

CITIZENS' WATER ADVISORY COMMITTEE (CWAC) AGENDA
 February 11, 2020, 6:00 p.m.
 Lowry Room, 3rd Floor, Aurora Municipal Center

Members: Janet Marlow - Chair, Tom Coker – Vice-Chair, Angie Binder, Jay Campbell, Don Langley, Tom
 Tobiassen, Susan Turnquist

- | | | |
|---|-----------------|-----------|
| 1. Approval of Minutes – January 15, 2020 | Chair | 6:00 p.m. |
| 2. Introductions/Public Invited to be Heard | Chair | 6:05 p.m. |
| 3. Recognize Outgoing Members | Chair | 6:10 p.m. |
| • Tom Tobiassen and Susan Turnquist | | |
| 4. New/Old Business | Chair | 6:20 p.m. |
| 5. Communications Update | Greg Baker | 6:25 p.m. |
| • High Line Canal Cleanup – Mar. 21 | | |
| • Youth Water Festival – May 14 | | |
| • Water Tour – Aug. 18-19 | | |
| 6. Quarterly Financial Report – Preliminary Fourth Quarter –
December 2018 | Jo Ann Giddings | 6:30 p.m. |
| 7. Box Elder Feasibility Study | Alicia DuPree | 6:40 p.m. |
| 8. Review Follow-Up Questions Generated at this Meeting | Chair | 7:00 p.m. |
| 9. Confirm Next Meetings | Chair | 7:05 p.m. |
| • Orientation – Tuesday & Wednesday, March 10 & 11 | | |
| • Formal meeting – Tuesday April 14 | | |
| 10. Adjourn | Chair | 7:10 p.m. |

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CITIZENS' WATER ADVISORY COMMITTEE (CWAC) MINUTES
January 15, 2020

Members Present: Don Langley (Chair), Janet Marlow (Vice Chair), Angie Binder, Jay Campbell, Tom Coker

Excused Absence: Susan Turnquist, Tom Tobiassen

Staff Present: Marshall Brown, Sarah Young, Greg Baker, Rory Franklin, Sandy Moore, Dean Bedford

Visitors Present: None

The meeting was called to order at 6:02 p.m.

1. ELECTIONS – 2020 CHAIR AND VICE-CHAIR

Nomination and approved Janet Marlow as Chair

Nomination and approved Tom Coker as Vice Chair

2. APPROVAL OF MINUTES – November 12, 2019

A motion was made to approve the minutes of the November 12, 2019 meeting by J Campbell. Minutes were seconded and approved.

3. AGENDA TOPICS FROM THE COMMITTEE

There were no topics from the committee.

4. INTRODUCTIONS/PUBLIC INVITED TO BE HEARD

There were no topics from the committee.

5. NEW/OLD BUSINESS

There was no new or old business.

6. COMMUNICATIONS UPDATE

- G Baker gave an update on the online payment system cyber incident announced on December 30, 2019. To date, Two percent of affected customers had enrolled for credit monitoring.
 - G Baker reminded the committee that the new online payment system would be fully implemented effective January 24, 2020.
 - G Baker noted that there would be a minimum of four new committee members effective February 15. There will be a two-day orientation on March 10 & 11, 2020 in lieu of the regular meeting.
-

7. RIPPLE EFFECTS PRESENTATION

Dean Bedford, Principle Engineer, explained the interconnections between Aurora's raw water system maintenance and the operational needs of water treatment. Aurora Water started upgrading the Aurora Reservoir Pump Station (ARPS) in 2018. The purpose of the project is to increase the flexibility, reliability and capacity of the ARPS. Construction continued through the whole of 2019. During this period an issue was identified with the condition of Rampart Delivery System (RDS) pipeline, which passes though the Denver Tech Center (DTC) and supplies Aurora with its mountain water. This presentation illustrated the flexibility that allowed the ARPS project to stay on track even when effected by a wildcard like the repair of the RDS.

D Langley asked what type of backup generators are in use at the pump station and how long can they operate. D Bedford responded that the current standard is for diesel generators. J Campbell inquired on how many feet of pipe had been replaced in the DTC area. D Bedford replied that it was 450 ft.

8. DISCUSS CWAC QUARTERLY REPORT TO WPC IN JANUARY

D Langley will distribute a draft WPC Quarterly Report to the committee for review. The WPC meeting is January 22 at 9 a.m.

9. 2020 VOLUNTEER AGREEMENTS

G Baker distributed 2020 Volunteer Agreements for signature.

10. REVIEW / VERIFICATION OF 2019 ATTENDANCE RECORDS

The committee members reviewed the 2019 Attendance Records for accuracy. T Coker verified that he did a teleconference in for the meeting in June 2019.

11. REVIEW FOLLOW-UP QUESTIONS AT THIS MEETING

There were no questions for follow up generated at this meeting.

10. CONFIRM NEXT MEETING – TUESDAY, FEBRUARY 11, 2020

The next regular meeting will be held Tuesday, February 11, 2020, in the Lowry Room.

11. ADJOURN

The meeting was adjourned at 7:15 p.m.

Janet Marlow, Chair
Citizens' Water Advisory Committee

Submitted by: Sandy Moore
Administrative Specialist, Aurora Water

ADOPTED: _____





Aurora Water



City of Aurora

Water Administration
15151 E. Alameda Parkway, Ste. 3600
Aurora, Colorado 80012
303.739.7370

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To: Citizens' Water Advisory Committee
Through: Marshall P. Brown, Director, Aurora Water 
From: JoAnn Giddings, Deputy Director Water Financial Administration 
Date: January 19, 2020

Subject: Quarterly Financial Report – Fourth Quarter December 2019

Highlights

Combined operating revenues (Water, Sewer, and Stormwater): Through the fourth quarter were 4.2% higher than the spending plan and 2.8% higher than 2018. The increase from 2018 was anticipated due to the rate increases implemented in 2019 (3% average increase in water, 4.0 percent in sewer). WISE revenues totaled \$5.5 million through the fourth quarter of 2019, which were higher than the planned \$4.6 million total budget for 2019.

Combined Development revenues (Water, Sewer, and Stormwater): Through the fourth quarter, revenues were 8% lower than plan and 21% lower than the revenue collected over the year 2018. Although the number of new connections in 2019 are lower compared to last year's (which was historically high), growth is still healthy compared to historical averages.

Operating expenses (Water, Sewer, and Stormwater combined), excluding, debt service, ended the year under budget by \$10.9M or 8.5 percent. Significant underspending in Supplies & Other Services are mainly due to lower than anticipated expenditures in Professional & Technical Services. In addition, significant savings were largely driven by the underspending of Repair & Maintenance projects, Vehicle/Equipment Replacement purchases, and Personal Services (Vacancy Savings).

Water, Sewer, and Stormwater as of End of Fourth Quarter					
Item	YTD Plan	2019	2018	Q4 2019 vs YTD Plan	Year Over Year Difference
Operating Revenue	\$192,131,853	\$200,517,853	\$194,499,078	\$8,386,000	\$6,018,775
Development Revenue	49,650,095	45,693,763	58,395,321	(3,956,332)	(12,701,558)
Bond Proceeds and Restricted Assets	0	3,000,000	18,374,750	3,000,000	(15,374,750)
Interest Income	1,845,272	5,951,967	4,958,846	4,106,695	993,121
Total Revenue	\$243,627,220	\$255,163,583	\$276,227,995	\$11,536,363	(\$21,064,412)
Operating Expense	(\$127,433,678)	(\$116,542,763)	(\$132,651,220)	(\$10,890,915)	(\$16,108,457)
Capital Projects	(177,565,032)	(98,662,405)	(103,869,328)	(78,902,627)	(5,206,923)
Debt Service	(67,228,986)	(67,261,793)	(22,303,894)	32,807	44,957,899
Total Expense	(\$372,227,696)	(\$282,466,961)	(\$258,824,442)	(\$89,760,735)	\$23,642,519

Operating expenses, excluding, debt service, were lower than 2018 (same period) by \$16.1 million or 12.1 percent due to a \$16 million transfer to fund the Southeast Area Maintenance Facility. Debt

service expenses were higher than 2018 (same period) by \$45 million due to the pre-payment of 2016 bonds.

Statements showing the budget to actual results and the year to year comparison can be found at the end of this memo on pages 8 and 9. Capital details can be found on pages 5 and 6.

Cash Balances

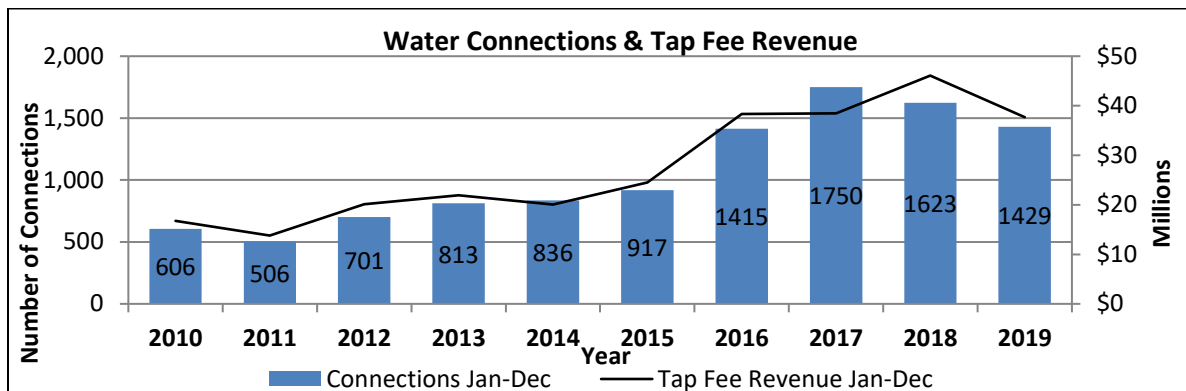
Total cash in the Water Fund increased in the fourth quarter after a \$45 million prepayment of debt in the third quarter of 2019.

Total cash in the Wastewater Fund increased in the fourth quarter. Reserves detail and cash balances are shown in the table below.

	Water	Wastewater
Total Cash	\$192.8M	\$82.4M
Reserve & Commitment Type		
Debt Service Policy Reserve (next fiscal year debt payment)	\$21.4M	\$4.1M
Operating Reserve (25% of adopted operating budget excl debt service)	\$16.1M	\$14.3M
Water Resources Reserve (\$20 Million)	\$20.0M	
Capital Reserve (0.5% of Net Fixed assets)	\$8.4M	\$2.8M
Capital and Operating Encumbrances	\$47.5M	\$16.4M
TOD Incentive Program	\$2.2M	
Pass-Thru Commitments (METRO and CC Basin)		\$6.0M
WISE Liability to Denver Water	\$5.0M	
Loan Proceeds for SEAM		\$15.7M
Total Reserves and Commiments	\$120.6M	\$59.3M
Cash after Reserves & Commitments	\$72.2M	\$23.0M

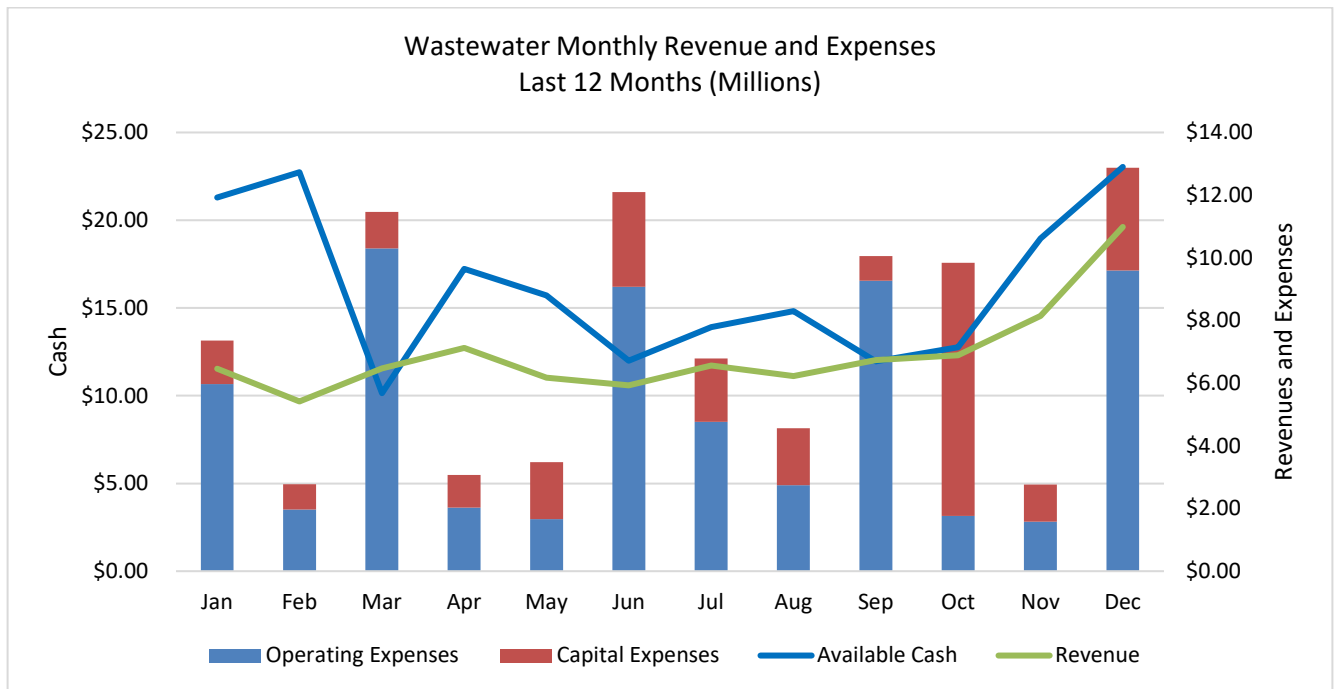
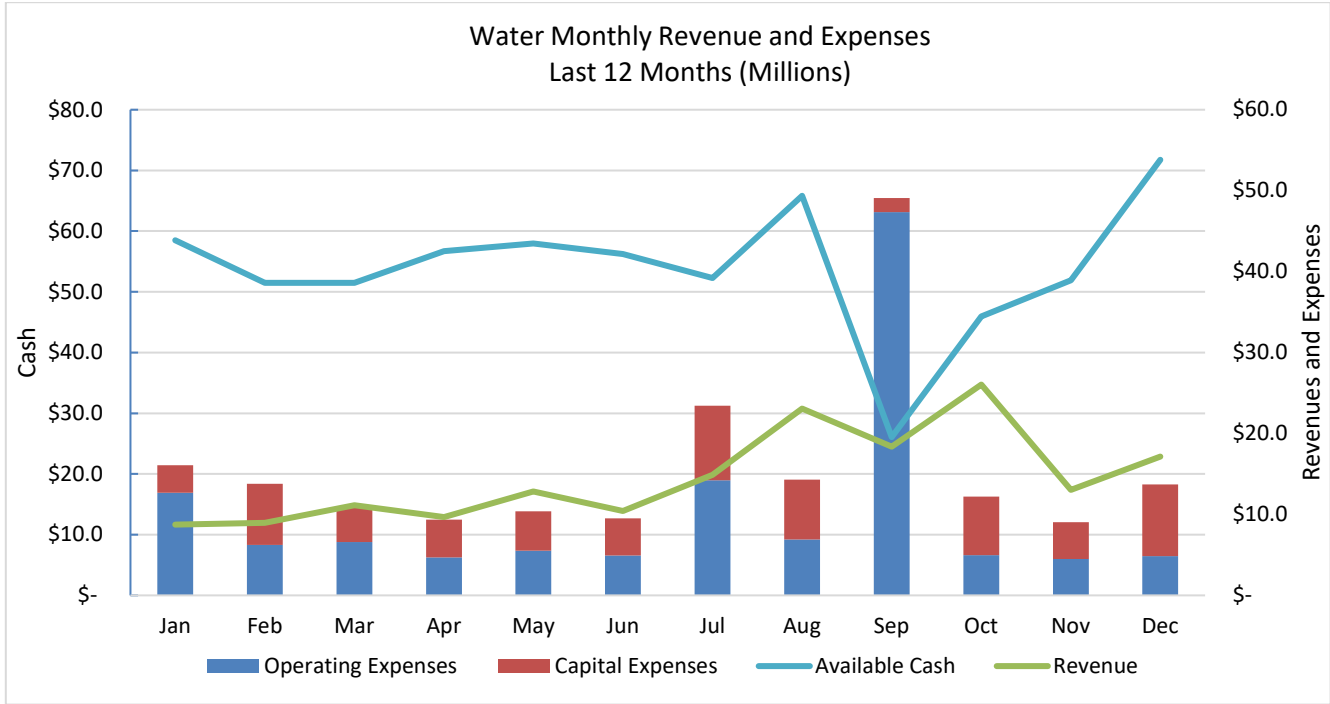
Water Connections

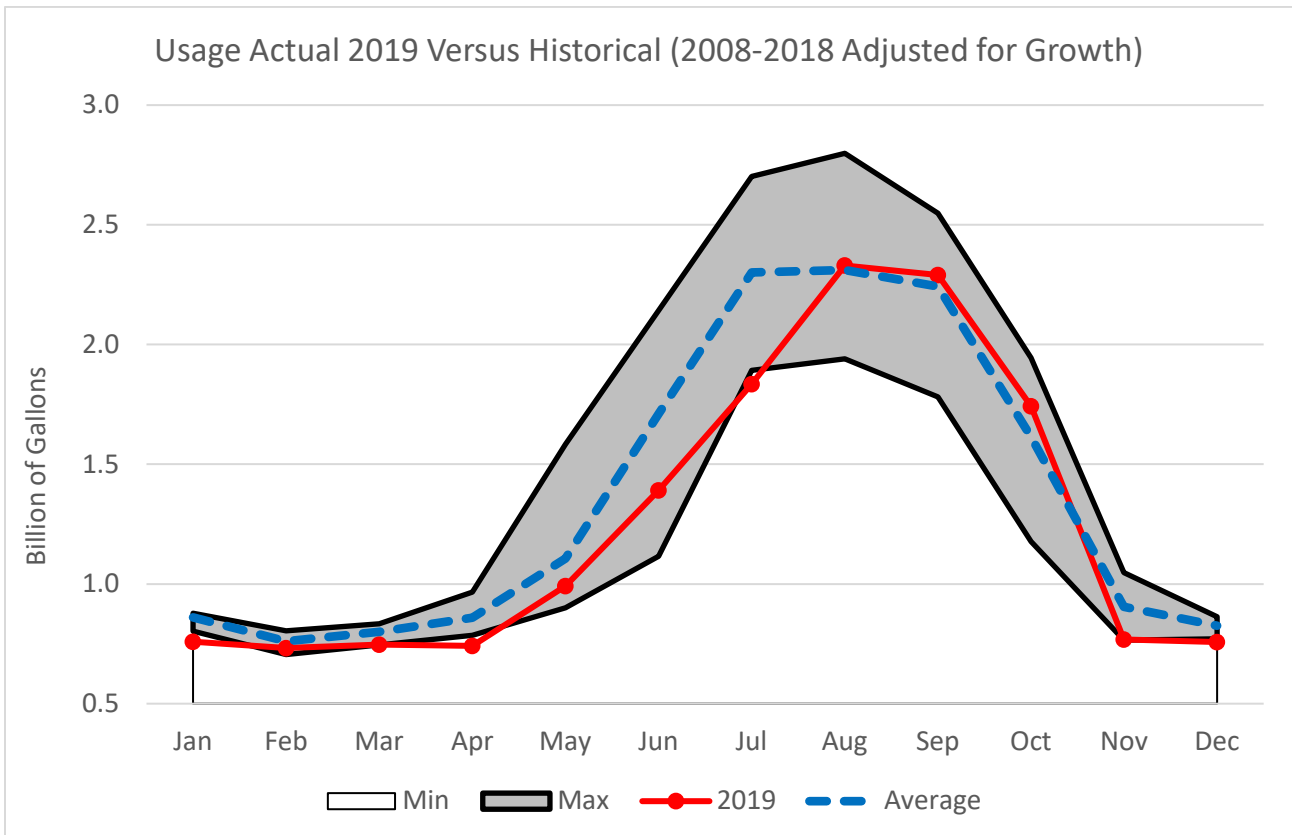
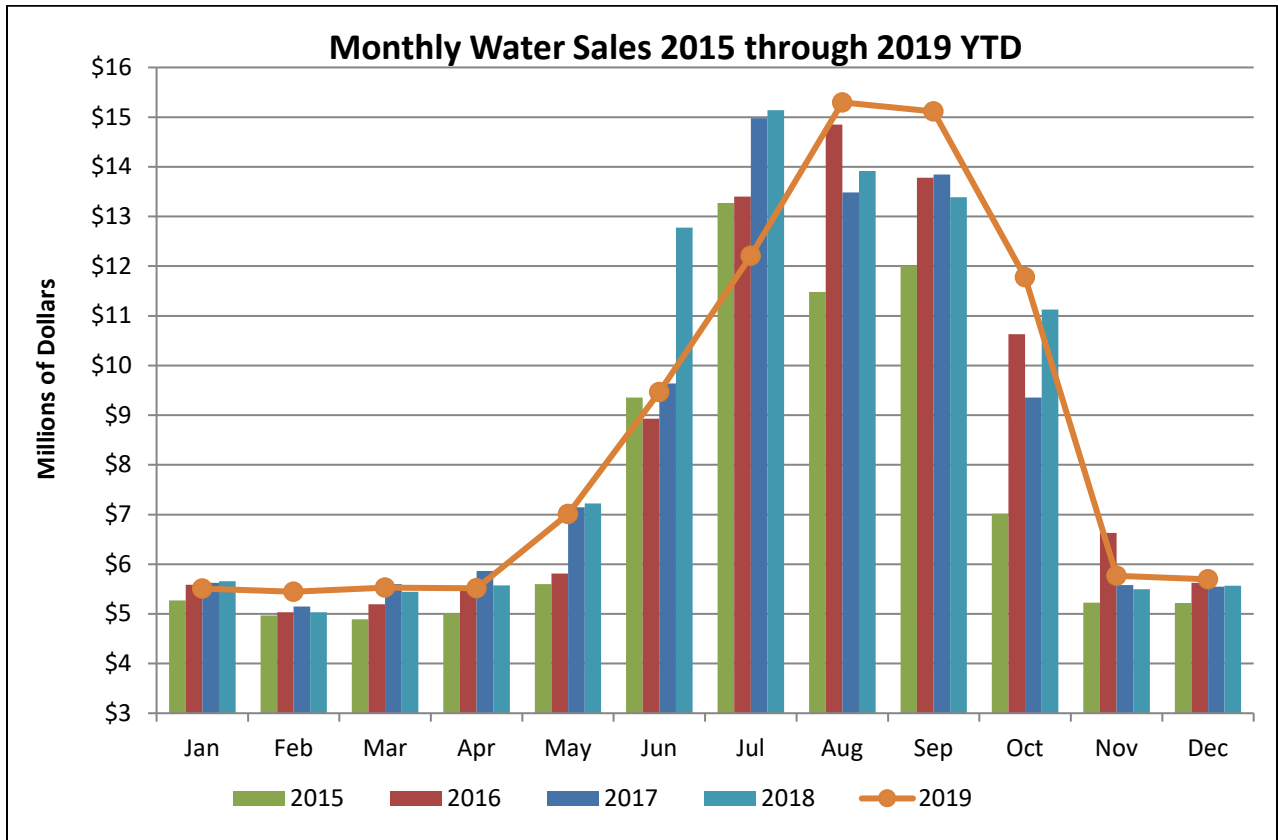
Total number of water connections (single family, commercial, irrigation and multifamily) and the corresponding Water Connection Fee revenue for 2009-2019 are shown on the following graph. The number of water connections in 2019 decreased by 194 connections or 12 percent compared to 2018. Total water connection fee revenues in 2019 were \$8.4 million (18 percent) lower than 2018. The overall growth due to development is still above the ten year average.



2019 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 12/30/19

Fund/Program	Working Budget¹	YTD Spending Plan	YTD Actual Spend	Encumbered²
Water Fund				
Operations & General Mgmt	31,306,127	5,606,643	1,188,132	4,035,834
Pumping	16,239,510	6,650,609	10,391,340	5,045,009
SOS Other	16,126,088	12,435,762	6,307,052	1,612,678
SOS Storage	31,585,059	21,708,990	7,304,067	3,745,506
SOS Water	31,428,193	18,635,268	17,195,592	4,486,592
Trans & Distrib	23,245,401	17,154,350	3,906,848	7,560,134
Treatment	43,475,275	36,033,501	25,566,102	18,384,009
Water Fund Total	193,405,653	118,225,125	71,859,134	44,869,761
Wastewater Fund				
Sewer CIP				
Collection	22,945,968	19,454,542	9,388,591	8,584,747
Operations & General Mgmt	16,829,189	5,799,726	521,866	868,305
Sewer CIP Total	39,775,157	25,254,267	9,910,457	9,453,053
Stormwater CIP				
Storm Water	55,810,348	33,498,042	16,809,214	11,631,116
Operations & General Mgmt	5,376,716	587,598	83,600	15,282
Stormwater Total	61,187,064	34,085,640	16,892,814	11,646,398
Wastewater Fund Total	100,962,221	59,339,907	26,803,270	21,099,451
Aurora Water CIP Total	294,367,874	177,565,032	98,662,404	65,969,212

¹Working budget includes adopted budget, carry forward, transfers, lapsed appropriation and supplementals.

²Encumbered amounts are PO contracts that may carry over multiple years.

Total capital spending in the Water Fund through the fourth quarter was \$71.8 million, which was \$46.4 million less than the anticipated year-to-date spending plan of \$118.2 million. This is due to timing differences of anticipated spending and estimated opportunistic purchases. The Havana Waterlines project (Transmission & Distribution) was pushed into 2020 due to the determination that there would be too great of a traffic impact working on this project at the same time as the Fitzsimons Drainage

Improvement project. Three large projects in New T&D Water Mains planned for 2019 encountered right of way issues which allowed for the encumbrance of one of the projects and pushed the other two out into the first and second quarters of 2020. In Treatment, projects for all three treatment plants are currently underway and expenditures plus encumbrances are close to budget. Expenditures will continue to increase in the first quarter of 2020. Many of the projects in the Water Fund are encumbered and spending is expected to continue to increase. Current Water Fund encumbrances are \$44.9 million.

Through the fourth quarter, total capital spending in the Wastewater Fund was \$26.8 million, which equates to \$32.5 million less than the anticipated spending plan of \$59.3 million. There are also timing differences of anticipated spending in the Wastewater Fund. In the Collections program, 1st Creek Interceptor is currently underway, however most of the expenditures will be incurred in the first two quarters of 2020. In the Stormwater Program, Work Package 4 of the Fitzsimons Drainage Improvement project was supposed to begin in September, but during the outreach process, it was recommended by Life Safety that Work Package 1 and Work Package 4 not be worked on concurrently due to traffic concerns. Therefore, Work Package 4 was moved to the first quarter of 2020. The Peninsula Townhomes project encountered delays during the application review having to do with the resubmittal period and was also pushed into the first quarter of 2020.

Capital Project of the Quarter

2018/2019 Water System Improvement Project

This water system improvement project is part of an annual program to improve the City of Aurora's water pipeline system. Aurora Water Engineering compiles historical system water break issues as documented by our Water T&D Operations Team.

Based on historical information, locations are evaluated and narrowed down to a focused area for preparation to design and construct. This project entailed various streets northwest of Havana St. and 1st Ave.

The 2018/2019 location was high-lighted due to multiple water breaks within this geographic area. Water break issues can be related to expansive soils, corrosive soils, and in this case petroleum contaminated soils which when ground water is introduced will surround pipe gaskets and soften them until failure. This area was also targeted because of redevelopment opportunities at the old "Fan Fare" site where water pressures were low at the edge of a pressure zone. By design we were able to move higher pressures to the targeted area to provide for the service requirements that were needed.



2019 Financial Comparison

The following tables present a comparison of revenues and expenses through the fourth quarter for years 2019 and 2018.

Summaries (Water, Sewer, and Stormwater Comparison to Budget)

WATER as of 12/31/2019				
Revenues & Expenses	Working Budget*	YTD Plan	YTD Actual (Accrual Basis)	% Actual to Plan
Operating Revenue	\$121,135,562	\$121,135,562	\$129,445,255	7%
Development Revenue	41,145,945	41,145,945	38,443,648	-7%
Bond Proceeds and Restricted Assets	-	-	-	0%
Interest Income	1,138,595	1,138,595	4,258,214	274%
Total Revenue	\$163,420,102	\$163,420,102	\$172,147,117	5%
Operating Expense	(\$69,540,850)	(\$69,540,850)	(\$62,503,910)	-10%
Capital Projects	(193,405,653)	(118,225,125)	(71,859,134)	-39%
Debt Service	(64,117,191)	(64,117,191)	(64,068,538)	0%
Total Expense	(\$327,063,694)	(\$251,883,166)	(\$198,431,582)	-21%
Net Revenue & Expense	(\$163,643,592)	(\$88,463,064)	(\$26,284,465)	
SEWER as of 12/31/2019				
Operating Revenue	\$49,068,843	\$49,068,843	\$47,847,585	-2%
Development Revenue	7,004,150	7,004,150	6,303,994	-10%
Bond Proceeds and Restricted Assets	0	0	0	0%
Interest Income	493,997	493,997	1,034,275	109%
Total Revenue	\$56,566,990	\$56,566,990	\$55,185,854	-2%
Operating Expense	(\$44,615,623)	(\$44,615,623)	(\$43,548,051)	-2%
Capital Projects	(39,775,157)	(25,254,267)	(9,910,457)	-61%
Debt Service	(2,271,610)	(2,271,610)	(2,284,357)	1%
Total Expense	(\$86,662,390)	(\$72,141,500)	(\$55,742,865)	-23%
Net Revenue & Expense	(\$30,095,400)	(\$15,574,510)	(\$557,011)	
STORMWATER as of 12/31/2019				
Operating Revenue	\$21,927,448	\$21,927,448	\$23,225,013	6%
Development Revenue	1,500,000	1,500,000	946,121	-37%
Bond Proceeds and Restricted Assets	0	0	3,000,000	0%
Interest Income	212,680	212,680	659,478	210%
Total Revenue	\$23,640,128	\$23,640,128	\$27,830,612	18%
Operating Expense	(\$13,277,205)	(\$13,277,205)	(\$10,490,802)	-21%
Capital Projects	(61,187,064)	(34,085,640)	(16,892,814)	-50%
Debt Service	(840,185)	(840,185)	(908,898)	8%
Total Expense	(\$75,304,454)	(\$48,203,030)	(\$28,292,514)	-41%
Net Revenue & Expense	(\$51,664,326)	(\$24,562,902)	(\$461,902)	

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

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

WATER Fourth Quarter Comparison			
Revenues & Expenses	2019	2018	% Change
Operating Revenue	\$129,445,255	\$126,424,012	2%
Development Revenue	38,443,648	46,359,463	-17%
Bond Proceeds and Restricted Assets	-	374,750	-100%
Interest Income	4,258,214	3,865,938	10%
Total Revenue	\$172,147,117	\$177,024,163	-3%
Operating Expense	(\$62,503,910)	(\$81,363,571)	-23%
Capital Projects	(71,859,134)	(75,808,410)	-5%
Debt Service	(64,068,538)	(19,122,177)	235%
Total Expense	(\$198,431,582)	(\$176,294,158)	13%
Net Revenue & Expense	(\$26,284,465)	\$730,005	
SEWER Fourth Quarter Comparison			
Operating Revenue	\$47,847,585	\$46,139,553	3.7%
Development Revenue	6,303,994	9,056,045	-30%
Bond Proceeds and Restricted Assets	-	10,000,000	-100%
Interest Income	1,034,275	722,415	43%
Total Revenue	\$55,185,854	\$65,918,013	-16%
Operating Expense	(\$43,548,051)	(\$41,545,245)	5%
Capital Projects	(9,910,457)	(17,620,830)	-44%
Debt Service	(2,284,357)	(2,273,716)	0%
Total Expense	(\$55,742,865)	(\$61,439,791)	-9%
Net Revenue & Expense	(\$557,011)	\$4,478,222	
STORMWATER Fourth Quarter Comparison			
Operating Revenue	\$23,225,013	\$21,935,513	6%
Development Revenue	946,121	2,979,813	-68%
Bond Proceeds and Restricted Assets	3,000,000	8,000,000	-63%
Interest Income	659,478	370,493	78%
Total Revenue	\$27,830,612	\$33,285,819	-16%
Operating Expense	(\$10,490,802)	(\$9,742,404)	8%
Capital Projects	(16,892,814)	(10,440,088)	62%
Debt Service	(908,898)	(908,001)	0%
Total Expense	(\$28,292,514)	(\$21,090,493)	34%
Net Revenue & Expense	(\$461,902)	\$12,195,326	

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MEMORANDUM



To: Citizens' Water Advisory Committee

Through: Marshall P. Brown, Director, Aurora Water *MPB*
Sarah Young, Deputy Director, Planning & Engineering, Aurora Water *SY*

From: Alicia DuPree, Senior Engineer, Aurora Water *ADP*

Date: February 11, 2020

Subject: Box Elder Feasibility Study

Purpose:

Aurora Water and Metro Wastewater Reclamation District (MWRD) are partnering on the Box Elder Feasibility Study to evaluate treatment and infrastructure options to provide water and wastewater services in the Box Elder Basin. The study includes the development of water supply demands, anticipated timing of those demands, and resulting wastewater loadings. Treatment and infrastructure alternatives, including potential reuse facilities, will be identified and evaluated. A cost/benefit analysis will be used to determine which treatment and infrastructure options provide the highest value solutions for the Box Elder Basin.

Question:

Informational item only. No action required.

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Box Elder Feasibility Study

Alicia DuPree, Senior Engineer

February 11th, 2020

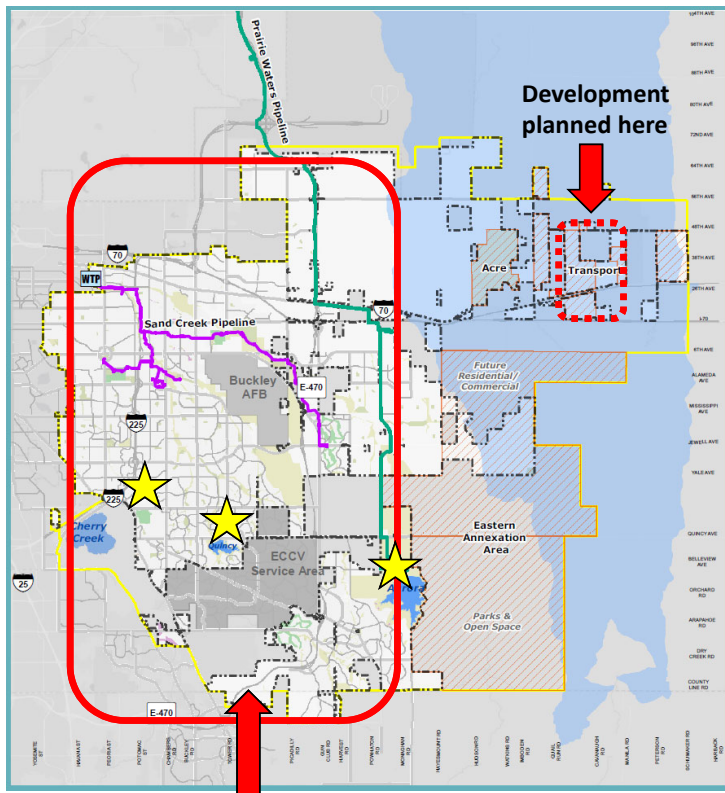


Outline

- Box Elder Basin Overview
- Background
 - Integrated Water Master Plan
 - Wastewater Master Plan
 - Sand Creek/Second Creek Regional Master Plan
- Feasibility Study
 - Demands and Loadings
 - Future Water Supply Options
 - Reuse Options
 - Alternative Considerations
 - Evaluation



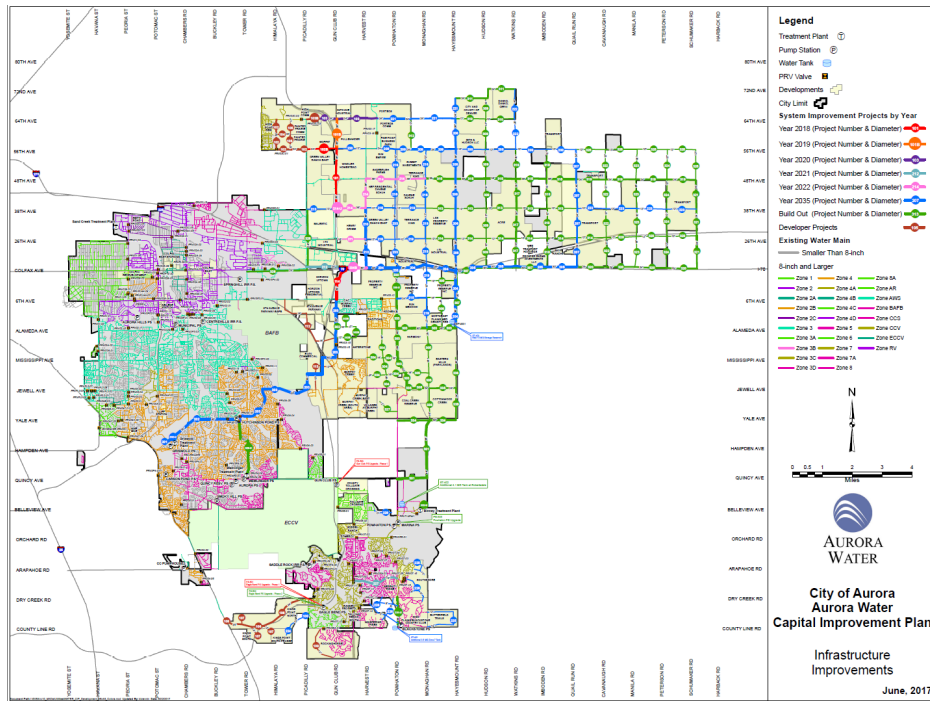
Box Elder Basin Overview



- Box Elder Basin Area:
 - City Limits: 29 sq mi
 - PAB: 72 sq mi
- Northeast Part of Aurora
- Primarily Undeveloped
- Industrial Hub



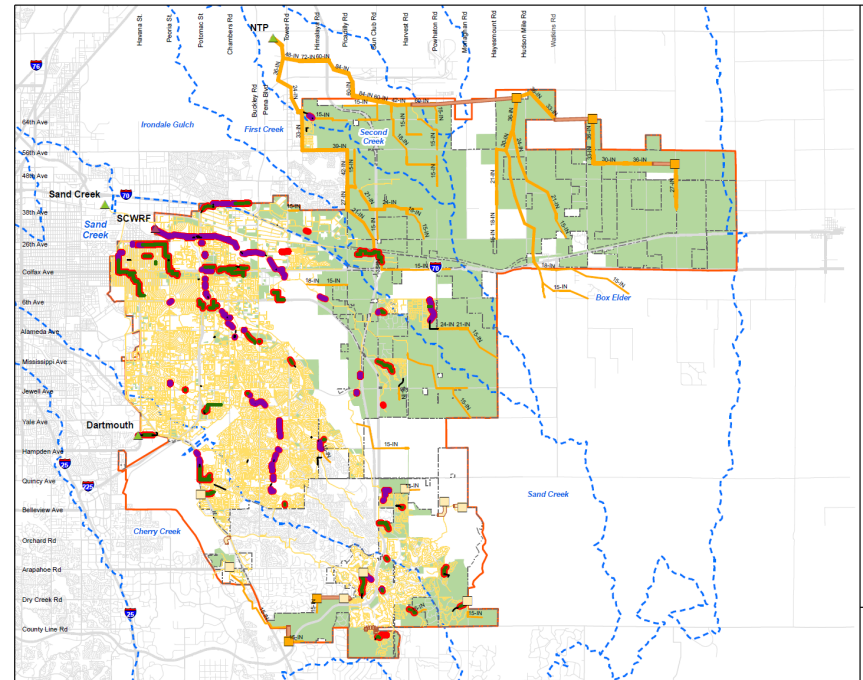
Integrated Water Master Plan



- IWMP
 - Completed in 2016
 - Looked at 3 major water systems concurrently:
 - Water Resources
 - Treatment
 - Transmission & Distribution
- Transmission & Distribution
 - Long Term
 - Focus on future growth in the eastern and northeastern side of the City
 - Backbone Projects
 - Accommodate future growth and existing treatment capacity

Wastewater Master Plan

- Completed in 2017
- Evaluated Wastewater System
- Developed Loadings
- Identified Capital Improvement Projects
- Box Elder Basin
 - 3 Lift Stations

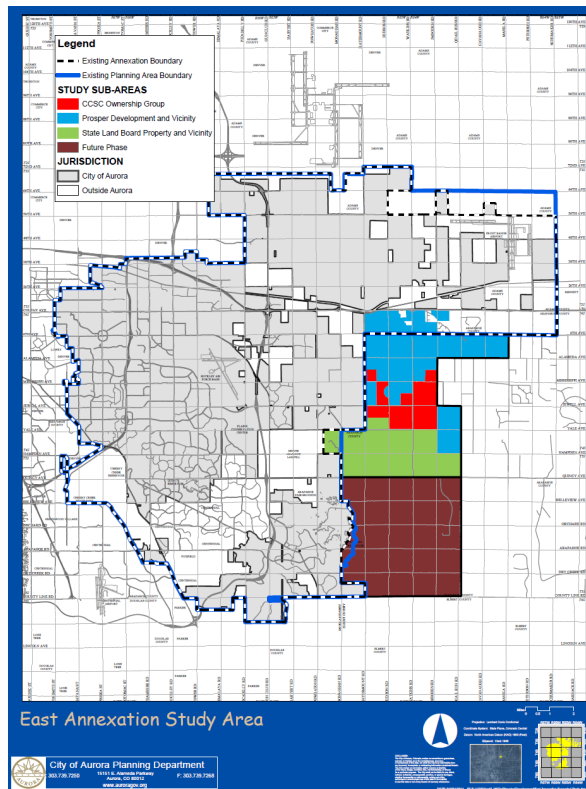


Sand Creek/Second Creek Regional Master Plan

- Metro Wastewater Reclamation District (MWRD) Regional Plan
 - Second Creek Interceptor (SDI)
 - Northern Treatment Plant (NTP)
- Box Elder Basin
 - Considered during Evaluation
 - Regional Facility Preferred:
 - Timing of Growth
 - Long Term O&M
 - 3 Lift Stations Required
 - Phasing Infrastructure
 - Costs to Upsize Downstream Infrastructure



Planning Area Boundary

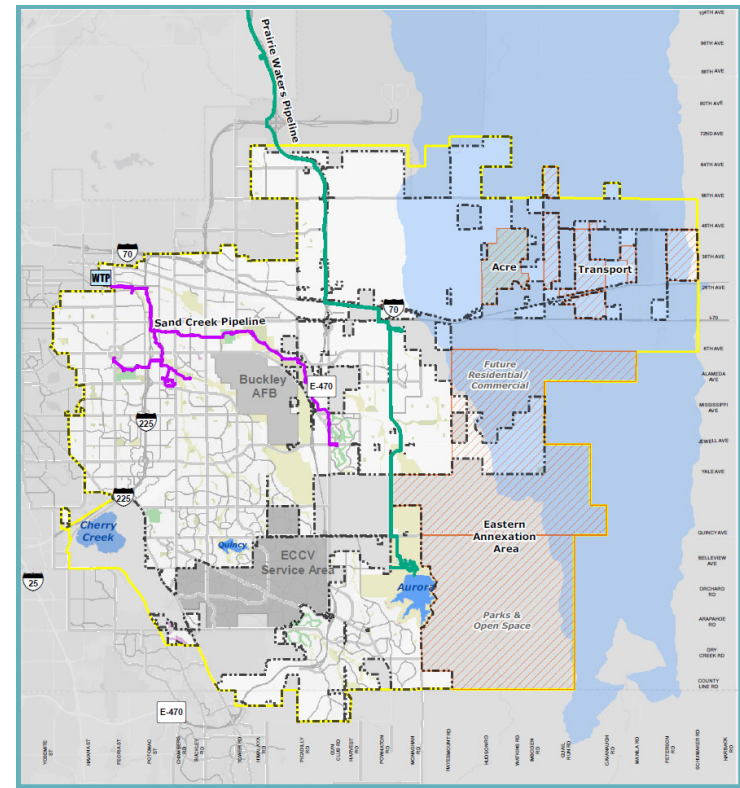


- In 2017 PAB expanded
- Eastern Annexation Area
- Primarily Residential
- Potential to Annex into the City
- Plan to provide water and wastewater service

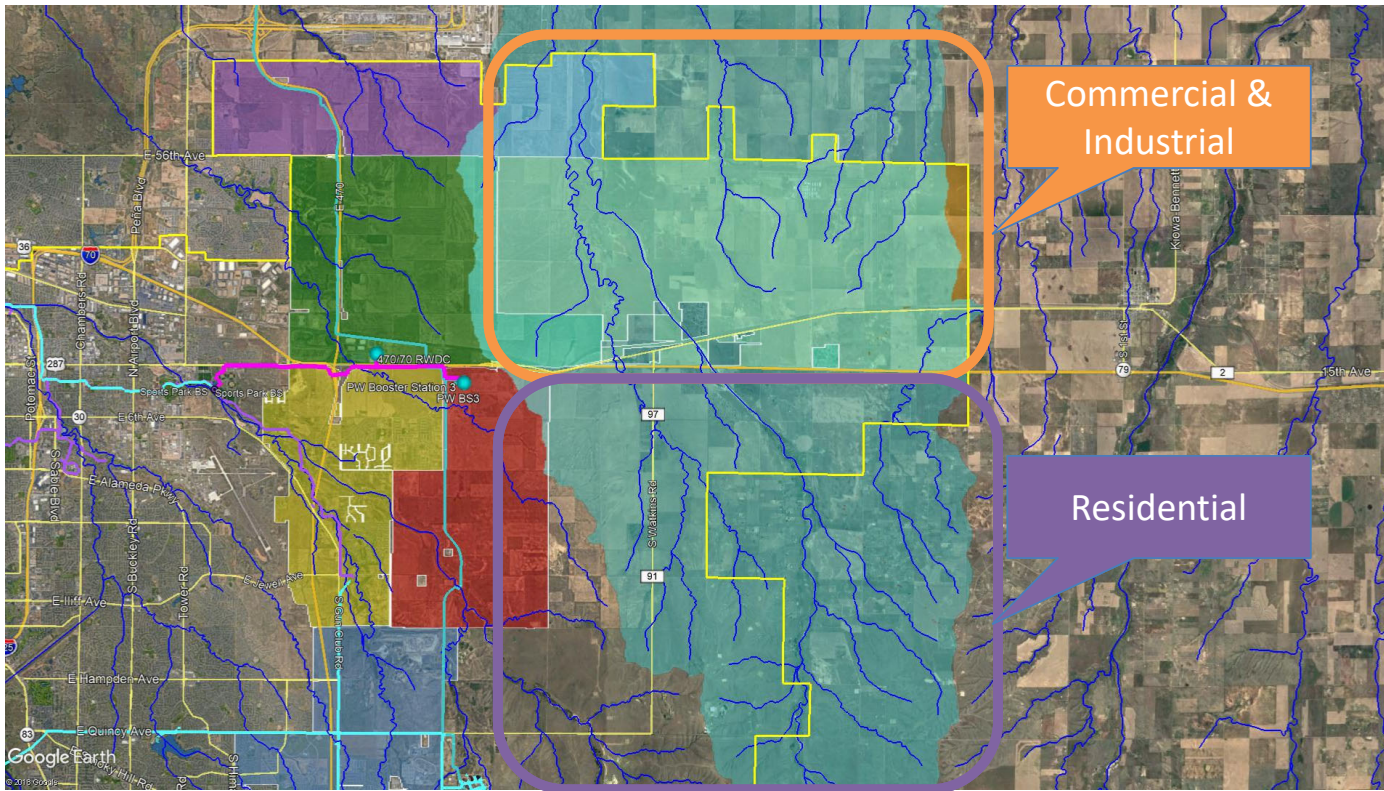


Feasibility Study

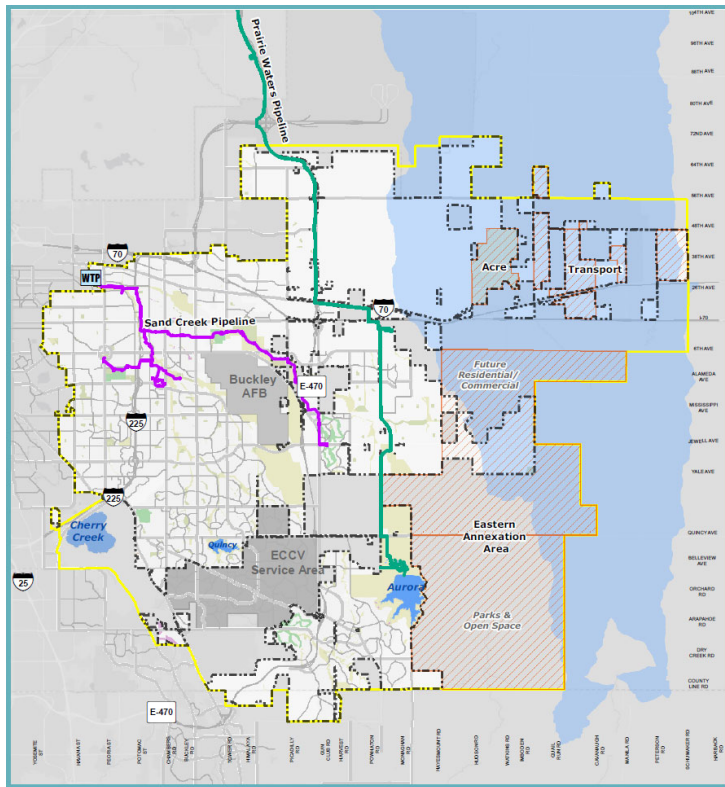
- Partnership with MWRD
- Develop:
 - Demands
 - Sewer Loadings
- Timing of Development
- Engineering/ Infrastructure Options
 - Regional Treatment
 - Reuse
- Cost/Benefit Analysis



Demands & Loadings



Future Water Supply Options

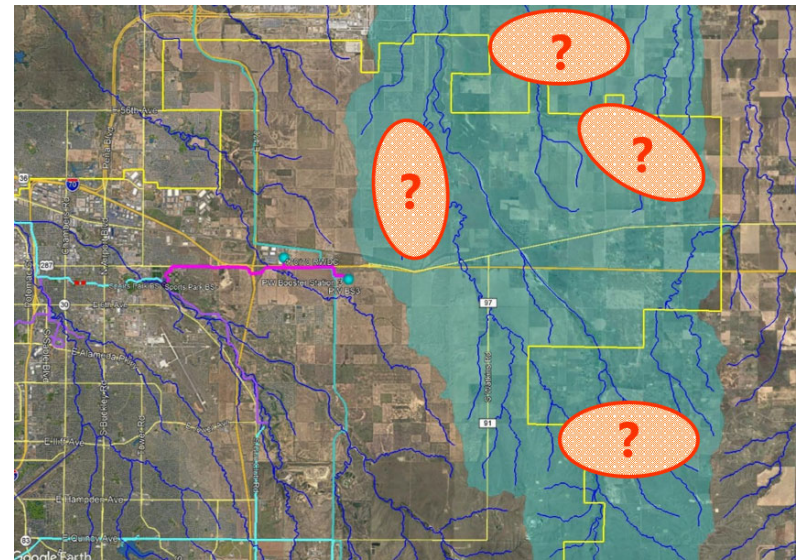


- South Platte Water via Prairie Waters
- Alluvial groundwater
- Sand Creek Reclamation Facility
- Other potential supplies
 - Regional Partners?



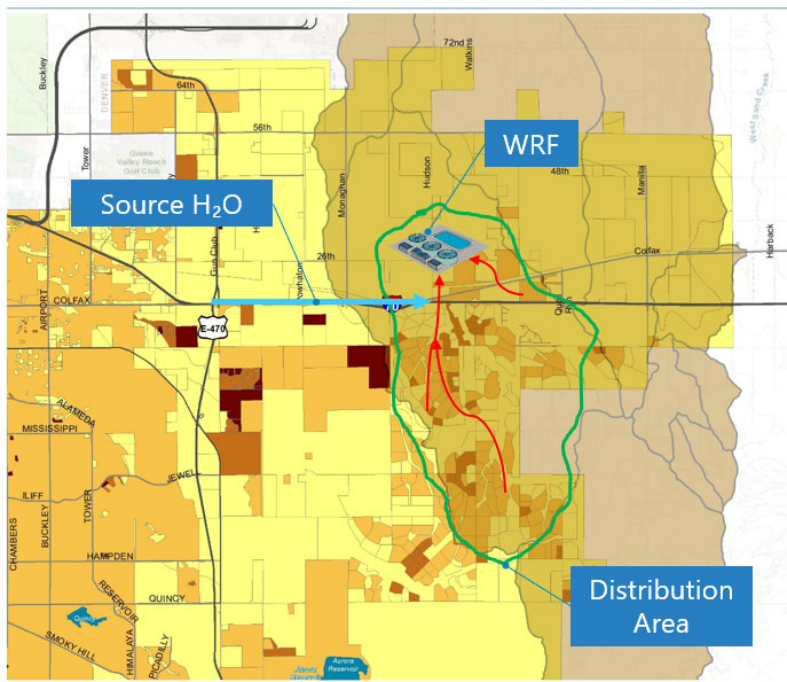
Reuse Options

- Indirect Potable Reuse (Natural Barrier)
 - Aquifer Storage & Recovery
- Direct Potable Reuse (No Natural Barrier)
 - Future CO Regs
- Non-Potable Reuse (e.g. Sand Creek Reclamation Facility)

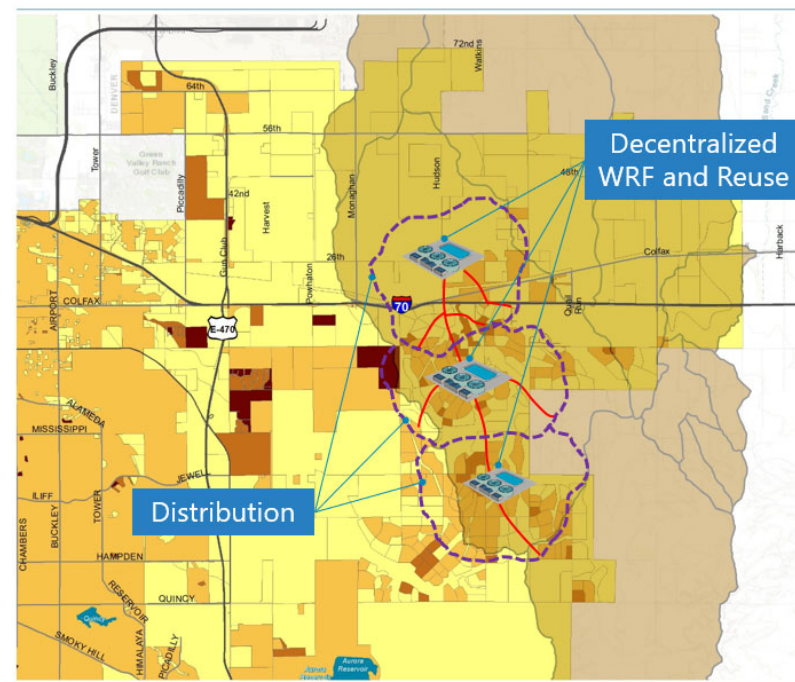


Alternative Considerations

Centralized Treatment

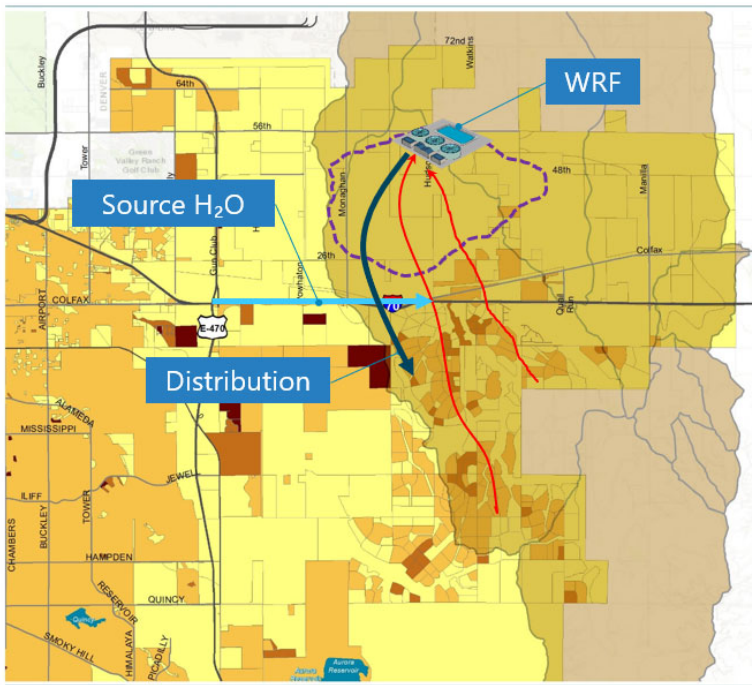


Decentralized Treatment

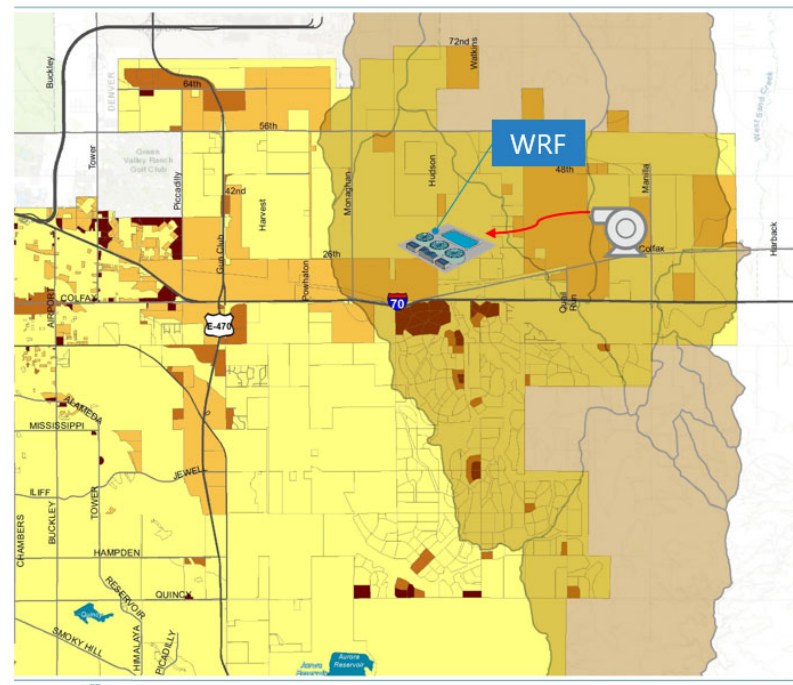


Alternative Considerations

WRF in North Basin

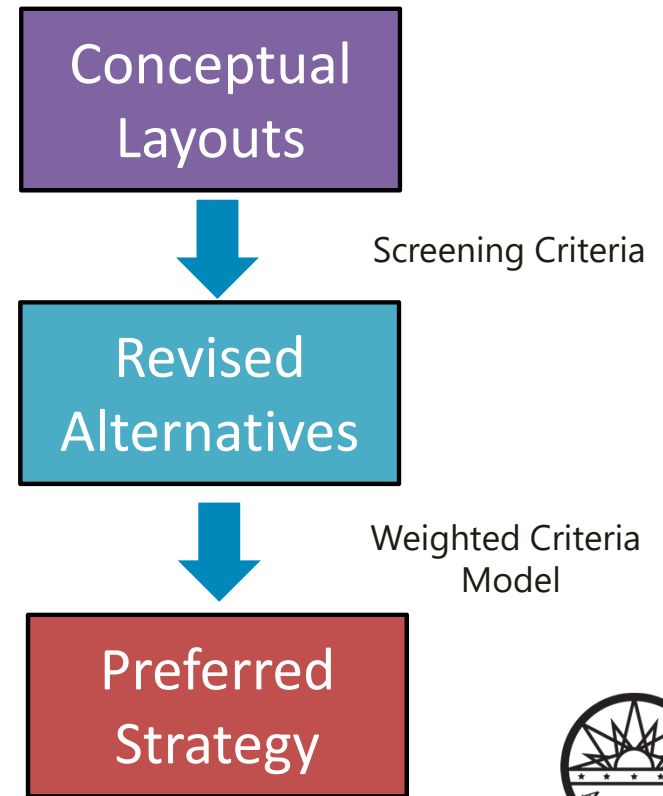


WRF Only for Industrial



Feasibility Evaluation

- Cost/Benefit Analysis
 - Is DPR *feasible* for Aurora?
- Outcome:
 - Water & Wastewater *Strategy* for Box Elder Basin
- Results Feed:
 - 2nd Integrated Water Master Plan
 - MWRD/Aurora Agreement
 - 2nd Wastewater Master Plan



Unique Project



Innovative Water Supply Solution



Creative Applications for Reclaimed Water



Unique Partnership with MWRD



Questions

