City of Arvada
City Council Agenda
AUGUST 23, 2021
WORKSHOPS

Info: 720-898-7550

Councilmembers:
Marc Williams, Mayor
Dot Miller, Mayor Pro-Tem
Bob Fifer, At large
Nancy Ford, District 1
David Jones, District 4
John Marriott, District 3
Lauren Simpson, District 2

Staff Members Usually Present:
Mark Deven, City Manager
Lorie Gillis, Deputy City Manager
Rachel Morris, City Attorney
Don Wick, Director of Public Works
Sharon Israel, Director of Utilities
Ryan Stachelski, Dir. of Community & Economic Development
Bryan Archer, Director of Finance
Rob Smetana, Manager of City Planning & Development
Ben Irwin, Chief Communications Manager
Kristen Rush, City Clerk

THIRD FLOOR CONFERENCE ROOM
EXECUTIVE SESSION
5:00 P.M.

Legal Advice, Pursuant to CRS 24-6-402(4)(b) Relating to Workplace Safety Analysis

CITY COUNCIL CHAMBERS
6:00 PM

1. CALL TO ORDER/ROLL CALL OF COUNCILMEMBERS

2. WORKSHOPS
   - A. Quarterly Bond Project Update
   - B. Water and Sewer Infrastructure Funding
   - C. Staff Updates

3. ADJOURNMENT

CITY OF ARVADA

REPORT TO CITY COUNCIL WORKSHOP	AGENDA ITEM 2.A.

TO: THE HONORABLE CITY COUNCIL DATE: August 23, 2021

SUBJECT: Quarterly Bond Project Update

Report in Brief

The Public Works engineering team will provide the City Council with an update on the two bond projects. The first project is Ralston Road Phase 2 (Yukon Street to Garrison Street). The second project is the W. 72nd Avenue corridor from Swadley Court to Kipling Street. The W. 72nd Avenue project also includes the construction of an underpass for the Union Pacific Railroad.

While not a part of the bond projects, Ralston Road Phase 1 (Upham Street to Yukon Street) merges with Ralston Road Phase 2 at Yukon Street. With the substantial completion of Ralston Road Phase 1, the engineering team will update the council about the successful completion of this project and the status of the merger with Ralston Road Phase 2.

Background

In November 2018, voters passed bond initiative 3F, which approved funding for the rebuilding and widening of Ralston Road from Yukon Street to Garrison Street. The bond initiative also approved the widening of W. 72nd Avenue from Swadley Court to Kipling Street, and for the construction of an underpass for the Union Pacific Railroad.

The bond initiative also requires a citizens bond oversight committee. Beginning in the third quarter of 2019, City team members meet quarterly with the citizens bond oversight committee. The City engineering team provides information to the committee regarding funding related to the project, project schedules, and communication with the residents and businesses along the project corridors. The citizens bond oversight committee also participates in public meetings, open houses, and project tours.

Through Council Workshops, the City team will report out to the City Council on a quarterly basis regarding the status of the bond projects. The following workshops have been conducted with the Council:

November 25, 2019
September 28, 2020
April 26, 2021

Since the April 26, 2021 workshop, construction has started on both bond projects. The engineering team also substantially completed the construction of Ralston Road Phase 1. While Ralston Road Phase 1 is not part of the bond projects, Phase 1 merges with Phase 2, and the City team will also discuss the progress and transition of the the Ralston Road Phase 1 project into the Ralston Road Phase 2 project.

The City team will update the City Council on the progress made on each project, the schedule of construction, budget information, and the team will discuss community and resident communication.

Strategic Alignment

Presentation of an update on the bond projects aligns with the Infrastructure Priority Area of the City Council Strategic Plan. Successful completion of the projects will complete Strategic Result 4 (SR4):

By 12/25, effectively utilize voter approved bond funds for the completion of Ralston Road phase 2 and the expansion of W. 72nd Avenue.

Next Steps

Receive feedback from the City Council and schedule the next quarterly workshop in order to provide bond project updates.

Prepared by:
Don Wick, Director of Public Works

Reviewed by:

Approved by:

Chris Lisberg, Assistant City Engineer	8/2/2021
Jacqueline Rhoades, Civil Engineer III	8/2/2021
Don Wick, Director of Public Works	8/2/2021
Bryan Archer, Director of Finance	8/2/2021
Tammy Hedlund, Legal Specialist	8/3/2021
Erika Pierce, Litigation Paralegal	8/3/2021
Jessica Morales, Assistant City Attorney	8/3/2021
Rachel Morris, City Attorney	8/3/2021
Lorie Gillis, Deputy City Manager	8/9/2021
Mark Deven, City Manager	8/9/2021

Enclosure, exhibits & attachments required to support the report

CITY OF ARVADA

Bond Project Update

August 23, 2021

We Dream Big and Deliver

Project Updates Overview

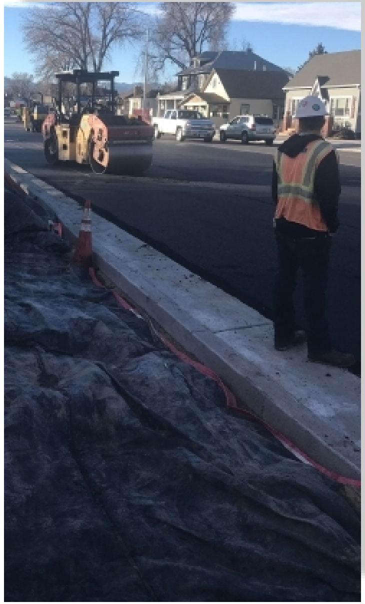
PROJECT MANAGERS:

1. Chris Lisberg, P.E.
2. Trang Tran, E.I.T.
3. Bill Cornelius, P.E.

Ralston Road Phase I - Team

- Status
- Construction Budget
- Construction Schedule
- Steps Forward

Ralston Road Phase I - Status



TOP LIFTS PAVED (Completed May 10th)

Ralston Road Phase 1 - Upham to Yukon
Construction Budget Total

BUDGET: $3,464,063

SPENT: $3,145,435

PERCENT SPENT: 91%

Landscaping (Completed mid July)

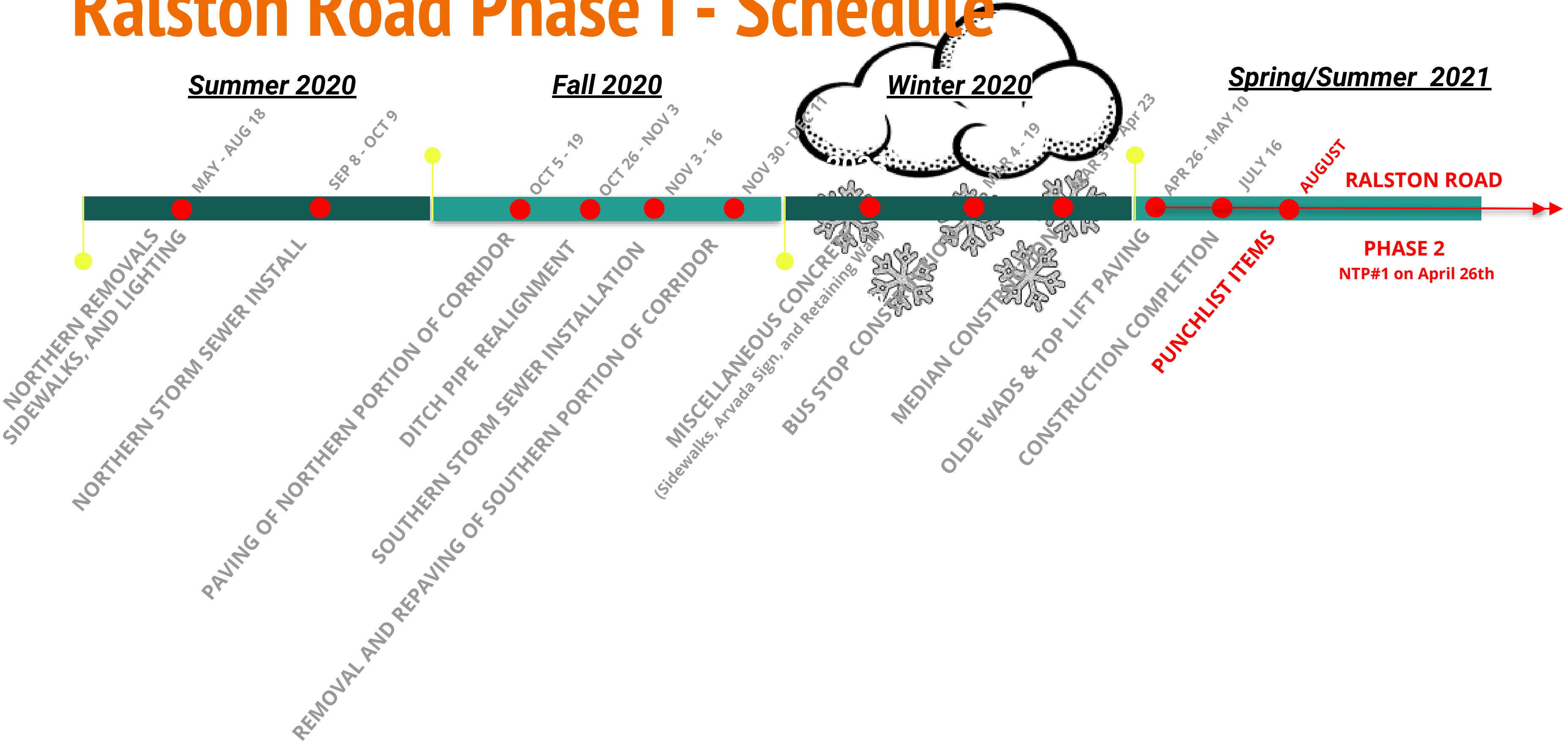
Ralston Road Phase I - Budget

USES	Initial Budget	Current Expected Cost	Difference
Design	$ 372,090	$ 697,288	$325,198
Right of Way	1,250,000	1,300,908	50,908
Construction	2,735,560	3,408,074	672,514
TOTAL	**$ 4,357,650**	**$ 5,406,270***	**$ 1,048,620**

SOURCES	Initial Funding	Current Funding	Difference
City of Arvada	$ 2,454,450	$3,464,063	$1,009,613
DRCOG (Federal)	1,903,200	1,903,200	-
TOTAL	**$ 4,357,650**	**$ 5,367,263***	**$1,009,613**

* Estimated funding shortfall to be covered by another transportation project completed with a funding surplus.

Ralston Road Phase I - Schedule



STEPS FORWARD

PUNCHLIST

August, 2021

PROJECT RESULTS SURVEY

Fall 2021

Project Updates Overview

PROJECT MANAGERS:

1 Chris Lisberg, P.E.

2 **Trang Tran, E.I.T.**

3 Bill Cornelius, P.E.

Ralston Road Phase II - Status and Schedule

PROJECT BUDGET

BUDGET : $17,883,000

SPENT: $6,808,626

PERCENT SPENT: 38.1%

Notice to Proceed 1
May 3, 2021

Construction Completion and Warranty

5-yr bond arbitrage calculation

2021 - 2023

2019 - 2021

Design & ROW Acquisitions

2023 - 2024

Construction

24-month construction period

Project Phasing

1. Notice to Proceed 1 (8-10 months)
   - Yukon to Estes north widening
   - Drainage and water main construction

2. Notice to Proceed 2 (4-8 months)
   - Estes to Garrison south widening
   - Traffic signal replacement

3. Notice to Proceed 3 (8-10 months)
   - Yukon to Estes south widening
   - Estes to Garrison north widening

Note: Notices to Proceed will overlap due to constraints of the temporary construction easements

Ralston Road Phase II - Budget & Expenditure

SOURCES	Initial Budget	Current Expected Cost
Bond Funding	$ 15,300,000	$15,300,000
Additional City Funding		$2,583,000
AURA Funding (Streetscape)	$3,500,000	$3,500,000
TOTAL	**$18,800,000**	**$ 21,383,000**
USES		
Design	$852,407	$1,260,607
Right-of-Way	$4,190,034	$5,555,332
Construction - Hamon Infrastructure, Inc.	$12,274,000	$12,360,000
Construction - Street Lights & Testing		$189,009
Miscellaneous/Contingency	$1,483,559	$2,000,000
TOTAL	**$ 18,800,000**	**$21,364,948**

Ralston Road Phase II - ROW

https://arvada.maps.arcgis.com/apps/dashboards/1bcb56b14cf54936b6233cf169ceafb9

Ralston Road Phase II - Current Activities

- Notice to Proceed 1a to Hamon to access temp const easements issued June 26, 2021
- Last MOA signed on August 17, 2021
- Balsam and Allison waterline installed
- Electric, telecoms and gas relocations estimated completion end of September

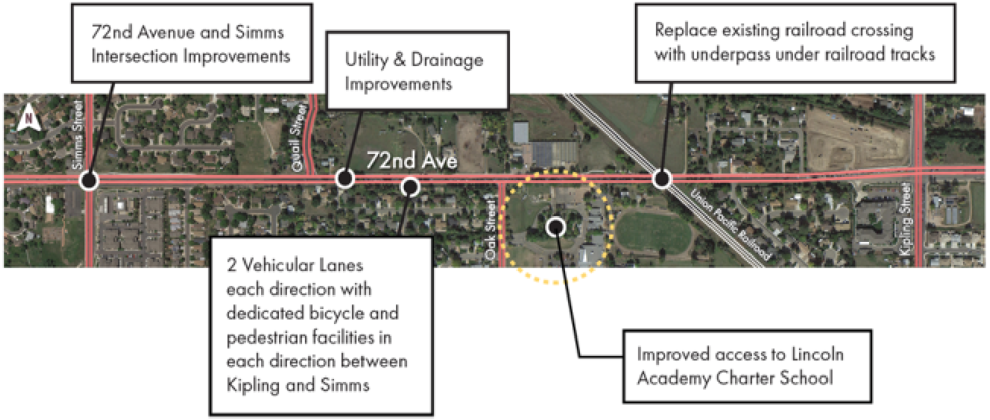
Project Updates Overview

PROJECT MANAGERS:

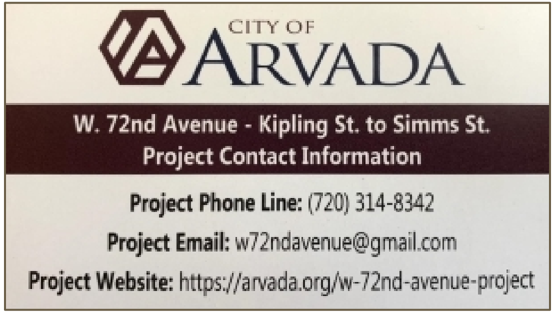
1. Chris Lisberg, P.E.
2. Trang Tran, E.I.T.
3. **Bill Cornelius, P.E.**

W. 72nd Ave - Agenda

- Overview
- Status
- Budget and Adjusted Schedule
- ROW (GIS Dashboard)
- UPRR Coordination and Status
  - Bypass, RR Shoofly
  - Bridge, Construction & Maintenance (C&M) Agreement, PUC Application
- Community Feedback/Interaction
  - Residents’ Concerns



W. 72nd Ave - Overview

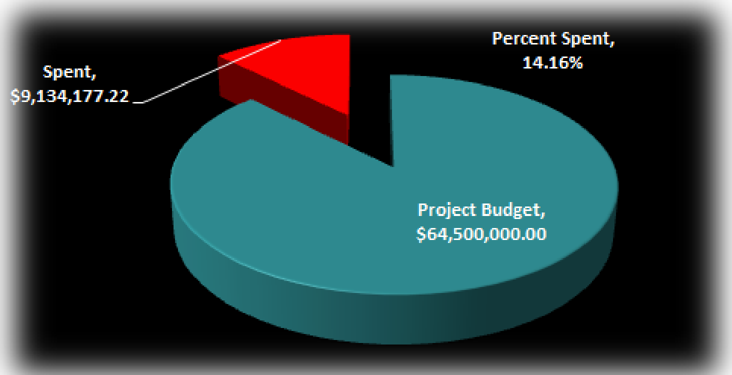

CITY OF ARVADA

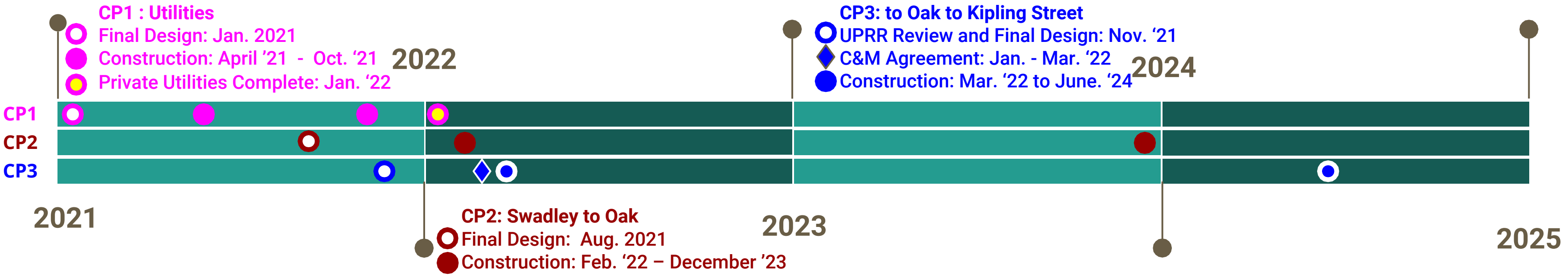
W. 72nd Avenue - Kipling St. to Simms St.
Project Contact Information

Project Phone Line: (720) 314-8342

Project Email: w72ndavenue@gmail.com

Project Website: https://arvada.org/w-72nd-avenue-project



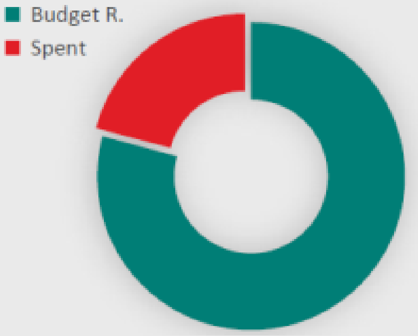


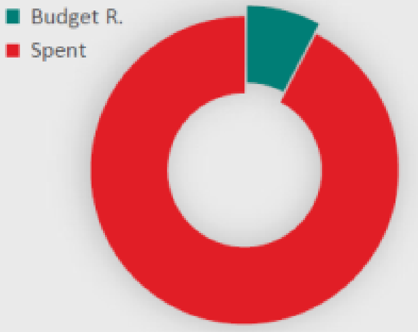
W. 72nd Ave - Status

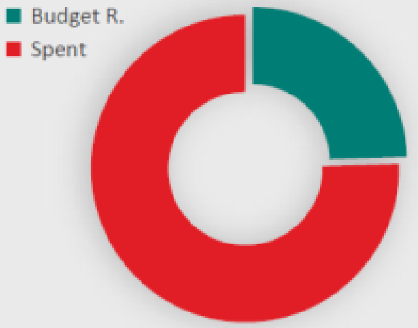
- Overall design currently at approximately 85%
- CP-1 (NTP 3/25/21) tree removals near completion
- CP-2 100% plans in final review. Construction Agreed Price (CAP) expected in September 2021
- CP-3 90% plans expected October 2021
- Utility coordination is ongoing
- Right-of-way acquisition nearing completion (shown on next slide)

W. 72nd Ave - Pre-Construction Budget

	Preconstruction Services	Owner's Rep & CM	Design	ROW Acquisition
BUDGET	$530,000.00	$2,085,552.00	$4,183,451.00	$5,550,000.00
SPENT	$530,000.00	$434,278.99	$3,860,441.43	$4,188,535.33
Percent Spent	100.0%	20.8%	92.3%	75.5%

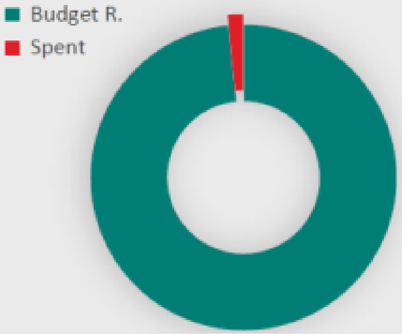


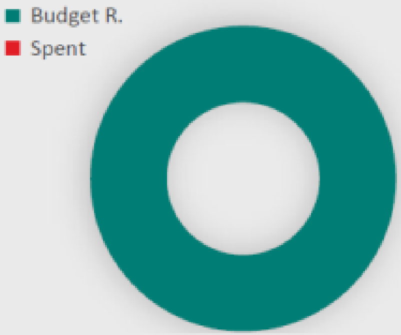


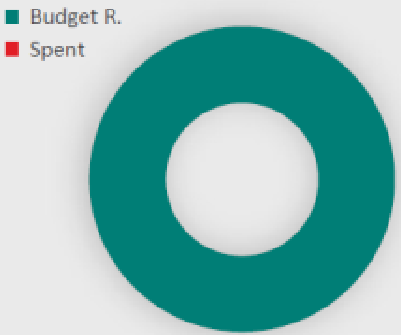


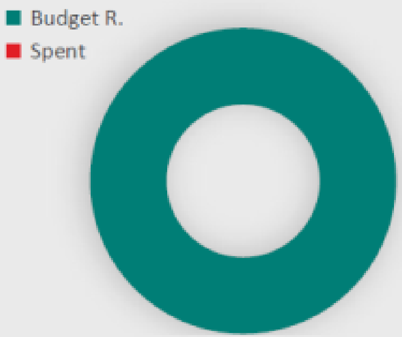
W. 72nd Ave - Construction Budget

CP 1: Utilities	CP 2: Swadley to Oak	CP 3: Oak to Kipling	Material Procurement Package 1
BUDGET $1,371,181.73	BUDGET $19,701,114.55	BUDGET $27,501,414.55	BUDGET $3,577,286.16
SPENT $22,158.08	SPENT $0.00	SPENT $0.00	SPENT $0.00
Percent Spent	Percent Spent	Percent Spent	Percent Spent
1.6%	0.0%	0.0%	0.0%









W. 72nd Ave - CP-1 Schedule (Utility Relocates)

ROW Acquisition Process (5/15/19 to 7/4/21)	90% Plan Submittal and (11/16/20 to 12/7/21)	90% Opinion of Probable Construction Cost (OPCC) and Independent Cost Estimate (ICE) (12/10/20 to 1/15/21)
Construction Agreed Price (CAP) (1/29/21)	City Council Approval (3/15/21)	Execute Contract (3/16/21)
Notice to Proceed (3/25/21)	Construction Activity (4/26/21 to 1/31/21)	Construction Completion (1/31/21)

W. 72nd Ave - CP-2 Schedule (Adjusted)

- **CP-1 experienced delays**
  - Xcel Energy
  - Tree removal
  - ROW acquisition
- **A new CP-2 Cost/Schedule Model was developed based on CP-1 Delays. The New Schedule Will:**
    - Save over 100 construction days
    - Save $458,000 in construction costs
    - Finish only 1 month later than original schedule
    - Leverage efficiencies in:
      - Mobilization
      - Traffic control
      - Subcontractor bidding

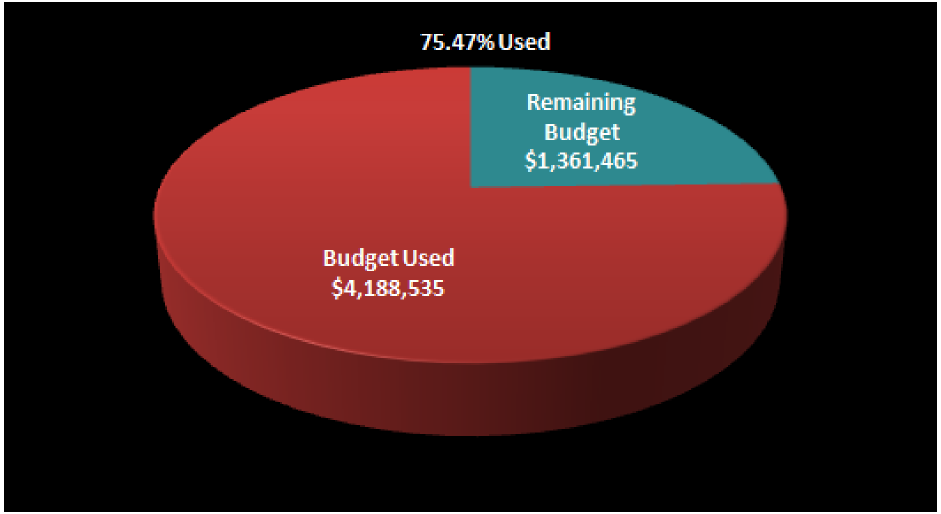
W. 72nd Ave - CP-2 Schedule (Swadley Ct. to Oak)

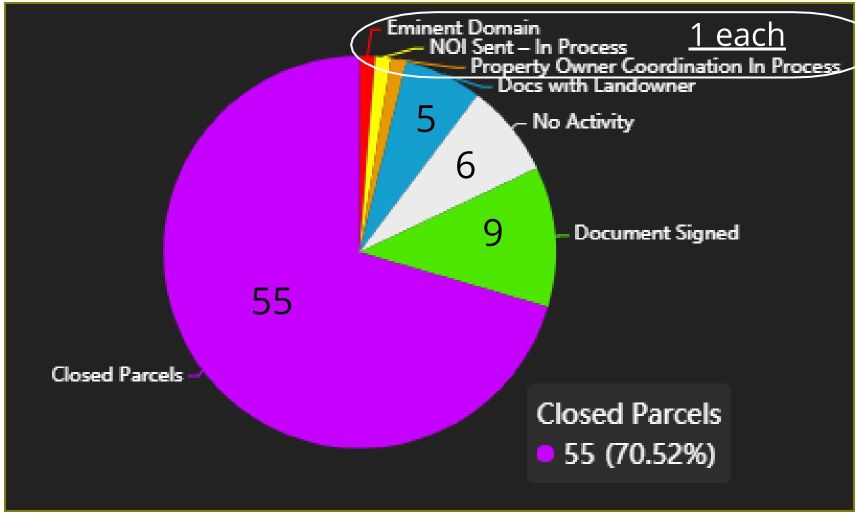
ROW Acquisition (5/15/20 to 9/04/21)	90% Roadway Plans Submittal And Review (2/26/21 to 3/22/21)	90% OPCC and ICE (8/03/21 to 9/17/21)
CAP (9/24/21)	City Council Approval (10/16/21)	Execute Contract (10/17/21 to 10/27/21)
Construction NTP (1/31/22)	Construction Activity (2/01/22 to 012/31/23)	Construction Completion (12/31/23)

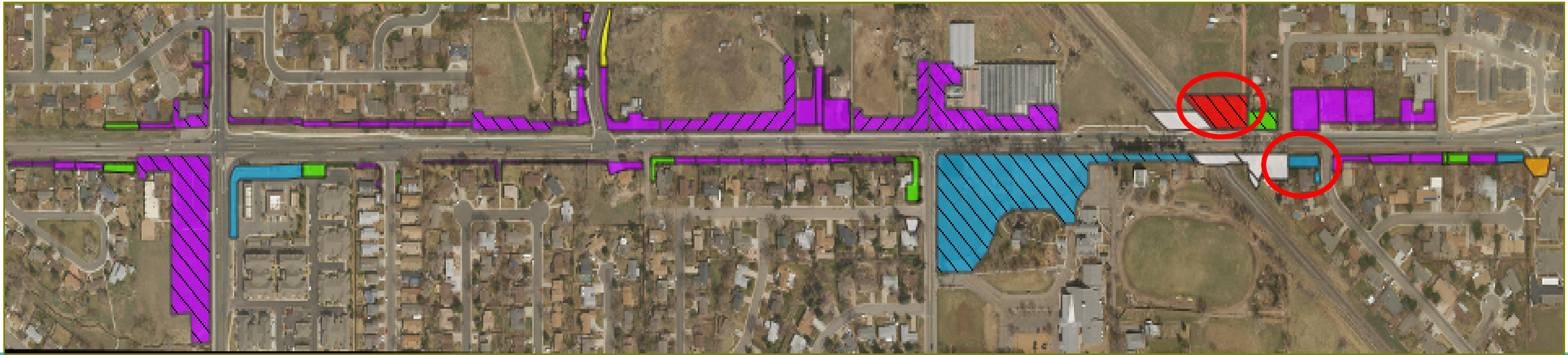
W. 72nd Ave - Schedule CP-3 (Oak St to Kipling)

ROW Acquisition (Complete)	90% Roadway Plans Submittal (09/21)	90% Plan Review and Start Amend PUC Application (09/21 to 02/22)
100% UPRR Plan Prep. and Submittal (11/04/21 to 11/29/21)	OPCC 90% (11/04/21 to 11/22/21)	UPRR Plan Review and Draft C&M Agreement (09/21 to 02/22)
CAP (11/21 to 12/21)	Final Construction Plan Submittal (01/22)	Final PUC Application and Approval (01/22 to 03/22)
City Council Approval (3/22)	Contract Execution (3/22)	Fully Execute C & M Agreement by (3/22)
Construction NTP (3/22)	Construction Activity (03/22 to 06/24)	Construction Completion (06/24)

ROW GIS Map Dashboard



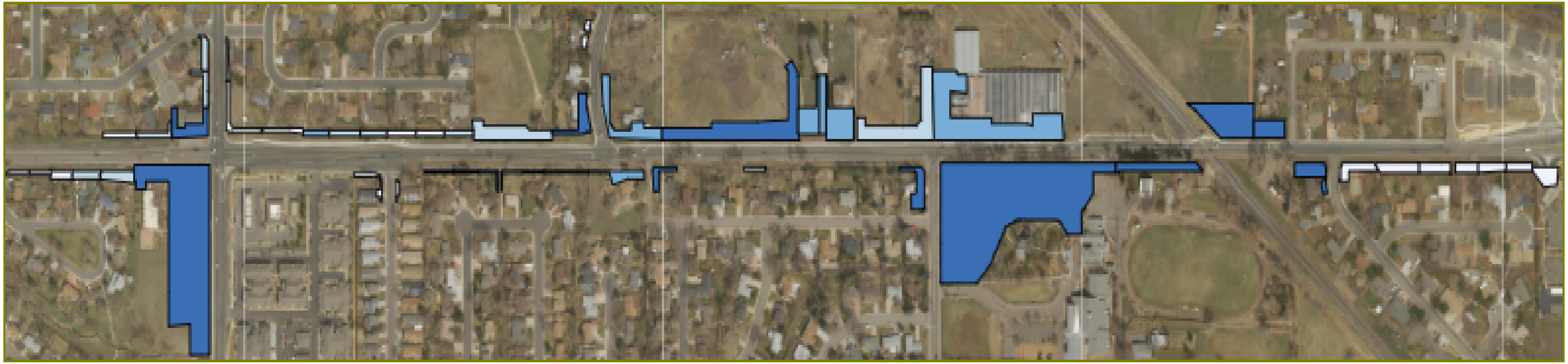




Status of Coordination with UPRR

- Mar 2021 - 25% Temp Bypass plans submitted to UPRR
- Feb 2021 - 25% Shoofly plans submitted
- Jun 2021 - 25% Temp Bypass and Shoofly plans resubmittal
- Jun 2021 - 60% Bridge Plans submitted
- Aug 2021 - Waterline Crossing Agreement Executed
- Sept 2021 - Onsite Meeting with UPRR
- Sept 2021 - 30% Temp Bypass and Shoofly submitted
- Oct 2021 - 90% Bridge Plans to UPRR
- Nov 2021 - 90% Temp Bypass and Shoofly plans submitted
- Feb 2022 to Mar 2022 - C&M Agreement Execution (requires 6-9 mo)
- PUC Applications runs concurrently to the C&M Agreement

Community Feedback Dashboard

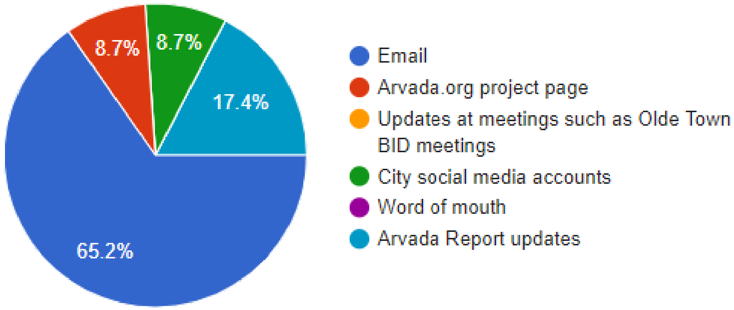


Number of Neighborhood Contacts

- > 6 – 8
- > 4 – 6
- > 2 – 4
- 1 – 2

Corridor Residents’ Stated Concerns	
Fencing	**Loss of Trees**
Construction Timing	**Safety**
Loss of Property & Property Values	**Irrigation**
Driveway Access Concerns	**Road Closures/Construction Noise**

Takeaways



- Ralston Rd Phase I is substantially complete. Responses were analyzed from the communications survey. The City will address the paving gap from Wadsworth Boulevard to Phase I at Upham Street.
- Ralston Rd Phase II utility relocations are 90% complete and the City has immediate possession of all of the properties.
- Two of the three design (CP-1 & CP-2) packages are complete. The third (CP-3) is near 90% with roadway construction planned to begin February 2022. UPRR coordination and approvals may impact the project timeline. A UP on site meeting is being scheduled for September 2021.

CITY OF ARVADA

REPORT TO CITY COUNCIL WORKSHOP	AGENDA ITEM 2.B.

TO: THE HONORABLE CITY COUNCIL DATE: August 23, 2021

SUBJECT: Water and Sewer Infrastructure Funding

Report in Brief

The Infrastructure Work System will be presenting recommendations for funding the City's water and wastewater infrastructure for City Council consideration. This workshop is a follow-up to the May 10, 2021 workshop where the City team provided a brief update on master planning and a financial needs assessment. At that workshop, the team presented preliminary recommendations for the upcoming budget process. This update includes specific recommendations for water and sewer rates and service fees for 2022 and funding alternatives in the 10 year budget model.

Background

The City Council Strategic Plan describes the purpose of the Infrastructure Work System this way: "The community depends on a well-maintained foundation of streets, sidewalks, and water, wastewater and stormwater facilities. Planned and steady population growth requires proper maintenance of existing infrastructure and additional capacity to support a thriving community." This workshop will present funding needs and options to ensure that proper maintenance and additional capacity for the City's water and sewer infrastructure can be supported.

The Infrastructure Work System team is responsible for operations and capital planning as part of our ongoing commitment to continue to provide safe and reliable drinking water and wastewater services to our community. Recent updates to the Council regarding this work include discussion and approval of the Capital Improvement Program budget (July 2020), discussion of increases to water rates (October 12, 2020 Workshop and October 19, 2020 Council Meeting), a December 14, 2020 Water Master Plan workshop, and a May 7, 2021 Water Infrastructure Update. This work corresponds to the 2020-2025 City Council Strategic Plan, which calls for updated master plans for water, sewer and stormwater, as well as an overall Infrastructure Master Plan.

As discussed in the December and May workshops, the current water-related master planning process has identified a number of needs and opportunities. This includes reinvestment in the City's two water treatment plants and replacing water lines, system controls, and other facilities at or nearing the end of their design life. Additional system capacity is also needed to meet growing demand from planned development.

With the drawdown of the water supply reserves as the Gross Reservoir project proceeds, and the increasing costs of water infrastructure construction, the City team has been engaging the City Council for strategic discussions about capital planning, priorities, and recommendations for the upcoming budget process.

The City has a long history of thoughtful and proactive planning, especially around our water supply. With the Gross Reservoir expansion, we will be in a strong position to supply water to all development contemplated in our Comprehensive Plan. With that in mind, the latest master planning efforts have focused on assessing our current infrastructure and forecasting CIP projects to reinvest and build capacity to meet growing demand.

The Infrastructure Engineering team has been refining recommendations from the Water Infrastructure Update presented to Council in May. At this workshop, we will present an update of that work, including the latest financial needs assessment, recommendations for water and sewer rates and service fees for 2022 and an update on tap fees. Also, the water and sewer enterprise funds currently carry no debt. A discussion of issuing bonds and exploring other sources of funding will be covered in this workshop.

Strategic Alignment

Review of the Water Master Plan Update aligns with the following Strategic Result within the Infrastructure Priority Area of the City Council Strategic Plan:

Update the water, sewer, stormwater, and overall infrastructure Master Plan by December, 2021.

In addition, the review of the Water Master Plan Update aligns with the following Principle stated within the Infrastructure Priority Area:

Provides the community with a safe, reliable, high-quality water supply, drainage system, and wastewater disposal services for full city build-out, as defined by the Comprehensive Plan. This includes maintaining utility rates at lowest practical levels with accurate billing that supports replacement of aging infrastructure in order to maintain robust utility systems.

Next Steps

Next steps include receiving Council feedback on the funding options, to solicit feedback on prioritizing resources and to proactively manage expectations related to water and sewer infrastructure reinvestment including fees. The Infrastructure Work System team plans to return to City Council with ordinances adjusting rates and service fees later in the 2022 budget process.

Prepared by:
Sharon Israel, Director of Utilities

Reviewed by:

Approved by:

Sharon Israel, Director of Utilities	8/8/2021
Bryan Archer, Director of Finance	8/9/2021
Jessica Morales, Assistant City Attorney	8/9/2021
Kelsy Sargent, Assistant City Attorney	8/9/2021
Tammy Hedlund, Legal Specialist	8/9/2021
Erika Pierce, Litigation Paralegal	8/9/2021
Rachel Morris, City Attorney	8/9/2021
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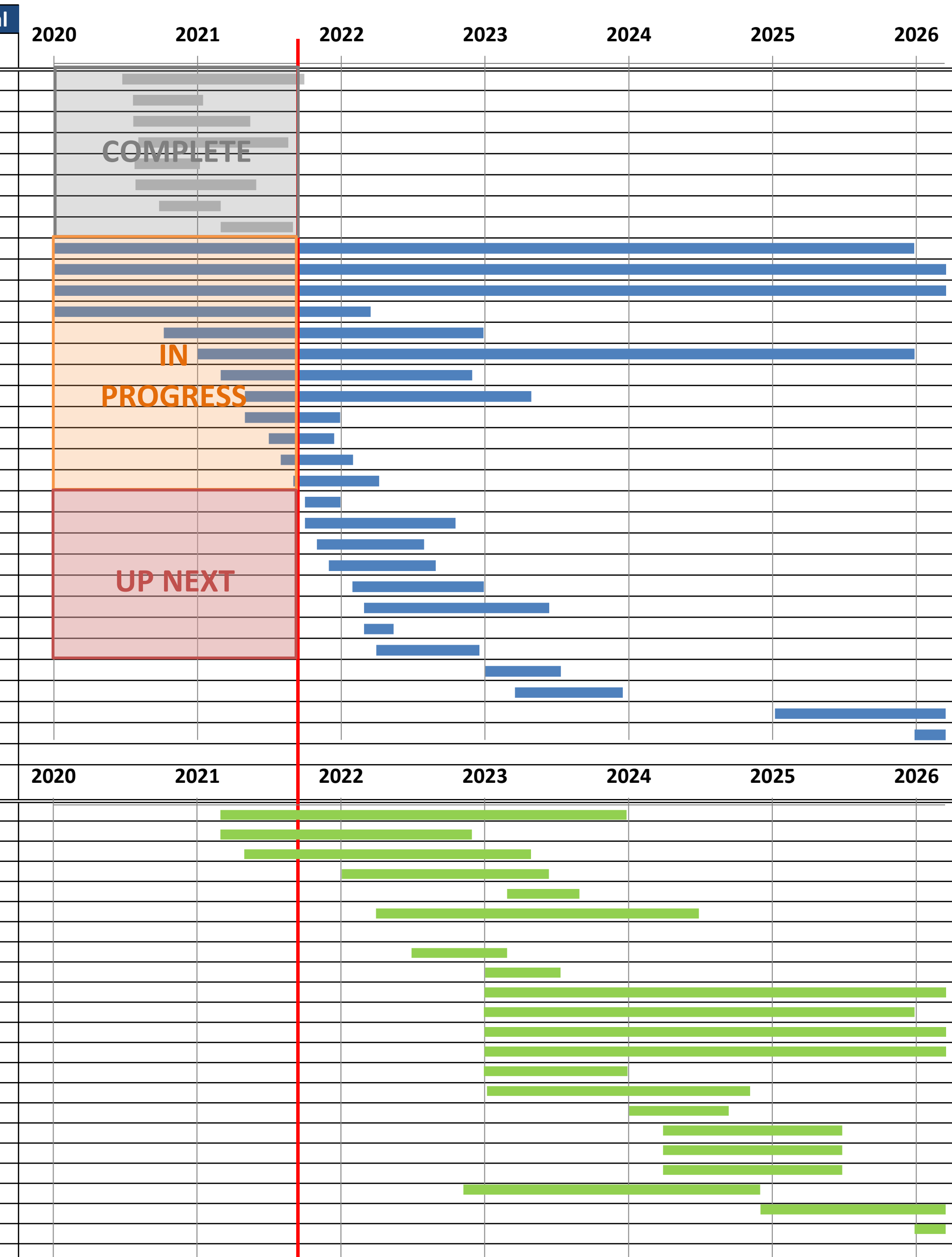
Mark Deven, City Manager	8/9/2021

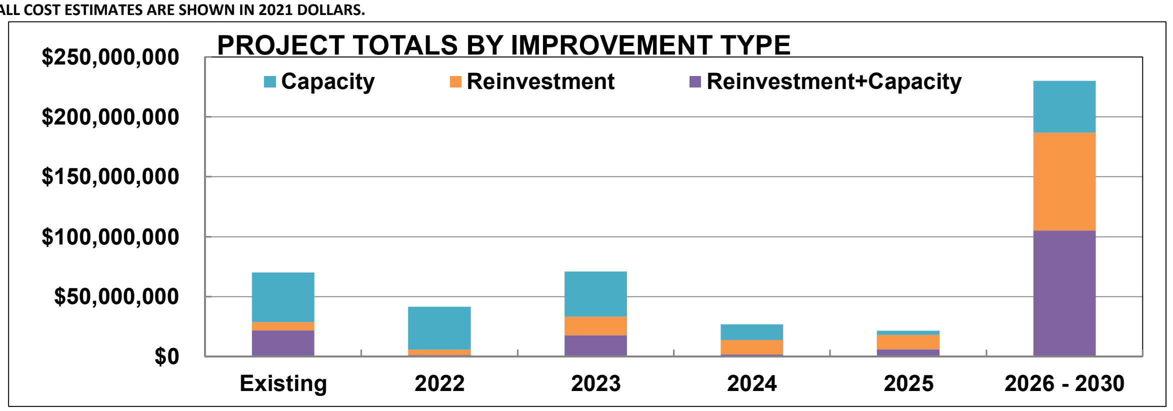
Enclosure, exhibits & attachments required to support the report

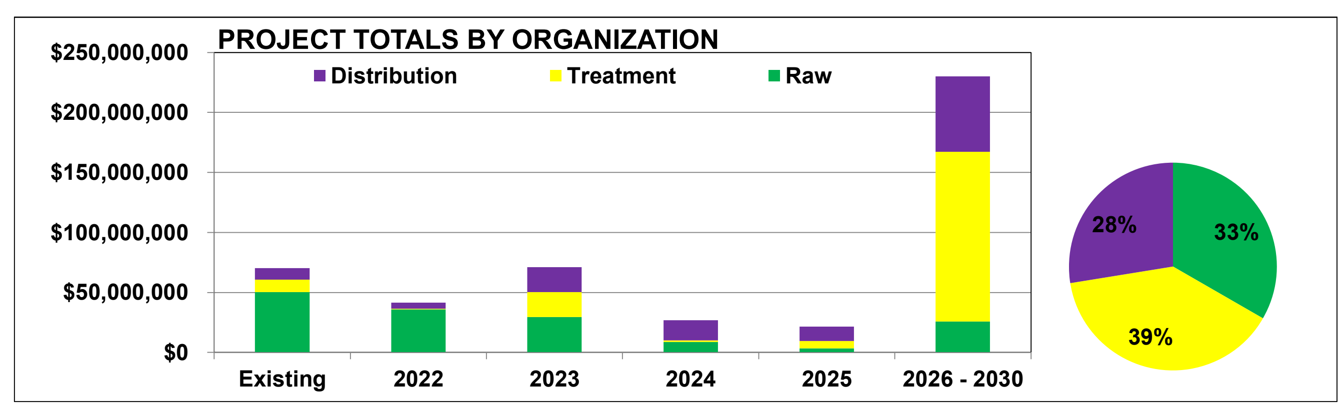
	Existing	2022	2023	2024	2025	2026 - 2030	Project Total	Improvement Type
FUNDED PROJECT LIST								
Ralston Raw Water PS/Pipeline (19WA40)	$13,117,046						$13,117,046	Reinvestment+Capacity
Corrosion Control / Source Water Change	$32,610						$32,610	Reinvestment+Capacity
Fluoride System Replacement (18WA11)	$804,105						$804,105	Reinvestment
Zone 5 PS Construction (18WA11)	$3,000,000						$3,000,000	Reinvestment+Capacity
Blunn Dam Seismic Study	$40,000						$40,000	Reinvestment
RWTP Parking Lot Extension	$172,169						$172,169	Reinvestment+Capacity
Engineering Assessment of 54" Transmission Main	$59,347						$59,347	Capacity
Level of Service (Internal Project)	120 hours							Reinvestment+Capacity
Denver Water Moffat Project Participation	$36,827,443	$35,146,000	$28,734,000	$8,616,000	$3,500,000	$4,942,032	$117,765,475	Capacity
Water Distribution System Upgrades (Equipment)	$520,200	$530,604	$541,216	$552,041	$563,082	$2,988,903	$5,696,045	Reinvestment+Capacity
Water System Replacement (Operations) Program (at 1%)	$3,830,560	$2,745,477	$4,063,842	$4,185,757	$4,311,330	$23,576,117	$42,713,083	Reinvestment
Hwy 93 Water Tank & Pipeline (Sleeping Indian Tank) (18WA10)	$3,940,000						$3,940,000	Capacity
Water System Hydraulic Model Updates and Scenario Analysis	$80,000	$100,000					$180,000	Reinvestment+Capacity
Smart Meter Upgrades	$600,000	$1,200,000					$1,800,000	Reinvestment
RWTP Residuals Handling	$2,475,000						$2,475,000	Reinvestment+Capacity
RWTP Filter Rehabilitation and Expansion	$1,500,000						$1,500,000	Reinvestment+Capacity
RWTP Reaction Tank Rehabilitation	$320,000						$320,000	Reinvestment
Long-term Planning Asset Management Database (Internal Project)	1,000 hours							Reinvestment+Capacity
Blunn Dam Spillway Repairs	$250,000						$250,000	Reinvestment
Water Demand Forecasting / Demand Model Update	$70,000						$70,000	Capacity
RWTP Site Engineering and Reinvestment	$250,000						$250,000	Reinvestment
Treatment Facilities Expansion and Replacement and Siting Study	$600,000						$600,000	Capacity
Chemical System Improvements Project	$500,000						$500,000	Reinvestment+Capacity
Castlegate Water Line	$500,000						$500,000	Reinvestment+Capacity
Treatment Facilities Repair Backlog	$458,924	$400,000					$858,924	Reinvestment
Raw Water Meter Upgrades (19-WA-30)	$0	$740,281					$740,281	Reinvestment+Capacity
Arvada Reservoir Fencing		$50,000					$50,000	Reinvestment
NW Improvements - Leyden Rock - Upsize Quaker Alignment Pipeline		$650,000					$650,000	Capacity
AWTP Clarifier Rehabilitation	$280,000						$280,000	Reinvestment
Leyden Rock / Candelas Gore Street Alignment Interconnect			$618,000				$618,000	Capacity
Highway 93 Lakes New Reservoir						$20,500,000	$20,500,000	Capacity
Water Treatment Facilities Expansion						$5,500,000	$5,500,000	Capacity
SUBTOTAL FUNDED	**$70,227,404**	**$41,562,362**	**$33,957,058**	**$13,353,798**	**$8,374,412**	**$57,507,052**	**$224,982,085**	
UNFUNDED PROJECT LIST (2021 Dollars)								
Lead and Copper Rule Revisions Compliance			TBD				$0	Reinvestment
RWTP Residuals Handling			$11,525,000				$11,525,000	Reinvestment+Capacity
RWTP Filter Rehabilitation and Expansion			$3,600,000				$3,600,000	Reinvestment+Capacity
Raw Water Meter Upgrades (19-WA-30)			$500,000				$500,000	Reinvestment+Capacity
RWTP Roof Replacement			$2,000,000				$2,000,000	Reinvestment
Distribution System Storage Expansion			$8,400,000	$3,600,000		$12,000,000	$24,000,000	Capacity
Distribution System Storage Replacement						TBD		
Chemical System Improvements Project			$1,000,000				$1,000,000	Reinvestment+Capacity
AWTP Clarifier Rehabilitation			$1,720,000				$1,720,000	Reinvestment
Water Treatment Plant Repair Program			$500,000	$500,000	$500,000	$2,500,000	$4,000,000	Reinvestment
Smart Meter Upgrades			$2,900,000	$2,900,000	$2,900,000		$8,700,000	Reinvestment
Water System Replacement (Operations) Program (at 2% of DS piping)			$4,063,842	$4,185,757	$4,311,330	$23,576,117	$36,137,046	Reinvestment
Water System Hydraulic Model Updates and Scenario Analysis			$50,000	$50,000	$50,000	$250,000	$400,000	Capacity
Water Resources Master Plan			$250,000			$300,000	$550,000	Reinvestment+Capacity
RWTP Storage Tank Replacement						$32,000,000	$32,000,000	Reinvestment
Sliplining of 54" Transmission Main				$950,000			$950,000	Capacity
Distribution System Master Plan Update				$250,000		$300,000	$550,000	Reinvestment+Capacity
Risk and Resiliency Assessment / Emergency Response Plan Updates				$100,000		$100,000	$200,000	Reinvestment+Capacity
Security and Resiliency Projects			TBD				$0	Reinvestment+Capacity
Treatment Facilities Expansion Pilot			$500,000	$1,000,000	$500,000		$2,000,000	Reinvestment+Capacity
Treatment Facilities Expansion Design					$5,000,000	$8,000,000	$13,000,000	Reinvestment+Capacity
Treatment Facilities Expansion Construction						$93,500,000	$93,500,000	Reinvestment+Capacity
Treatment Facilities Replacement Design						TBD		
SUBTOTAL UNFUNDED	**$0**	**$0**	**$37,008,842**	**$13,535,757**	**$13,261,330**	**$172,526,117**	**$236,332,046**	
TOTAL PROJECT ESTIMATE FUNDED + UNFUNDED (2021 - 2030)	**$70,227,404**	**$41,562,362**	**$70,965,900**	**$26,889,555**	**$21,635,742**	**$230,033,169**	**$461,314,131**	



NOTE: **Blue text** indicates at least a portion is included in the 2022 budget request.

ALL COST ESTIMATES ARE SHOWN IN 2021 DOLLARS.





Water and Sewer Infrastructure Funding Workshop

Arvada City Council
August 23, 2021

CITY OF ARVADA
UTILITIES

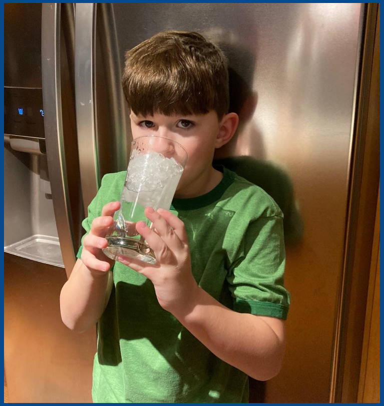
We Dream Big and Deliver

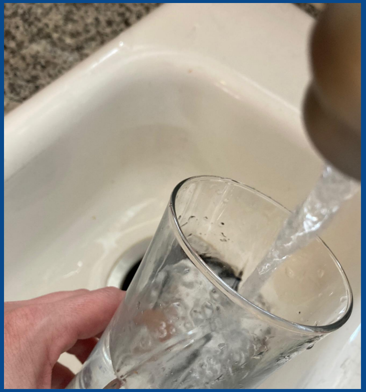
Review of Agenda

- ★ Background, Strategy and Philosophy
- ★ Review of May 10, 2021 Needs Assessment and Initial Budget Recommendations
- ★ Needs Assessment Update
- ★ Options for Funding and 10 Year Models
    - ○ 2022 Rates and Service Fees
    - ○ Bonds/Long-Term Debt

Background, Strategy, and Philosophy

Why Water Matters





Poll is full and no longer accepting responses

Imagine Arvada's Water Future

Poll Everywhere

STRATEGIC PRIORITIES THROUGH THE WATER LENS

Infrastructure Work System:

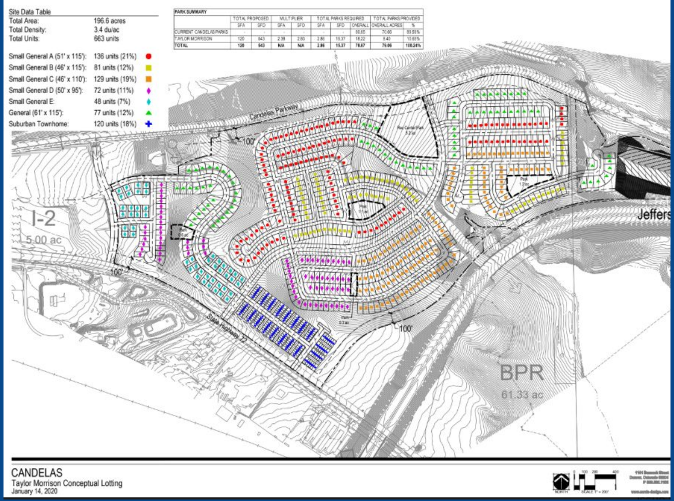
Principles - Replace aging infrastructure, maintain lowest practical rates

Strategic Results - Master Plans and Sufficient Supply for Comprehensive Plan Build-Out

Master Plan Findings Recap

Aging Infrastructure

Reinvestment in existing assets reaching the end of their useful life.



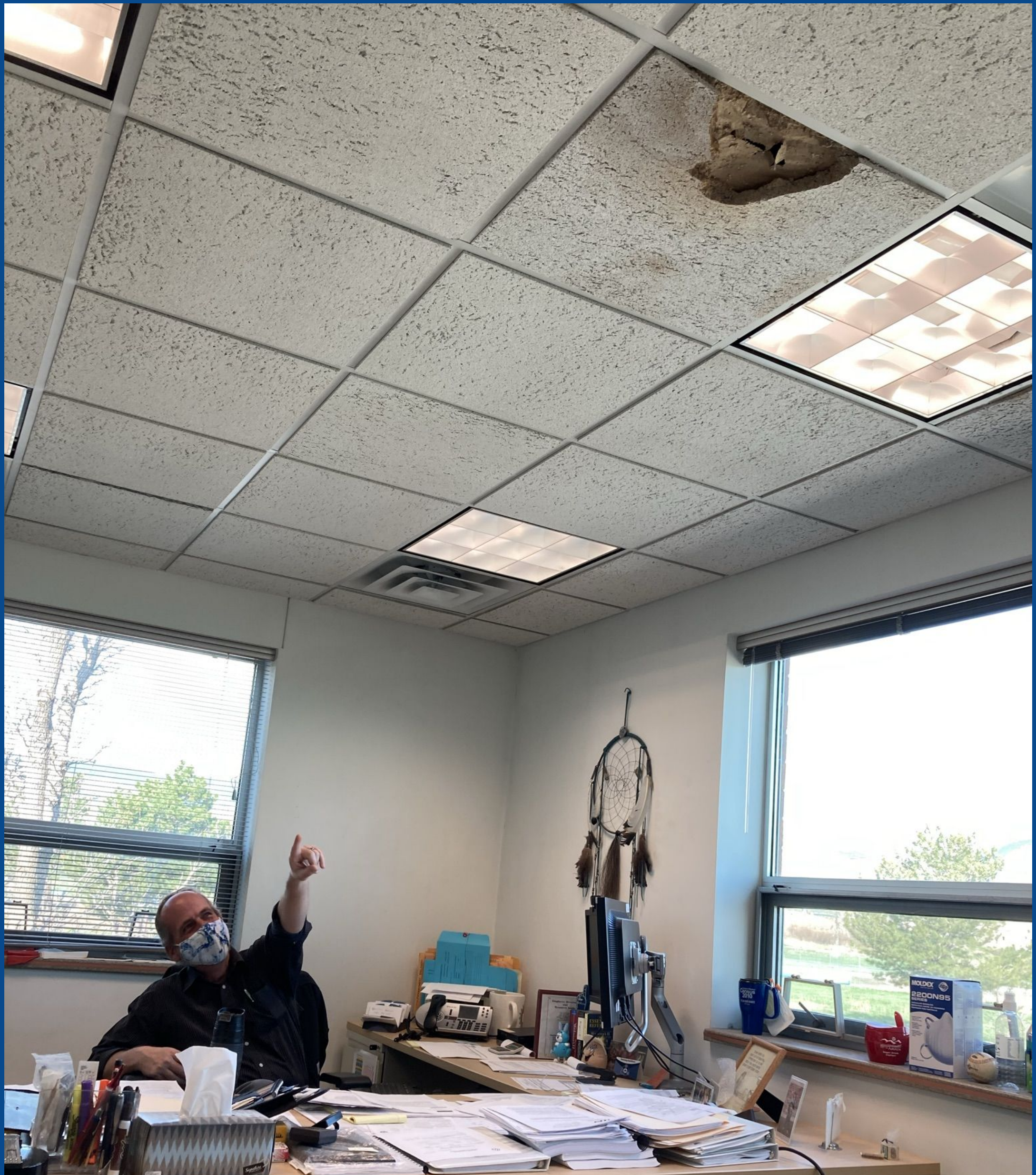
Capacity Limitations

Expansion of treatment and storage facilities is needed to serve planned development.

May 10, 2021 Recap: Recommendations to Address Financial Needs, 2022-2024

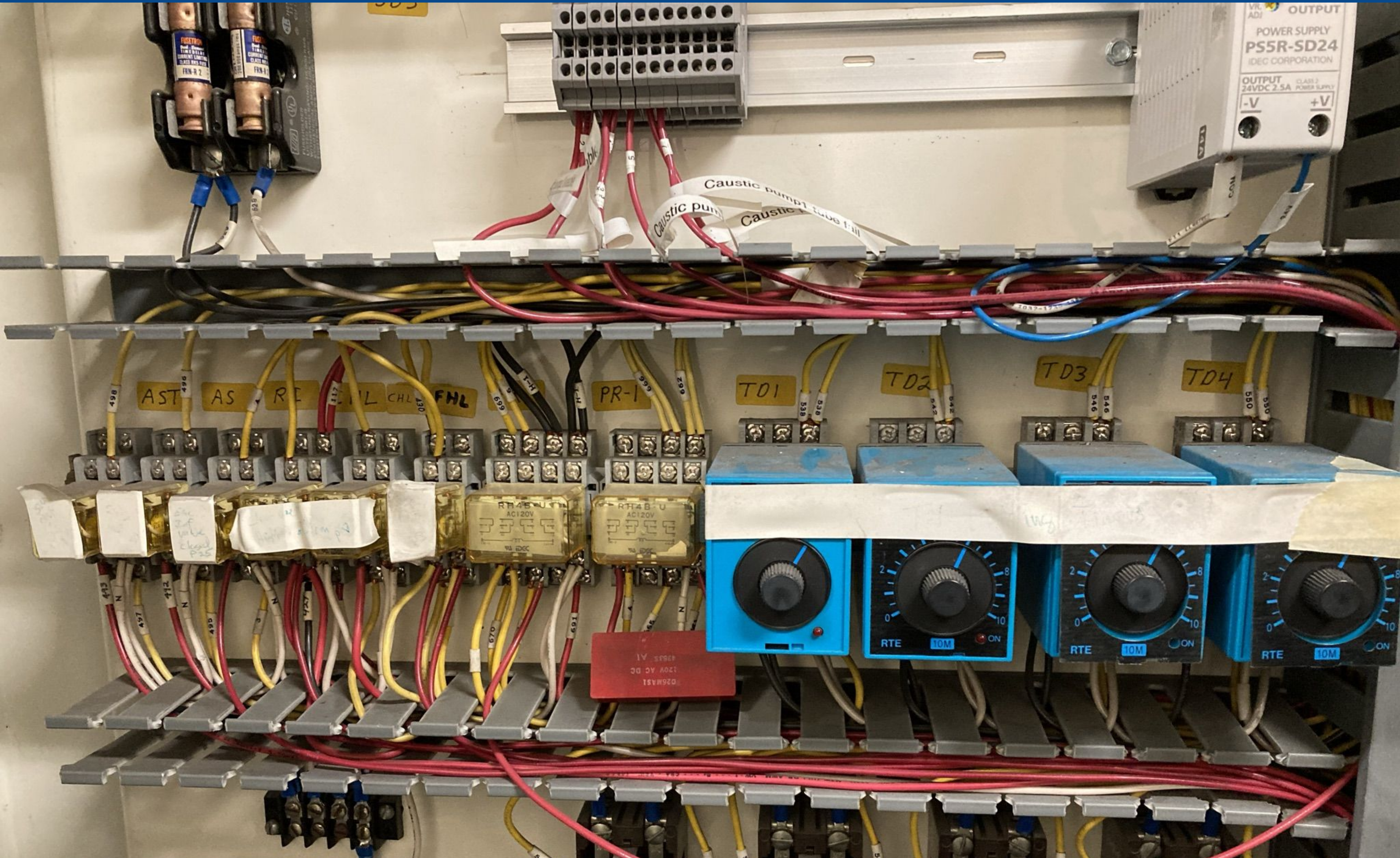
- Adjust service charges in 2022 for the first time since 2009.
- Introduce new "infrastructure reinvestment fee".
- Similar rate increase as previous years, 2-4%.
- Conduct tap fee study and implement recommendations.
- Begin Colorado Water Grant and State Revolving Loan Fund Processes.
- Bond issue (planning estimate: $100 million, 25 years, 3.5%).
- Audit cost allocation for enterprise funds.

Needs Assessment Update



CITY OF ARVADA

Needs Assessment Update



Needs Assessment Update

Needs Assessment Update

Needs Assessment Update

Needs Assessment Update

May 10, 2021 Summary

- $212 million unfunded CIP in 10 year model
- Engineering staffing for project management and technical leadership
- $37,000/acre-foot (54% increase from $24,000)
- $120 million due 2022-2028 for Gross Reservoir

August 23, 2021 Update

- $236 million unfunded CIP in 10 year model
- 2.5 FTE engineering staff added in 2021, 1 FTE proposed for 2022
- Estimated $40,000+/acre-foot
- Preliminary findings from sewer and stormwater master plans

Progress Update - Gross Reservoir

Treatment and Distribution Master Plans

	Existing	2022	2023	2024	2025	2026 - 2030	Project Total	Improvement Type
FUNDED PROJECT LIST								
Ralston Raw Water PS/Pipeline (19WA40)	$13,117,046						$13,117,046	Reinvestment+Capacity
Corrosion Control / Source Water Change	$32,610						$32,610	Reinvestment+Capacity
Fluoride System Replacement (18WA11)	$804,105						$804,105	Reinvestment
Zone 5 PS Construction (18WA11)	$3,000,000						$3,000,000	Reinvestment+Capacity
Blunn Dam Seismic Study	$40,000						$40,000	Reinvestment
RWTP Parking Lot Extension	$172,169						$172,169	Reinvestment+Capacity
Engineering Assessment of 54" Transmission Main	$59,347						$59,347	Capacity
Level of Service (Internal Project)	120 hours							Reinvestment+Capacity
Denver Water Moffat Project Participation	$36,827,443	$35,146,000	$28,734,000	$8,616,000	$3,500,000	$4,942,032	$117,765,475	Capacity
Water Distribution System Upgrades (Equipment)	$520,200	$530,604	$541,216	$552,041	$563,082	$2,988,903	$5,696,045	Reinvestment+Capacity
Water System Replacement (Operations) Program (at 1%)	$3,830,560	$2,745,477	$4,063,842	$4,185,757	$4,311,330	$23,576,117	$42,713,083	Reinvestment
Hwy 93 Water Tank & Pipeline (Sleeping Indian Tank) (18WA10)	$3,940,000						$3,940,000	Capacity
Water System Hydraulic Model Updates and Scenario Analysis	$80,000	$100,000					$180,000	Reinvestment+Capacity
Smart Meter Upgrades	$600,000	$1,200,000					$1,800,000	Reinvestment
RWTP Residuals Handling	$2,475,000						$2,475,000	Reinvestment+Capacity
RWTP Filter Rehabilitation and Expansion	$1,500,000						$1,500,000	Reinvestment+Capacity
RWTP Reaction Tank Rehabilitation	$320,000						$320,000	Reinvestment
Long-term Planning Asset Management Database (Internal Project)	1,000 hours							Reinvestment+Capacity
Blunn Dam Spillway Repairs	$250,000						$250,000	Reinvestment
Water Demand Forecasting / Demand Model Update	$70,000						$70,000	Capacity
RWTP Site Engineering and Reinvestment	$250,000						$250,000	Reinvestment
Treatment Facilities Expansion and Replacement and Siting Study	$600,000						$600,000	Capacity
Chemical System Improvements Project	$500,000						$500,000	Reinvestment+Capacity
Castlegate Water Line	$500,000						$500,000	Reinvestment+Capacity
Treatment Facilities Repair Backlog	$458,924	$400,000					$858,924	Reinvestment
Raw Water Meter Upgrades (19-WA-30)	$0	$740,281					$740,281	Reinvestment+Capacity
Arvada Reservoir Fencing		$50,000					$50,000	Reinvestment
NW Improvements - Leyden Rock - Upsize Quaker Alignment Pipeline		$650,000					$650,000	Capacity
AWTP Clarifier Rehabilitation	$280,000						$280,000	Reinvestment
Leyden Rock / Candelas Gore Street Alignment Interconnect			$618,000				$618,000	Capacity
Highway 93 Lakes New Reservoir						$20,500,000	$20,500,000	Capacity
Water Treatment Facilities Expansion						$5,500,000	$5,500,000	Capacity
SUBTOTAL FUNDED	**$70,227,404**	**$41,562,362**	**$33,957,058**	**$13,353,798**	**$8,374,412**	**$57,507,052**	**$224,982,085**	
UNFUNDED PROJECT LIST (2021 Dollars)								
Lead and Copper Rule Revisions Compliance			TBD				$0	Reinvestment
RWTP Residuals Handling			$11,525,000				$11,525,000	Reinvestment+Capacity
RWTP Filter Rehabilitation and Expansion			$3,600,000				$3,600,000	Reinvestment+Capacity
Raw Water Meter Upgrades (19-WA-30)			$500,000				$500,000	Reinvestment+Capacity
RWTP Roof Replacement			$2,000,000				$2,000,000	Reinvestment
Distribution System Storage Expansion			$8,400,000	$3,600,000		$12,000,000	$24,000,000	Capacity
Distribution System Storage Replacement						TBD		
Chemical System Improvements Project			$1,000,000				$1,000,000	Reinvestment+Capacity
AWTP Clarifier Rehabilitation			$1,720,000				$1,720,000	Reinvestment
Water Treatment Plant Repair Program			$500,000	$500,000	$500,000	$2,500,000	$4,000,000	Reinvestment
Smart Meter Upgrades			$2,900,000	$2,900,000	$2,900,000		$8,700,000	Reinvestment
Water System Replacement (Operations) Program (at 2% of DS piping)			$4,063,842	$4,185,757	$4,311,330	$23,576,117	$36,137,046	Reinvestment
Water System Hydraulic Model Updates and Scenario Analysis			$50,000	$50,000	$50,000	$250,000	$400,000	Capacity
Water Resources Master Plan			$250,000			$300,000	$550,000	Reinvestment+Capacity
RWTP Storage Tank Replacement						$32,000,000	$32,000,000	Reinvestment
Sliplining of 54" Transmission Main				$950,000			$950,000	Capacity
Distribution System Master Plan Update				$250,000		$300,000	$550,000	Reinvestment+Capacity
Risk and Resiliency Assessment / Emergency Response Plan Updates				$100,000		$100,000	$200,000	Reinvestment+Capacity
Security and Resiliency Projects			TBD				$0	Reinvestment+Capacity
Treatment Facilities Expansion Pilot			$500,000	$1,000,000	$500,000		$2,000,000	Reinvestment+Capacity
Treatment Facilities Expansion Design					$5,000,000	$8,000,000	$13,000,000	Reinvestment+Capacity
Treatment Facilities Expansion Construction						$93,500,000	$93,500,000	Reinvestment+Capacity
Treatment Facilities Replacement Design						TBD		
SUBTOTAL UNFUNDED	**$0**	**$0**	**$37,008,842**	**$13,535,757**	**$13,261,330**	**$172,526,117**	**$236,332,046**	
TOTAL PROJECT ESTIMATE FUNDED + UNFUNDED (2021 - 2030)	**$70,227,404**	**$41,562,362**	**$70,965,900**	**$26,889,555**	**$21,635,742**	**$230,033,169**	**$461,314,131**	

COMPLETE

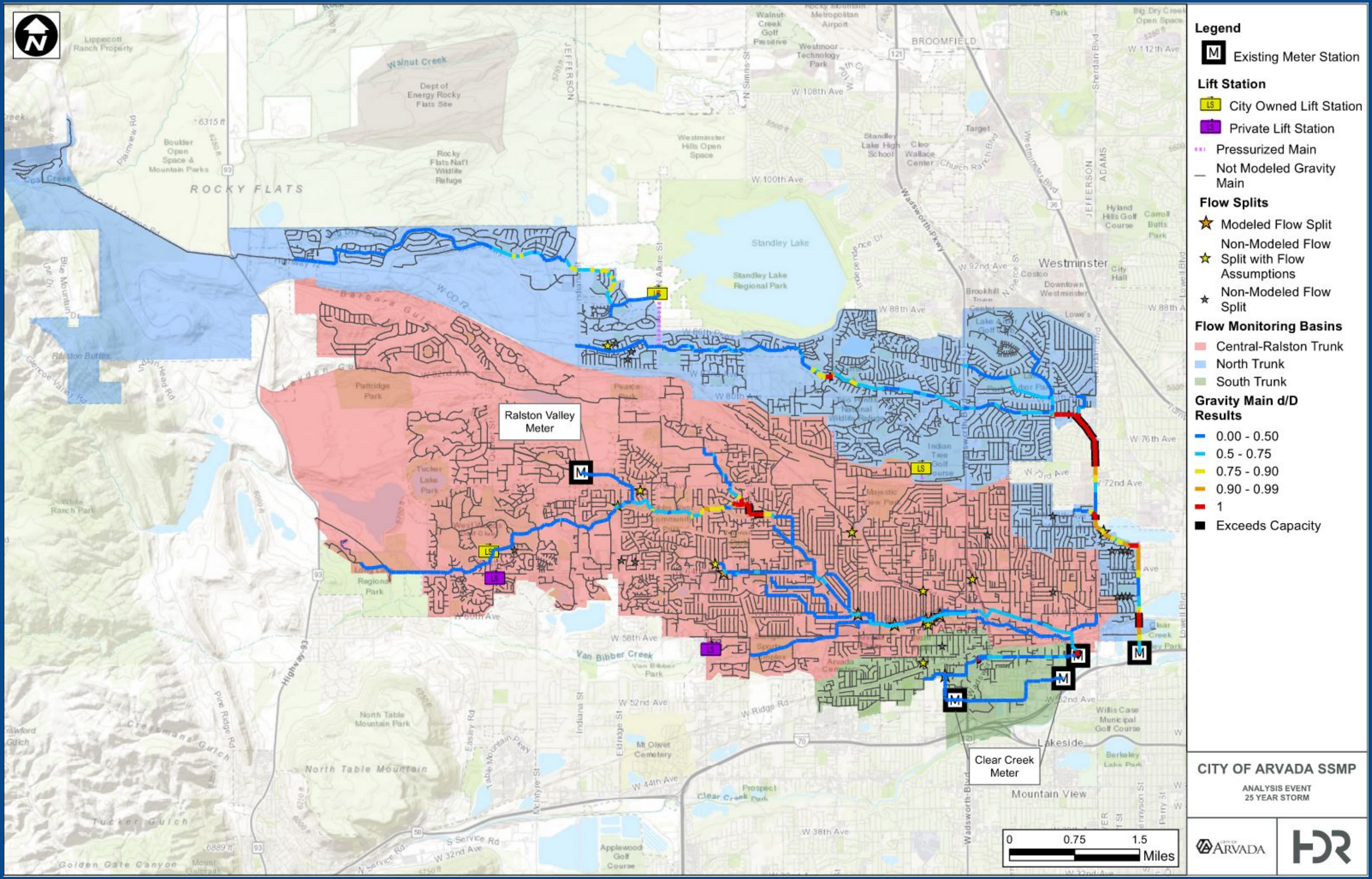
IN PROGRESS

UP NEXT

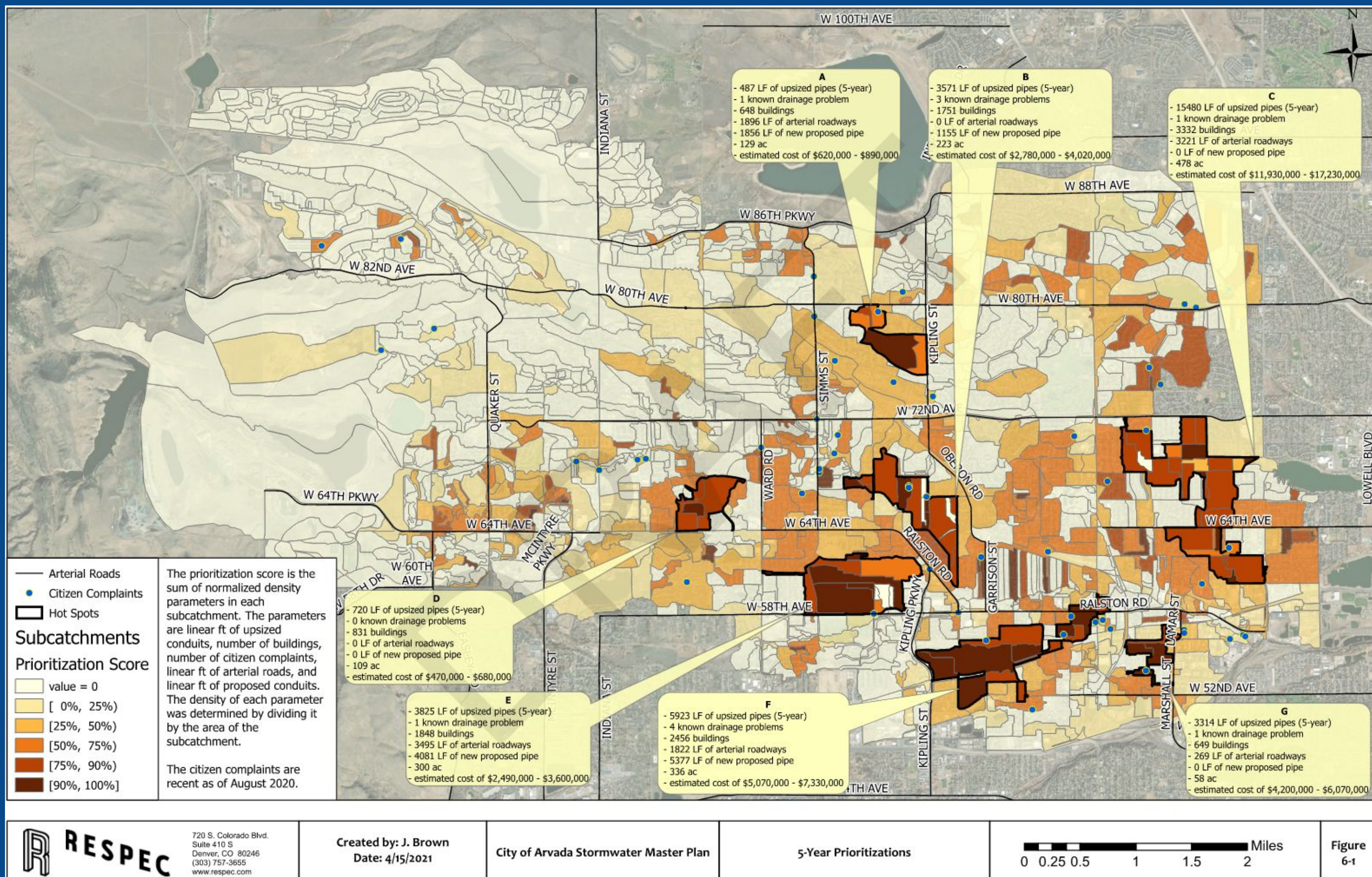
NOTE: Blue text indicates at least a portion is included in the 2022 budget request.
ALL COST ESTIMATES ARE SHOWN IN 2021 DOLLARS.

CITY OF ARVADA

Sewer Master Plan



Stormwater Master Plan



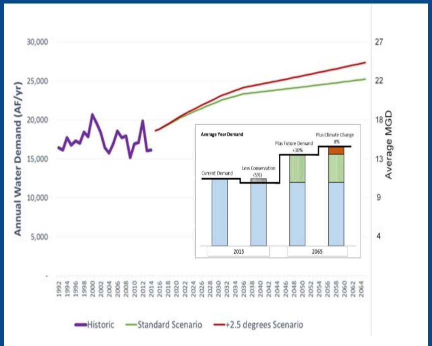
Up Next - Treatment and Distribution

Define safe, reliable, secure **= LEVEL OF SERVICE POLICY**

Evaluate how much, when **= DEMAND FORECASTING**

Scope and phase the work **= ASSET MANAGEMENT**

Treatment Expansion and Replacement Planning



Water Demand / Supply Model Updates

Options for Funding

Current State

$5.83, water
$2.44, sewer

Bimonthly Service Fees

-$5.83 bimonthly
-Last increased in 2009
-1986 was $4.30 - water, $1.20 - sewer

- Replacement for meters, infrastructure
- Median of comp cities:
  $25.86 - water
  $6.22 - sewer

$4.29 - $6.45, water
$5.17, sewer

Rates

-3 blocks, rate per 1000 gal
-average annual increase 2006-2021: 4.1%, water, 5.4%, sewer
-2018 Rate Study

- Personnel
- Operating Expenses
- Denver Water contract
- Reinvestment-related Capital Projects

$18,214 to $25,849

Tap Fees

-Total water, sewer, Metro, parks
-last increased in 2016

- Capacity-related capital projects

14.5% from misc fees, penalties, interest, fund transfers, etc.

Proposed for 2022

$9.83, water
$4.44, sewer

Bimonthly Service Fees

-Increase $2/month water and $1/month sewer
-Option: Add portion as "infra. reinvestment fee"

- Replacement for meters, infrastructure
- Median of comp cities:
  $25.86 - water
  $6.22 - sewer

$4.44 - $6.67, water
$5.30, sewer

Rates

-3 blocks, rate per 1000 gal
-3.4% increase - water
-2.6% increase - sewer

- Personnel
- Operating Expenses
- Denver Water contract
- Reinvestment-related Capital Projects

TBD

Tap Fees

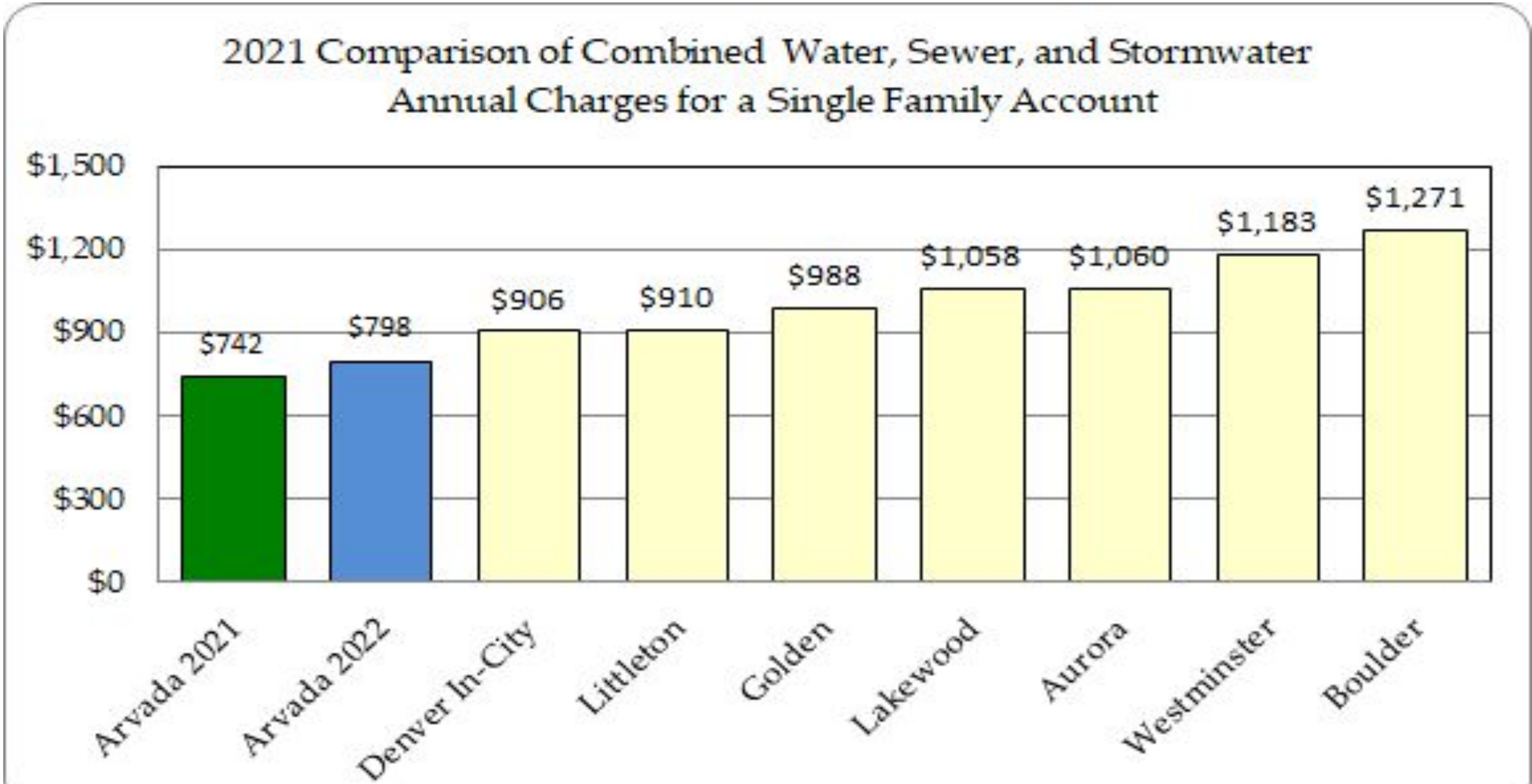
-Increases estimated in 10-year model
-Formal study by end of 2021
-Will reflect increased cost of water supply/Gross Res.

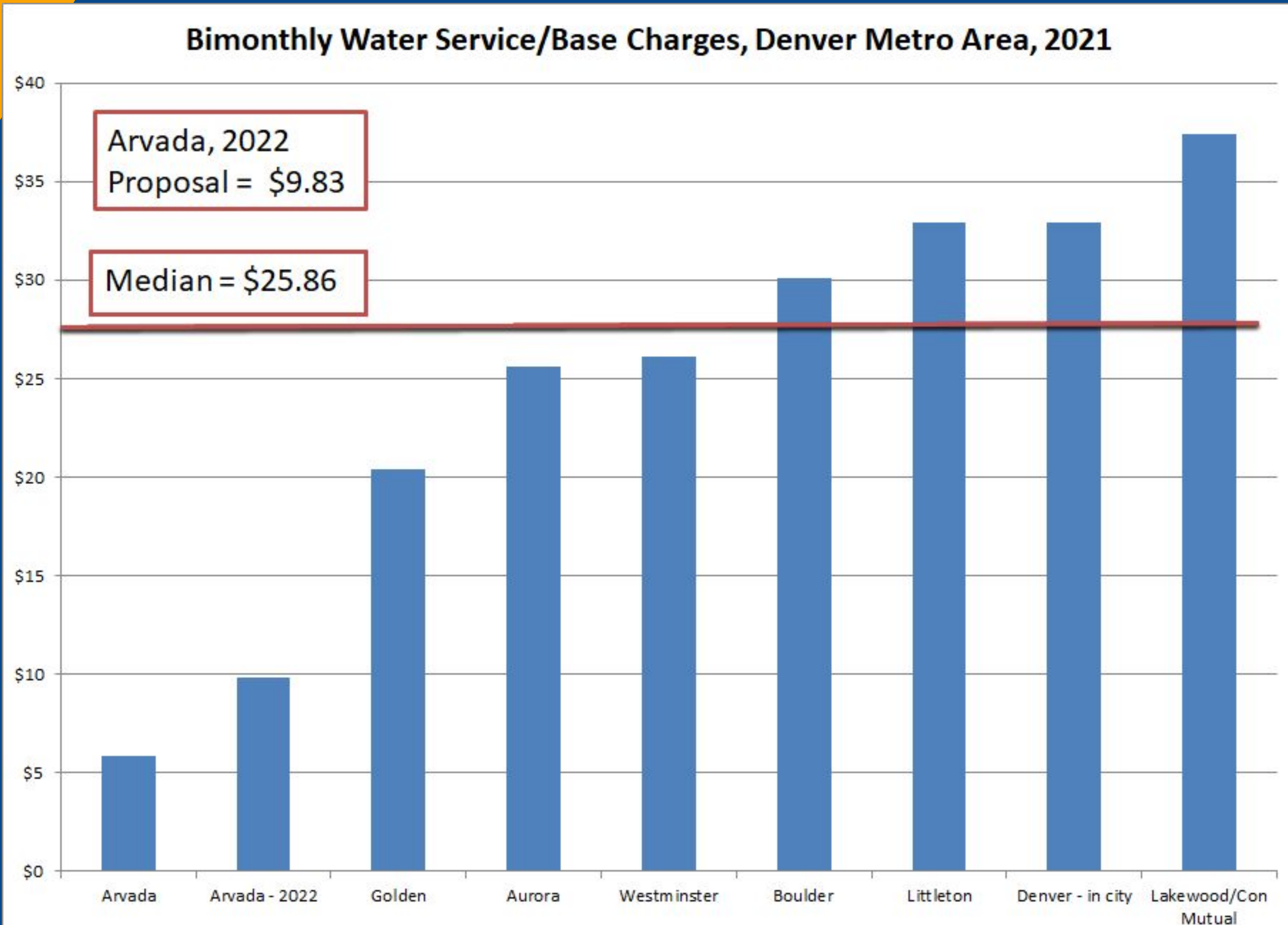
- Capacity-related capital projects

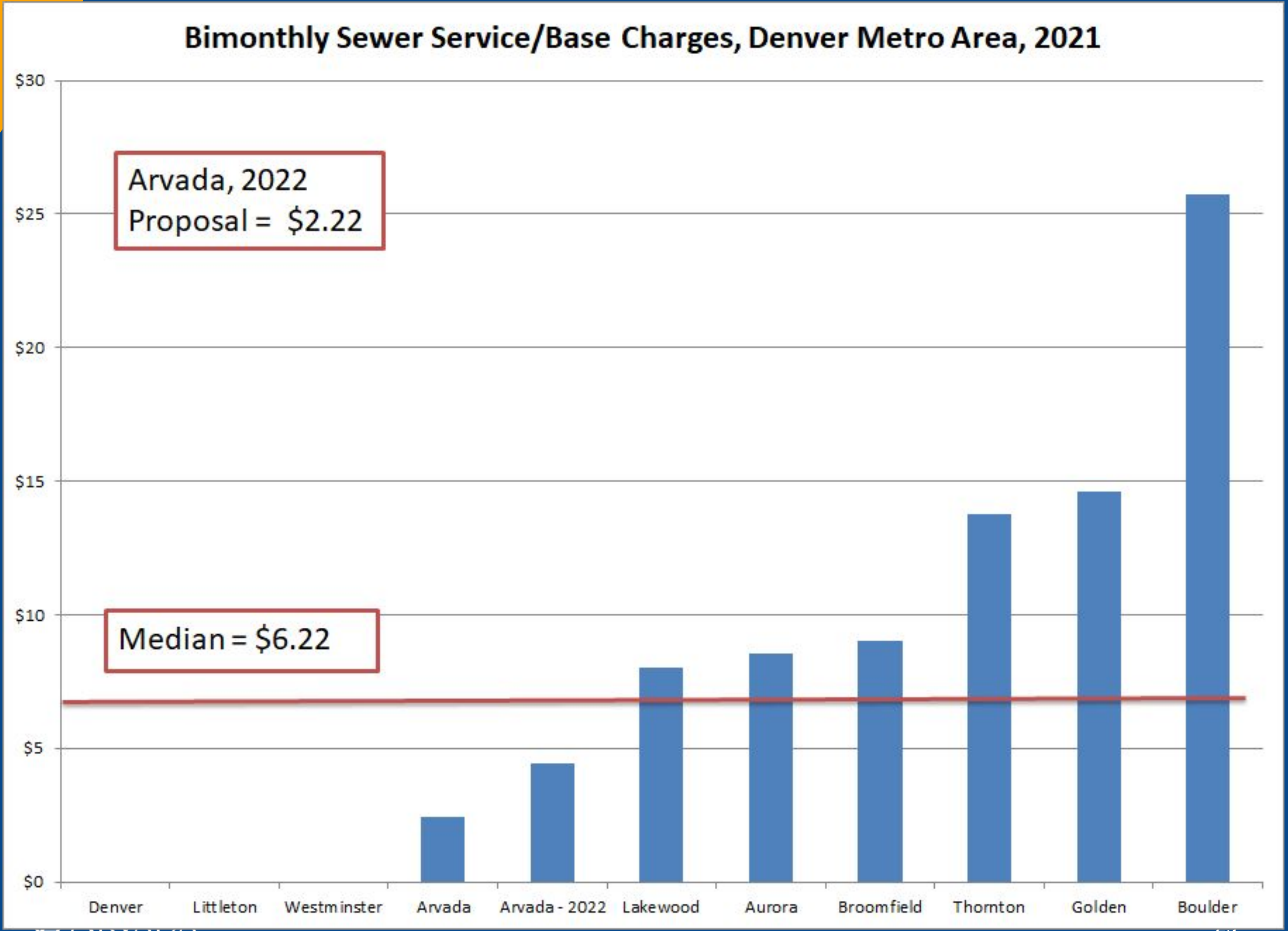
CITY OF ARVADA

Water, Wastewater & Stormwater Enterprise Funds: Annual Rates Review

Water Rates Increase = 3.4% + $2 bimonthly	$37.83 per year	$3.15/ month
Wastewater Rate Increase = 2.6% + $1 bimonthly	$18.45 per year	1.54 / month
Total increase =	$56.31 per year	$4.69/month

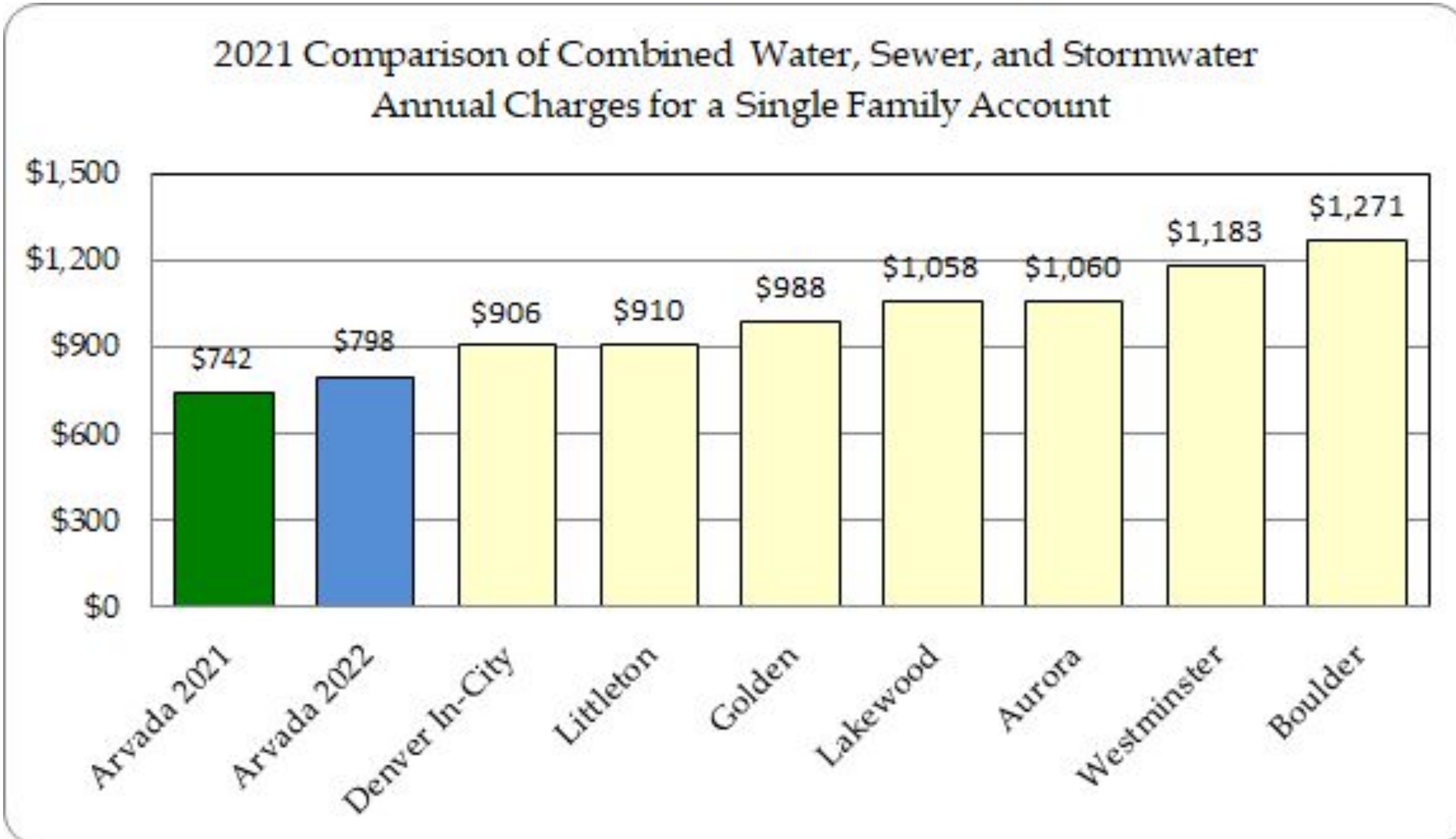



Bimonthly Water Service/Base Charges, Denver Metro Area, 2021
Arvada, 2022
Proposal = $9.83
Median = $25.86
$40
$35
$30
$25
$20
$15
$10
$5
$0
Arvada
Arvada - 2022
Golden
Aurora
Westminster
Boulder
Littleton
Denver - in city
Lakewood/Con Mutual

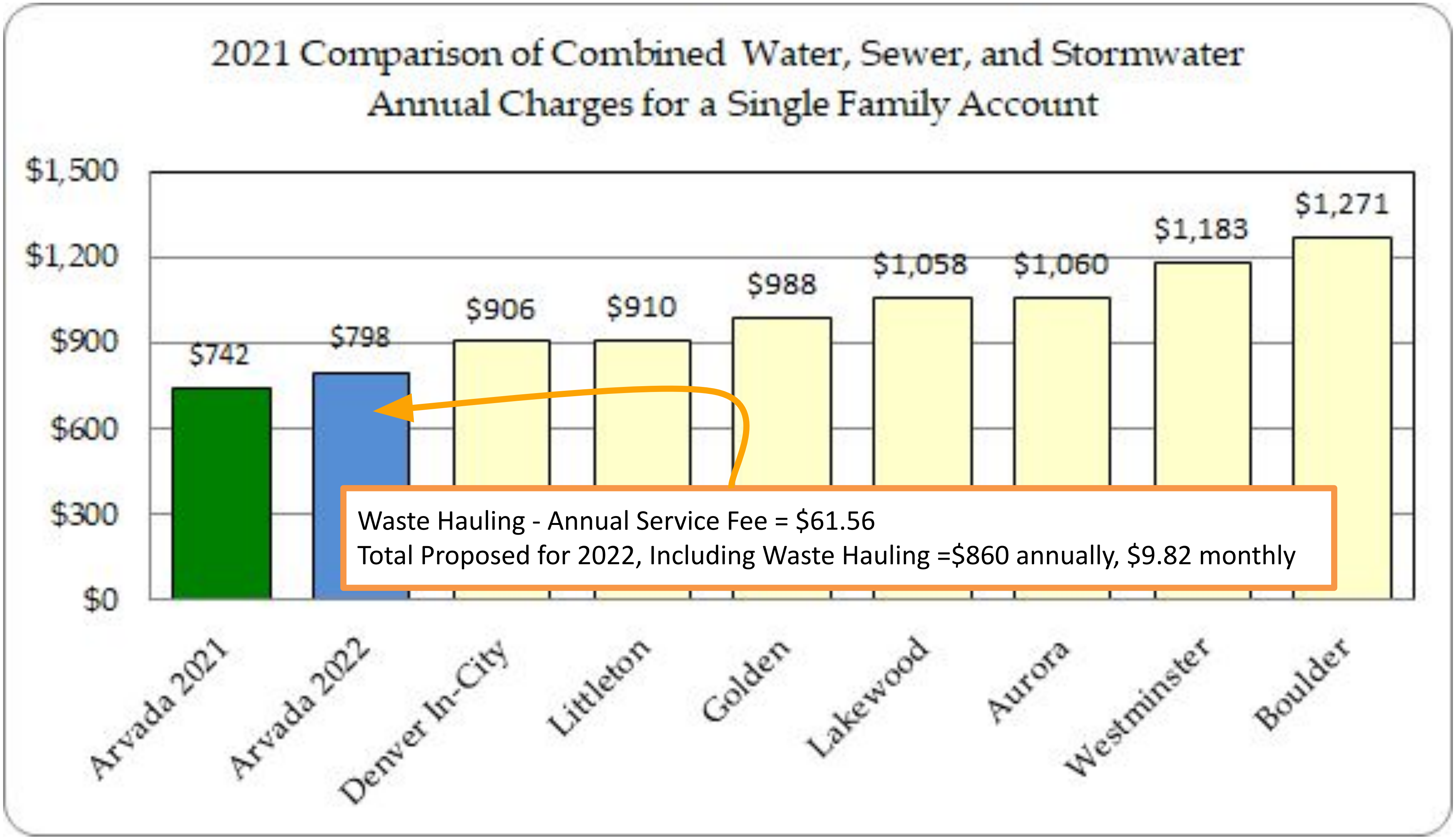


Bimonthly Sewer Service/Base Charges, Denver Metro Area, 2021
Arvada, 2022
Proposal = $2.22
Median = $6.22
$30
$25
$20
$15
$10
$5
$0
Denver
Littleton
Westminster
Arvada
Arvada - 2022
Lakewood
Aurora
Broomfield
Thornton
Golden
Boulder

Proposed for 2022 - Combined Water, Sewer, Stormwater



Proposed for 2022 + Waste Hauling Service Fee ($5.13)



10 year water model

Ten-Year Financial Models
Water Fund - Table 5

	2020 Actual	2021 Revised	2022 Budget	2024 Forecast	2026 Forecast	2028 Forecast	2030 Forecast
REVENUES							
Licenses, Permits and Fees	$ 5,837,986	$ 4,061,295	$ 3,907,339	$ 5,970,858	$ 6,180,439	$ 5,690,982	$ 4,650,373
Charges for Services	27,129,634	26,536,736	27,515,151	31,401,580	35,824,653	40,917,979	46,749,112
Miscellaneous	5,107,712	956,222	1,018,793	681,130	276,156	169,951	183,994
Revenue Transfer	549,238	460,390	473,752	501,690	691,249	732,432	776,122
Other Financing Sources	(373,789)	-	-	-	-	-	-
Total Revenues	$ 38,250,781	$ 32,014,643	$ 32,915,035	$ 38,555,258	$ 42,972,497	$ 47,511,344	$ 52,359,601
EXPENDITURES							
Personnel	$ 7,379,946	$ 7,642,827	$ 8,577,032	$ 9,281,887	$ 9,967,824	$ 10,651,177	$ 11,268,562
Services & Charges	9,120,840	9,647,770	10,057,151	10,635,500	11,267,134	11,690,426	12,131,376
Supplies & Expenses	1,440,408	1,540,820	1,840,861	1,913,669	2,024,998	2,136,438	2,252,738
Contract & Leases	548,859	3,353,454	905,028	962,200	1,023,752	1,080,876	1,141,268
Debt Service	2,247,420	-	-	-	3,900,000	3,900,000	3,900,000
Inventory	(6,439)	-	-	-	-	-	-
Capital Maintenance	4,171,664	6,030,393	4,871,873	5,110,880	5,417,300	5,742,185	6,086,653
Capital Outlay	7,967,409	49,483,866	23,556,637	7,926,912	12,642,890	6,776,358	8,811,389
Transfers	2,795,921	2,467,849	2,731,070	2,694,186	2,856,649	3,029,031	3,211,938
Other	839	6,337	6,447	6,675	6,911	7,120	7,335
Total Expenditures	$ 35,666,867	$ 80,173,316	$ 52,546,099	$ 38,531,909	$ 49,107,458	$ 45,013,611	$ 48,811,259
Working Capital, Beginning	$ 106,124,319	$ 108,708,233	$ 60,549,560	$ 16,110,790	$ 12,648,719	$ 3,388,112	$ 6,783,639
Working Capital, Ending	$ 108,708,233	$ 60,549,560	$ 40,918,496	$ 16,134,139	$ 6,513,758	$ 5,885,845	$ 10,331,981
Working Capital Goal (25%	$ 6,924,865	$ 7,672,363	$ 7,247,366	$ 7,651,249	$ 9,116,142	$ 9,559,313	$ 9,999,968
Excess/(Deficiency)	$ 101,783,368	$ 52,877,197	$ 33,671,130	$ 8,482,889	$ (2,602,384)	$ (3,673,469)	$ 332,013

CITY OF ARVADA

10 year sewer model

Ten-Year Financial Models
Wastewater Fund - Table 6

	2020 Actual	2021 Revised	2022 Budget	2024 Forecast	2026 Forecast	2028 Forecast	2030 Forecast
REVENUES							
Licenses, Permits and Fees	$ 1,169,171	$ 396,716	$ 396,819	$ 397,028	$ 397,241	$ 397,458	$ 397,680
Charges for Services	12,789,493	12,789,684	13,525,017	15,128,715	16,927,885	18,946,573	21,211,798
Miscellaneous	(345,066)	848,200	827,200	841,200	853,200	894,718	243,200
Revenue Transfer	-	-	-	-	-	-	-
Total Revenues	$ 13,613,598	$ 14,034,600	$ 14,749,036	$ 16,366,943	$ 18,178,326	$ 20,238,749	$ 21,852,678
EXPENDITURES							
Personnel	$ 1,551,014	$ 1,830,831	$ 2,006,889	$ 2,165,665	$ 2,320,582	$ 2,476,382	$ 2,616,629
Services & Charges	170,195	635,472	621,053	657,029	695,146	729,766	766,269
Supplies & Expenses	445,170	497,187	514,612	534,384	561,897	594,495	628,563
Contract & Leases	8,122,117	8,517,321	9,507,840	9,688,431	10,478,614	11,440,805	12,373,935
Capital Maintenance	580,265	3,820,910	2,561,997	853,887	905,888	961,057	1,019,585
Capital Outlay	5,834,907	3,358,705	1,239,154	582,597	618,078	655,718	3,695,652
Transfers	1,038,138	823,445	942,135	899,759	1,114,452	1,182,306	1,254,295
Other	418	-	-	-	-	-	-
Total Expenditures	$ 17,742,223	$ 19,483,871	$ 17,393,680	$ 15,381,752	$ 16,694,657	$ 18,040,529	$ 22,354,928
Working Capital, Beginning	$ 12,370,684	$ 8,242,059	$ 2,792,788	$ 626,127	$ 2,516,575	$ 5,637,995	$ 6,565,123
Working Capital, Ending	$ 8,242,059	$ 2,792,788	$ 148,144	$ 1,611,318	$ 4,000,244	$ 7,836,215	$ 6,062,873
Working Capital Goal (25% of Expenditures)	$ 4,435,556	$ 4,870,968	$ 4,348,420	$ 3,845,438	$ 4,173,664	$ 4,510,132	$ 5,588,732
Excess/(Deficiency)	$ 3,806,503	$ (2,078,180)	$ (4,200,276)	$ (2,234,120)	$ (173,420)	$ 3,326,083	$ 474,141

CITY OF ARVADA

10 year stormwater model

Ten-Year Financial Models
Stormwater Utility - Table 8

	2020 Actual	2021 Revised	2022 Budget	2024 Forecast	2026 Forecast	2028 Forecast	2030 Forecast
REVENUES							
Licenses, Permits and Fees	$ 2,025	$ -	$ -	$ -	$ -	$ -	$ -
Charges for Services	3,852,729	3,935,577	3,935,577	4,094,573	4,259,994	4,532,098	4,611,155
Miscellaneous	296,920	99,813	102,299	102,245	103,933	105,254	106,598
Revenue Transfer	37,099	-	-	-	-	-	-
Total Revenues	$ 4,188,773	$ 4,035,390	$ 4,037,876	$ 4,196,818	$ 4,363,927	$ 4,637,352	$ 4,717,753
EXPENDITURES							
Personnel	$ 726,069	$ 817,913	$ 1,170,580	$ 1,273,197	$ 1,363,918	$ 1,453,630	$ 1,527,807
Services & Charges	146,711	1,224,723	797,073	844,652	895,108	947,302	1,003,964
Supplies & Expenses	106,581	92,286	126,264	138,873	144,985	151,361	157,323
Contract & Leases	154,247	167,228	172,246	182,735	193,863	205,669	218,194
Capital Outlay	1,129,209	4,067,028	876,227	1,074,375	1,289,804	870,358	919,390
Transfers	1,599,128	1,514,861	1,760,954	1,571,256	751,668	797,443	846,006
Other	790	-	-	-	-	-	-
Total Expenditures	$ 3,862,735	$ 7,884,039	$ 4,903,344	$ 5,085,088	$ 4,639,346	$ 4,425,763	$ 4,672,684
Working Capital, Beginning	$ 7,026,194	$ 7,352,232	$ 3,503,583	$ 1,812,650	$ 848,384	$ 825,694	$ 1,116,752
Working Capital, Ending	$ 7,352,232	$ 3,503,583	$ 2,638,115	$ 924,380	$ 572,965	$ 1,037,283	$ 1,161,821
Working Capital Goal (25%)	$ 683,381	$ 954,253	$ 1,006,779	$ 1,002,678	$ 837,386	$ 888,851	$ 938,324
Excess/(Deficiency)	$ 6,668,850	$ 2,549,330	$ 1,631,336	$ (78,298)	$ (264,421)	$ 148,432	$ 223,497

Timeline of Recommended Next Steps:

Current:	2022 Budget Development
July-December 2021:	Tap Fee Study
September-October 2021:	Rates Ordinance and 2022 Budget Adoption
March 2022:	Tap Fee Adjustments
2022-2023:	Bond/Long-Term Debt Recommendations

CITY OF ARVADA

Discussion and Questions

END of Water and Sewer Infrastructure Funding Workshop

August 23, 2021

CITY OF ARVADA
UTILITIES

We Dream Big and Deliver

CITY OF ARVADA

REPORT TO CITY COUNCIL	AGENDA ITEM 2.C.

TO: THE HONORABLE CITY COUNCIL DATE: August 23, 2021

SUBJECT: Staff Updates

Report in Brief

The purpose of this workshop is for staff to provide City Council with brief updates on projects and issues that do not require a full workshop.

Prepared by:
Chris Koch, CCO Admin

Reviewed by:

Approved by:

Enclosure, exhibits & attachments required to support the report