

## CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA

July 12, 2022, 6:00 p.m.  
Aspen Room, 2<sup>nd</sup> Floor, Aurora Municipal Center  
or Hybrid option below

Microsoft Teams Link:  
[Click here to join the meeting](#)  
or go to

<https://bit.ly/3bC93Wh>

Call in (audio only) - 720-388-8447  
Phone Conference ID: 595 739 077#

Members: Angie Binder - Chair, Richard "Dick" Eason -Vice Chair, Jay Campbell, Tom Coker, Dennis Dechant, William Gondrez, Janet Marlow, David Patterson, Daniel Widrich

- |     |  |                                |           |
|-----|--|--------------------------------|-----------|
| 1.  | Approval of Minutes – May 10, 2022                   | 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.  | Water Conservation Annual Report                     | Tim York                       | 6:30 p.m. |
| 6.  | 2023 Proposed Budget                                 | JoAnn Giddings                 | 7:00 p.m. |
| 7.  | 2023 Water rates and fees                            | JoAnn Giddings/Fernando Aranda | 7:20 p.m. |
| 8.  | Review Follow-Up Questions Generated at this Meeting | Greg Baker                     | 7:45 p.m. |
| 9.  | Confirm Next Meeting – Tuesday, August 9, 2022       | Chair                          | 7:55 p.m. |
| 10. | Adjourn  | Chair                          | 8:00 p.m. |

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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

**Date:** July 12, 2022

**Subject:** Water Conservation Annual Report

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**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 2021 indoor programs and 2022 outdoor programs. Staff will present highlights of 2021 programs. 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.

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# Water Conservation Programs

*Citizens' Water Advisory Committee – July 12<sup>th</sup>, 2022*

*Tim York*

*Water Conservation Supervisor*

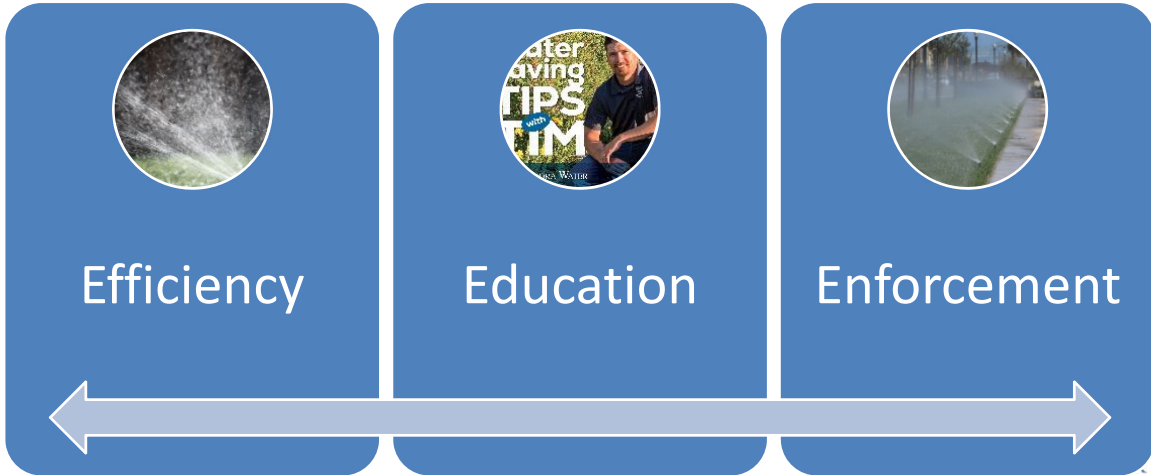


## Agenda

- Program History & Team
- Conservation Programs Overview
- Program Performance Review
  - Participation and Consumption Change
  - Efficiency Analysis
  - Waste Intervention
- Conservation Innovations



# What is Conservation?

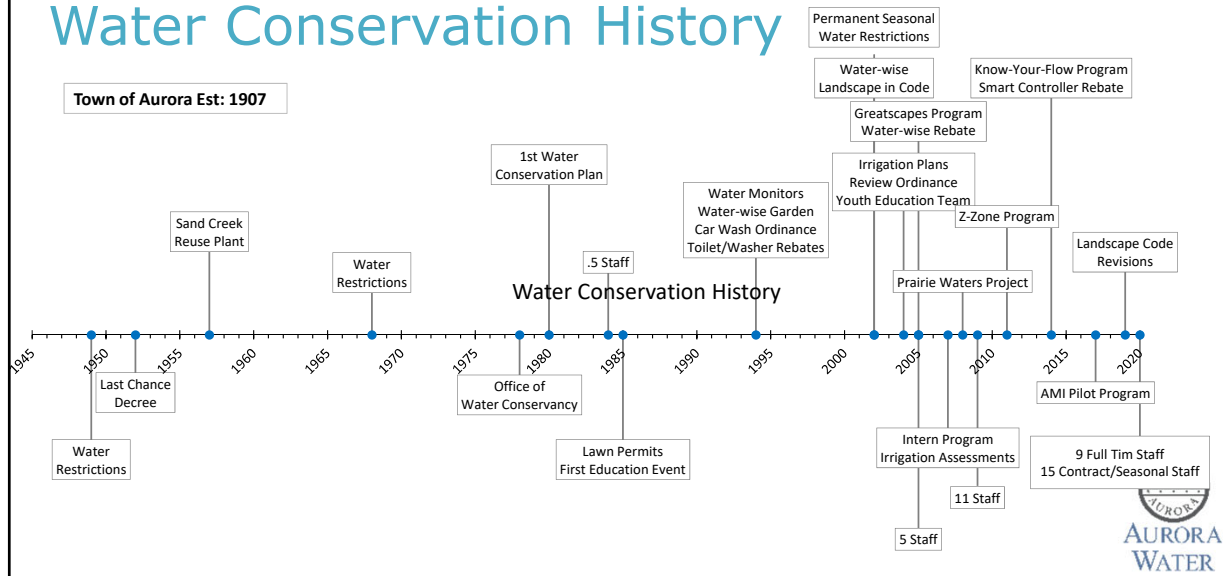


Aurora's Water Conservation team is one of 2 platinum recognized teams in the country.

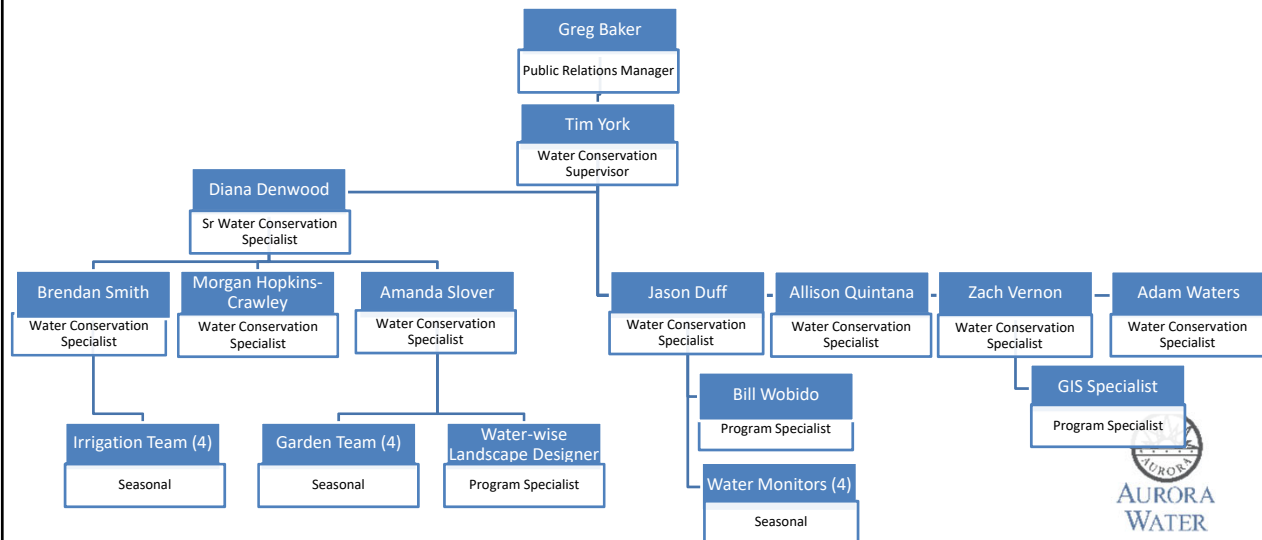


# Water Conservation History

Town of Aurora Est: 1907



# Meet the Team!



## Conservation Programs

- AMI Leak Notification and Investigations
- Code/Ordinance Development
- Commercial Washer Rebates
- Community Gardens
- Conservation Education
- Dreamscape Giveaway – New 2021
- Greatscapes – Income Qualified Landscape
- High Use Outreach and Investigations
- Indoor Water Assessments
- Irrigation and Soil Inspections
- Irrigation High-Efficiency Component Rebates
- Irrigation Plans Review
- Know Your Flow
- Large Property Watering Variance Program
- Low-income Water Efficiency Program
- Outdoor Water Assessments
- Smart Irrigation Controller Rebates
- Ultra-high Efficiency Toilet Rebates
- Water Management Plan Enforcement
- Water-wise Landscape Designs
- Water-wise Garden
- Water-wise Landscape Rebates
- Water-wise Neighbors – New 2021
- Z-zone Program

*\* Programs in BLUE are outdoor use focused or inclusive*



## Programs Included: 2021 Indoor

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



## Programs Included: 2020 Outdoor

*\*Analysis for outdoor programs requires data from a full irrigation season after customer participation; as a result, outdoor analysis shows 2020 participants.*

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



## Conservation Programs





## 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)



## Indoor Water Assessments

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



## Water-wise Landscape Rebate

### Residential

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

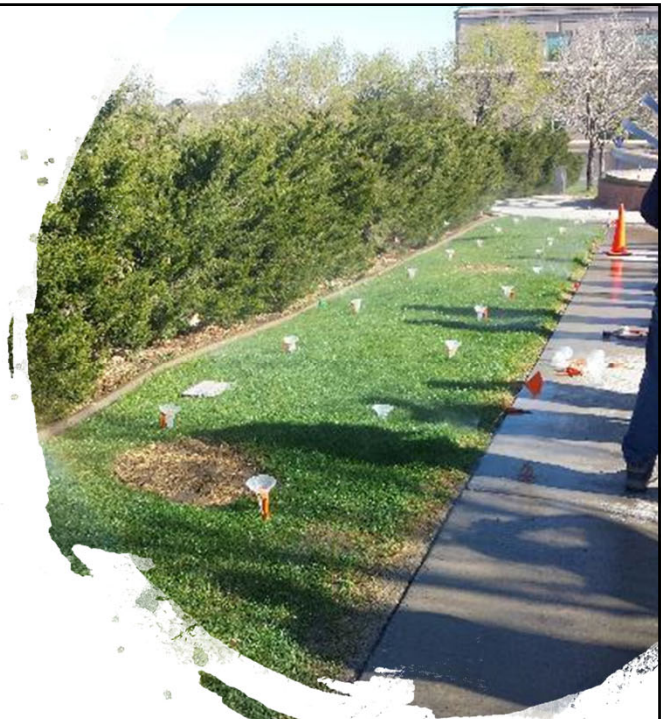
### Commercial/Multi-Family

- Same options with rebate value dependent on conservation analysis.



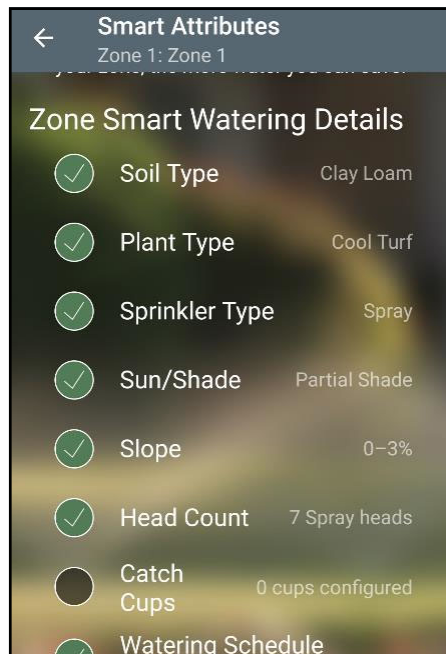
## Outdoor Water Assessments

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



## Irrigation Rebates

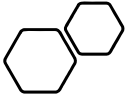
- Residential HE Components
  - \$9 per pop-up (max 50)
  - \$12 per rotor (max 50)
  - \$6 per nozzle (max 50)
  - Spray to drip conversion, \$75 per zone (max 3)
- Commercial/Multi-family
  - \$100 per zone up to 150 zones



## "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 is agreement dependent
  - Multi-year payback





## Greatscapes

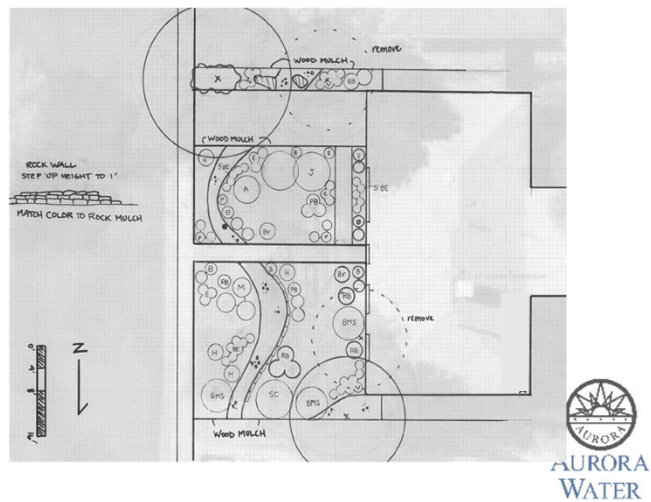
Income qualified

- Free water-wise landscape design and installation
  - No irrigation
- Community Works
  - Non-profit career prep and placement
- Partnership allows us to reach more residents
- \$45K budget
  - Approximately 6 residents/year



## Landscape Designs

- Free
- Designed by professional designer or Landscape Architect
- Homework required
- Allows homeowners to become familiar with effort level





## Water-wise Garden

- 6 acres formal beds
- Volunteer program
- Labeled/themed beds
- Active & passive spaces
- Outdoor activity/meeting space for AMC campus



## Community Gardens

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

# Water Management Plan

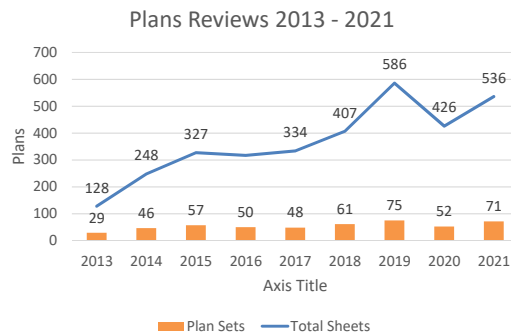
Water monitors look for non-compliance/water waste issues.

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.

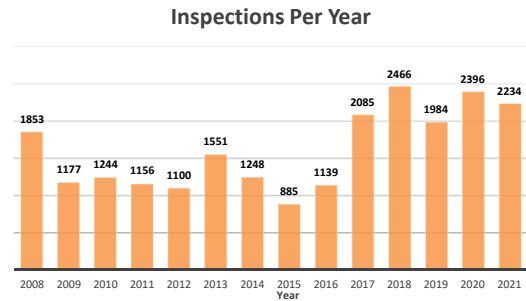
## Irrigation Plans Review

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



# Soil and Irrigation Inspections

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

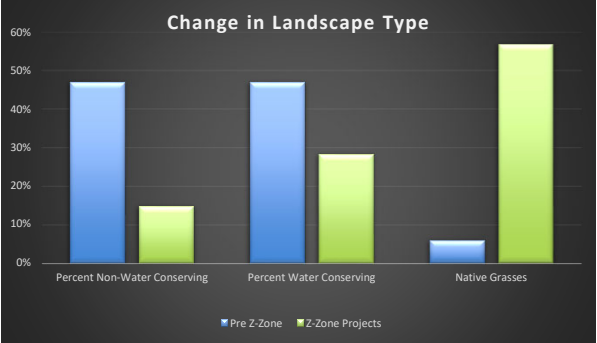


## Conservation in New Development

- 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

# Conservation in New Development

- Z-Zone Program
  - 83 total projects
- Conservation and Planning work together to ensure water-wise practices are implemented in new code.





# Targeted Efficiency Educational Programs



## KNOW YOUR FLOW

- Educate residents on efficient water use
- 1,667 participants
- Weekly recommended irrigation schedule
- Monthly water use report
  - Recommended water use vs. actual water use

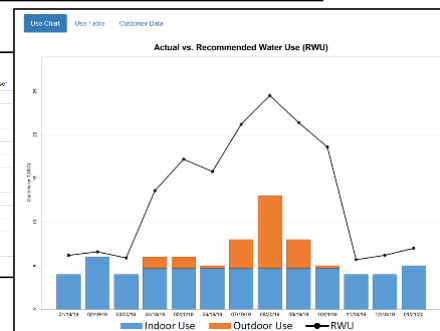
[www.aurorgov.org/KnowYourFlow](http://www.aurorgov.org/KnowYourFlow)

Use Chart   Use Table   **Customer Data**

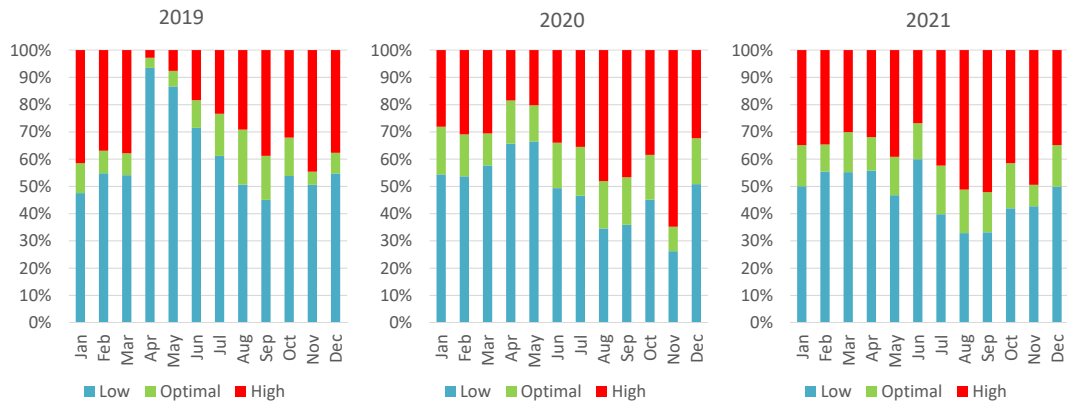
The information below is used to calculate your household's recommended water use. Visit [this website](#) for more information on the calculation methods, and please call (720.859.4375) or e-mail us if any information below has changed.

- 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 Table	Customer Data				
Billing Period	Total Use*	Total RWU**	Indoor Use*	Indoor RWU**	Outdoor Use*	Outdoor RWU**
12/18/19 - 01/21/20	4	4	4	4	0	0
02/18/19 - 02/20/19	0	0	0	0	0	0
02/18/19 - 02/20/19	4	5.0	4	5.0	0	0
02/18/19 - 02/20/19	6	1.6	7.7	3.9	1.5	1.5
04/18/19 - 04/20/19	6	1.2	4.7	8.9	1.2	1.2
02/22/19 - 06/19/19	2	15.8	4.7	6.2	6.3	6.3
02/18/19 - 02/19/19	2	21.4	4.7	6.2	3.3	3.3
02/18/19 - 02/20/19	63	31.5	7.7	6.5	6.5	6.5
02/18/19 - 02/20/19	8	7.4	7.7	3.2	3.5	3.5
02/18/19 - 02/21/19	3	14.6	4.7	8.9	8.9	8.9
02/20/19 - 11/20/19	4	5.7	4	5.7	0	0
11/18/19 - 12/18/19	4	6.2	4	6.2	0	0
01/18/19 - 01/21/20	5	7	5	7	0	0
<b>Total (last 12 mos.)</b>	<b>71</b>	<b>101.7</b>	<b>35.2</b>	<b>75.0</b>	<b>15.1</b>	<b>15.1</b>



# Know Your Flow

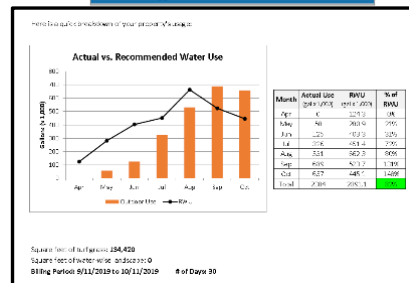
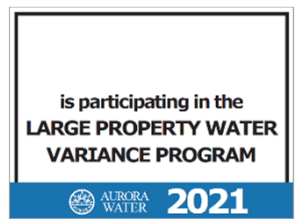


Low – 90% of recommended or lower  
 Optimal – 90%-110% of recommended  
 High – 110% of recommended or higher

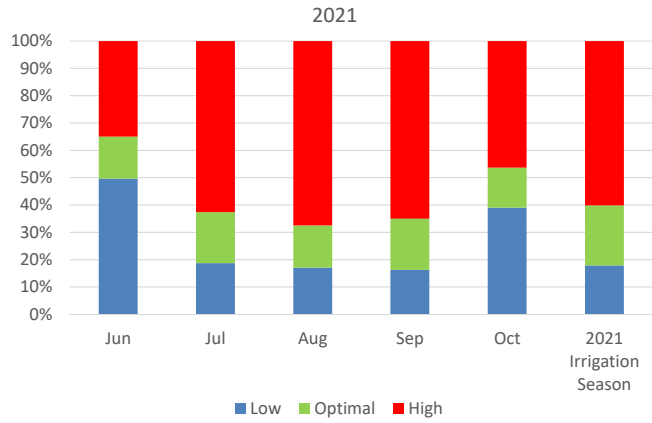


# Variance Program

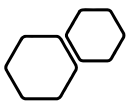
- Variance for irrigating seven days/week (not between 10 a.m. – 6 p.m.)
- Monthly report card
- Commercial
- HOA Common Space
- Irrigation efficiency plans



# Large Property Watering Variance



Low – 90% of recommended or lower  
 Optimal – 90%-110% of recommended  
 High – 110% of recommended or higher



## Classes

- In-person
- Self paced (online)
- Topics:
  - Water-wise landscape
  - Vegetable gardens
  - DIY projects
  - Understanding water use
  - Much more

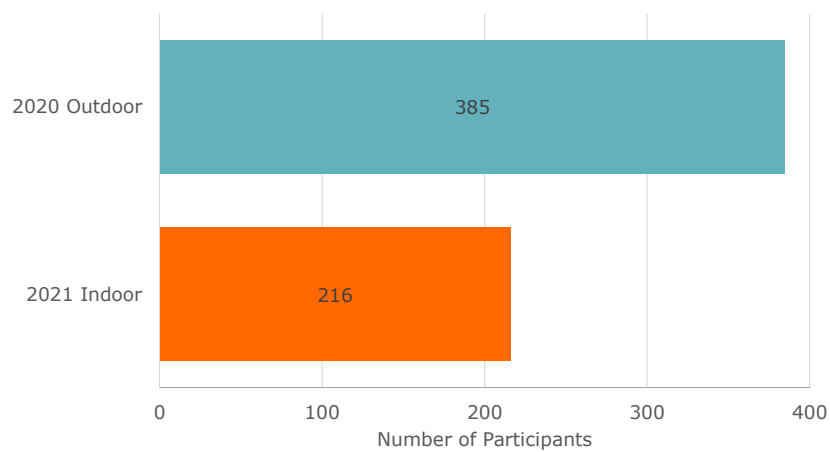
[www.aurorawater.org/waterclasses](http://www.aurorawater.org/waterclasses)

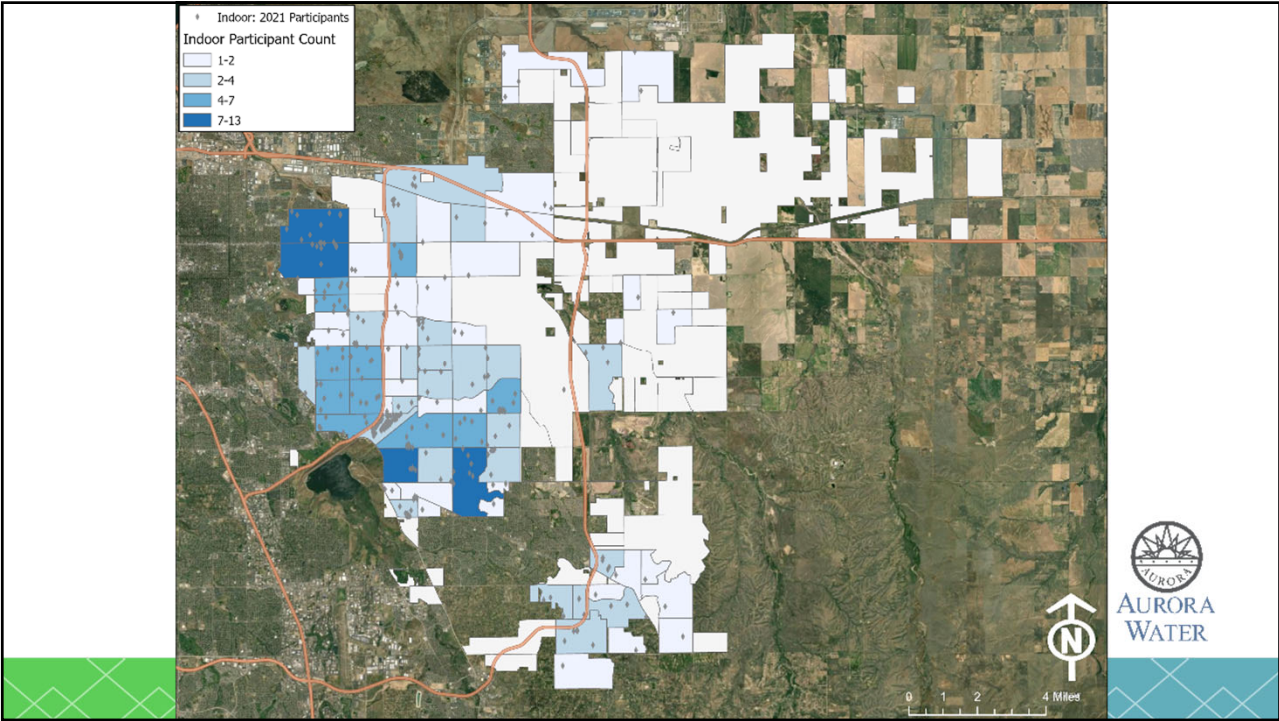
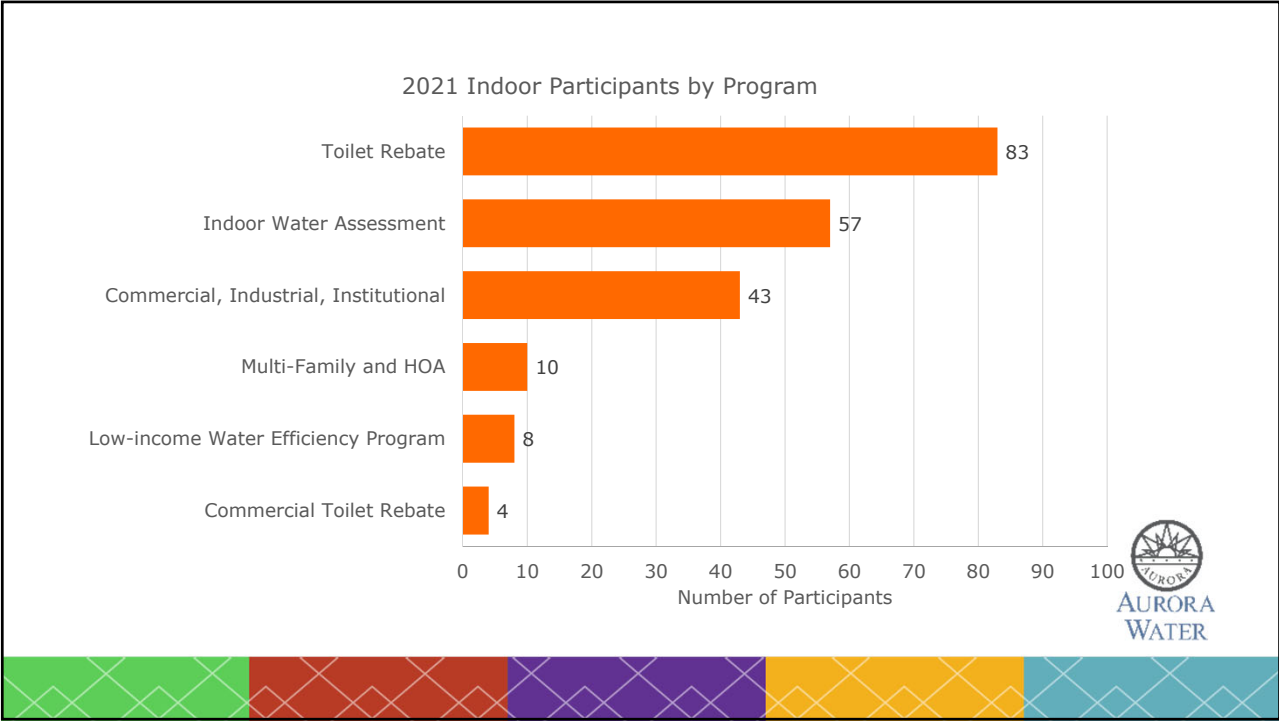


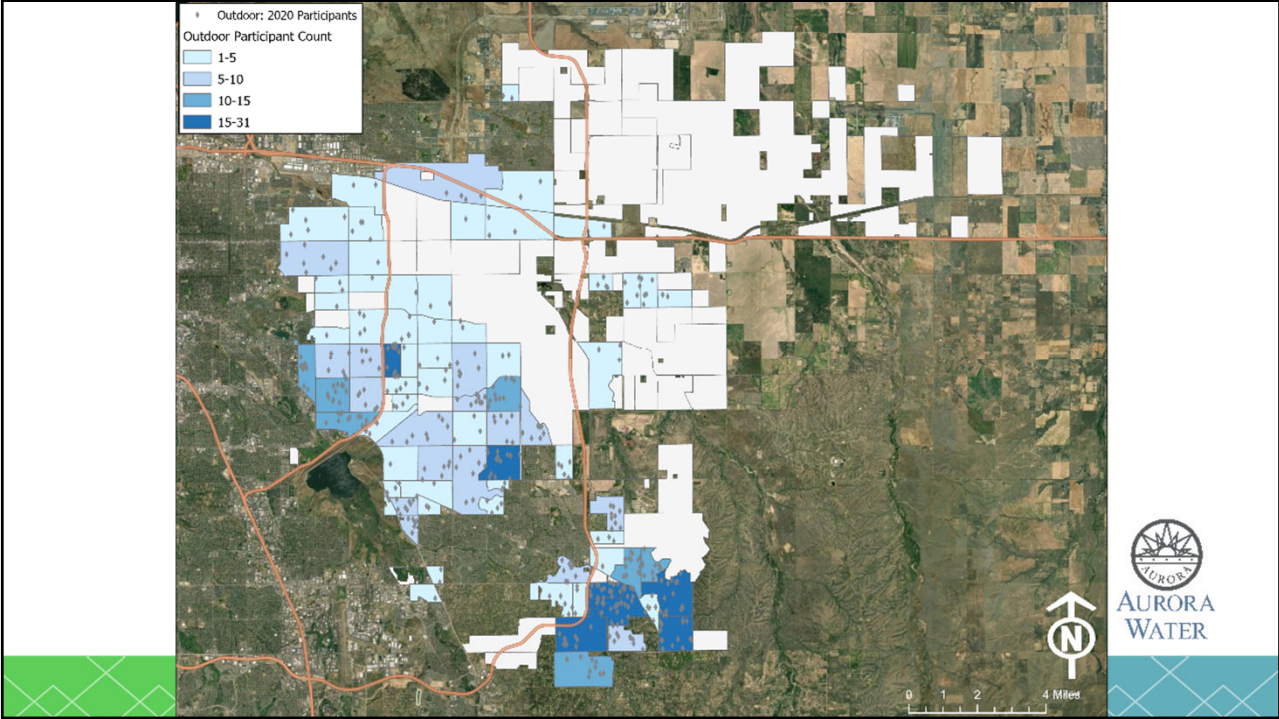
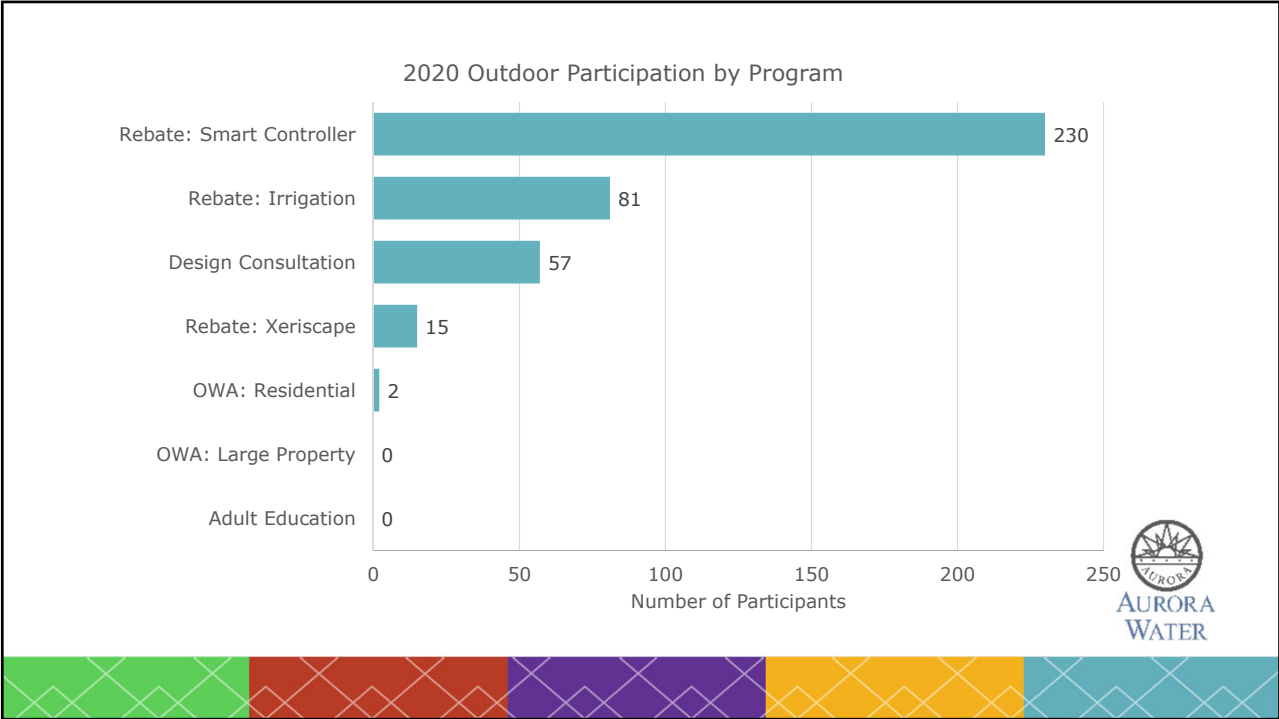
# Program Performance Review Participation and Consumption Change



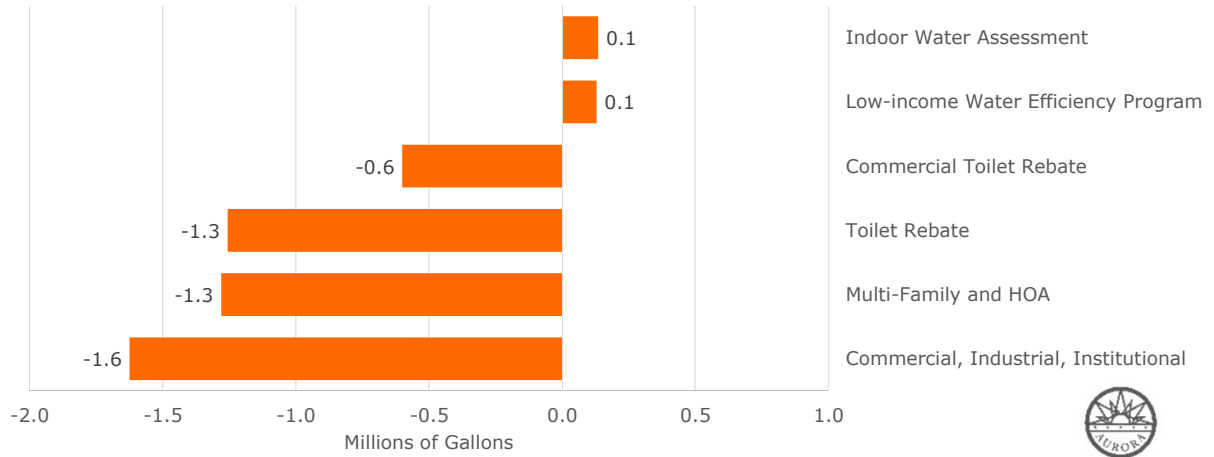
Program Participants





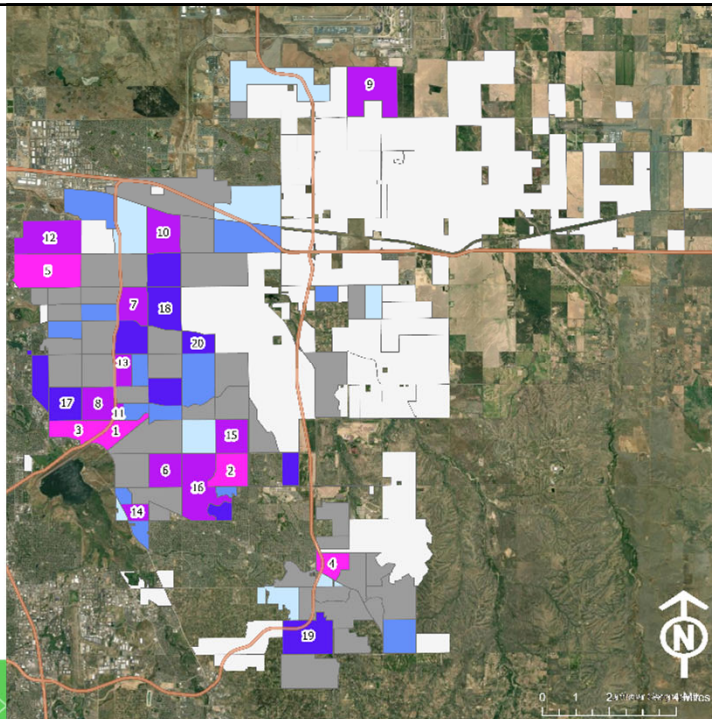


### 2021 Indoor Consumption Change by Program



### 2021 Indoor Program Savings

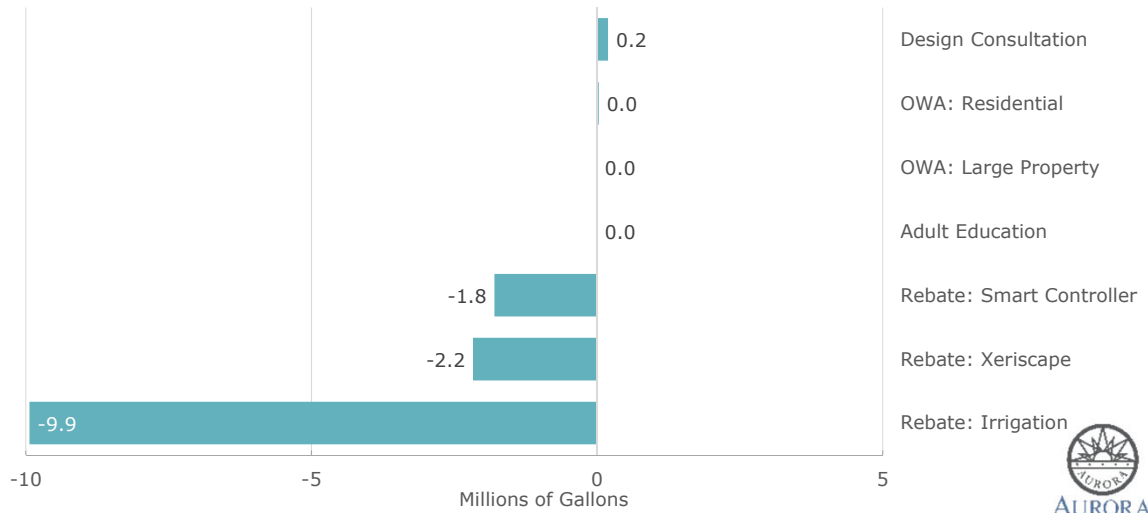
- 1 MG to 3.9 MG
- 250K to 1 MG
- 100K to 250K
- 25K to 100K
- 0 to 25K
- No Indoor Savings
- No Participants



Rank	Neighborhood	Savings	Ct
1	Heather Gardens	-3,880	11
2	Highpoint	-2,524	33
3	Dam Last Dam West	2,404	27
4	Southlands	-2,336	5
5	Del Mar Parkway	1,364	31
6	Mission Viejo	-880	40
7	City Center North	832	2
8	Heather Ridge	-808	8
9	Portos	720	1
10	Norfolk Glen	-616	2
11	Hill Station	584	1
12	North Aurora	-188	31
13	Sable Ridge	456	6
14	Woodgate	-328	37
15	Seven Hills	300	37
16	Summer Valley	-288	41
17	Foxridge Ptarmigan Park	244	43
18	Centretech	-252	4
19	Heritage Eagle Bend	204	62
20	Tollgate Overlook	-172	8

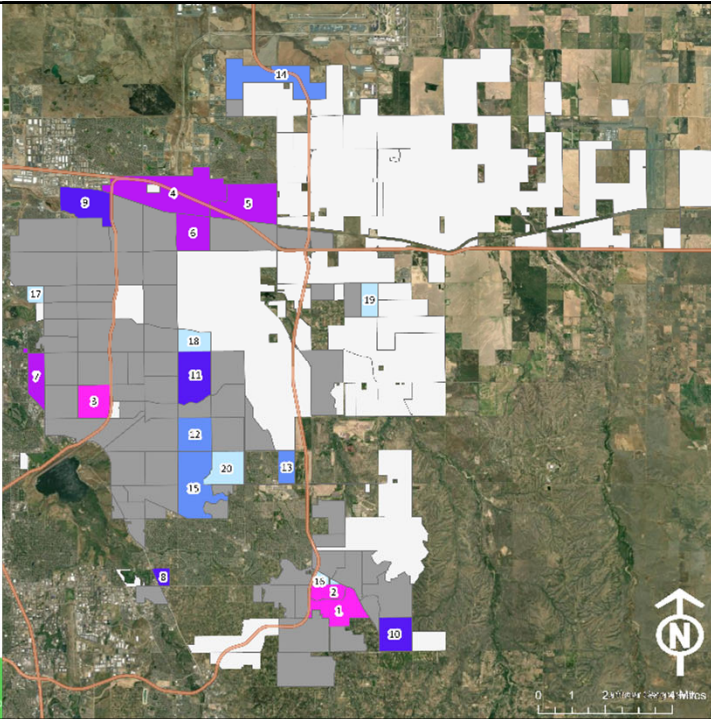


### 2020 Outdoor Consumption Change by Program



### 2020 Outdoor Program Savings

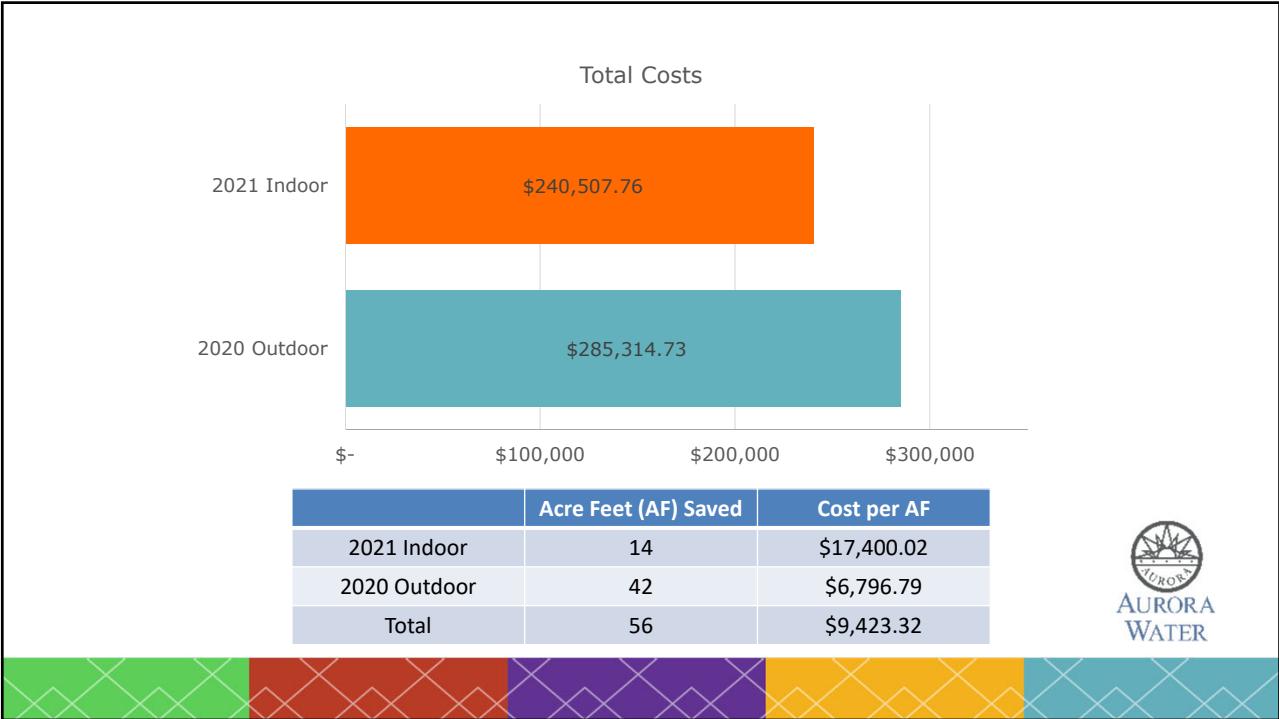
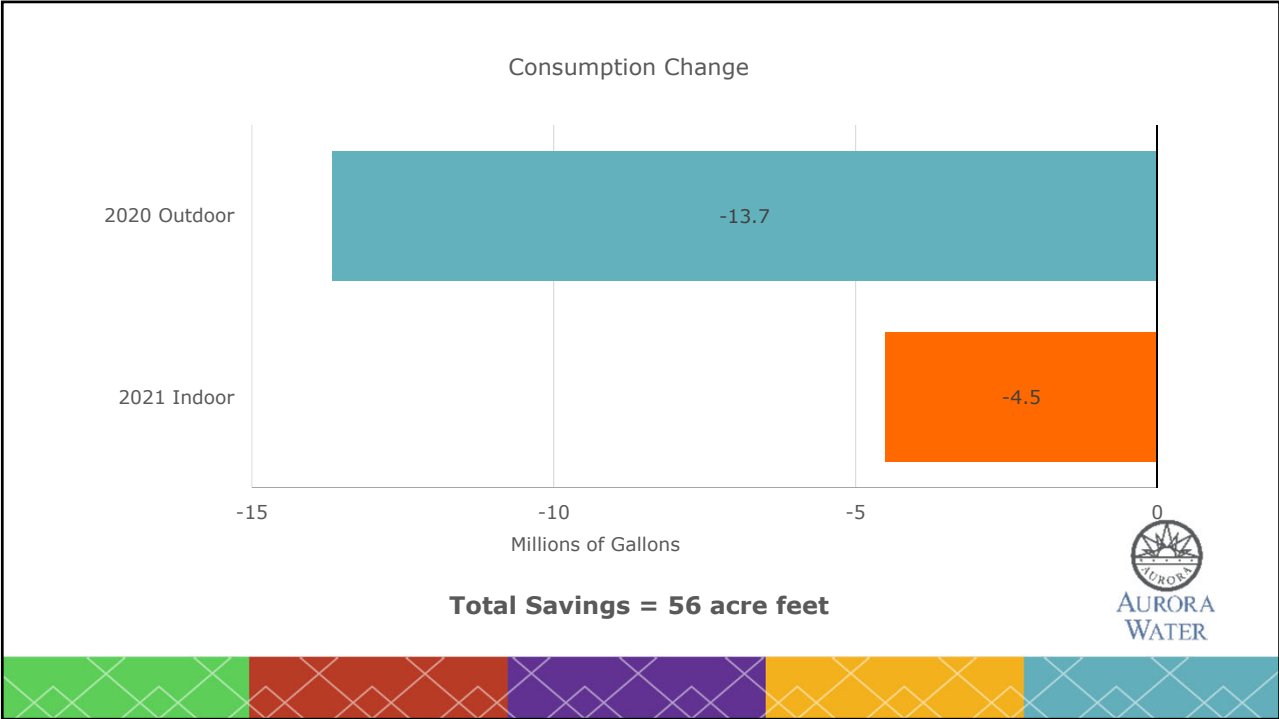
- 3 MG to 3.8 MG
- 500K to 3 MG
- 100K to 500K
- 40K to 100K
- 3K to 40K
- No Outdoor Savings
- No Participants



Rank	Neighborhood	Savings	Ct
1	Tallyns Reach	-1,814	81
2	Tallyns Reach North	-3,369	28
3	Heather Ridge	-3,017	54
4	Gateway Park	-2,945	2
5	Northwest	1,540	2
6	Friendly Village	814	1
7	Dayton Triangle	-755	17
8	Asapahoe Crossing	-478	2
9	Morris Heights	-141	4
10	Blackstone Country Club	137	18
11	Aurora Highlands	135	33
12	Aurora Knolls-Hutchison Hts	-61	23
13	East Quincy Highlands	-77	24
14	High Point at DNA	-51	10
15	Summer Valley	43	18
16	Forest Trace	-38	2
17	Sunny Vale	-34	2
18	Tollgate Overlook	-9	5
19	Adriens	7	14
20	Highpoint	3	16







# Waste Intervention



## 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	701	-2,108,000
Non-compliance	313	-204,000
Water Waste	51	-2,695,000

\* Consumption change compares month of violation to month after



# 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)*	
	2020	2021	2020	2021
Commercial	580	718	-14,964,000	-12,751,000
Irrigation	12	0	111,000	0
Multi-family	46	76	73,000	-2,754,000
Residential	1,372	1,515	-10,257,000	-14,953,000
<b>Total</b>	<b>2,010</b>	<b>2,116</b>	<b>-25,037,000</b>	<b>-30,458,000</b>

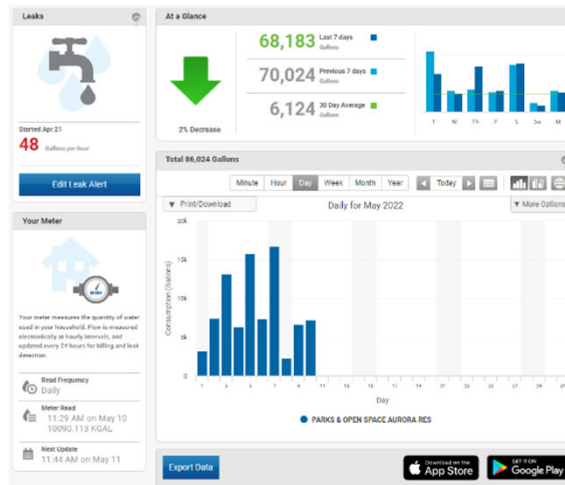
\*change in consumption compares month of high use to month after receiving letter



# AMI

## Advanced Metering Infrastructure

- 36,000 AMI accounts (39% customers)
- EyeOn Water
  - Customer portal
    - Leak alerts
    - Usage spikes
  - 1,766 users
  - 5% of AMI accounts



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



## AMI Leak Detection Cases

- 500-1000 leak notifications/day
- Cost-Benefit Study (2021)
  - \$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



## AMI Leak Detection Case: Car Wash

- 2,264 gal/hr leak detected (\$332/day)
- IWA finds no visible leaks
- Maintenance technician diagnostics:
  - Pump failure requiring replacement
  - Small equipment leaks
  - Broken, continuously running flushing valve
  - Hose bib leaking into drain
- 9 days from outreach to resolution
- EyeOnWater signup for four locations in Aurora



# Conservation Innovations



## ConserveTrack

- Online portal for conservation programs
  - Apply for rebates
  - Track current and past applications
  - Request indoor/outdoor assessments
  - Communicate directly with conservation staff
  - Alerts

Apply for a Program

### 1. Rebate Calculator

Calculate your rebate request. Select the toilet model(s) that you anticipate purchasing and then the number and your cost (without taxes). The maximum rebate per toilet is \$100.

	Brand And Model	Number	Cost Per	Sub Total
1	Select...			
2	AquaSource   Ultra High Efficiency 2 Piece Toilet			
	Ferguson ProFlo   Greenlee Series Toilet			
	Gerber   Viper 3.8 gpf 2-Piece Elongated ErgoHeight Toilet			
	Hemmsey & Hencoville   Prioritydry 2.8 gpf Toilet			
	Nilgiris   Stealth Toilet			
	Projet   Koaer   Koa Flush 2-piece 0.8 gpf			
	Saason   Hating 48-In-One Round Toilet			

### 2. Toilets

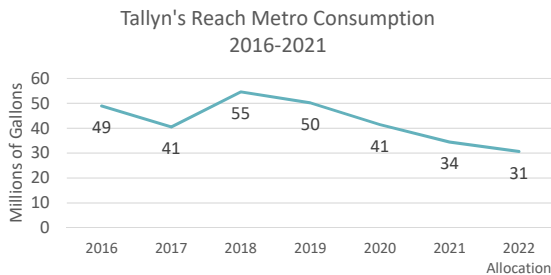
Fill in the data of toilets you anticipate replacing. Eligible toilets must use at least 1.6 gallons per flush. Our pre-inspection will verify a portion of these toilets.

Toilet Type 1	Gallons Per Flush	Age (years)	Number



# Allocation Agreement 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
  - 16,000,000 gal per year savings since installation
  - \$5,600 per acre foot saved
- 5 interested properties in 2022 with combined:
  - 142 acres of irrigated landscape
  - 126 Mgal/yr current use
  - 26.8 Mgal/yr estimated savings



# Conservation and AMI

- Operational
  - 2 internal working groups
    - Data Users – Central databases and analysis
    - Operations - leak response, customer engagement
- Research and Collaboration
  - National information sharing group (headed by Aurora Water)
    - 132 participating organizations
    - 11 states
    - Providers use or research AMI for conservation programs
    - Bi-monthly meetings

Round Rock, TX: AMI History

City of Fort Collins WaterSmart Leak Alerts

How We Use AMI Data to Engage Customers

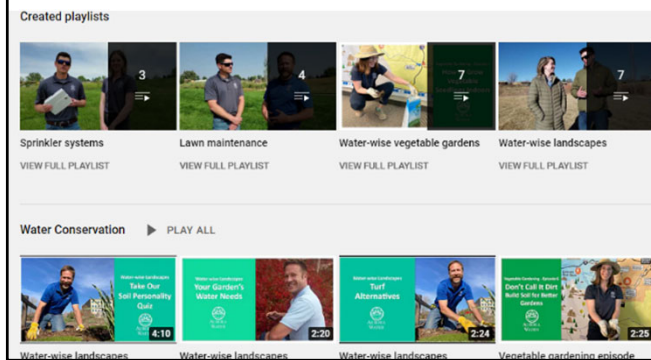
- Staff resource to diagnose site issues
  - Customer service and conservation staff can investigate spikes, constant usage, as well as hourly, daily, and seasonal patterns
- My Account "self-help" web portal for customers
  - Hourly, daily, monthly water use and targets and bills
- Leak alert program

WaterSmart Leak Alerts interface showing a leak alert notification: "You may have a LEAK! 5 days 33 gph".



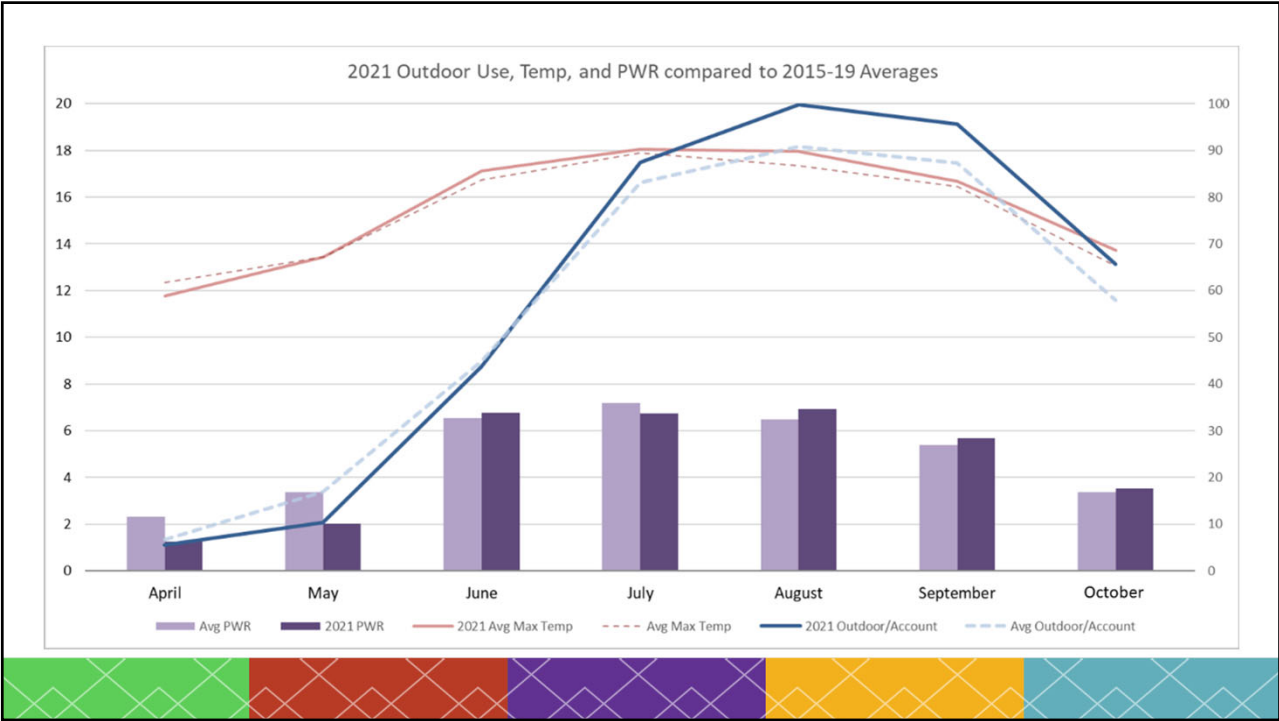
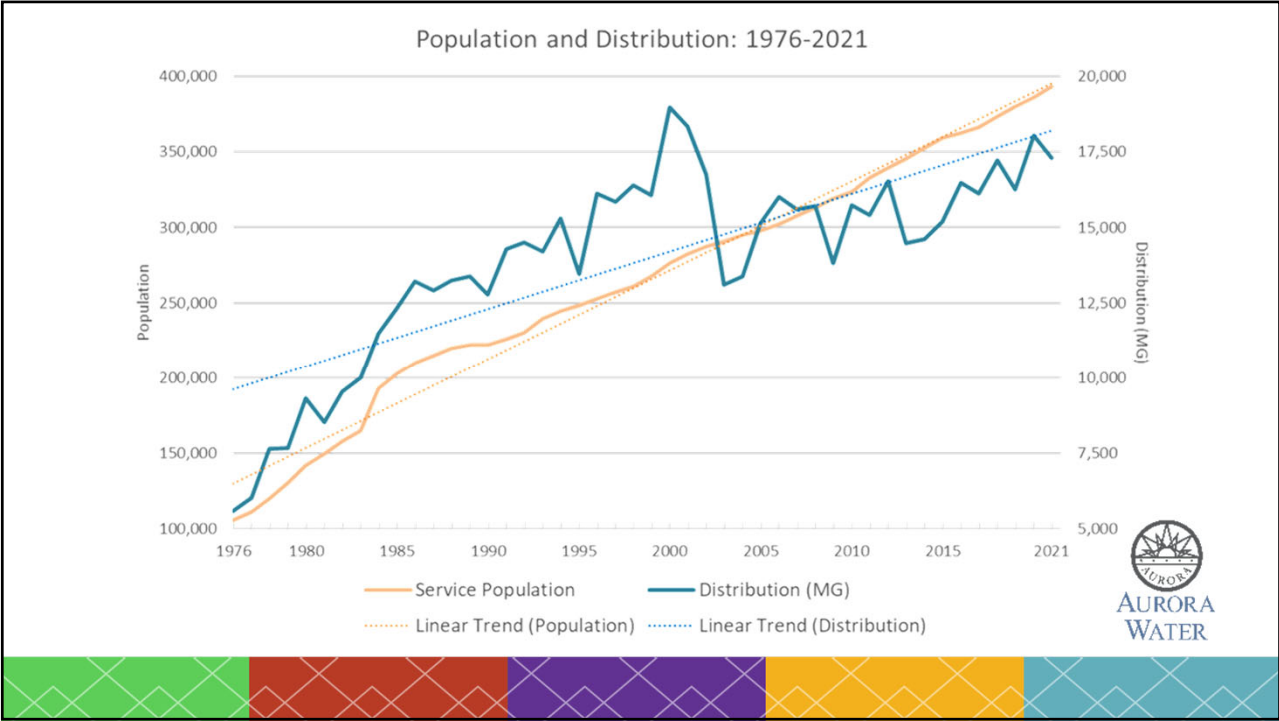
## Virtual Conservation

- DIY indoor/outdoor assessments
- Self-paced online classes
- Tips with Tim (serial shorts)
- Virtual series (YouTube)
- Remote water-wise designs



## Conservation Impact







## Total Estimated Consumption Change

51,822,525 gal

159 Acre Feet

\$10,276.05 per acre foot

- Does not include AMI Leak Response. Includes high use letters, WMP enforcement and conservation programs. Includes all 2021 conservation expenditures.



Questions?



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# MEMORANDUM



City of Aurora

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**To:** Citizens' Water Advisory Committee

**From:** Marshall P. Brown, General Manager, Aurora Water  
Jo Ann Giddings, Deputy Director Water Financial Administration

**Date:** July 12, 2022

**Subject:** 2023 Proposed Budget

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## Summary

This memorandum reflects Aurora Water's 2023 proposed operating and 2023-2027 capital improvement budgets. The budget is a planning tool used to project what activities will be performed and what capital projects will be completed during the year, and their impact on the financial status of the enterprise funds. The 2023 revenue assumptions, 2023 service fees, 2023 proposed operating costs, 2023-2027 Capital Improvement Program, and changes in funds available for the Water and Wastewater Funds are presented for discussion. All figures are preliminary pending final budget recommendations from City Management.

Key dates for review of the 2023 proposed budget are as follows:

- September 20th City Manager, Appointees and staff present to Council
- September 20th Boards & Commissions present to Council
- October 8th Council Fall Budget Workshop
- October 24th First reading of the 2023 budget by Council
- November 7th Second reading of the 2023 budget by Council

## Budget Overall

The 2023 budget is being proposed with a 5.0% average increase in water retail revenues, 5.0% increase in sewer rates and 3.5% in stormwater rates. Water connection fees are proposed to increase 11.0% overall but because of the changes in the methodology as presented to the committee in April the changes will vary depending on the class Sewer Connection Fee are proposed to increase 6.4%. These increases are necessary to maintain and build Aurora Water's infrastructure.

**Revenues**

The following table summarizes revenues for the Water Fund.

**WATER FUND  
REVENUE SUMMARY (\$ Millions)**

	<b>2021</b>	<b>2022</b>	<b>2023</b>
	<b>Actual</b>	<b>Projection</b>	<b>Proposed</b>
<b>Utility Sales</b>	\$130.5	\$135.3	\$144.7
<b>Development Fees</b>	57.4	53.2	52.9
<b>Charges for Services</b>	2.9	2.9	4.0
<b>Investment Income</b>	2.2	2.1	3.0
<b>Other Revenues</b>	20.3	3.4	2.6
<b>Proceeds from Borrowing</b>	388.0	0.0	0.0
<b>Total Revenue</b>	<b>\$601.3</b>	<b>\$196.9</b>	<b>\$207.2</b>

2021 – Water revenues were 7.6% higher than 2020 due to higher usage than previous years because of a very dry summer. Development fees in 2021 marked a record and were 6.8% higher than 2020. Aurora Water issued \$122 million in revenue bonds in the spring to fund the SEAM facility and the acquisition of water rights. During the Summer, Aurora Water did a partial refunding of the 2016 bonds with the issuance of taxable bonds in the amount of \$264.0 million which resulted in an average annual saving of debt service of \$1.7M. Other revenues in the 2021 include \$16 million to that repaid the Water Fund for the SEAM interfund loan from the Wastewater Fund.

2022 – Utility sales are expected to be slightly lower than plan due to WISE water sales are lower than plan due to delays in the constructions of the final interconnect. Development fees are expected to be on budget just lower than last year’s record high while the growth remains strong.

2023 – Utility sales are expected to increase compared to 2021, driven by growth, increase in WISE deliveries and a proposed average increase of 5.0% in rates. The 2023 projections are based on average usage patterns, temperature and precipitation. The growth projection is based on the City’s population forecasts (1.3%) and increase in connection fees of 11.0%. Aurora Water is proposing a change in the connection fee methodology which was presented in April to the Citizen’s Water Advisory Committee which will have different impacts depending on the class and if developments follow the conservation ordinance.

The following table summarizes revenues for the Wastewater Fund.

**WASTEWATER FUND  
REVENUE SUMMARY (\$ Millions)**

	<b>2021</b>	<b>2022</b>	<b>2023</b>
	<b>Actual</b>	<b>Projection</b>	<b>Proposed</b>
<b>Utility Sales</b>	\$65.8	\$69.8	\$74.2
<b>Development Fees</b>	14.3	11.0	9.2
<b>Charges for Services</b>	7.0	7.7	8.1
<b>Investment Income</b>	0.9	1.0	1.3
<b>Other Revenues</b>	2.2	1.5	1.4
<b>Proceeds from Borrowing</b>	60.3	0.0	45.0
<b>Total Revenue</b>	<b>\$150.5</b>	<b>\$91.0</b>	<b>\$139.2</b>

2021 - Utility sales increased by 2.2 percent compared to 2020. No increase was adopted in 2021 due to the pandemic. Development fee revenues were 104% higher than 2020 which was a record year for development in the City. Aurora Water issued \$60.3M in revenue bonds to fund the Seam facility and the SENAC creek interceptor.

2022 - Utility sales in the Wastewater Fund are projected to increase by 6.0% compared to 2021, mainly driven by growth and rate increases of 4.0% in sewer and 3.5% in stormwater, adopted in 2022. Development fees are projected to be lower than 2021 which was a record year but higher than plan.

2023 – Utility sales are projected to increase in 2022 due to growth and a proposed rate increase of 5.0% in sewer and 3.5% in stormwater. The 2022 projections are based on average usage patterns and growth projection 1.3%. The 2023 budget includes a proposed increase in sewer connection fee of 6.4% as part of our planned phase-in increase based on the 2017 sewer master plan.

**Operating Expenses**

The table presented below summarizes changes in the 2023 proposed operating expenses (Water and Wastewater combined) compared to the 2022 adopted budget.

**WATER AND WASTEWATER (COMBINED)**  
**SUMMARY OF CHANGES IN 2023 PROPOSED OPERATING EXPENSES**  
(\$ Millions)

	<b>2022 Adopted Operating Budget</b>	<b>2023 Proposed Operating Budget</b>	<b>Increase / (Decrease)</b>	<b>Water Variance</b>	<b>Wastewater Variance</b>
<b>Personal Services</b>	\$51.2	\$54.3	\$3.1	\$2.2	\$0.9
<b>Allocated Expenses</b>	8.9	8.9	0.0	0.0	0.0
<b>Supplies and Services</b>	28.3	35.1	6.8	5.9	1.0
<b>Utilities</b>	41.7	45.7	4.0	3.4	0.6
<b>Interfund Charges</b>	3.9	4.2	0.3	0.1	0.2
<b>Debt Related</b>	37.5	37.2	(0.3)	0.1	(0.4)
<b>Capital Related</b>	4.4	5.4	1.0	0.8	0.1
<b>Transfers Out</b>	0.0	0.0	0.0	0.0	0.0
<b>TOTAL</b>	<b>\$175.9</b>	<b>\$190.8</b>	<b>\$14.9</b>	<b>\$12.5</b>	<b>\$2.4</b>
<b>FTE - Water Dept</b>	<b>485.00</b>	<b>496.00</b>	<b>11.00</b>	<b>7.50</b>	<b>3.50</b>
<b>FTE - City Attorney</b>	<b>1.00</b>	<b>2.00</b>	<b>1.00</b>	<b>1.00</b>	<b>0.00</b>

**Changes to the 2023 Adopted budget include the following:**

2023 FTE Requests:

Add 1.0 FTE HMI SCADA Network Security Specialist (\$168,730)

- To support the added complex critical infrastructure and improvements to the Aurora Water Operational Technology (OT) system.

Add 1.0 FTE AW Technology Administrator (\$152,490)

- An additional project manager is needed for a broader view of the Water Technology program and managing priorities, budget and governance of all technology in the department.

Add 1.0 FTE Customer Billing Representative (\$76,584)

- To ensure the highest level of customer service as the City continues to grow.

Add 1.0 FTE Manager of Inspection Services (\$155,415)

- Planning & Engineering is proposing a new structure that includes a new Manager of Inspection Services. The Manager will be responsible for 3 inspection supervisors and the Watch and Protect team. This structure will also provide flexibility for additional inspection services from elsewhere in the department if identified as a need in the future.

Add 1.0 FTE Project Coordinator (\$84,579)

- To perform scheduling/estimating and additional project coordination roles to support the project managers and the SCADA team whose workload has tripled in the past three years.

Add 1.0 FTE Water Conservation Manager (\$195,284)

- To oversee increased workload for water conservation due to the need to continue to expand the water conservation program.

Add 1.0 FTE Water Resources Project Manager (\$140,015)

- To address the growing need to manage Aurora Water's land and water ownership which make up the water supply system and to comply with various decrees and other mandated requirements.

Conversion of Contract Staff to 1.0 FTE – GIS Specialist (\$95,457)

- The GIS staff has utilized contract staff and intern staff over the last several years to manage an ever-increasing workload. The recent Water Tech Master Plan identified additional resources needed to maintain service levels in the GIS group.

Conversion of Contract Staff to 1.0 FTE – Project Engineer (\$123,646)

- To cover the increasing workload for engineering needs on capital projects at remote sites for operating and/or monitoring and data collection.

Conversion of Contract Staff to 2.0 FTE – Water Utility Inspector (\$183,300)

- The inspections staff has relied on several contract staff as well as third party resources over the last several years due to the continued growth in the City. The intent of this request is to convert two inspectors this year to FTE positions while monitoring workload.

Add 1.0 FTE Paralegal II (Net \$0)

- To assist attorneys who provide legal advice and assistance to the Water Department. This includes an offset to the outside legal services appropriations making this a zero dollar add to the Water Fund.

- **Personal Services** increased by \$3.1 million.
  - Payroll budget reduction for Temporary OT SCADA Security Engineer (\$-123,285),
  - Regular Salary and allowance increases (\$1,396,717),
  - 4.5% adjustments for overtime compensation, temporary compensation and insurance, non-salary related benefits, and CDL adjustments (\$198,525),
  - Temporary salary (\$150,000),
  - Overtime pay (\$50,000),
  - Add 12.0 FTE (\$1,385,227).
  
- **Supplies and Services** increased by \$6.9 million.
  - Department Specific mandated cost increases including Credit Card Fees and Software Maintenance (\$2,556,320).
  - Supplies for new staff and reduction in legal services to offset addition of new Paralegal in Civil Division (\$-51,727),
  - Additional funds for pump and motor maintenance (\$125,000),
  - Funding to T&D Construction & Repair (\$190,000),
  - Pump casing for large Prairie Water conveyance pumps (\$579,000),
  - Training and new employee certification incentive program (\$94,359),
  - Moving expenses for Southeast Area Maintenance Facility (SEAM) (\$100,000),
  - Lead Replacement program (\$3,000,000),
  - Watershed Health (\$100,000),
  - Power BI Software (\$70,000),
  - Rocky Ford II Revegetation Efforts and Land Management (\$200,000),
  
- **Utilities** increased by \$4.0 million primarily due to increased Electricity costs (\$3,654,302). Increases have been requested for utilities for the Strontia Springs Watershed Management program (\$188,760) and the SEAM facility (\$115,000).
  
- **Interfund Charges** increased by \$0.4 million due to fleet fuel and maintenance costs (\$191,064) and Risk Management internal fund charges. (\$174,962)
  
- **Debt Related** decreased by \$0.3 million to account for the principal and interest in the original debt schedules in Water Fund (\$0.1 million) increases and Wastewater Fund (\$0.4 million) decreases.
  
- **Capital Related** increased by \$1.0 million due to requests for new vehicle and equipment purchases (\$1,182,000) partially offset by reduction due to efficiency alignments (\$-34,800) and adjustments for the reversal of 2022 one-times (\$-158,500).



## Capital Improvement Program

The following table summarizes the 2023-2027 Capital Improvement Program by program.

<b>CAPITAL IMPROVEMENT PROGRAM</b>						
<b>2023 -2027</b>						
<b>(\$ millions)</b>						
	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>TOTAL</b>
<b>Operations &amp; General Management</b>	\$3.3	\$6.9	\$5.6	\$0.4	\$0.4	\$16.6
<b>Pumping</b>	5.9	13.9	10.0	1.0	10.0	40.8
<b>Source of Supply - Other</b>	24.1	66.8	67.0	2.0	20.0	179.9
<b>Source of Supply - Storage</b>	26.6	27.6	25.0	149.1	106.3	334.6
<b>Source of Supply - Water</b>	32.7	41.0	32.5	56.5	25.0	187.7
<b>Transmission &amp; Distribution</b>	28.8	24.9	22.2	16.4	17.1	109.4
<b>Treatment</b>	37.3	31.5	34.4	30.7	36.5	170.4
<b>TOTAL WATER</b>	<b>\$158.7</b>	<b>\$212.6</b>	<b>\$196.7</b>	<b>\$256.1</b>	<b>\$215.3</b>	<b>\$1,039.4</b>
<b>Collection</b>	\$31.7	\$17.6	\$4.5	\$16.6	\$19.8	\$90.2
<b>Operations &amp; General Management</b>	2.7	2.0	0.7	2.2	0.7	8.3
<b>Stormwater</b>	11.3	21.6	14.2	7.6	5.3	60.0
<b>TOTAL WASTEWATER</b>	<b>\$45.7</b>	<b>\$41.2</b>	<b>\$19.4</b>	<b>\$26.4</b>	<b>\$25.8</b>	<b>\$158.5</b>
<b>TOTAL ALL PROJECTS</b>	<b>\$204.4</b>	<b>\$253.8</b>	<b>\$216.1</b>	<b>\$282.5</b>	<b>\$241.1</b>	<b>\$1,197.9</b>

Significant Water Fund projects planned for 2023-2027 by program include the following.

### Operations & General Management

- **Meter Replacement Program (AMI) (\$8.0 million)** – This project is to replace the current meter system installed in 2005, which is at the end of its life. There will be annual meter replacements over the next three years.
- **Solar Projects (\$3.4 million)** – Renewable energy opportunities were identified in 2012 Energy Master Plan. Based on this analysis, AW will be implementing a 360 KW DC fixed tilt, ballasted tank mount solar PV system project at the Robertsdale Pump Station.
- **SCADA Improvements (2.2 million)** - King's Point infrastructure is located such that communicating SCADA information would be difficult without additional communication infrastructure. Plans for further development in the area exist and the SCADA Master Plan indicated a tower would be helpful to the south. Additionally, the backbone could be expanded to take data off of Public Safety towers.

### Pumping

- **Pump Station Improvements (\$34.3 million)** – improvements in the five-year plan include expansion of raw water pumping capacity and/or pump replacement at the following pump stations: Quincy (2023,2024), Robertsdale (2023, 2024), Wemlinger Zone 5 (2024), Marina Zone 7

(2024,2025), and Powhatan Zone 8 (2026,2027). These projects will improve the reliability, dependability and efficiency of the pump stations.

- **PW Raw Water Pump Station Expansion (\$6.5 million)** – expansion of three conveyance pump stations on the Prairie Water Conveyance System (2023, 2025).

### Source of Supply - Other

- **Rampart Delivery System Expansion (\$104.0 million)** – this project is for the construction of a parallel line that will expand the capacity of the Rampart Delivery System to meet growing demand (2024, 2025).
- **PW North Campus Expansion (\$58.0 million)** – phased expansion of the Prairie Waters North Campus from a firm capacity of approximately 16.0 million gallons per day (MGD) to 30 MGD in future years. Project includes drilling additional wells and construction of related appurtenant facilities (2023-2027)
- **Well Field Land Acquisition (\$4.0 million)** – phased plan for land acquisition related to the Prairie Waters North Campus expansion. (2023, 2024).
- **North Campus Well Rehab (\$4.1 million)** – annual rehabilitation and maintenance for the North Campus River Bank Filtration and Aquifer Recharge and Recovery. Additionally, a North Campus Pilot Well will evaluate water collection methods for potential use by comparing two types of horizontal wells to determine cost per gallon of water produced. This cost would include impact to treat the water based on the water quality obtained from the wells, required permitting, infrastructure design/installation, maintenance costs and well capacity to determine the most cost-effective solution for increasing well field capacity.
- **Wemlinger Source Improvements (\$6.0 million)** – design of the second pipeline between Aurora Reservoir and Wemlinger WPF. This project adds treatment capacity and flexibility.

### Source of Supply – Storage

- **Wild Horse Reservoir (\$262.2 million, final amounts yet to be determined)** – land acquisition, design, engineering, geotechnical and environmental studies, and start of construction of Wild Horse Reservoir in the Upper South Platte River basin.
- **ASR: Aquifer Storage and Recovery (\$18.5 million)** - geotechnical investigations, testing and analysis of alluvial and confined aquifers under and adjacent to the City. The development of such storage could give Aurora Water additional flexibility in water resources management, help meet storage needs and allow maximum utilization of water supplies.
- **Homestake Capital Projects (\$22.5 million)** – improvements to the Homestake Water System under agreement with Colorado Springs Utilities.
- **Eagle River Project (\$8.6 million)** – multi-partner, new water supply development project in the Eagle River basin that will provide Aurora with 10,000 acre-feet of yield, Colorado Springs with 10,000 acre-feet of yield, west-slope partners with 10,000 acre-feet of yield, and Climax with 3,000 acre-feet of storage.
- **Lower South Platte Storage/Everist (\$12.3 million)** – purchase and development of gravel pit reservoirs near Weld County Road 18 from LG Everist pursuant to the 2011 Amended and Restated Purchase and Sale Agreement. Once completed, Aurora will have about 11,000 acre-foot of water storage at this location.

- **Lower South Platte Storage/Walker (\$5.5 million)** - Walker Reservoir is part of the Lower South Platte/Prairie Waters integrated resource system consisting of several water storage cells (e.g. gravel pits) and pump stations. These storage cells will be utilized for the purpose of augmentation of the Prairie Waters wellfield in accordance with the water court decree for case # 06CW104.

### Source of Supply – Water

- **Water Rights Acquisition (\$150.0 million)** – purchase of water rights to meet future municipal water demands as the population of Aurora grows. The actual budget needed to purchase water rights is very unpredictable and will be updated through budget supplementals as needed.
- **Raw Water Rehabilitation (\$30.1 million)** – the five-year plan is driven by the Rampart prestressed concrete cylinder pipe (PCCP) repair at Quincy & Orchard (2023-2024), Sand Creek Reclaimed Water Line Land Acquisition (2023,2024), and the Strontia PRV Isolation Valve (2025,2026).
- **Arkansas Basin Land Acquisition (\$7.6 million)** - purchase of additional land and associated water rights (when applicable) in the Arkansas River Basin.

### Transmission & Distribution

- **New T&D Water Mains (\$37.0 million)** – installation of new water mains to support growth and development in the City. Projects anticipated in the five-year plan are predominately located in the northeast portion of the City around Gun Club Road.
- **Line Replacement (\$39.7 million)** – annual waterline replacement of oldest pipes and pipes with increased frequency of breaks, upgrade of lines to meet new City standards, and addition of fire hydrants to improve fire protection.
- **Transmission and Vault Rehab (\$7.4 million)** – installation of miscellaneous transmission mains, appurtenances, and other water distributions system infrastructure required to improve the City's potable water distribution system.
- **PRV Rehab Replacement (\$9.4 million)** – design and construction of rehabilitation of critical pressure reducing valves throughout the city, including Jewell and Powhaton.
- **Storage Tank (\$10.0 million)** – construction of a storage tank in Zone 7 located in Southeast Aurora to expand capacity to serve the increasing population of Aurora.

### Treatment

- **Griswold WPF Plan Renovation (\$81.5 million)** – various improvements and renovation projects to Griswold Water Purification Facility including Solids Handling System construction (2023-2024), HVAC improvements (2024), Chemical Feed Improvements (2025-2027) and Filter Media, Retaining Troughs, Effluent Valves, and Flow Meters (2023-2027).
- **Binney WPF Improvements (\$26.6 million)** – various improvements and renovation projects to Binney Water Purification Facility including Flocculation/Sedimentation construction (2023), Se (Selenium) Treatment (2023), PLC (Programmable Logic Controllers) Conversion (2024), Subsurface Investigation Building 33 construction (2025), Filter Media (2024-2026), and construction of a GAC (Granular Activated Carbon) Media design (2023-2027).
- **Wemlinger WPF Improvements (\$62.3 million)** – various improvements, renovations, and modifications to Wemlinger Water Purification Facility including chemical feed improvements

(2023-2027), MCC (Motor Control Center) replacement (2023,2024), and filter rehabilitation (2023-2027).

Significant Wastewater Fund projects planned for 2023-2027 by program include the following.

### **Operations & General Management**

- **Sand Creek Water Reuse Plant (\$3.0 million)** – upgrades to the Sand Creek Water Reuse Plant including blower and HVAC improvements. Phase II design will begin in 2026.
- **Demolition (\$3.0 million)** - Various structures on sites are either currently not in use or slated to come offline in the next few years. If left as is, the sites will be a risk and liability for the City. The purpose of this project will be to prioritize 10 sites for demolition based on their risk along with other factors (2023-2027).

### **Collection**

- **Annual Sewer Rehab (\$6.8 million)** – Annual rehabilitation of vitrified clay pipe (VCP) ranging from 8” to 18” in diameter using the cured-in-place pipe (CIPP) process. The pipe is over 50 years old and is largely located in the northwest part of Aurora.
- **Interceptor Rehab (\$6.8 million)** - Annual rehabilitation of the City's interceptor sewer lines comprised largely of Reinforced Concrete Pipe (RCP) installed in the 1960's and 70's. Per information obtained from the GIS, approximately 12 miles of RCP ranging from 18" to 42" in diameter exists in the system.
- **Misc. Sewer Replacement (\$10.9 million)** – sewer line replacement including Lima Paris, US 225 to N Laredo St and Billings St to N Sable Blvd, and S Chambers Rd and E Alameda Pkwy.
- **First Creek Interceptor (\$25.9 million)** – design and construction of FC2 segment 1B-1D NTP West Interceptor on N Picadilly Ave and E 56th Ave from N Dunkirk St to N Rome St. (2023 – 2024).
- **Sewer Line Construction (\$31.3 million)** – New sewer line construction including Sand Creek Interceptor East from E Colfax Ave to E Airport Road, Sand Creek Interceptor East E Airport Road to US 225, and E 4th Ave and Kings Pointe Interceptor from S Parker Rd to S Chambers Way

### **Stormwater**

- **Westerly Creek Future Phases (\$28.3 million)** –Westerly Creek improvements including detention facilities and underground pipe infrastructure. Some projects included in the five-year projection are Virginia Tributary pipe (2025) and Alameda Storm Outfall pipe (2023-2024).
- **Crossing Structure Projects (\$7.8 million)** – rehabilitation of deteriorating and aging bridges and construction of new culverts throughout the system. Projects include Bridge Replacement at Mexico Ave (2024-2026) and Sand Creek to Alameda Culvert construction (2024-2025).
- **TBD Stormwater Development Projects (\$10.0 million)** - Existing or proposed stormwater infrastructure improvements to support development or re-development throughout the city.

**Ending Funds Available**

The following table summarizes Sources, Uses and Changes in Funds Available for the Water Fund.

**WATER FUND**  
**Schedule of Sources, Uses and Changes in Funds Available**  
(\$ Millions)

	<b>2020 Actual</b>	<b>2021 Actual</b>	<b>2022 Adopted Budget</b>	<b>2022 Projection</b>	<b>2023 Proposed</b>
Revenues	\$198.3	\$213.3	\$196.8	\$196.9	\$207.2
Proceeds from Borrowing	0.0	388.0	0.0	0.0	0.0
<b>Sources</b>	<b>\$198.3</b>	<b>\$601.3</b>	<b>\$196.8</b>	<b>\$196.9</b>	<b>\$207.2</b>
Operating Costs	\$64.2	\$69.9	\$75.9	\$77.3	\$88.3
Debt Service	20.9	289.4	28.6	28.6	28.6
Capital Projects (Continuing	147.6	178.4	106.0	106.0	158.7
<b>Total Uses</b>	<b>\$232.7</b>	<b>\$537.7</b>	<b>\$210.5</b>	<b>\$211.9</b>	<b>\$275.6</b>
<b>Beginning Funds Available</b>	<b>\$54.6</b>	<b>\$20.1</b>	<b>\$83.7</b>	<b>\$83.7</b>	<b>\$68.7</b>
Net Changes in Funds Available	(34.4)	63.5	(13.6)	(15.0)	(68.5)
<b>Ending Funds Available</b>	<b>\$20.1</b>	<b>\$83.7</b>	<b>\$70.1</b>	<b>\$68.7</b>	<b>\$0.2</b>

December 31, 2022 ending funds available for the Water Fund are projected to end slightly lower than the 2022 Adopted Budget due to a combination of lower revenues and higher costs. December 31, 2023 ending funds available are anticipated to decrease by \$68.5 million primarily due to the increase in capital projects and increases in operating costs. The increase in 2023 revenues is based on growth and rate and fee increases which are 5% increases in water rates and an average of 11.0% in connection fees.

**Ending Funds Available**

The following table summarizes Sources, Uses and Changes in Funds Available for the Wastewater Fund.

**WASTEWATER FUND**  
**Schedule of Sources, Uses and Changes in Funds Available**  
**(\$ Millions)**

	2020 Actual	2021 Actual	2022 Adopted Budget	2022 Projection	2023 Proposed
Revenues	\$87.6	\$90.2	\$89.7	\$91.0	\$94.2
Proceeds from Borrowing	0.0	60.3	0.0	0.0	45.0
<b>Sources</b>	<b>\$87.6</b>	<b>\$150.5</b>	<b>\$89.7</b>	<b>\$91.0</b>	<b>\$139.2</b>
Operating Costs	\$52.3	\$57.3	\$62.5	\$59.0	\$65.4
Debt Service	3.7	22.4	8.9	8.9	8.5
Capital Projects (Continuing	20.0	79.6	47.8	47.8	45.7
<b>Total Uses</b>	<b>\$76.0</b>	<b>\$159.3</b>	<b>\$119.2</b>	<b>\$115.7</b>	<b>\$119.6</b>
<b>Beginning Funds Available</b>	<b>\$27.6</b>	<b>\$39.2</b>	<b>\$30.3</b>	<b>\$30.3</b>	<b>\$5.6</b>
Net Changes in Funds Available	11.6	(8.9)	(29.5)	(24.7)	19.6
<b>Ending Funds Available</b>	<b>\$39.2</b>	<b>\$30.3</b>	<b>\$0.8</b>	<b>\$5.6</b>	<b>\$25.2</b>

December 31, 2022 ending funds available for the Wastewater Fund are projected to increase by \$4.8 million compared to the 2022 Adopted Budget. This is mainly due to vacancy savings and a reduction in Supplies and Services. December 31, 2023 ending funds available are anticipated to increase by \$19.6 million compared to the 2022 projection, primarily due to increases in revenues which are based on customer growth as well as proposed rate and fee increases which consist of 5% in sewer rates, 3.5% in storm rates, and 6.4% in sewer connection fees. Aurora Water projects the issue of \$45M of Debt to fund the First Creek Interceptor.

# Aurora Water

## 2023 Proposed Operating And Capital Improvement Program Budget

Citizens' Water Advisory Committee  
July 12, 2022



## 2023 Proposed Budget

### Council Dates to Remember

- September 20th City Manager, Appointees and staff present to Council
- September 20th Boards & Commissions present to Council
- October 8th Council Fall Budget Workshop
- October 24th First reading of the 2023 budget by Council
- November 7th Second reading of the 2023 budget by Council

### Assumptions used to develop the proposed 2023 budget

- Average year temperature and precipitation
- Population growth rate of 1.3%



## 2023 Proposed Budget Water Fund Summary (\$ Millions)

### WATER FUND Schedule of Sources, Uses and Changes in Funds Available (\$ Millions)

	2020 Actual	2021 Actual	2022 Adopted Budget	2022 Projection	2023 Proposed
Revenues	\$198.3	\$213.3	\$196.8	\$196.9	\$207.2
Proceeds from Borrowing	0.0	388.0	0.0	0.0	0.0
<b>Sources</b>	<b>\$198.3</b>	<b>\$601.3</b>	<b>\$196.8</b>	<b>\$196.9</b>	<b>\$207.2</b>
Operating Costs	\$64.2	\$69.9	\$75.9	\$77.3	\$88.3
Debt Service	20.9	289.4	28.6	28.6	28.6
Capital Projects (Continuing)	147.6	178.4	106.0	106.0	158.7
<b>Total Uses</b>	<b>\$232.7</b>	<b>\$537.7</b>	<b>\$210.5</b>	<b>\$211.9</b>	<b>\$275.6</b>
<b>Beginning Funds Available</b>	<b>\$54.6</b>	<b>\$20.1</b>	<b>\$83.7</b>	<b>\$83.7</b>	<b>\$68.7</b>
Net Changes in Funds Available	(34.4)	63.5	(13.6)	(15.0)	(68.5)
<b>Ending Funds Available</b>	<b>\$20.1</b>	<b>\$83.7</b>	<b>\$70.1</b>	<b>\$68.7</b>	<b>\$0.2</b>



## 2023 Proposed Budget Wastewater Fund Summary (\$ Millions)

### WASTEWATER FUND Schedule of Sources, Uses and Changes in Funds Available (\$ Millions)

	2020 Actual	2021 Actual	2022 Adopted Budget	2022 Projection	2023 Proposed
Revenues	\$87.6	\$90.2	\$89.7	\$91.0	\$94.2
Proceeds from Borrowing	0.0	60.3	0.0	0.0	45.0
<b>Sources</b>	<b>\$87.6</b>	<b>\$150.5</b>	<b>\$89.7</b>	<b>\$91.0</b>	<b>\$139.2</b>
Operating Costs	\$52.3	\$57.3	\$62.5	\$59.0	\$65.4
Debt Service	3.7	22.4	8.9	8.9	8.5
Capital Projects (Continuing)	20.0	79.6	47.8	47.8	45.7
<b>Total Uses</b>	<b>\$76.0</b>	<b>\$159.3</b>	<b>\$119.2</b>	<b>\$115.7</b>	<b>\$119.6</b>
<b>Beginning Funds Available</b>	<b>\$27.6</b>	<b>\$39.2</b>	<b>\$30.3</b>	<b>\$30.3</b>	<b>\$5.6</b>
Net Changes in Funds Available	11.6	(8.9)	(29.5)	(24.7)	19.6
<b>Ending Funds Available</b>	<b>\$39.2</b>	<b>\$30.3</b>	<b>\$0.8</b>	<b>\$5.6</b>	<b>\$25.2</b>





## 2022 to 2023 Operating Budget Comparison Water and Wastewater (Combined)

	2022 Adopted Operating Budget	2023 Proposed Operating Budget	Increase / (Decrease)
<b>Personal Services</b>	\$51.2	\$54.3	\$3.1
<b>Allocated Expenses</b>	8.9	8.9	0.0
<b>Supplies and Services</b>	28.3	35.1	6.8
<b>Utilities</b>	41.7	45.7	4.0
<b>Interfund Charges</b>	3.9	4.2	0.3
<b>Debt Related</b>	37.5	37.2	(0.3)
<b>Capital Related</b>	4.4	5.4	1.0
<b>Transfers Out</b>	0.0	0.0	0.0
<b>TOTAL</b>	<b>\$175.9</b>	<b>\$190.8</b>	<b>\$14.9</b>
<b>FTE - Water Dept</b>	<b>485.00</b>	<b>496.00</b>	<b>11.00</b>
<b>FTE - City Attorney</b>	<b>1.00</b>	<b>2.00</b>	<b>1.00</b>



## 2023 Operating Budget

- **Personal Services** increased by \$3.1 million. Regular salary and allowance adjustments (\$1.4M), 4.5% proposed increase, addition of 12.0 FTE (\$1.6M) and other miscellaneous (\$0.1M).
- **Supplies and Services** increased by \$6.9 million.
  - Funding Lead Replacement Program to meet new requirements \$3.0M
  - Mandated cost increases (contracts, software) \$2.6M Prairie Water pump casings \$0.6M
  - Additional funding for programs trending over budget \$.3M
  - Other (supplies and equipment for new staff, SEAM move, land management) \$0.4M
- **Utilities** increased by \$4.0 million primarily due to increased Electricity costs (\$3.7M). Utilities increased for the Strontia Springs Watershed Management program (\$0.2M) and for utilities at the SEAM facility (\$0.1M).
- **Interfund Charges** increased by \$0.4 million due to fleet fuel and maintenance costs (\$0.1M) and Risk Management internal fund charges (\$0.2M).
- **Debt Related** decreased by \$0.3 million. Wastewater Fund principal and interest payments decreased \$0.4M and Water Fund principal and interest payments increased \$0.1M.
- **Capital Related** increased by \$1.0 million due to new vehicle and new equipment purchases.



## 2023 FTE REQUESTS

Program	FTE Count	Total
<b>Water and Wastewater Fund</b>		
Civil Division	1.0	\$ 96,478
Financial Administration	2.0	\$ 223,074
Planning&Engineering Services	6.0	\$ 638,397
Public Info & Water Conserv	1.0	\$ 189,284
Support Services	1.0	\$ 101,979
Water Resources	1.0	\$ 136,015
Subtotal	12.0	\$ 1,385,227
<b>General Fund</b>		
Access Aurora	3.0	\$ 229,749
Subtotal	3.0	\$ 229,749
<b>Grand Total</b>	<b>15.0</b>	<b>\$ 1,614,976</b>



## 2023 FTE REQUESTS

### **Water and Wastewater Funds:**

- Add 1.0 FTE HMI SCADA Network Security Specialist (\$168,730)
- Add 1.0 FTE AW Technology Administrator (\$152,490)
- Add 1.0 FTE Customer Billing Representative (\$76,584)
- Add 1.0 FTE Manager of Inspection Services (\$155,415)
- Add 1.0 FTE Project Coordinator (\$84,579)
- Add 1.0 FTE Water Conservation Manager (\$195,284)
- Add 1.0 FTE Water Resources Project Manager (\$140,015)
- Conversion of Contract Staff to 1.0 FTE – GIS Specialist (\$95,457)
- Conversion of Contract Staff to 1.0 FTE – Project Engineer (\$123,646)
- Conversion of Contract Staff to 2.0 FTE – Water Utility Inspector (\$183,300)
- Add 1.0 FTE Paralegal II (Net \$0)

### **General Fund:**

- Add 3.0 FTE Customer Service Representatives (\$95,028)



## Capital Improvement Program 2023-2027 (\$ Millions)

	2023	2024	2025	2026	2027	TOTAL
<b>TOTAL WATER FUND</b>	<b>\$158.7</b>	<b>\$212.5</b>	<b>\$196.7</b>	<b>\$256.2</b>	<b>\$215.3</b>	<b>\$1,039.4</b>
Sanitary Sewer	\$34.4	\$19.6	\$5.2	\$18.8	\$20.5	\$98.5
Storm Drain	\$11.3	\$21.6	\$14.2	\$7.6	\$5.3	\$60.0
<b>TOTAL WASTEWATER FUND</b>	<b>\$45.7</b>	<b>\$41.2</b>	<b>\$19.4</b>	<b>\$26.4</b>	<b>\$25.8</b>	<b>\$158.5</b>
<b>TOTAL CIP</b>	<b>\$204.4</b>	<b>\$253.7</b>	<b>\$216.1</b>	<b>\$282.6</b>	<b>\$241.1</b>	<b>\$1,197.9</b>



## Capital Improvement Program Highlights 2023-2027 By Program

### Water Fund

#### Operations & General Management (\$16.7 million)

- Meter Replacement Program \$8.0 million

#### Pumping (\$40.8 million)

- Expanding capacity and maintenance at various pump stations \$34.3 million

#### Transmission & Distribution (\$109.4 million)

- New Water Mains, Replacement Water Mains and other maintenance \$109.4 million

#### Treatment (\$170.4 million)

- Various improvements to three Water Treatment Facilities \$170.4 million

#### Source of Supply - Other (\$179.9 million)

- Expansion of the Prairie Waters North Campus \$58.0 million

#### Source of Supply - Storage (\$334.6 million)

- Preparation and initial construction of Wild Horse Reservoir \$262.2 million

#### Source of Supply – Water (\$187.7 million)

- Water Rights Acquisitions \$150.0 million



# Capital Improvement Program Highlights 2023-2027 By Program

## Wastewater Fund

### Collection (\$90.2 million)

- First Creek Interceptor, new line construction and various maintenance projects \$90.2 million

### Operations & General Management (\$8.3 million)

- Sand Creek Water Reuse Plan improvements \$3.0 million

### Stormwater (\$60.1 million)

- Westerly Creek improvements \$28.3 million



# Looking Ahead 2023 and Beyond

- Master Planning for future growth
- Continue to work on partnering opportunities for effective regional solutions to water and wastewater challenges (Metro, WISE, etc.) and ensure watershed/source water protection
- Continue to monitor long-term water supply availability and plan for the future; continue to look for creative ways to acquire water
- Continue to enhance conservation efforts to make better use of Aurora's existing water supplies
  - 2022 new residential rate structure
  - Aurora Water is proposing a new conservation ordinance for new development that will promote low water-use landscape by eliminating high water use turf in front yards, back yards (500 sq. ft. restrictions), medians, and new golf courses
  - New changes in connection fee methodology that recognizes re-usable versus consumptive use that was proposed and presented in April and is expected to be implemented in 2023
- Anticipate legal and regulatory challenges
  - Current topics being monitored include lead and copper regulations and PFAS regulations



# 2023 Proposed Budget

## Questions?



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# MEMORANDUM



**To:** Citizens' Water Advisory Committee

**From:** Marshall P. Brown, General Manager, Aurora Water  
Jo Ann Giddings, Deputy Director Water Financial Administration

**Date:** June 29th, 2022

**Subject:** 2023 Proposed Rate and Fee Changes

Aurora Water's Financial Administration Division continually monitors and evaluates our fees and rates for adequacy to fund our capital and operating needs in the water, sanitary sewer, and storm drainage system. This memo summarizes the proposed changes to rates and fees in each utility for the 2023 budget.

## Summary

The proposed 2023 budget includes the proposed rate and fee adjustments based on the latest financial plans. Aurora Water understands the impacts rate increases have to customers and therefore have a policy, whenever possible, to have small incremental rate increases as opposed to having infrequent large rate increases. Proposed changes for 2023 are:

Utility	Revenue Increase	Connection Fee Increase
Water	5.0%	11%
Sewer	5.0%	6.4%
Stormwater	3.5%	0.0%

The proposed changes to the water connection fee methodology were presented to the Water Citizen Advisory Committee on the April meeting. The 11% increase is the result of a 3.9% which was the last phase-in of the master plan study from 2017 and inflationary adjustment based on the construction cost index in the Denver area in 2021 reported by the ENR publication.

## Revenue and Rate Increases

The planned capital improvements needs for operations and maintenance of the system require an average 5% increase in water revenues for the 2023 budget. The increase by customer class will vary with single family revenues to increase by 7.0%, multi-family 1.6%, irrigation accounts 4%, commercial accounts 4.0%, hydrant accounts 5.0% and fire protection accounts 10.7%. The financial plan also projects annual 5% increases starting 2024. These future increases are reviewed annually, and increases are requested through the budget process.

The sewer rates are adjusted based on Aurora's cost for sewer infrastructure maintenance and operations and the costs passed through from Metro Water Recovery for the treatment process. A

proposed 5% increase is included in the 2023 budget based on the financial plan. A 5% annual rate increase is projected in future years as well.

A rate increase of 3.5% for stormwater is also proposed in the 2023 budget. Currently Aurora Water financial planning projects the need for a 3.5% increase in 2025 and 2027. Future rates are reviewed annually and proposed when needed through the budget process.

**Residential Rate Structure**

In 2021 Aurora Water adjusted the residential class water rate structure. Staff developed a multi-year plan that would keep rates at the existing levels for several years for customers with usage of 5,000 gallons and below by changing the Tiers and implementing the increases to usage above 5,000 gallons. This plan will provide a strong conservation message to large users while providing affordability to low users.

The plan is based on current assumptions and projected needed increases from Aurora Water’s financial plan. Changes in some of the underlining assumptions (usage patterns, droughts, growth) as well as changes in the financial plan will have an effect on the plan. Aurora Water will review the plan and the assumption every time a rate adjustment is proposed and will try to stay within the plan as much as possible.

The proposed 2023 residential rates will be the third adjustment in the phased-in plan. The rates are designed to recover 7% more revenues than the existing ones with no rate change for usage below 5,000 gallons.

Tier	Existing	Proposed	Difference
Tier 1 / 0-5 Kgal	\$5.63	\$5.63	\$0.00
Tier 2 / 6-10 Kgal	\$5.93	\$6.63	\$0.70
Tier 3 / 11-20 Kgal	\$6.50	\$7.63	\$1.13
Tier 4 / 21Kgals+	\$10.00	\$12.00	\$1.00

The proposed rates include a 4% increase in the monthly service charge. The average residential customer will have a total monthly increase of \$4.09 (4.5%) of which \$1.23 is sewer (assumes 5,000 of winter quarter average usage), \$0.38 is storm, and \$2.48 is water. Aurora Water utility rates are still very affordable compared to other utilities in the Front Range.

**Water Connection Fee**

Aurora Water staff presented in April the proposed changes to the Water connection Fees for 2023. There have been some updates since that meeting based on new information reviewed for inflation and the conservation ordinance proposed by Aurora Water.

**Sewer Connection Fee**

In 2017 Aurora Water’s Planning and Engineering Division completed a master plan for the sanitary sewer system. As part of that study, staff evaluated the sewer connection and interceptor development fees for their adequacy to fund the projected capital costs needed to expand the sanitary sewer system. In 2017 we presented a phase-in plan to adjust the sewer connection and interceptor development fee.



Three of the four increases were adopted in 2019, 2020, and in 2022 the remainder increase is of the phase-in plan would be in 2023.

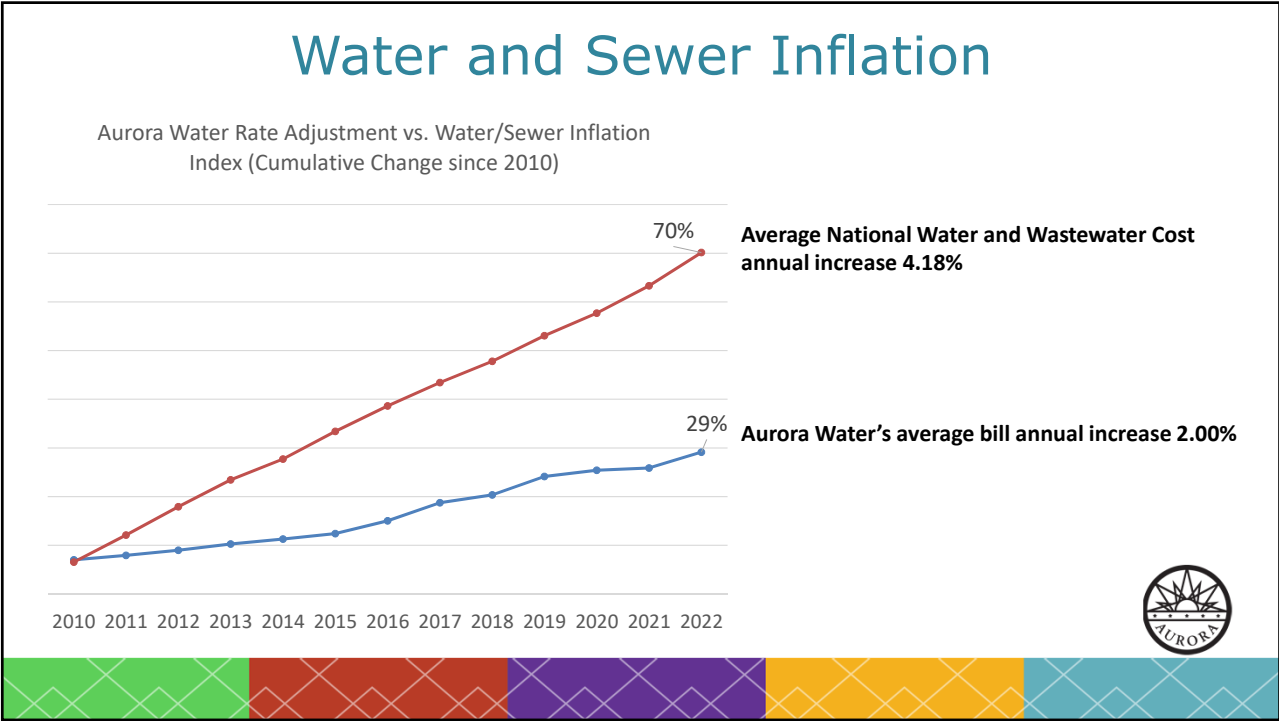
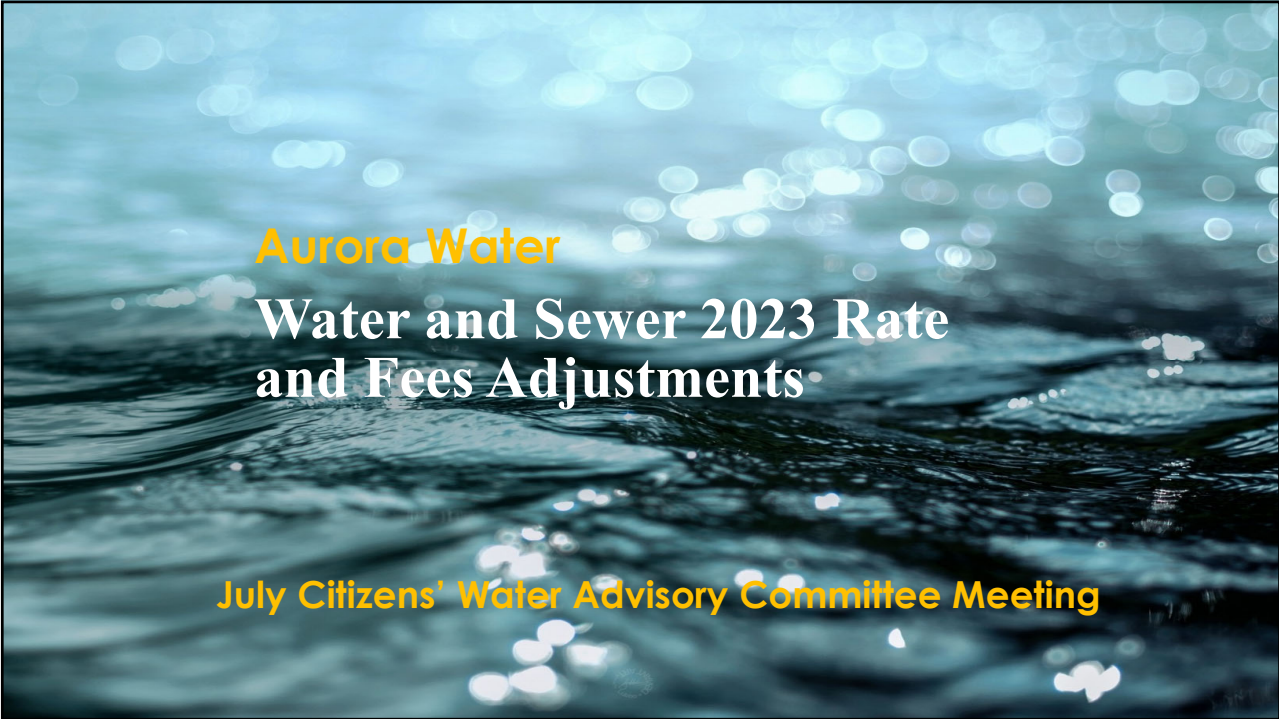
The proposed plan for the sewer connection fees is the following:

<b>Sewer Connection Fee</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Connection Fee per ERU (5/8")	\$3,040	\$3,220	\$3,400
Dev Fee per ERU (5/8")	\$240	\$270	\$310
<b>Total Fee per ERU</b>	<b>\$3,280</b>	<b>\$3,490</b>	<b>\$3,710</b>
% increase	0.0%	6.4%	6.3%

The sewer connection fee will be reviewed based on new master plans which is expected to be completed in the next two years.

**Stormwater Development Fee**

No increase in the stormwater development fee are proposed for 2022. Aurora Water’s planning and engineering division is evaluating the stormwater future needed projects as well the share of responsibility between Aurora Water, developers, and Mile High Flood District in order to determine the appropriate needs for the stormwater development fees.



# Rates and Fees Adjustments

## Proposed Rate Revenue Adjustments

Utility	2022	2023	2024	2025	2026	2027
Water	3.5%	5.0%	5.0%	5.0%	5.0%	5.0%
Sewer	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Stormwater	3.5%	3.5%	0.0%	3.5%	0.0%	3.5%

## Proposed Fee Adjustments

Utility	2022	2023	2024	2025	2026	2027
Water	10.6%	11.0%*	10.0%**	10.0%**	10.0%**	10.0%**
Sewer	6.3%	6.4%	4.0%**	4.0%**	4.0%**	4.0%**
Stormwater	0.0%	0.0%	3.0%**	3.0%**	3.0%**	3.0%**

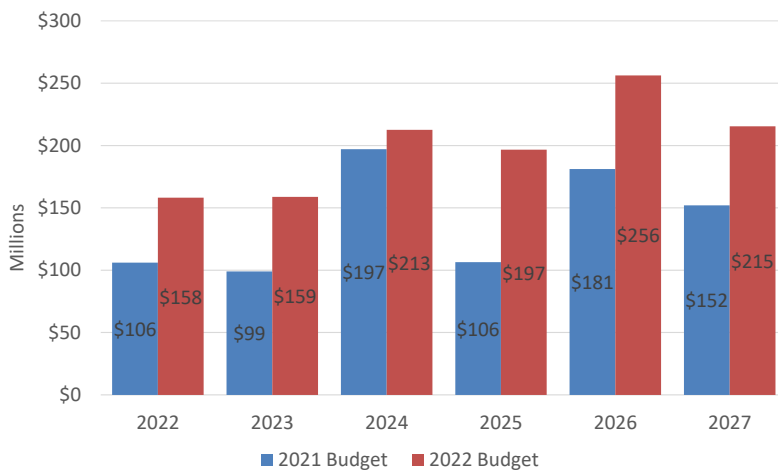
\* Change in Structure and Re-usable and consumptive demand result in different increases by class –Additional 9.7% adjustment for Construction cost inflation was included

\*\*increases are preliminary planned and will be reviewed based on new master plans to be completed in the next two years



# What Changed?

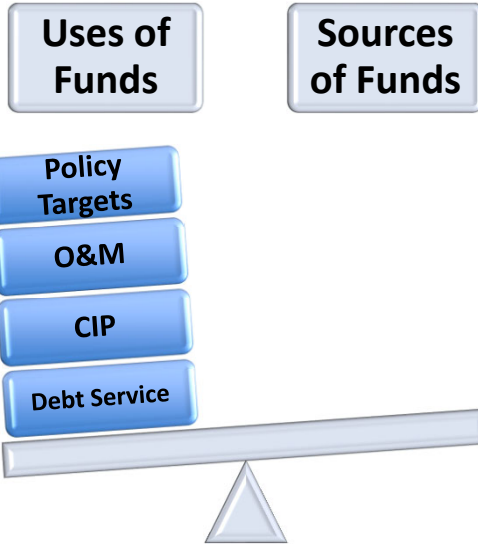
Capital Improvement Plan



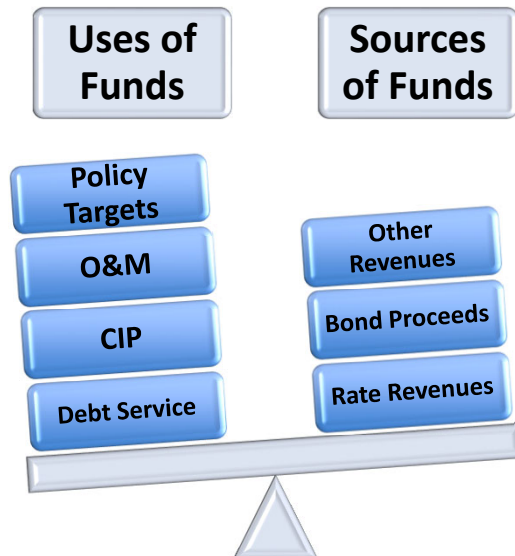
- \$356M in Additional Capital Expenses
- \$188M System Improvements
- Inflation in capital cost (Over 9.7% in 2021 in Denver ENR CCI)
- Projects can't be delayed for AW to maintain level of service
- Some of the most important Variance:
  - \$145M Wild Horse Reservoir\*
  - \$50M Water Right Purchases
  - \$41M Treatment Improvements
  - \$50M North Campus



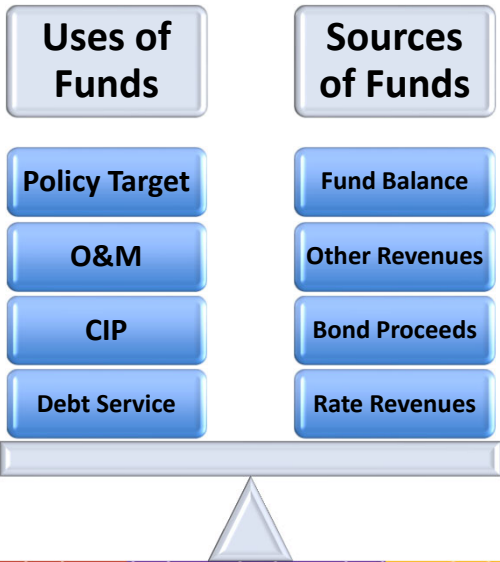
# Financial Planning 101



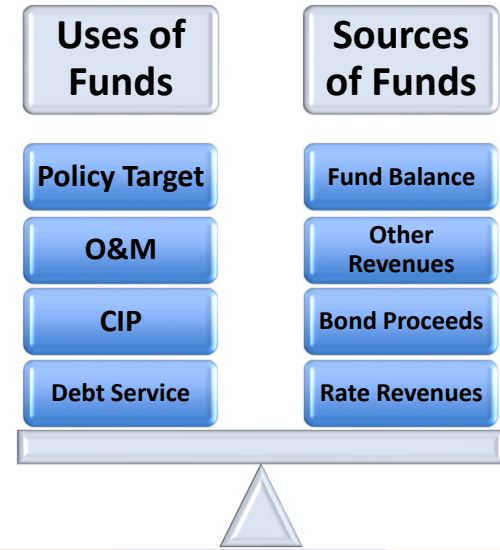
# Financial Planning 101



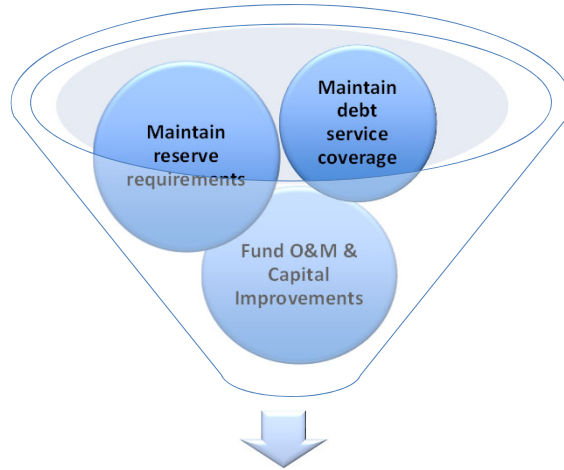
# Financial Planning 101



# Financial Planning 101



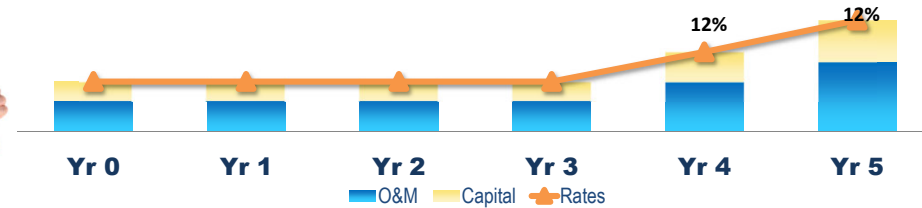
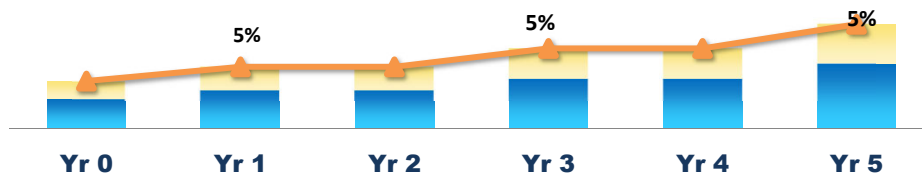
# Financial Planning Goals



Optimal combination of debt and rate increases

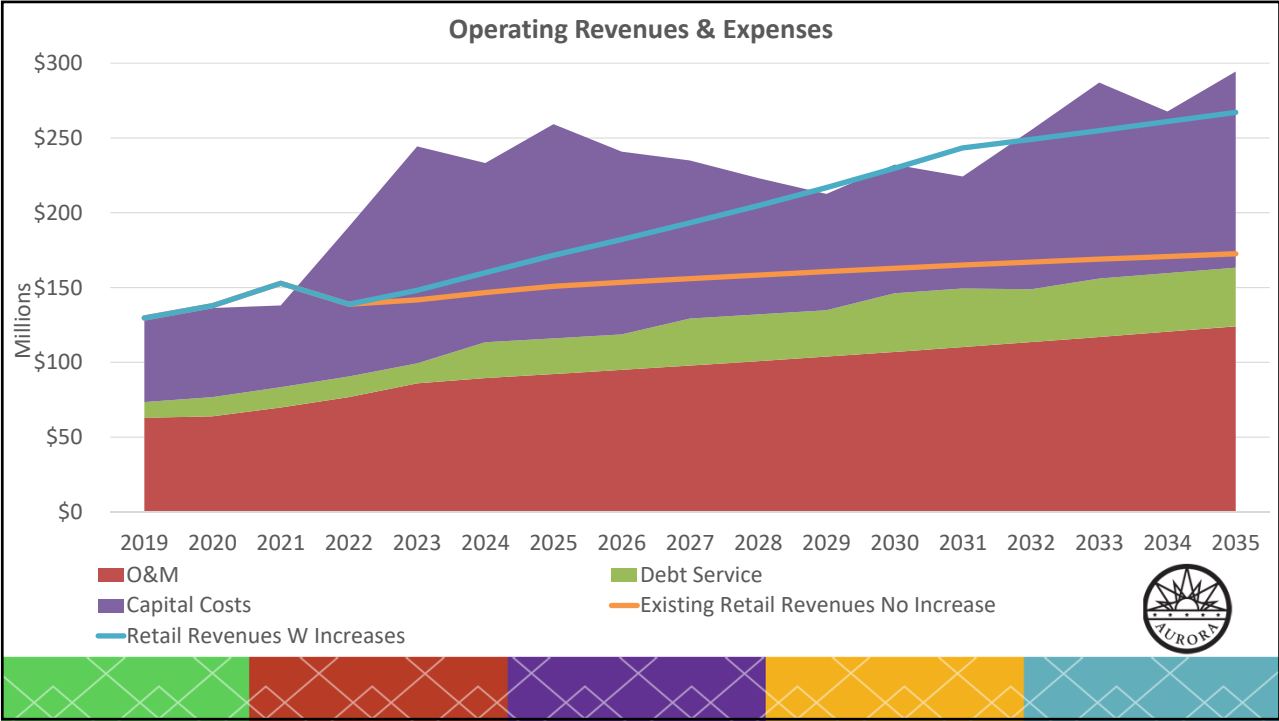


# Why is Planning Important



O&M Capital Rates





## Proposed Water Revenue Adjustments by Class (Millions)

Customer Class	Revenues under Existing Rates	Revenues under Proposed Rates	Difference %
Single Family Residential	\$59.66	\$63.81	7.0%
Multi-Family 2+ Units	24.50	24.90	1.6%
Irrigation	14.00	14.56	4.0%
Commercial	22.91	23.82	4.0%
Hydrant	2.69	2.82	5.0%
Fire Protection	0.32	0.35	10.7%
<b>Totals</b>	<b>\$124.06</b>	<b>\$130.26</b>	<b>5.0%</b>



# Proposed 2023 Rates

## Monthly Service Charges (4% Increase)

Meter	Residential, Commercial, Multi-Family Class			Irrigation Customers		
	Existing	Proposed	Difference	Existing	Proposed	Difference
5/8" & 3/4"	\$13.00	\$13.51	\$0.51	\$12.43	\$12.91	\$0.48
1"	\$19.88	\$20.66	\$0.78	\$18.20	\$18.91	\$0.71
1 1/2"	\$31.36	\$32.58	\$1.22	\$27.82	\$28.90	\$1.08
2"	\$45.14	\$46.90	\$1.76	\$39.37	\$40.91	\$1.54
3"	\$81.85	\$85.04	\$3.19	\$70.16	\$72.90	\$2.74
4"	\$123.15	\$127.95	\$4.80	\$104.80	\$108.89	\$4.09
6"	\$237.90	\$247.18	\$9.28	\$201.04	\$208.88	\$7.84
8"	\$486.76	\$505.74	\$18.98	\$316.50	\$328.84	\$12.34

## Block 1 Volumetric Rate

Class	Existing Rate	2023		% Difference
		Proposed	Difference	
Multi-Family 2+ Units	\$5.92	\$6.01	\$0.09	1.5%
Irrigation	\$7.46	\$7.76	\$0.30	4.0%
Commercial	\$6.11	\$6.35	\$0.24	4.0%



# Proposed 2023 Rates Continued

Fire Line	Fire Protection (11%)			Hydrant Meter (5.0%)		
	Existing	Proposed	Difference	Existing	Proposed	Difference
2"	\$2.18	\$2.42	\$0.24	\$12.13	\$12.74	\$0.61
3"	\$4.77	\$5.28	\$0.51	\$76.96	\$80.81	\$3.85
4"	\$8.59	\$9.51	\$0.92			
6"	\$19.10	\$21.14	\$2.04			
8"	\$32.74	\$36.24	\$3.50			
10"	\$51.84	\$57.38	\$5.54			
12"	\$68.20	\$75.50	\$7.30			
Rate Per 1,000 Gallons				\$9.80	\$10.29	\$0.49





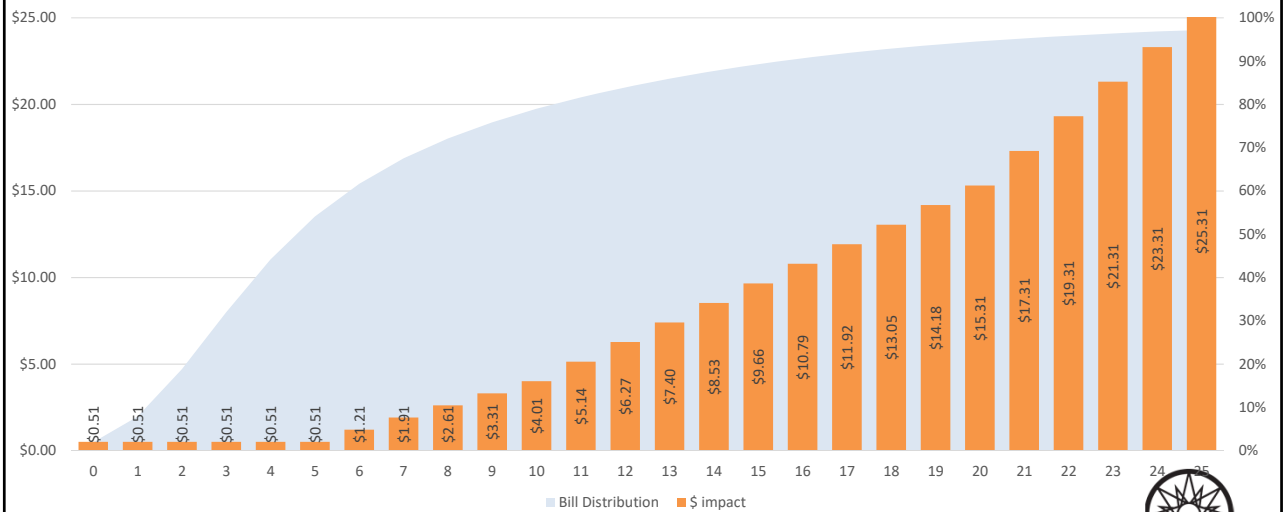
# Proposed Residential 2023 Water Rates

Tier	Existing	Proposed	Difference
Tier 1 / 0-5 Kgal	\$5.63	\$5.63	\$0.00
Tier 2 / 6-10 Kgal	\$5.93	\$6.63	\$0.70
Tier 3 / 11-20 Kgal	\$6.50	\$7.63	\$1.13
Tier 4 / 21Kgal+	\$10.00	\$12.00	\$2.00

- Consistent with the multi-year phase-in plan
- No increase on the first 5K gallons
- Promotes affordability for low users



## Residential Monthly Bill (Water Only) Impact



## Residential Monthly Bill (Water Only) Impact

Tier	Usage	Existing Bill	Proposed Bill	Difference
Winter Usage	5,000	\$41.15	\$41.65	\$0.51
Average usage	8,000	\$58.94	\$61.54	\$2.61
Average Summer Usage	13,000	\$90.30	\$97.69	\$7.40
High usage	25,000	\$185.80	\$211.10	\$25.31



## Sewer and Storm Revenue Increase

- Capital projects and new debt requires additional revenue adjustments
- Metro 5% 2023 rate increase
- General Inflation in capital projects and operating costs
- Sewer Capital Projects (2022-2027)
  - Total CIP \$141M - \$61.3M System Improvements – (\$80.2M Development)
  - 1<sup>st</sup> Creek Interceptor – (\$56M)
  - Sand Creek Interceptor – (\$28M)
  - SENAC Creek Interceptor – (\$17M under construction)
  - Colfax Sewer Improvements – (\$16.7M)



# 2023 Proposed Sewer (5%) & Storm (3.5%) Rates

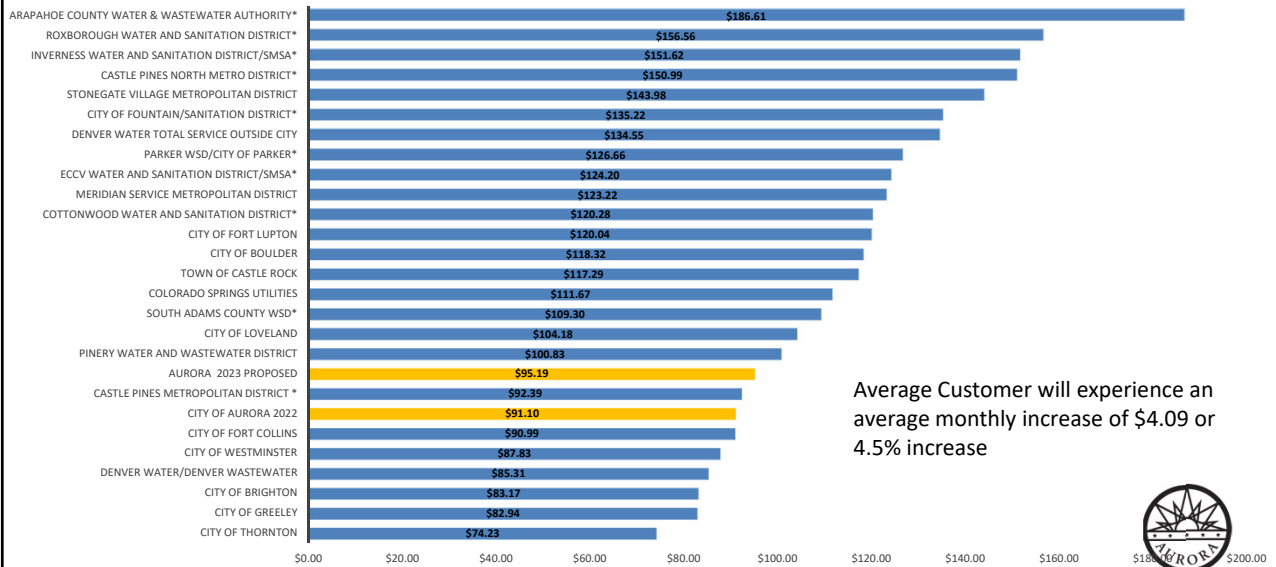
Meter	Residential, Commercial, Multi-Family Class		
	Existing	Proposed	Difference
5/8" & 3/4"	\$4.45	\$4.68	\$0.23
1"	\$11.14	\$11.70	\$0.56
1 1/2"	\$22.28	\$23.39	\$1.11
2"	\$35.65	\$37.43	\$1.78
3"	\$77.98	\$81.88	\$3.90
4"	\$222.81	\$233.95	\$11.14
6"	\$445.62	\$467.90	\$22.28
<b>Volumetric Rate Per 1,000 gallons*</b>	<b>\$4.10</b>	<b>\$4.30</b>	<b>\$0.20</b>
<b>Storm Water</b>			
Existing	Proposed	Difference	
First unit	\$10.83	\$11.21	\$0.38
Additional unit	\$8.53	\$8.83	\$0.30

\*Sewer Usage is determined by Winter Quarter Average

Average Residential Customer with 5 Kgal WQA will see an increase of \$1.61 (\$1.23 sewer and \$0.38 Stormwater)



## Monthly Average Water, Sewer & Storm Bill Comparison 2022 - (88,000 gallons a year, 4 people house, 7,700 sq. ft. lot size, 4,230 Irrigable Area, \$230K Home)



Average Customer will experience an average monthly increase of \$4.09 or 4.5% increase



# CONNECTION FEES



## Proposed Water Connection Fee 2023

### Single Family Residential

Indoor Use		Outdoor Use (per sq ft of lot size)
Number of Bathrooms	2023 Proposed Fee	2023 Proposed Fee
1-2	<del>\$6,749</del> \$6,427	<del>\$1,153</del> \$1,545 \$1,094
3-4	<del>\$10,904</del> \$10,385	
5+	<del>\$18,897</del> \$17,997	
Single Family Attached Fee Simple Lots (per unit)		<del>\$10,798</del> \$10,284

### Multi-family Residential (Indoor Use Fee per Unit)

2023 Proposed Fee
<del>\$10,798</del> \$10,284

### Commercial

Meter Size (Inches)	2023 Proposed Fee
3/4	<del>\$24,553</del> \$23,386
1	<del>\$43,950</del> \$41,861
1 1/2	<del>\$96,493</del>

### Irrigation (per square foot of landscaped area)

Landscape type	2023 Proposed Fee
Non-Water Conserving	<del>\$3.36</del> /\$4.50
Water Conserving	<del>\$1.80</del> /\$2.42

-Based on \$67.03 gpd re-usable fee and \$94.33 Consumptive use Fee  
 -1 1/2" and larger is based on projected Consumptive and re-usable volumes  
 and subject to capital recovery fee



## Water Connection Fee Summary 2023

- Status Quo -An average residential single-family home with 3 bathrooms and 6,900 sq. ft. will see an increase of 11.6% (\$2,186)
- New Ordinance - An average residential single-family home with 3 bathrooms and 6,900 sq. ft. will see a decrease of 5% (\$926)
- In total the new ordinance results in a \$3.1K decrease
- New integrated water master plan will be completed in the next 2 years fees will then be updated.



## Sewer Connection Fee Phase-in

Connection Fee	2022	2023
Connection Fee per ERU (5/8")	\$3,220	\$3,400
Dev Fee per ERU(5/8")	\$270	\$310
Total Fee Per ERU	\$3,490	\$3,710
	6.4%	6.3%

Since 2019 Sewer Dev Fee has been assessed at time of building permit



# Rates and Fees Adjustments

## Proposed Rate Revenue Adjustments

Utility	2022	2023	2024	2025	2026	2027
Water	3.5%	5.0%	5.0%	5.0%	5.0%	5.0%
Sewer	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Stormwater	3.5%	3.5%	0.0%	3.5%	0.0%	3.5%

## Proposed Fee Adjustments

Utility	2022	2023	2024	2025	2026	2027
Water	10.6%	11.0%*	10.0%**	10.0%**	10.0%**	10.0%**
Sewer	6.4%	6.3%	4.0%**	4.0%**	4.0%**	4.0%**
Stormwater	0.0%	0.0%	3.0%**	3.0%**	3.0%**	3.0%**

\* Change in Structure and Re-usable and consumptive demand result in different increases by class –Additional 9.7% adjustment for Construction cost inflation was included

\*\*increases are preliminary planned and will be reviewed based on new master plans to be completed in the next two years



# Questions

