

Citizens' Water Advisory Committee (CWAC) Agenda

February 14, 2023, 6:00 p.m.
Aspen Room, 2nd Floor, Aurora Municipal Center/Hybrid

Microsoft Teams Link:
[Click here to join the meeting](#)
or
<https://bit.ly/AuroraWaterAdvisoryCommittee>



Call in (audio only) - 720-388-8447
Phone Conference ID: 532 291 8#

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 – January 10, 2023 Chair
2. Introductions/Public Invited to be Heard Chair
3. Communications Update Greg Baker
4. Consent items
- a) 4th Quarter 2022 Financial Update Gail Thrasher
- b) Project of the Quarter Justin Montes
5. Integrated Water Master Plan James DeHerrera
6. WISE Partnership Alex Davis
7. CWAC Restructure update Greg Baker
8. New/Old Business Chair
9. Review Follow-Up Questions Greg Baker .
10. Confirm Next Meeting – Tuesday, March 14, 2023 Chair .
11. Adjourn Chair

Citizens’ Water Advisory Committee (CWAC) Minutes
January 10, 2023, 6:00 p.m.
Aspen Room/Microsoft Teams

Members Present: Angie Binder – Chair, Dick Eason - Vice Chair, Jay Campbell, Dave Patterson (Teams), Bill Gondrez, Janet Marlow, Daniel Widrich, Dennis Dechant (Teams), Tom Coker (Teams)

Absent: None

Staff Present: Marshall Brown, Sarah Young, Alex Davis, Greg Baker, Fernando Aranda Rory Franklin, Sherry Scaggiari, Rich Ommert, Chris Hill, Samuel Lanternier, Gail Thrasher, Sonya Gonzalez

Visitors Present: None

The meeting was called to order at 6:01 p.m.

1. Elections – 2023 Chair and Vice-Chair

Angie Bend was nominated for Chair by Dick Eason. All voted aye.
Dick Eason nominated for Vice-chair by Angie Bender. All voted aye.

2. Approval of October 11, 2022, Minutes

The October 11, 2022, minutes were approved with amendments.

3. Introductions/Public Invited to be Heard

None.

4. New/Old Business

None

5. Communications Update

Greg Baker noted that the Assistant Secretary for the interior was visiting the Binney Water purification facility on Friday, Jan. 13. He also noted that staff would be asking the Water Policy Committee on Jan. 18 to advance a resolution to Study Session declaring Stage I drought, to be effective May 1. Finally, Marshall Brown informed the committee that Jo Ann Giddings has retired from her position as Deputy Director for Water Financial Administration.

6. Drainage Reviews Overview

Richard Ommert, Project Engineer gave a presentation highlighted the roles and function of the Aurora Water Drainage team, which recently moved over from the Public Works Department.

7. Drought Surcharge update

Fernando Aranda, Rate Analyst, presented on a proposed change to the drought surcharge included in the rate ordinance. This change will exempt indoor use from drought surcharges that are included when a Water Availability Stage I or greater is declared by city council.

8. Proposed committee restructure

Marshall Brown, General Manager for Aurora Water, outlined a proposed change to the Citizen’s Water Advisory Committee’s structure, adding specific powers that would utilize the committee to act as a point for reconsideration by outside proposers of water supply agreements that have been denied by staff, proposed commercial or industrial developers that would exceed engineering standards for water use, extraterritorial water supply agreements denied by staff and provide advice on projected water needs for new annexation agreements. The committee would provide an advisory report to the Water Policy Committee. These proposed changes would require an amendment to the ordinance that created CWAC, dissolving the current committee and resulting in new appointments for members.

9. Review Follow-Up Questions

None

10. Confirm Next Meeting – Tuesday February 14, 2023.

Th next meeting on February 14, 2023 was confirmed.

11. Adjourn

The meeting was adjourned at 7:52p.m.

Angie Binder, Chair
Citizens’ Water Advisory Committee

Adopted: _____



To: Citizens’ Water Advisory Committee

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

From: Dan Mikesell, Deputy Director (Interim), Water Financial Administration _____

Date: January 14, 2023

Subject: Quarterly Financial Report – Preliminary Fourth Quarter 2022

Highlights

Combined Operating revenues (Water, Sewer, and Stormwater) in 2022 were 3.8 percent higher than plan and slightly less (0.2 percent) than 2021. In 2022, Aurora Water implemented rate increases of 3.5 percent, 4.0 percent, and 3.5 percent to the water, sewer, and stormwater service respectively.

Combined Development revenues (Water, Sewer, and Stormwater) in 2022 were 13.2 percent higher than plan and 0.8 percent (\$0.6 million) higher than 2021. Aurora Water implemented in 2022 a 10.6 percent and 6.4 percent increase in the water and sewer connection fees. No increase was adopted for the stormwater development fees. In 2022, Development revenues was mixed across utilities while water experienced a 6.0 percent (\$3.4 million) increase in development revenues compared to 2021 due to multi-family and irrigation developments. In sewer and storm, the development revenues were 20 percent lower (\$2.9 million) than 2021. Considering all this, growth in the City is still healthy.

Operating expenses (Water, Sewer, and Stormwater combined), excluding debt service, were lower than the plan by \$7.6 million or 5.3 percent. Personal Services were lower than plan mainly due to vacancies, as a result of a competitive labor market. Professional Services contract payments were lower than anticipated for the fourth quarter. Vehicle and Equipment purchases were lower than plan by \$2.6 million due to supply chain issues. Costs coming in higher than plan were credit cards fees (\$1.1 million), treatment chemicals (\$0.9 million), Water Authorities assessment costs for Busk-Ivanhoe and Joint Water Authority (\$1.8 million) which may require a supplemental. The budget for the Water Authorities were adopted after the City of Aurora’s budget development process. Operating expenses, excluding debt service, were higher than 2021 (same period) by \$9.3 million or 7.3 percent.

Statements showing the budget to actual results and the year-to-year comparison can be found at the end of this memo on pages 9 and 10. Capital details can be found on pages 6 and 7.

Water, Sewer, and Stormwater as of End of Fourth Quarter					
Item	YTD Plan	2022	2021	Q4 2022 vs YTD Plan	Year Over Year Difference
Operating Revenue	\$218,837,705	\$227,082,390	\$227,442,995	\$8,244,685	(\$360,605)
Development Revenue	64,976,924	73,539,731	72,944,112	8,562,807	595,619
Bond Proceeds and Transfers	0	0	448,273,084	0	(448,273,084)
Interest Income	2,782,782	4,160,274	3,190,689	1,377,492	969,585
Total Revenue	\$286,597,411	\$304,782,395	\$751,850,880	\$18,184,984	(\$447,068,485)
Operating Expense	(\$143,054,380)	(\$135,413,091)	(\$126,160,689)	(\$7,641,289)	\$9,252,402
Capital Projects	(281,928,674)	(204,413,453)	(145,712,688)	(77,515,221)	58,700,765
Debt Service	(37,476,123)	(35,964,954)	(311,862,029)	(1,511,169)	(275,897,075)
Total Expense	(\$462,459,177)	(\$375,791,498)	(\$583,735,406)	(\$86,667,679)	(\$207,943,908)

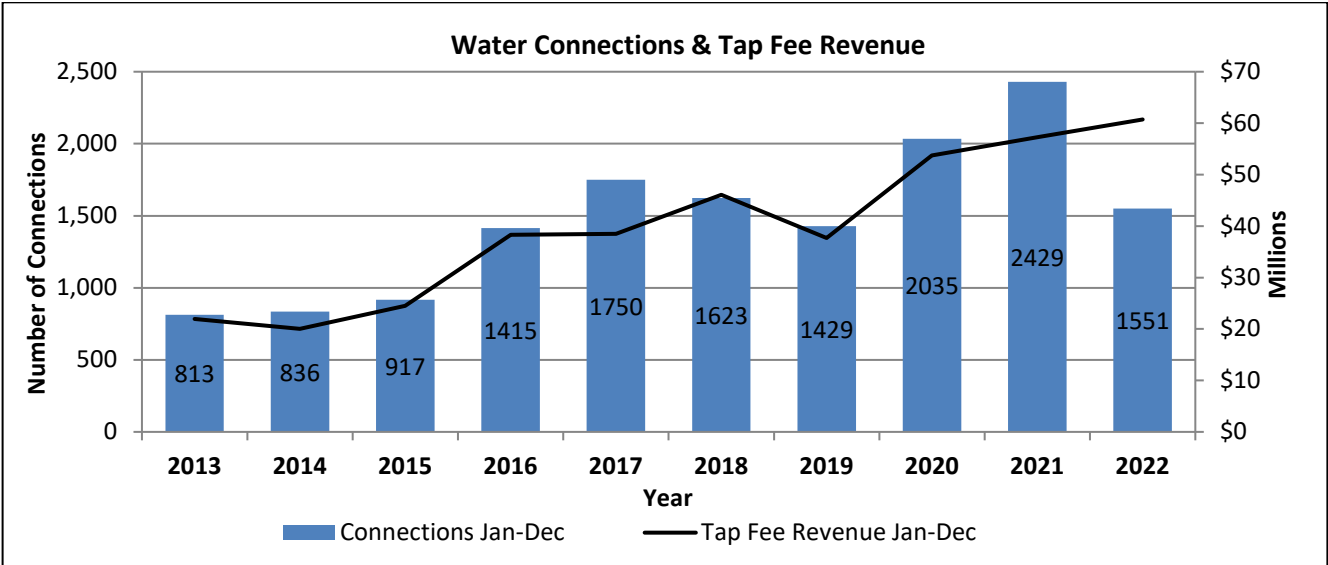
Cash Balances

Reserves and cash balances are shown in the table below. Total cash in the Water and Wastewater Funds compared to the third quarter decreased by \$8.7 million and \$0.1 million respectively. This is mainly due to capital spending and seasonal cash inflows. However, the cash after reserves and commitments increased slightly in both the water and wastewater fund as projects were completed and capital and operating encumbrances decreased.

	Water	Wastewater
Total Cash	\$266.1M	\$112.4M
Reserve & Commitment Type		
Debt Service Policy Reserve (next fiscal year debt payment)	\$28.9M	\$8.5M
Operating Reserve (25% of adopted operating budget excl debt service)	\$18.9M	\$15.6M
Water Resources Reserve (\$20 Million)	\$20.0M	
Capital Reserve (0.5% of Net Fixed assets)	\$9.8M	\$3.4M
Capital and Operating Encumbrances	\$87.2M	\$67.0M
Net Restricted Bond Proceeds for Projects	\$24.8M	\$3.3M
Pass-Thru Commitments (METRO and CC Basin)		\$5.3M
WISE Liability to Denver Water	\$5.0M	
Total Reserves and Commitments	\$194.6M	\$103.1M
Cash after Reserves & Commitments	\$71.5M	\$9.3M

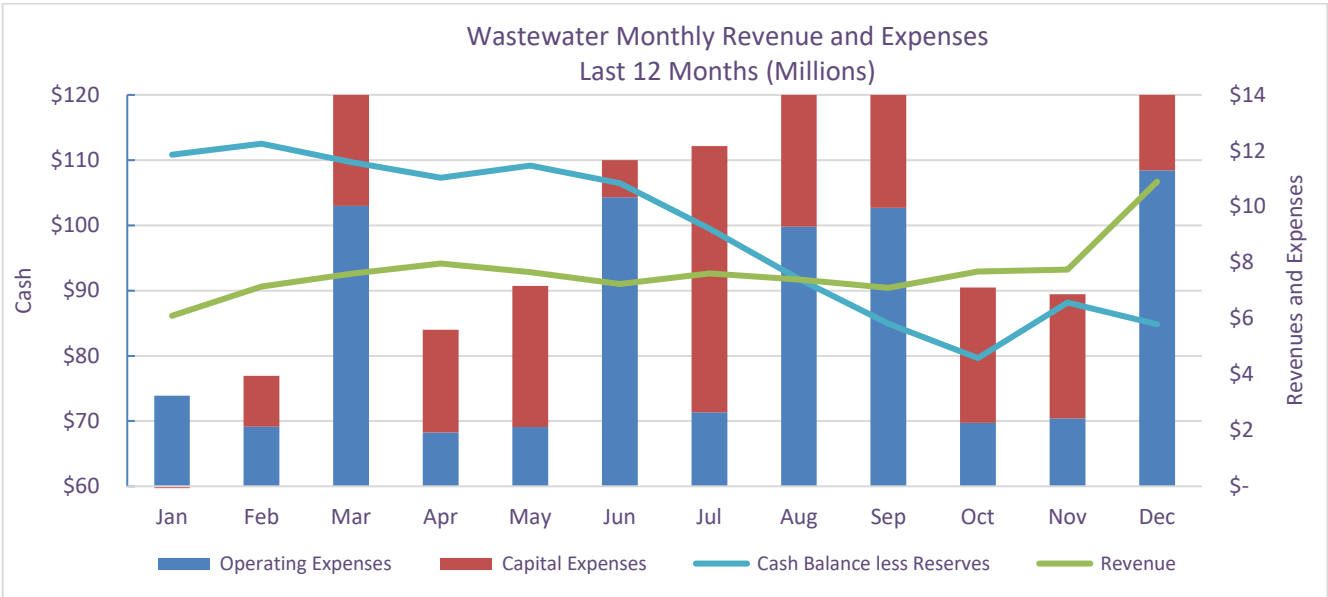
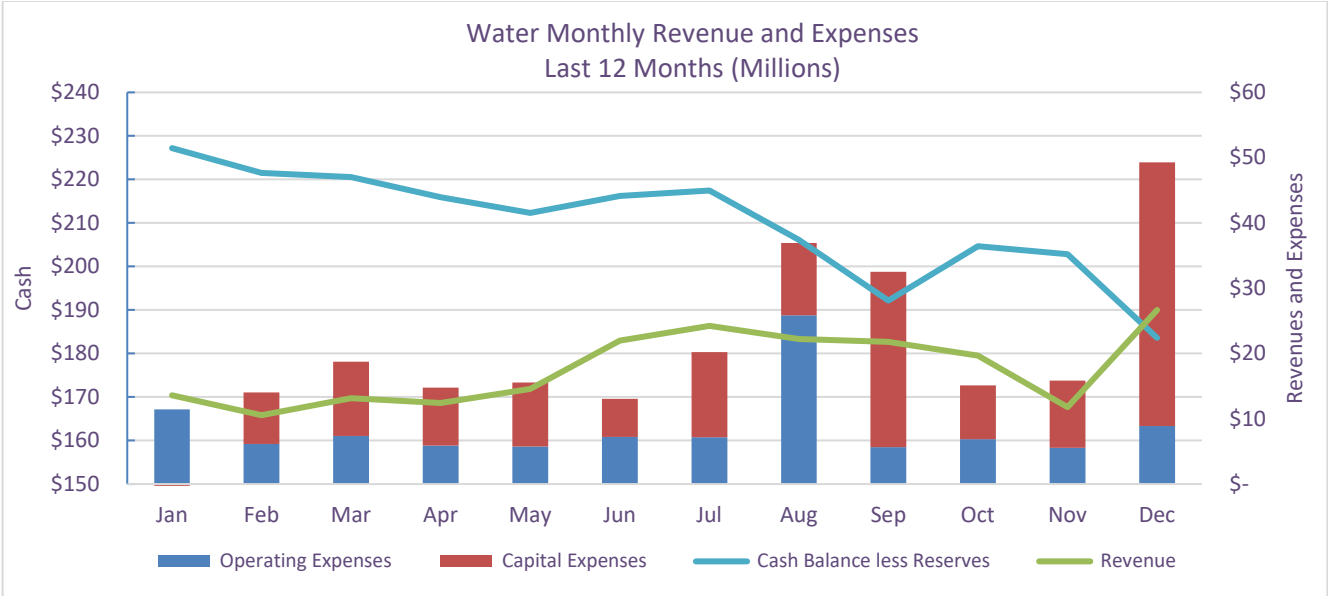
Water Connections

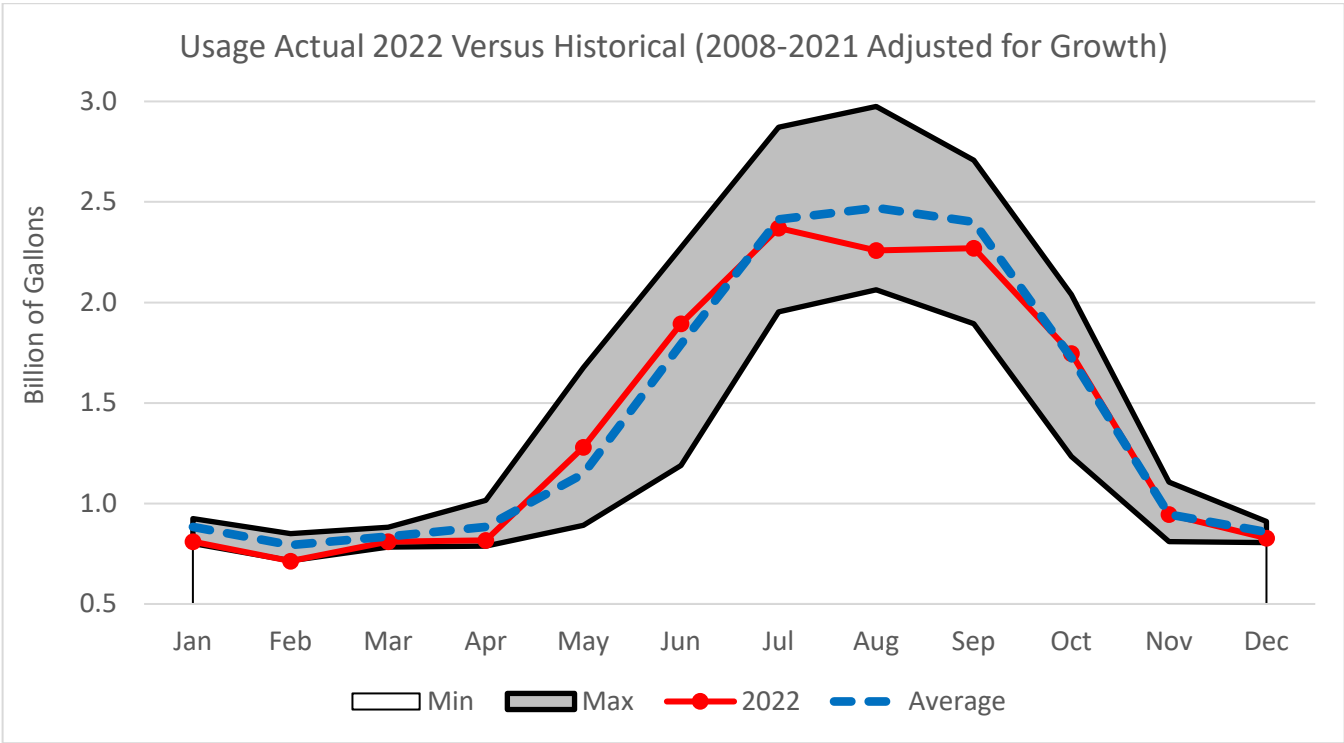
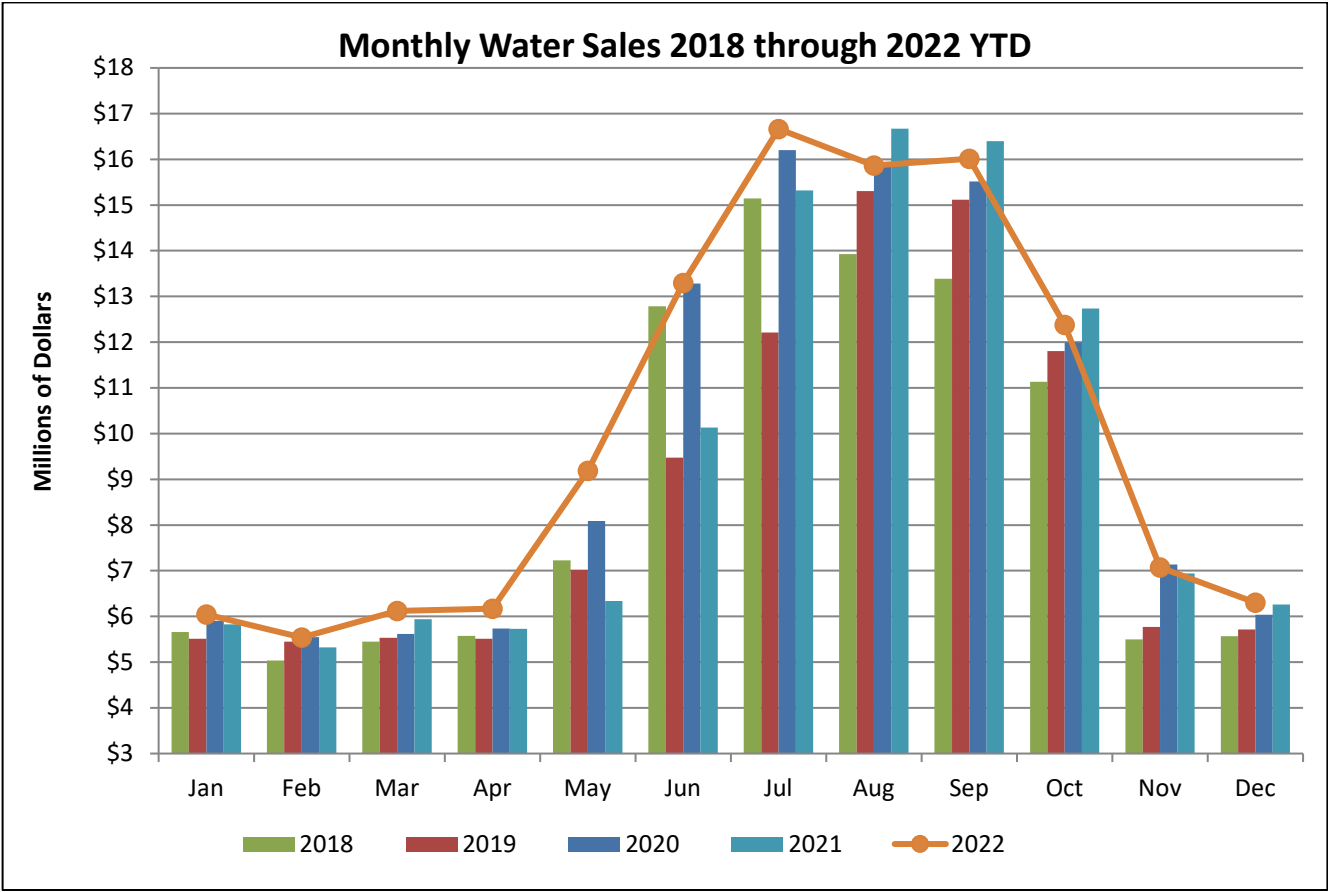
The total number of water connections (single-family, commercial, irrigation and multi-family) and the corresponding Water Connection Fee revenue for 2013-2022 are shown on the following graph. The number of water connections through the end of 2022 decreased by 878 connections or 36 percent compared to 2021. Total water connection fee revenues in 2022 was \$3.5 million (6.1 percent) higher than in 2021. The reason for the higher revenues but lower taps was due to more irrigation and multifamily taps in 2022 compared to 2021.



2022 Revenue, Expenses and Cash Flow

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





Overall Capital Plan

Capital Projects Spending as of 12/31/2022				
Program	Working Budget*	YTD Spending Plan	YTD Actual Spend	Encumbered**
<u>Water CIP</u>				
Operations & General Management	76,600,674	46,037,456	47,975,448	21,397,520
Pumping	7,123,261	950,170	355,458	250,004
SOS Other	51,799,729	23,844,292	6,948,773	9,224,149
SOS Storage	43,542,945	23,625,313	15,783,466	3,930,858
SOS Water	43,842,422	74,763,954	55,667,117	5,829,442
Transmission & Distribution	40,098,504	27,570,414	15,612,425	18,650,764
Treatment	54,527,424	16,193,012	9,611,760	22,161,161
Water Total	317,534,959	212,984,611	\$151,954,447	81,443,898
<u>Sewer CIP</u>				
Collection	75,679,807	27,045,522	15,621,011	45,813,939
Operations & General Management	35,114,752	19,788,451	18,424,344	12,679,397
Sewer Total	\$110,794,559	\$46,833,973	\$34,045,355	58,493,336
<u>Stormwater CIP</u>				
Stormwater	22,487,826	11,284,393	7,736,362	2,960,180
Operations & General Management	15,270,201	10,825,697	10,677,289	3,704,856
Stormwater Total	37,758,027	\$22,110,090	\$18,413,651	\$6,665,036
Wastewater Total	148,552,586	\$68,944,063	\$52,459,006	\$65,158,372
Water & Wastewater Total	466,087,545	\$281,928,674	\$204,413,453	\$146,602,270

*Working budget includes adopted budget, carryforward, transfers, lapsed appropriations, and supplementals.

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

Capital Projects Spending

Current economic conditions continue to affect the supply chain and labor force, as well as changing development plans, impacting utility corridors, and increasing permit timelines.

Total capital spending in the Water Fund through the fourth quarter was \$152.0 million, which was \$61.0 million less than the year-to-date spending plan of \$213.0 million. Water Rights opportunistic purchases in 2022 was \$24.0 million in the fourth quarter. The Horizontal Wells 6MGD and North Campus Well Field Expansion projects were \$12.0 million less than planned due to construction being pushed out to 2023. Delays at the Bureau of Land Management affected timing of permitting at Wild Horse Reservoir (SOS Storage). Many of the projects in the Water Fund are encumbered for a total of \$81.4 million.

Through the fourth quarter, total capital spending in the Wastewater Fund was \$52.4 million, which was \$16.5 million less than the spending plan of \$68.9 million. In the Collection program, the SC2 & SC5 Sanitary Sewer Upgrade is \$2.4 million less than planned due to project delays. This project is scheduled to be completed in 2023. The Senac Creek Interceptor was \$2.9 million less than plan due to delays in material procurement and the project start date for Phase 2 pushed out to March 2023. In addition, the Piney Creek Lift Station Repairs is \$2.2 million less than planned due to delay in project start time but is scheduled to be completed by mid-2023. In the Storm Water program, the ETG06 - Maintenance Access and Recreation Path (Confluence to Aurora Signature Park) Construction request for proposal is still in process as of Q1 2023. The Hutchinson Channel & Central Recreation Center Redesign was delayed in 2022 and construction is scheduled to start in 2023. Many of the projects in the Wastewater Fund are encumbered for a total amount of \$65.2 million.

2022 Financial Comparison

The following table presents a comparison of budget to revenues and expenses through the Fourth quarter for the year 2022.

WATER as of 12/31/2022				
Revenues & Expenses	Working Budget*	YTD Plan	YTD Actual (Accrual Basis)	% Actual to Plan
Operating Revenue	\$140,748,853	\$140,748,853	\$147,912,165	5%
Development Revenue	54,165,843	54,165,843	61,831,455	14%
Interest Income	1,933,602	1,933,602	2,865,767	48%
Total Revenue	\$196,848,298	\$196,848,298	\$212,609,387	8%
Operating Expense	(\$78,977,791)	(\$78,977,791)	(\$76,642,624)	-3%
Capital Projects	(317,534,959)	(212,984,611)	(151,954,446)	-29%
Debt Service	(28,578,370)	(28,578,370)	(27,071,089)	-5%
Total Expense	(\$425,091,120)	(\$320,540,772)	(\$255,668,159)	-20%
Net Revenue & Expense	(\$228,242,822)	(\$123,692,474)	(\$43,058,772)	
SEWER as of 12/31/2022				
Operating Revenue	\$53,330,062	\$53,330,062	\$53,717,939	1%
Development Revenue	8,311,081	8,311,081	8,830,079	6%
Interest Income	521,180	521,180	740,795	42%
Total Revenue	\$62,162,323	\$62,162,323	\$63,288,813	2%
Operating Expense	(\$48,809,240)	(\$48,809,240)	(\$46,540,714)	-5%
Capital Projects	(110,794,559)	(46,833,973)	(34,045,355)	-27%
Debt Service	(4,961,015)	(4,961,015)	(3,984,919)	-20%
Total Expense	(\$164,564,814)	(\$100,604,228)	(\$84,570,988)	-16%
Net Revenue & Expense	(\$102,402,491)	(\$38,441,905)	(\$21,282,175)	
STORMWATER as of 12/31/2022				
Operating Revenue	\$24,758,790	\$24,758,790	\$25,452,286	3%
Development Revenue	2,500,000	2,500,000	2,878,197	15%
Interest Income	328,000	328,000	553,712	69%
Total Revenue	\$27,586,790	\$27,586,790	\$28,884,195	5%
Operating Expense	(\$15,267,349)	(\$15,267,349)	(\$12,229,753)	-20%
Capital Projects	(37,758,027)	(22,110,090)	(18,413,652)	-17%
Debt Service	(3,936,738)	(3,936,738)	(4,908,946)	25%
Total Expense	(\$56,962,114)	(\$41,314,177)	(\$35,552,351)	-14%
Net Revenue & Expense	(\$29,375,324)	(\$13,727,387)	(\$6,668,156)	

*Working budget includes adopted budget, carryforward, transfers, lapsed appropriations, and supplementals.

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

The following table presents a comparison of revenues and expenses through the Fourth quarter for years 2022 and 2021.

WATER Fourth Quarter Comparison			
Revenues & Expenses	2022	2021	% Change
Operating Revenue	\$147,912,165	\$152,753,881	-3%
Development Revenue	61,831,455	58,358,824	6%
Bond Proceeds and Transfers	0	387,990,000	-100%
Interest Income	2,865,767	2,244,090	28%
Total Revenue	\$212,609,387	\$601,346,795	-65%
Operating Expense	(\$76,642,624)	(\$69,713,028)	10%
Capital Projects	(151,954,446)	(110,465,585)	38%
Debt Service	(27,071,089)	(\$289,431,203)	-91%
Total Expense	(\$255,668,159)	(\$469,609,816)	-46%
Net Revenue & Expense	(\$43,058,772)	\$131,736,979	
SEWER Fourth Quarter Comparison			
Operating Revenue	\$53,717,939	\$45,980,615	17%
Development Revenue	8,830,079	10,596,593	-17%
Bond Proceeds and Transfers	0	60,283,084	-100%
Interest Income	740,795	552,805	34%
Total Revenue	\$63,288,813	\$117,413,097	-46%
Operating Expense	(\$46,540,714)	(\$45,190,690)	3%
Capital Projects	(34,045,355)	(17,105,731)	99%
Debt Service	(3,984,919)	(\$12,636,775)	-68%
Total Expense	(\$84,570,988)	(\$74,933,196)	13%
Net Revenue & Expense	(\$21,282,175)	\$42,479,901	
STORMWATER Fourth Quarter Comparison			
Operating Revenue	\$25,452,286	\$28,708,499	-11%
Development Revenue	2,878,197	3,988,695	-28%
Bond Proceeds and Transfers	0	0	0%
Interest Income	553,712	393,794	41%
Total Revenue	\$28,884,195	\$33,090,988	-13%
Operating Expense	(\$12,229,753)	(\$11,256,971)	9%
Capital Projects	(18,413,652)	(18,141,372)	2%
Debt Service	(4,908,946)	(\$9,794,051)	-50%
Total Expense	(\$35,552,351)	(\$39,192,394)	-9%
Net Revenue & Expense	(\$6,668,156)	(\$6,101,406)	

Capital Improvement Project of the Quarter North Campus Horizontal Well Project

Background

The North Campus Horizontal Well Project will expand the City’s North Campus (NC) Well Field capacity. Originally constructed between 2008 and 2012 under the Prairie Waters Project (PWP), the Well Field currently consists of 23 conventional vertical groundwater production wells along the South Platte River, and has a current capacity of 10 million gallons per day (MGD). This project consists of two phases and will add a new type of well, the radial collector well, to our north campus infrastructure. By late 2026, the construction of two radial collector wells is projected to increase our raw water collection capacity by 7 MGD.

The water collected at the North Campus increases the firm yield of the City’s water resource portfolio. In addition, these flows represent a constant reliable yield that provides a means for meeting future water demands and achieving a higher standard of drought resiliency. Through the “Horizontal Well Alternatives Analysis” performed by LRE Engineers, the “Horizontal Wells Preliminary Design Report” performed by Carollo Engineers, and the full design effort by the latter, we have refined the location, infrastructure details, and methods of construction for the new radial collector wells. They will be located on the east side of the South Platte River adjacent, though across the river from, our existing infrastructure near County Road 8 and Highway 85.

Having completed the design work, Aurora Water is bidding this project to prequalified contractors in the coming weeks, and plans to begin construction on the first radial well and associated infrastructure in the second quarter of this year.

Scope of Work

The first construction effort will focus on construction of all required civil, electrical, and mechanical infrastructure required to complete one radial collector well and a pipeline to convey the collected water across the river to our existing infrastructure system. The core components of this collector well are a 20-ft diameter concrete caisson installed down to bedrock (roughly 35ft deep), the drilling and installation of at least eight (8) radially installed screened laterals from the base of the caisson, a 42’x42’ concrete masonry pump station constructed above the caisson, installation of four vertical turbine pumps and all other mechanical piping, all associated SCADA and electrical components, and all associated site improvements such as an access road and fencing.

The second construction effort will be a separate project and includes an almost identical set of components without the need for an additional river crossing. This effort slated to begin in 2025, also includes federal grant funding from the Bureau of Reclamation.

Top View of Caisson and Radials (subgrade)



3D Model of Pump Station





TO: Citizen’s Water Advisory Committee

THROUGH: Marshall P. Brown, General Manager, Aurora Water
Sarah Young, Deputy Director, Planning and Engineering Services, Aurora Water
Swirvine Nyirenda, Planning Services Manager, Aurora Water

FROM: James DeHerrera, Project Engineer, Aurora Water

DATE: February 14, 2023

SUBJECT: Integrated Water Master Plan 2 Update

Purpose:

In order to plan for the future, Aurora Water takes a proactive, integrated master planning approach. To meet the needs of current and future customers alike, the various disciplines within the utility must coordinate planning efforts to ensure alignment, consistent assumptions, and optimal capital utilization. The utility completed its first Integrated Water Master Plan (IWMP) in 2017. The IWMP integrated short- and long-range planning across the Water Resources, Source of Supply, Water Treatment, and Water Transmission disciplines within Aurora Water. The result was a multi-discipline Capital Improvement Plan (CIP) focused on growth-related projects using consistent key assumptions and the same planning horizon for all disciplines.

An important aspect of implementing a scenario-based master plan is to periodically revisit and update it to ensure planning efforts continue to be based on the best available information. The Integrated Water Master Plan 2 (IWMP2) has been underway over the past year and results from recent studies, new technologies, and updated climate information have been evaluated and incorporated into the analysis to produce an updated capital improvement project list with the end goal of an adaptable 20-year CIP and buildout roadmap. Details of the study, including current and future tasks, will be presented.

Action Required:

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

cc: File Copy

Aurora Water Integrated Water Master Plan 2 Update

CWAC Workshop, February 14, 2023

James DeHerrera, P.E., Project Engineer



1

Agenda

- Scenario based planning
- Integrated Water Master Planning overview
- Integrated Water Master Plan 2 (IWMP2)
 - Hydrology/demand pairings
 - Project status
 - Current task
 - Future tasks
- Questions



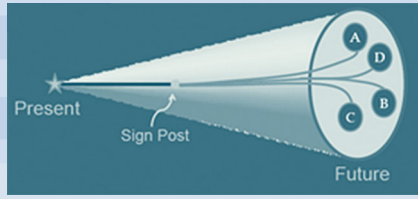
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Scenario Planning



Traditional Planning

- One target
- One solution



Scenario-Based Planning

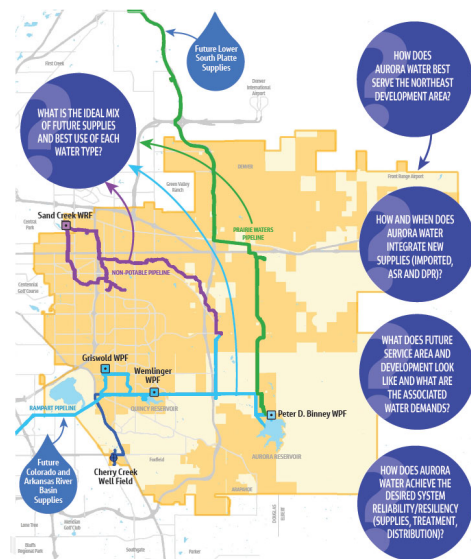
- Range of targets
- Range of potential solutions

- Future is unknown
- Plan for multiple possibilities (hydrology and demands)



Components of an Integrated Water Master Plan

- Multiple disciplines
- Hydrology
- Demands
- System analysis
- Capital Improvement Plan (CIP) development



IWMP2 Big Picture Questions

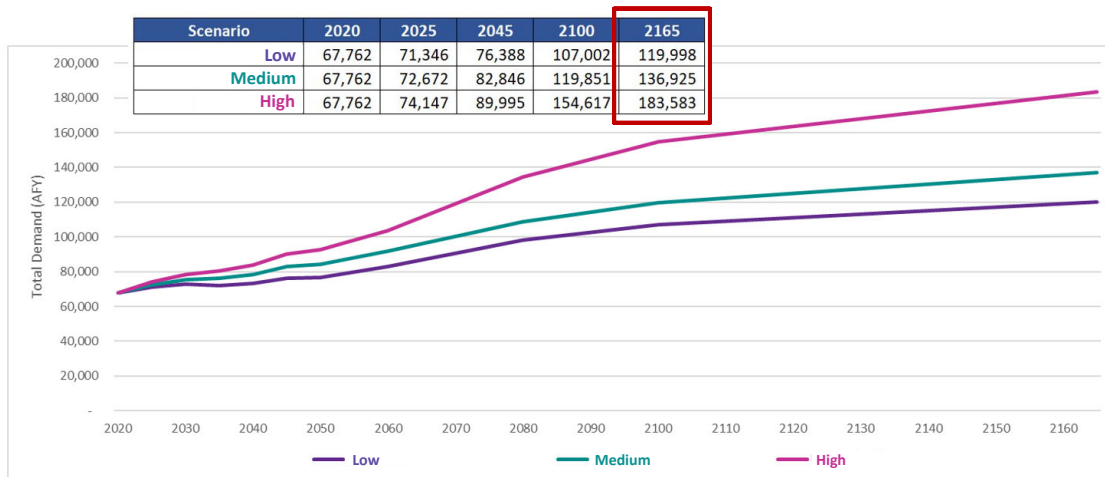
IWMP2 Hydrologic Scenarios

Simulated Climate Change Impact		IWMP2 Hydrologic Scenario Name
Mean Temperature Change	Mean Hydrology Change	
+0°C	0%	Historical
+1.3-1.6°C Global +2.0°C Colorado	-13% Aurora basins ¹	13% Reduction
+1.5-1.7°C Global +2.3°C Colorado	-25% Aurora basins ¹	25% Reduction
+3.0°C Global +3.9-4.5°C Colorado	-38% Aurora basins ¹	38% Reduction

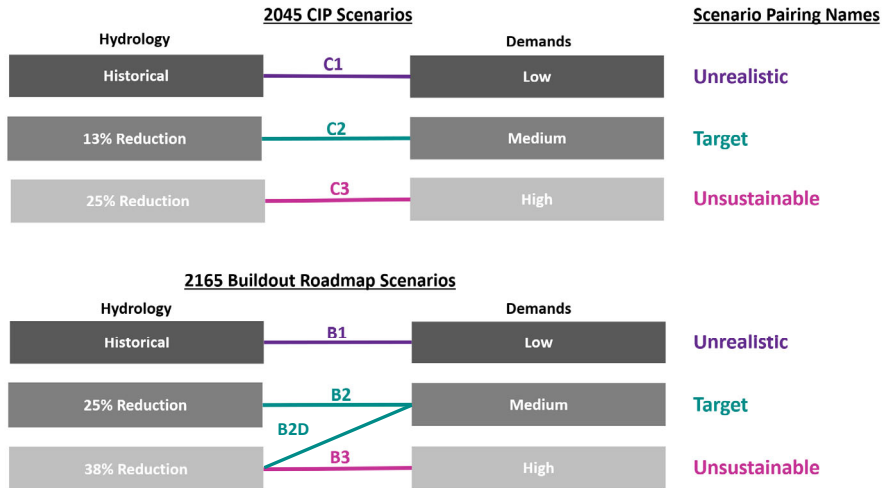
¹Hydrology change is based on a weighted average of forecasted flows of portions of the Colorado River, Arkansas River, and South Platte River that impact Aurora Water supplies.



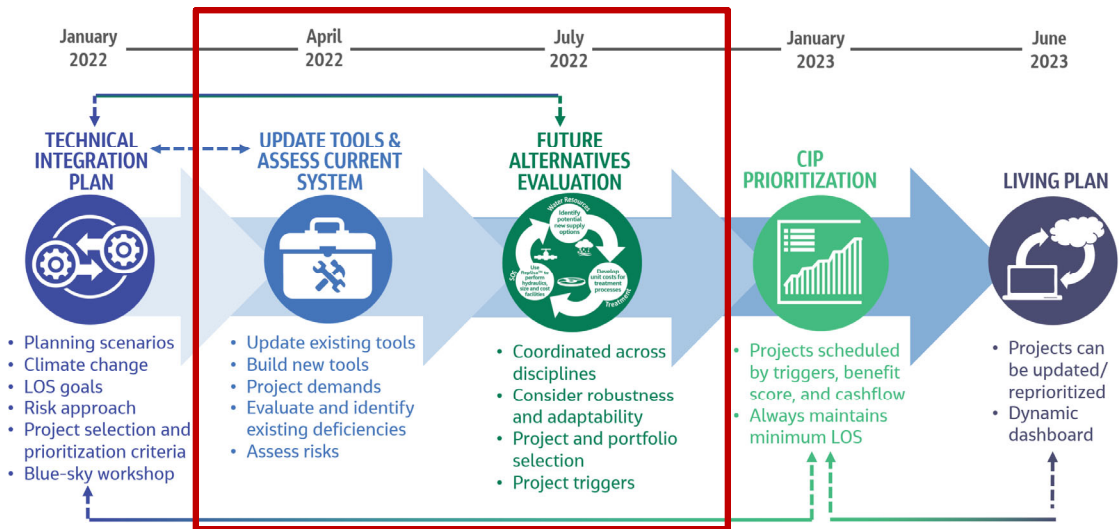
IWMP2 Demand Scenarios



Hydrology / Demand Scenario Pairings



System Analysis

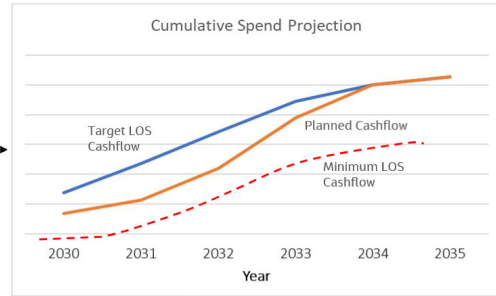


Current Task: CIP Benefit Scoring and Prioritization

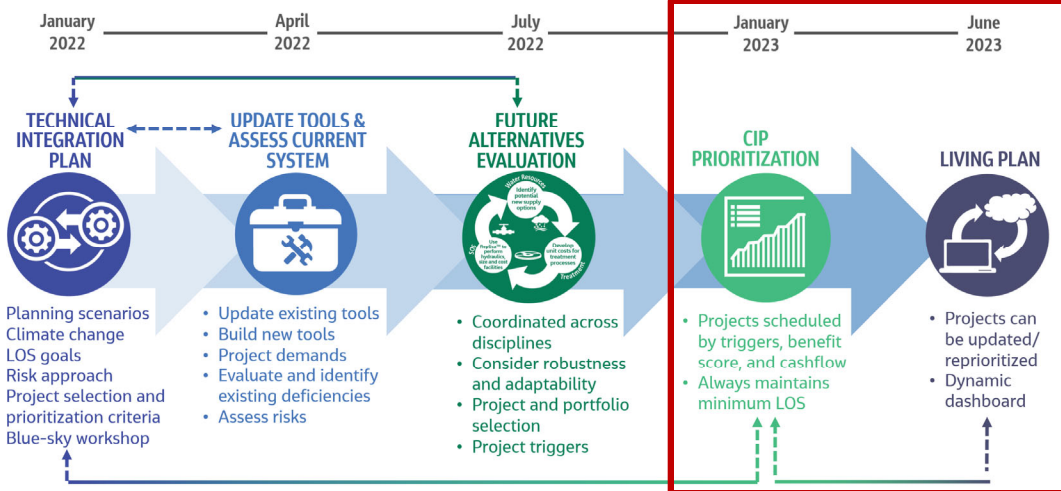
Bold Bold text indicates project may have a relatively low benefit score, but the project is on the critical path for a dependent project and extra caution should be taken if proposing alternate kickoff years
Blue Blue indicates user to review and edit if deemed necessary
Red Red indicates user changed default value. Right click on cell and select "new comment" or "reply to comment" and enter reason for edit.

ID	Project Name	Target Kickoff Date	Minimum Kickoff Date	Public Health and Safety	Financial Risk	Compliance	Performance Scores						Total Benefit Score
							System Reliability	Efficiency of Meeting User Needs	Increased Operational Efficiency	Community/Customer Benefit	Operational Benefit	Financial Benefit	
WR-3	Everist Phase II Fencing Design/Const	2025	2025	0	100	0	0	0	0	0	0	0	900
WR-7	Everist Phase III Cell Const	2025	2025	0	100	0	0	0	0	0	0	0	900
WR-8	Everist Water Quality Improvements Phase 1	2023	2023*	0	0	10	0	0	0	0	0	0	900
WR-10	Wild Horse Reservoir Const	2026	2026	0	0	100	6	0	3	0	0	0	1558
WR-21	Everist Remaining Projects	2032	2040	0	100	0	0	0	0	0	0	0	900
WR-22	Walker Remaining Projects	2037	2047*	0	100	0	0	0	0	0	0	0	900
WR-23	Honestake Discharge Pipeline Upgrade Incremental Cost	2026	2026	0	100	0	0	0	0	0	0	0	900
WR-24	Eagle River Project Permitting (AW's portion)	2025	2025	0	100	0	0	0	0	0	0	0	900
WR-30	Eagle River Project Design/Const (AW's portion)	2029	2039	0	0	0	7	7	0	3	0	0	1388
WR-34	Box Creek Reservoir Permitting Diligence Studies	2023	2023	0	100	0	0	0	0	0	0	0	900
SOS-2	2nd Radial Well Const	2024	2024	0	0	0	5	10	0	0	0	0	1275
SOS-3	3 Day Vertical Wells Design/Const (13 wells)	2024	2024	0	0	0	5	10	0	3	0	0	1473
SOS-4	3-Day Vertical Wells Design/Const (6 wells)	2026	2031	0	0	0	5	10	0	0	0	0	1473
SOS-6	Well Field Land Acquisition Late 2020s	2029	2030	0	100	0	0	0	0	0	0	0	900
SOS-7	Warming Blend Pipeline Design/Const	2026	2030	0	0	0	0	9	0	3	0	0	963
SOS-8	Quincy Intake to Vermiliger Pipeline	2023	2023*	0	0	100	7	0	0	0	0	0	1495
SOS-9	Rampart Delivery System Expansion Phase 1a Design/Const	2024	2024	0	0	0	7	9	0	3	0	0	1558
SOS-10	Rampart Delivery System Expansion Phase 1b Design/Const	2021	2031	0	0	0	7	9	0	3	0	0	1558
SOS-18	AGRI Aquifer Storage and Recovery Pilot Design/Const	2028	2163	0	0	0	0	0	0	0	0	0	0
SOS-19	Denver Basin Aquifer Storage and Recovery Pilot Design/Const	2024	2024*	0	100	0	0	0	0	0	0	0	900
SOS-20	PWS Pump Station Design/Const	2023	2023*	0	100	0	0	0	0	0	0	0	900
SOS-22	3rd Radial Well Design/Const	2030	2032	0	0	0	5	9	0	0	0	0	1190
SOS-23	4th Radial Well Const	2034	2036	0	0	0	5	9	0	0	0	0	1190
SOS-24	5th Radial Well Design/Const	2035	2037	0	0	0	5	9	0	0	0	0	1190

Prioritized 20-Year CIP & Buildout Road Map



Future Tasks: Prioritized 20-Year CIP and Buildout Roadmap



IWMP2 Project Schedule

	Workshop/Milestone	TIP	
Project Initiation	IWMP2 Kick-off	Jan 10, 2022	✓
	Scenarios & Climate Change	Jan 12, 2022	✓
	Risk Evaluation & LOS Goals Methodology	Jan 24, 2022	✓
	Alternatives Screening & Prioritization Criteria	Mid Feb 2022	✓

	Workshop/Milestone	Water Resources	Source of Supply	Treatment	Transmission/Distribution	
Technical Analysis	Kick-off/Method Refinement	Late Feb 2022	Late Feb 2022	Early Mar 2022	Mid Mar 2022	✓
	LOS Goals	Early Mar 2022	Early Mar 2022	Mid Mar 2022	Mid Mar 2022	✓
	Risks Identification	Early Apr 2022	Early Apr 2022	Late Apr 2022	Late Apr 2022	✓
	System Deficiencies/Alternatives Identification	Early Jun 2022	Early Jun 2022	Early Jul 2022	Early Jul 2022	✓
	Alternatives Findings	Late Sep 2022	Late Sep 2022	Late Nov 2022	Late Oct 2022	✓
	Selected Projects and Triggers	Late Oct 2022	Late Oct 2022	Mid-Dec 2022	Late Nov 2022	✓

	Workshop/Milestone	CIP	
Living Plan	Kick-off	March 2022	✓
	Prototype CIP Prioritization Tool	July 2022	✓
	20-Year CIP & Buildout Roadmap	March 2023	
	Executive Summary & Final Report	June 2023	



Questions?





To: Citizens’ Water Advisory Committee

Through: Marshall Brown, General Manager, Aurora Water

From: Alex Davis, Deputy Director for Water Resources, Aurora Water

Date: February 14, 2023

Subject: WISE Partnership overview and update

Background

The WISE (Water Infrastructure and Supply Efficiency) Partnership is a regional water supply project that combines available water supplies and system capacities among Denver Water, Aurora Water and the South Metro WISE Authority, which consists of 10 water providers serving Douglas and Arapahoe counties. Participating South Metro communities include Highlands Ranch, Parker and Castle Rock, among others. In 2013, Aurora Water, Denver Water and the South Metro WISE Authority signed an IGA to provide a permanent, but interruptible, renewable water supply for SMWSA Members.

This presentation will provide an overview on the history of the WISE Partnership and update the committee on the current partnership’s current status.

Action required

No action required. Informational item only.

The WISE Partnership

*Citizens Water Advisory Committee
February 14, 2023*



What is "WISE"?

Water,
Infrastructure
and Supply
Efficiency

An innovative, groundbreaking regional water use partnership

Instigated by

The problem of Douglas County's ongoing dependence on unsustainable, nonrenewable groundwater supply.

Solved by

A recognition of synergies

- ◇ Aurora's groundbreaking Prairie Waters Project infrastructure & its unused capacity
- ◇ Aurora's unused and accessible reusable flows
- ◇ Denver unused inaccessible reusable flows

Which allowed

11 Douglas County entities (members of the South Metro Water Supply Authority (SMWSA) to buy renewable water to help reduce their reliance on nonrenewable groundwater



It involved numerous agreements, studies and took years to develop

1999 & 2007 ~ Denver Water and SMWSA agreed to investigate potential future cooperative water operations, water efficiency, and delivery of water to SMWSA.

2006 ~ Denver Water and Aurora agreed to explore opportunities to share water resources and water facilities.

2008 & 2009 ~ Denver Water, Aurora, and SMWSA agreed to study water resources, including infrastructure, that might be available for a joint water supply project.

These investigations resulted in the idea of regional water resource operations that could benefit all three parties by identifying periodic available capacity in Aurora's existing Prairie Waters Project (PWP) that could be used by SMWSA and Denver and periodic available renewable water supplies for SMWSA.

2012 ~ Denver Water and Aurora agreed to certain operations under the WISE Project.



It took numerous agreements...

2012 ~ Denver Water agrees to the Colorado River Cooperative Agreement with numerous West Slope water users allowing Denver to use its reusable return flows which originate on the West Slope in WISE under specific terms and conditions.

2013 ~ SMWSA and its Members defined the Members' participation in WISE through the SM WISE IGA.

2013 ~ Aurora, Denver Water and SMWSA agreed to the WISE Partnership Water Delivery Agreement which, as the backbone of the regional water supply project;

- Reduces the reliance by SMWSA Members on nonrenewable groundwater and
- Creates a permanent, but interruptible, renewable water supply for SMWSA Members

- ❖ By utilizing the periodic unused or underused capacity in Aurora's PWP,
- ❖ Providing for the construction or acquisition of additional infrastructure, and
- ❖ Allowing the beneficial use by the SMWSA of Aurora and Denver water supplies .



What is WISE? Where is WISE?

Uses \$800 million in existing infrastructure

Up to 100,000 acre-feet of water delivery

Renewable supply for the SMWSA

Drought & emergency supplies for Denver and Aurora

Total population affected = 2 million



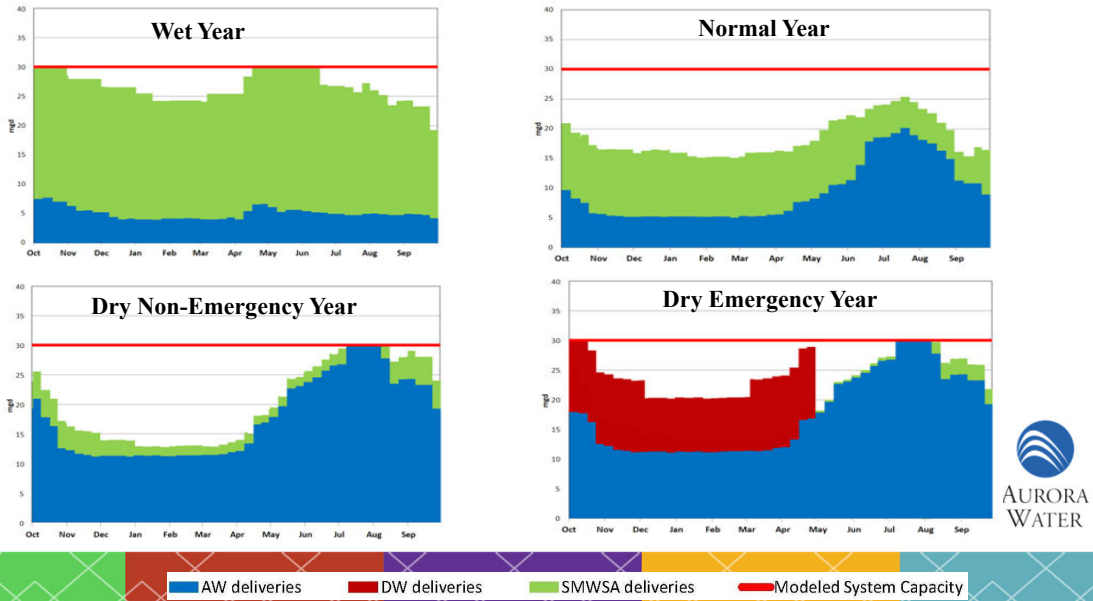
WISE Deliveries

Aurora and Denver Deliveries

- Fully reusable water for diversion, conveyance, and treatment by Aurora
- South Platte Train and Mountain Train, through Prairie Waters
- Fully treated water delivered from the Binney Plant to a Master Meter
- Interruptible supplies
- Rates determined based upon cost-of-service calculation
- SMWA distributes water to its member agencies



PWP Potential Operations



WISE Partnership Benefits



Efficient utilization of the Prairie Waters Project (PWP) system

- Offset PWP costs
- Share in the cost of future expansion and water rights purchases

Denver Water

Gain access to its unused return flows

Provide an emergency supply to its system

South Metro

Provides a sustainable supply

Reduce South Metro area reliance on groundwater



WISE Subscriptions

South Metro Members	Subscription (AF)
Town of Castle Rock	1,000
Dominion Water & Sanitation District	1,325
Stonegate Village Metropolitan District	1,000*
Cottonwood Water & Sanitation District	400
Pinery Water and Wastewater District	500
Centennial Water & Sanitation District	1,000
Rangeview Metropolitan District	500
Parker Water & Sanitation District	1,200
Meridian Metropolitan District	300
Inverness Water & Sanitation District	500
Douglas County	2,275
Total	10,000



Where Are We Now

Started deliveries in August of 2017

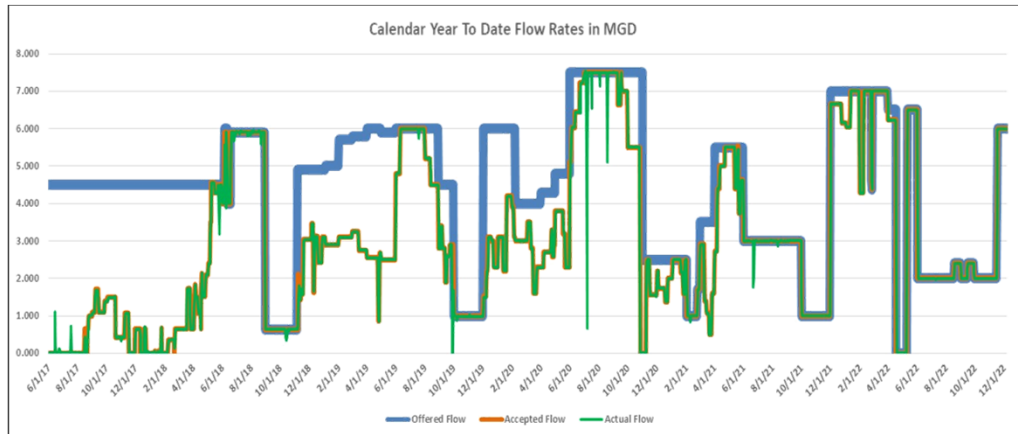
Total Water Offered to WISE for Delivery Year June 1 - May 31							
Year	2017	2018	2019	2020	2021	2022	Total
MGD	1,643	1,686	1,642	1,855	1,516	717	9,058
Acre Feet	5,041	5,175	5,039	5,691	4,652	2,200	27,797
Total Actual Deliveries to WISE for Delivery Year June 1 - May 31							
Year	2017	2018	2019	2020	2021	2022	Total
MGD	306	1,110	1,158	1,537	1,459	716	6,285
Acre Feet	939	3,405	3,552	4,716	4,476	2,198	19,287
WISE Deliveries to Dominion at Rampart for Delivery Year June 1 - May 31							
Acre Feet	47	152	172	348	394	79	1,192

Once all of the infrastructure is in place, the ‘block’ will begin- averaging
7,225 – 10,000 acre-feet per year.

Commitment is 100,000 acre-feet every 10 years.
Interruptible and can range from 0 to 25,000 acre-feet per year.



WISE Water Deliveries



What's Next

Delivery of WISE water is being shifted to allow the WISE partners to get infrastructure in place

- Temporary interconnect in use
- Permanent connection almost completed
 - Excel
 - SCADA
- DIA pipeline connection by 2025
 - SMWSA considering a different delivery option
- MORE Agreements!
 - Letter agreements over past 5 years
 - Amended Water Delivery Agreement between Denver Water, South Metro, and Aurora underway





Thank you.

Questions?

