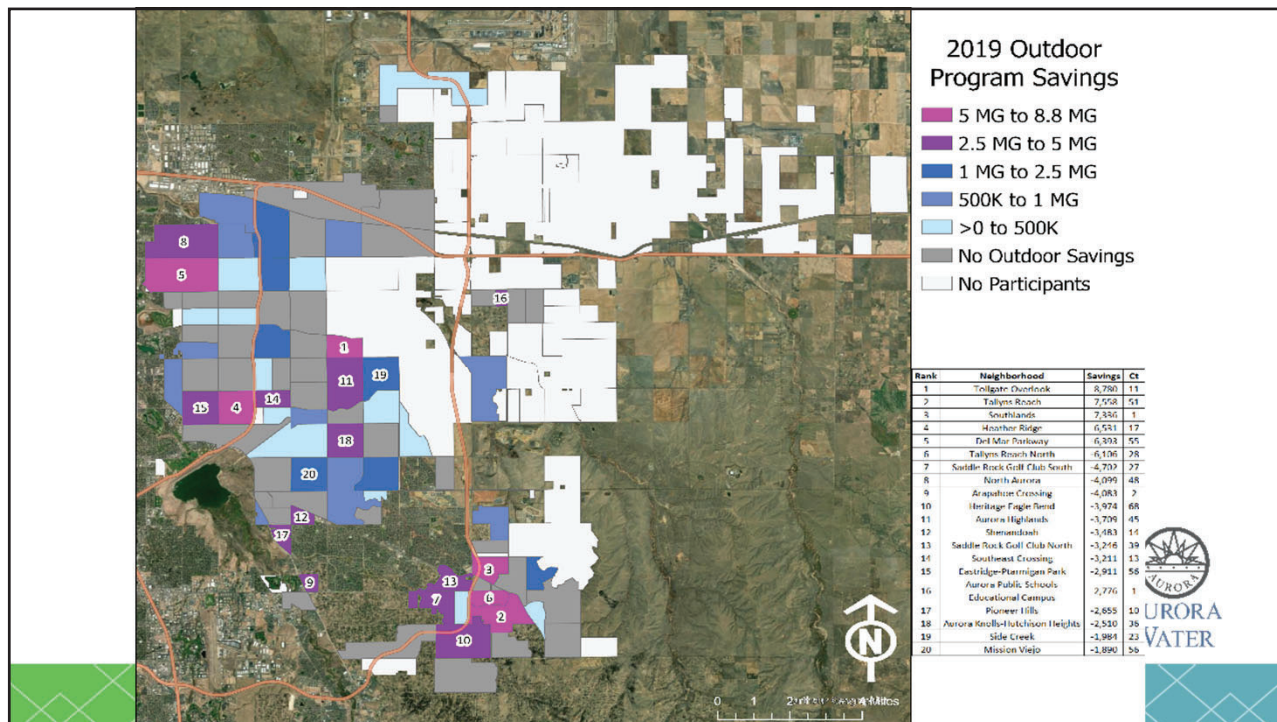


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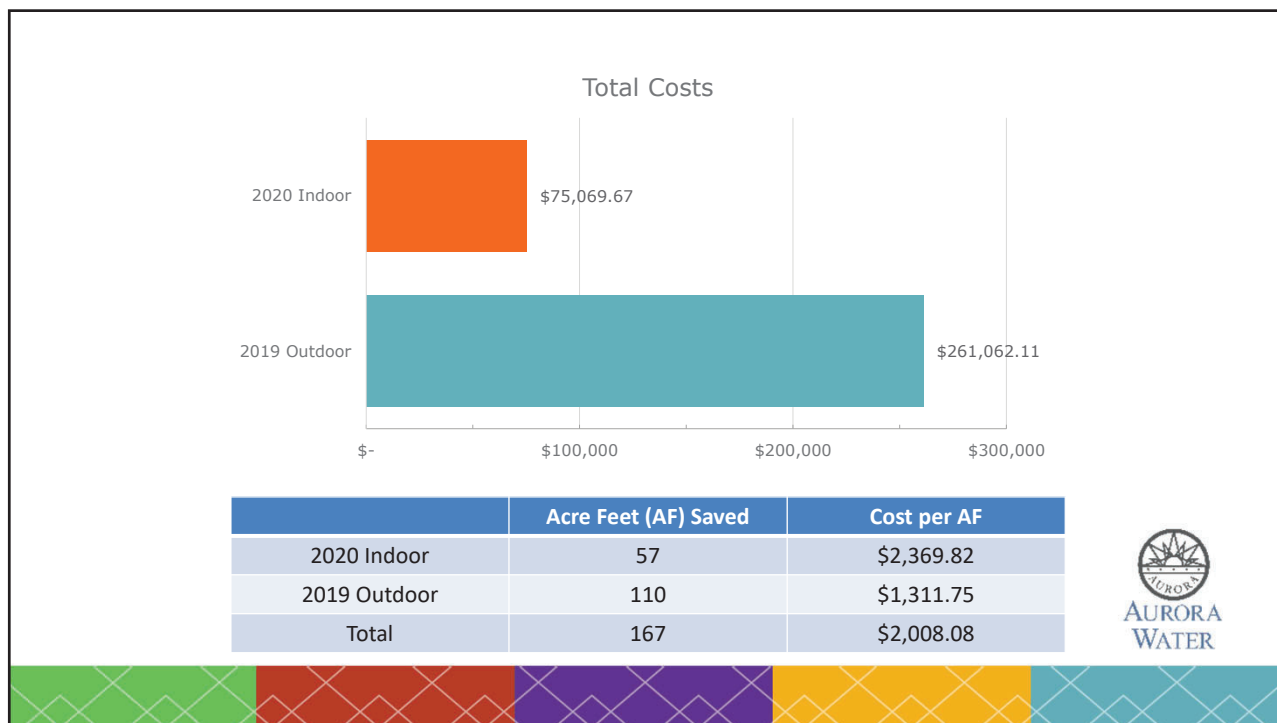


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39



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## Water Management Plan

- Enforcement of water wasting restrictions:
  - Customer Contacts –
  - Non-compliance – irrigating between 10 a.m. and 6 p.m. OR more than 3 days/week
  - Water Waste – visible waste of significant amounts of water

	Count	Change in Consumption (gal)*
Customer Contact	485	-1,455,000
Non-compliance	194	-3,566,000
Water Waste	33	508,000
* Consumption change compares month of violation to month after		

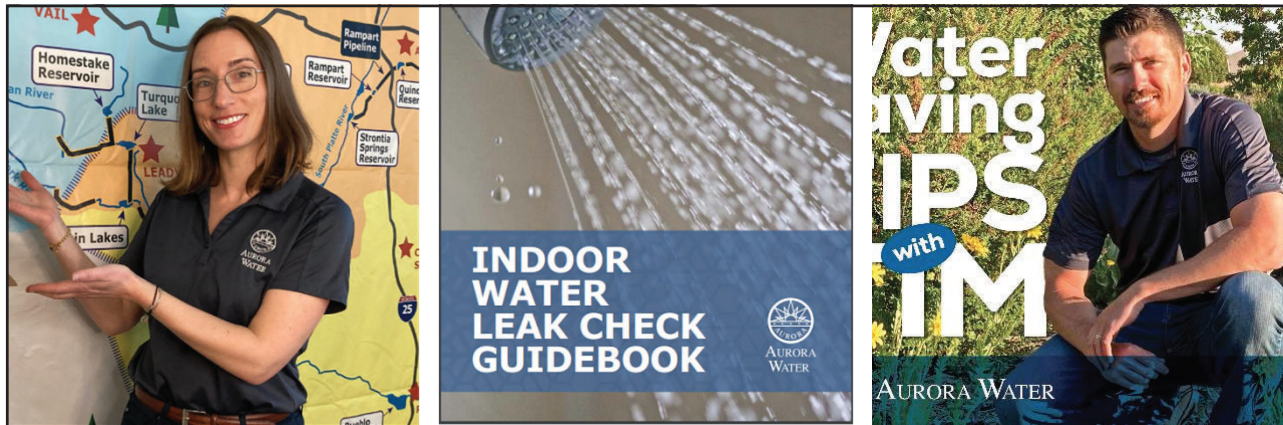


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## New in Conservation



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## Virtual Conservation

- 2020
- Virtual Classes
    - Live
    - Recorded
  - Assessment Guidebooks

- 2021
- Serial Shorts
  - Virtual Series
  - In-Person

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## Dreamscapes

- Complete water-wise renovation of front yard for FREE
- Multi-media
  - Twitter
  - Facebook
  - Instagram
  - Channel 8
- To participate, customers:
  - Create a one minute video on why they want a water-wise landscape
  - Post the video to social media
  - Tag Aurora Water



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# Water-wise Neighbors

- Community Oriented Water-wise Rebate Program
- Benefits
  - Direct water savings
  - Normalize water-wise in a community
  - Shared experience, neighbors helping neighbors
  - Fosters community, strengthens neighborhood organizations
  - Streamlines processes for participants and Conservation staff
- First participant: High Point HOA

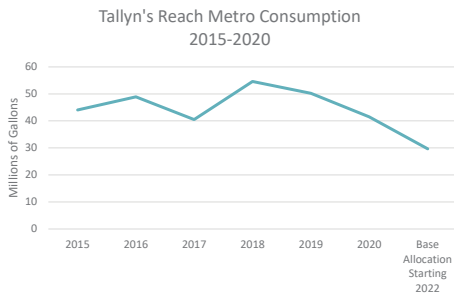
Pictures coming 2022!



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# Custom Rebates

- High cost, high savings projects
- Rate agreements
  - Match new irrigation class rates
  - Tier 1 allocations set to historical plant needs
  - Capital recovery rate at tier 2
  - Two years before new rates take effect



## Tallyn's Reach Metro District

- 24 meters
- 37 smart controllers, flow sensors
- AW funding - \$275,000
- Estimated reductions – 18 Mgal/year
- Cost per acre foot - \$4,990.60
- Decreased use by 8.7 Mgal 2019 to 2020



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# High Use Letters

- Consumption is 200% of the same month from the previous year
- 200-250 customers per month

Customer Class	Letters Sent	Change in Consumption (gal)*
Commercial	580	-14,964,000
Irrigation	12	111,000
Multi-family	46	73,000
Residential	1372	-10,257,000
<b>Total</b>	<b>2010</b>	<b>-25,037,000</b>

\*change in consumption compares month of high use to month after receiving letter



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# AMI Advanced Metering Infrastructure

- EyeOnWater online customer dashboard
  - Leak notifications
  - High Use

[AuroraGov.org/Meters](http://AuroraGov.org/Meters)



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# AMI Leak Detection

- Approx. 20,000 AMI meters installed (22% of all customers)
- Leak alert threshold = continuous 1 gal/hr flow over 24 hours
- 500-1000 leak notifications/day
- Low cost, high savings
  - \$50 cost per hour
  - 11,952,000 gals estimated savings per month
  - \$126.09 per acre foot saved

Sample Cases of Leak Alerts			
Customer Class	Leak Detected (gal/hr)	Investigation	Savings (gal/month)*
Residential	342	Stuck toilet flapper in rarely used basement bathroom	246,000
Multi-family	260	Plumbing leak under ground floor apartment	100,000
Commercial	1,288	Improper irrigation schedule, broken irrigation valves, broken toilets	927,000
Irrigation	1,319	Broken irrigation valve, zone running in retention pond area	950,000

\*Savings assume issue goes unnoticed



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# Conservation and AMI

- Operational
  - 2 internal working groups
    - Data Users – Developing single source databases, analysis
    - Operations - leak response, customer engagement
- Research and Collaboration
  - National information sharing group (headed by Aurora Water)
    - 47 participating organizations
    - 9 states
    - Providers have Conservation programs and AMI
    - Bi-monthly meetings
    - User chosen topics

Round Rock, TX: AMI History

**How We Use AMI Data to Engage Customers**

- Staff resource to diagnose site issues
  - Customer service and conservation staff can investigate spikes, constant usage, as well as hourly, daily, and seasonal patterns
- My Account "self-help" web portal for customers
  - Hourly, daily, monthly water use and targets and bills
- Leak alert program

The dashboard includes a "You may have a LEAK!" alert, a "5 days 33 gph" usage summary, and a "WaterSmart Leak Alerts" header. The Aurora Water logo is visible at the bottom right.

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## Total Estimated Consumption Change

96,002,000 gallon reduction

294.6 Acre Feet

\$5,187.94 per acre foot



AURORA  
WATER

\* Does not include Tallyn's Reach project. Includes estimates for AMI leak detection and High Use Letters. Includes all 2020 conservation expenditures.

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## Questions?



AURORA  
WATER

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