



DENVER
THE MILE HIGH CITY

Wastewater Enterprise Fund Financial Plan



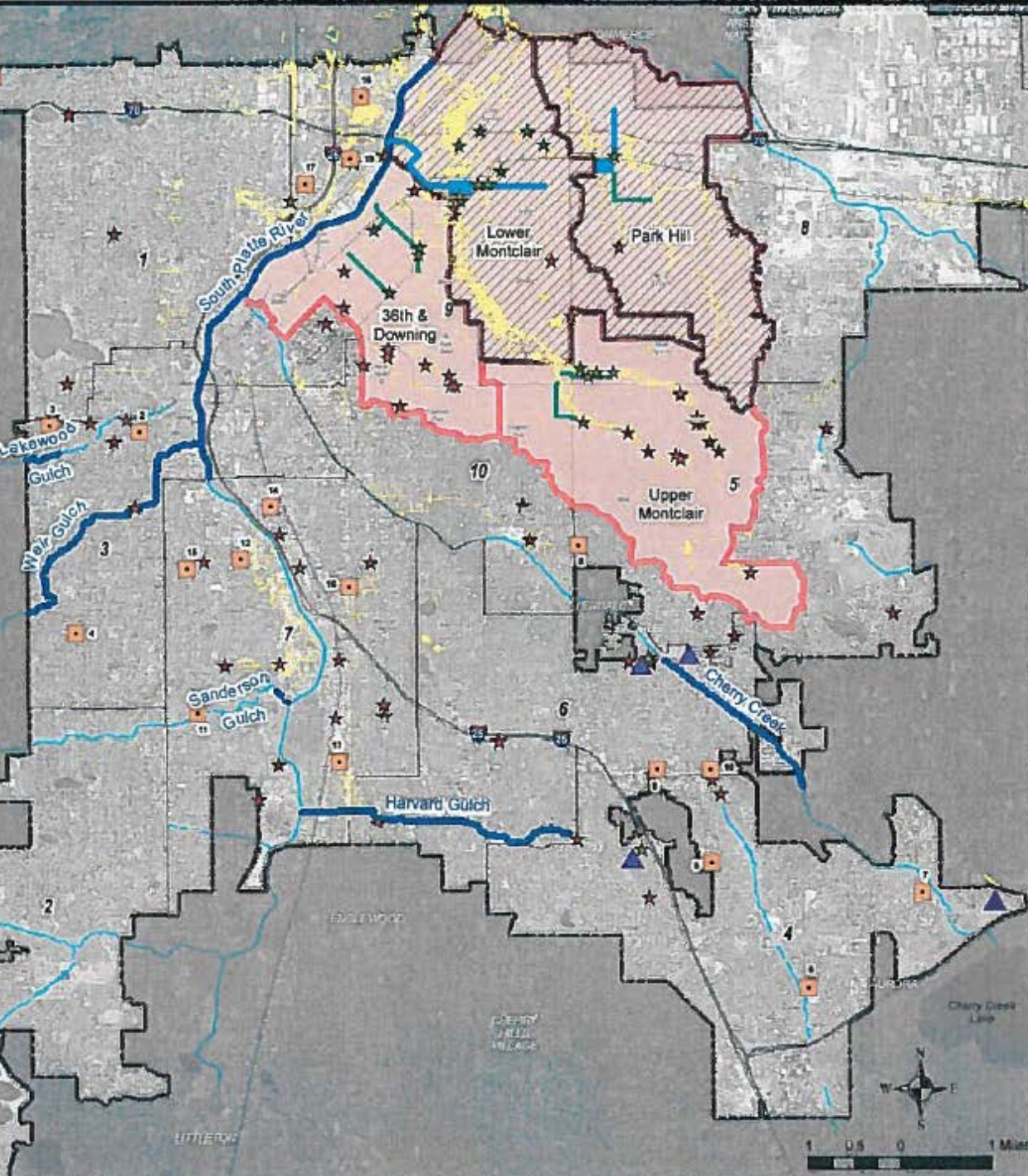
City Council Briefing

Department of Public Works
Budget and Management Office

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- Today's Presentation
 - Citywide drainage needs
 - Platte to Park Hill: Stormwater Systems program
 - The facts about Globeville
 - Wastewater rate proposal

- Citywide analysis of stormwater basins
- Scoring basins based on key criteria, including:
 - Number of significant flooding locations (locations where significant flooding and property damage have been reported since 2000 to the city)
 - Potential inundation areas (where storm water has been reported to collect in depths exceeding 12” during a major storm event)
 - Capacity/effectiveness of the existing system
 - Population density
 - Social justice
- The Lower Montclair Basin scored the highest, indicating that it is in most need of drainage improvements.



Wastewater Capital Projects Management 2016-2021 Storm Capital Improvement Program

Citywide Neighborhood Needs

	# of Projects	Total 6-Year Cost
□ Potential General Storm ^a	15-25	\$28.5M
□ Concrete Repair ^a	5-8	\$12.5M
▲ Identified Local Project	3	\$8.7M
Design & Engineering	multiple	\$1.45M
2019 Master Plan Update	1	\$1.25M

^aGeneral Storm projects are under engineering review, locations are shown for illustrative purposes only and are subject to change
^bSpecific locations to be determined, Not shown on map

Neighborhood Needs
(Annual Maintenance)



Two-Basin Drainage Project (TBDP)
 IGA 201522456 with CDOT per CB15-0381

Focus Basins
(Discretionary)



	Total 6-Year Cost
36th & Downing	\$41.6M
Upper Montclair	\$25.65M
Park Hill	\$10.0M



	**Estimated WCPM Cost Share
USACE Implementation	\$10.5M
Lakewood Gulch	\$7.3M
Sanderson Gulch	\$3.0M
Cherry Creek Stabilization, Ph1	\$1.75M
Bowles Ditch	\$800K
Marston Drainageway	\$625K
Planning Studies	\$555K

**Total project(s) cost dependent on cost shares with partners
 i.e. UDFCD, USACE, FEMA, etc.

Focus Waterway
(Local Match)

Citywide Water Quality

	# of Projects	Total 6-Year Cost
Construction ^a	6-12	\$21.375M
Public Restrooms ^a	5	\$1.5M

^aSpecific locations to be determined, Not shown on map

Water Quality

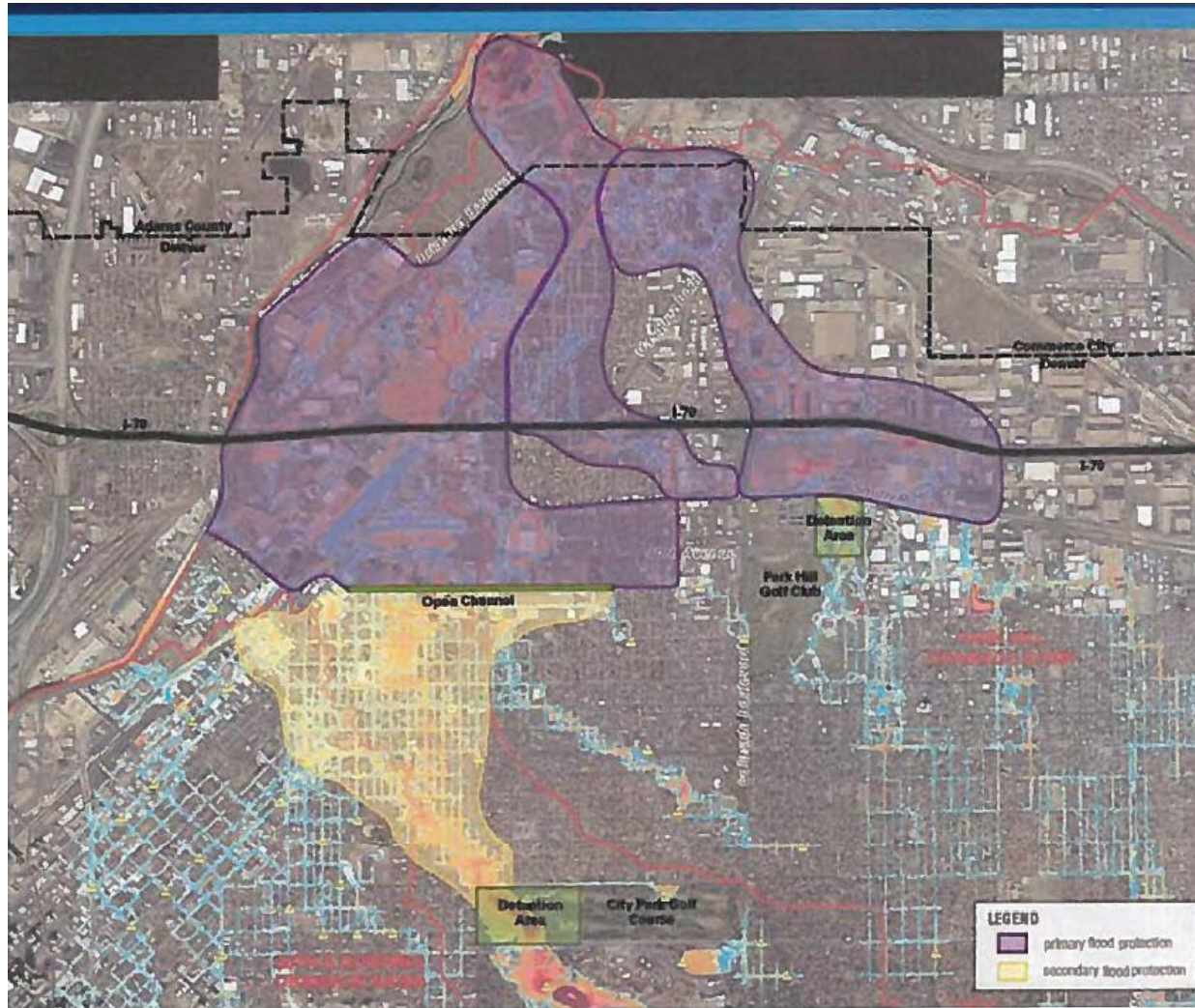
Legend

- ★ Mitigated Flooding Location (23 total)
- ☆ Significant Flooding Location (71 remaining)**
- Potential Inundation Area**
- Council Districts

****Significant Flooding Locations: shown with red stars, are locations where significant flooding and/or property damage have been reported between the years 2000 and 2014, to the City and County Department of Public Works-Storm Drainage Planning, and have yet to be mitigated with storm discharge improvements. They do not reflect all reports received, only the most severe.

**Potential Inundation Areas are areas where stormwater has been reported or modeled to collect in depths exceeding 12". Not to be confused with floodplains mapped in accordance with FEMA guidelines.

Areas of Reduced Flooding



Since providing costs estimates last year in the IGA with CDOT, we've:

- Expanded P2P to provide flood protection to neighborhood areas south of the channel with detention at City Park Golf Course.
- Accounted for labor, materials, and real estate cost escalations
- Added additional contingency

Right now we are moving into the preliminary design phase for the Platte to Park Hill projects, and, as we do, will refine the scope of each project and assign budgets at a project and program level.

- The budget for Platte to Park Hill is a range of \$267-\$298M depending on the use of contingencies.
- Sources
 - \$206M Wastewater debt issuance
 - \$63M CDOT funds
 - \$29M Urban Drainage and non-rate Wastewater & Environmental Service funds
- The project represents a little over \$5 of the \$23 yearly storm and sanitary rate increase for the average residential customer.

Current list of 2016-21 Projects with Rate Increase

1. Citywide Concrete Repair Annual Program
2. General Storm Drainage Capital Improvement Annual Program
3. Storm Project Annual Development
4. Storm Drainage Annual Master Plan Implementation
5. Storm Drainage Master Plan Update
6. 33rd Street Outfall
7. Glenbrook Detention Basin
8. E Yale Avenue Storm, Phase I
9. E 16th Avenue Street System, Phase I
10. 27th Street Interceptor, Phase I
11. Lakewood Gulch-Sheridan Phase II, Construction
12. Jackson Street System
13. E 16th Avenue System, Phase II
14. Marion Street System, Phase I
15. Oneida & Tennessee to Cherry Creek, Phase I
16. Park Hill System, Phases VI & 38th Avenue – Dahlia to Holly
17. UDFCD Study: Sloan’s Lake MDP and FHAD Update (2016)
18. UDFCD Study: Goldsmith Gulch MDP and FHAD Update (2017)
- 19 UDFCD Study: Irondale Gulch OSP Update (2018)
20. UDFCD Study: Sand Creek (downstream of Colfax) MDP & FHAD (2018)
21. UDFCD Study: Lakewood Gulch MDP and FHAD (2019)
22. UDFCD CIP: Cherry Creek Stabilization – Holly to Iliff
23. UDFCD CIP: Bowles Ditch Separation
24. UDFCD CIP: Marston Lake North Drainageway MDP Implementation (Reaches 7, 8, and 9)
25. Sanderson Gulch, Reach 1
26. USACE River South Study
27. USACE South Platte River Implementation
28. USACE Gulch Improvements (Weir and Harvard Gulches)
29. Regional Water Quality Project Development
30. Regional Water Quality Construction projects
31. Public Restrooms
32. Annual Critical Sanitary Sewer Lining Program
33. Annual Critical Sanitary Sewer Replacement Program
34. Annual Sanitary Improvements
35. Annual Sanitary Project Development
36. Sanitary Master Plan Updates
37. E Cherry Creek Sanitary Upsizing
38. 49th Avenue, Phase II
39. York Street Sanitary Improvements

When it comes to Globeville, we fully understand that there's also a need in this neighborhood to address some flooding issues.

This rate increase proposal includes:

- \$6M in funding to begin implementation of the Army Corps and UDFCD study of the South Platte River in this area to address overtopping issues along Ringsby Court. This will match an estimated \$12M in federal funding.
- \$5M per year for citywide “General Storm” projects. Globeville project needs will be considered each year as part of the annual budget process.
 - » Projects such as Platte Farm Open Space and 43rd and Sherman

- Globeville is NOT currently in a FEMA flood plain
- The Platte to Park Hill project will NOT put Globeville back in the flood plain
 - The Globeville Landing Outfall, which is a part of P2P, is located on the opposite (east) side of the river as the Globeville neighborhood
 - The potential river overtopping along Ringsby Court occurs upstream of where the P2P project enters the river.
- Parts of Globeville have Potential Inundation Areas (PIA). In any PIA, the city requires building floors to be elevated 12” above the flood level.

Storm Drainage System Recommended Rate Structure

Storm Drainage Estimated Rate Structure (Annual Billing)

\$115M revenue bond – Platte to Park Hill (2016)

\$121M revenue bond - \$91M Platte to Park Hill; \$30M Storm (2018)

Year	Total Avg. Residential Annual Bill	Total Rate Change % (Rate w/o CPI)	Residential Rate Change \$ (YoY)	Monthly rate*
2015	\$93.48	2.7%		\$7.89
2016	\$103.77	11% (8%)	\$10.28	\$8.64
2017	\$115.19	11% (8%)	\$11.42	\$9.59
2018	\$127.86	11% (8%)	\$12.67	\$10.65
2019	\$140.64	10% (7%)	\$12.78	\$11.72
2020	\$154.71	10% (7%)	\$14.07	\$12.89

- The total impact to residential rate payer is approximately \$61 over five years or average of \$12.24 per year.
- Meets \$177M storm capital improvement project needs of system (\$30M/year).
- In order to maintain \$30M/year program, a projected rate increase of approximately 9% will be needed in 2021-2023.

* The new monthly bill rate if we switch to monthly billing with the help of Denver Water

Proposed Sanitary Sewer Rate Plan

Sanitary Sewer Estimated Rate Structure (Monthly Billing)

Year	Total Avg. Residential Annual Bill	Total Avg. Monthly Bill	Total Rate Change % (Rate w/o CPI)	Annual Rate Change \$	Monthly Rate Change \$
2015	\$226.80	\$18.90	2.7%	\$6.00	\$0.50
2016	\$238.08	\$19.84	5% (2%)	\$11.28	\$0.94
2017	\$249.96	\$20.83	5% (2%)	\$11.88	\$0.99
2018	\$260.04	\$21.67	4% (1%)	\$10.08	\$0.84
2019	\$270.36	\$22.53	4% (1%)	\$10.32	\$0.86
2020	\$281.28	\$23.44	4% (1%)	\$10.92	\$0.91

- Meets capital project needs of sanitary sewer system.
 - Annual program of \$8M (\$5.3M annual sanitary capital maintenance, \$3M in discretionary sanitary projects).
- Maintains sufficient cash reserves and debt service requirements.
 - Long-term financial sustainability of sanitary sewer utility service.
 - Annual Metro Reclamation District increases

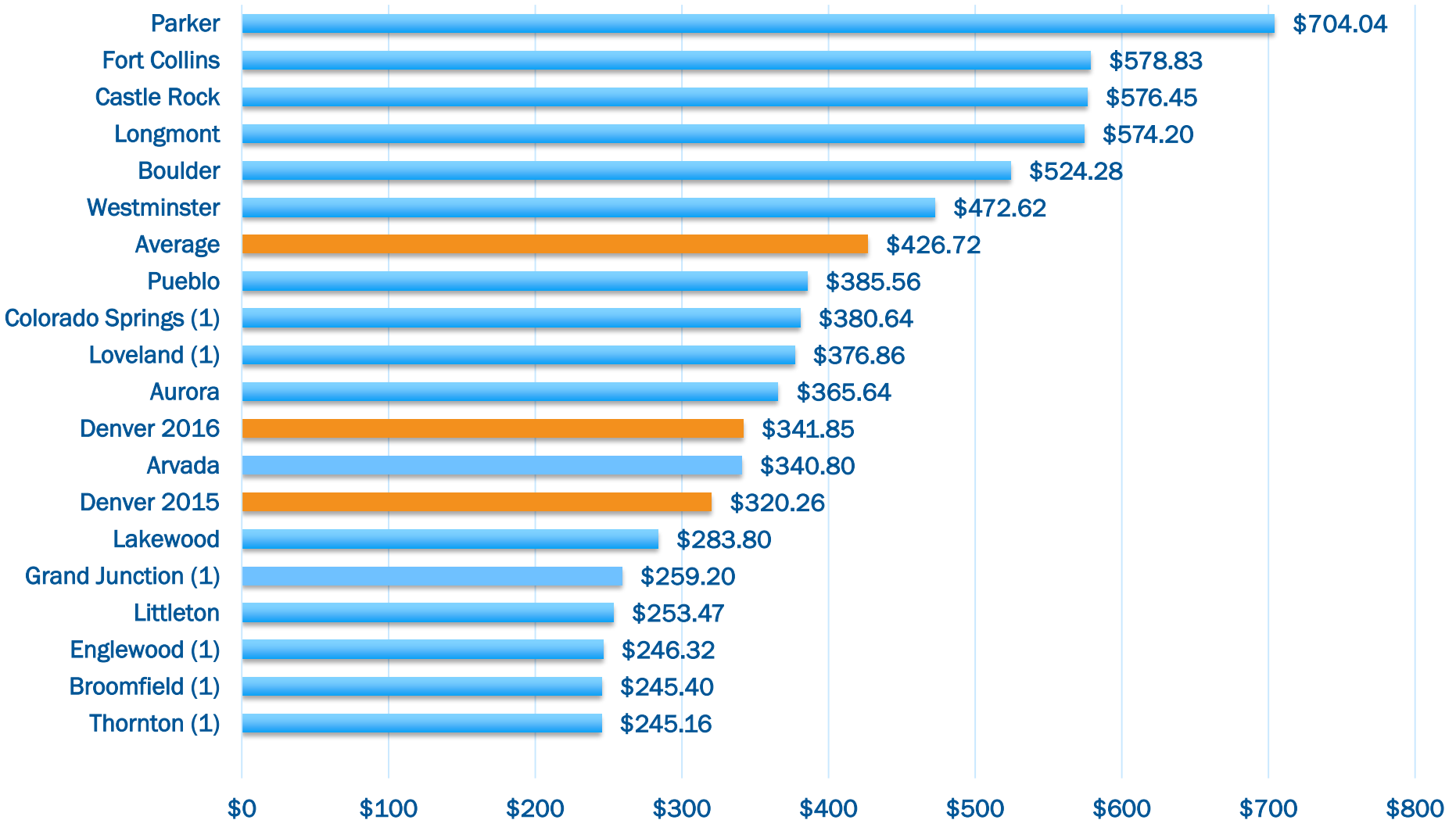
Storm & Sanitary Combined Recommended Rate Structures

Year	Avg. Annual Combined Single Family Bill (1)	Total Increase in Annual Bill
2016	\$341.85	\$21.56
2017	\$365.15	\$23.30
2018	\$387.90	\$22.75
2019	\$411	\$23.10
2020	\$436	\$25

Total increase over five-year period is approximately \$116 per single family residential home or an average increase of \$23 per year.

(1) Assumes 5/8-inch meter, 5,000 gallons of flow, and 7,500 sq. ft. lot with 2,750 sq. ft. impervious area.

Sewer & Storm Combined Single Family Residential Annual Bill Comparison (2)



(1) Annual charge does not include Storm Utility charges

(2) 5/8-inch meter; 5,000 gallons usage; Lot size 7,500 sq. ft.; Impervious Area 2,750 sq. ft.

- Rates attributable to the pay-as-you-go projects for storm and sanitary:
 - Storm
 - Cash funded CIP – Average of 6.3% over 5 years
 - Debt program – Average of 4.3% over 5 years
 - Sanitary
 - Cash funded CIP - Average of 2.2% over 5 years
 - Annual O&M - Average of 2.2% over 5 years

Metro Wastewater Charges

- The Metro Wastewater Reclamation District treats Denver's sanitary system, along with dozens of other area cities.
- We have forecasted the rate they charge for treatment will increase 8% annually or \$17M over the five year forecast.
- This is a CCD estimate based on historical experience.
- Increases would erode the capital program and decreases would allow for more capital projects.

- The General Fund is reimbursed by the Wastewater fund for activities that support the Wastewater fund activities and has been since 2004.
- These activities include alley improvements, snow removal, street sweeping, and curb and gutter.
- Percentage breakdowns (GF/WW)
 - Curb and gutter: 50/50
 - Sweeping – 50/50
 - Snow – 75/25
 - P&R Parks maintenance– 90/10
 - Alley improvements – 50/50
- These General Fund reimbursements have been validated by 3rd party engineers and through audits.
- A reconciliation is conducted each year to ensure the General Fund and Wastewater funds are not subsidizing one another.

- The use of CPI was approved by City Council in 2011 in order to keep up with basic costs.
- Automatic CPI increases have been noted as a credit positive by the rating agencies because they are seen as providing revenue certainty.
- Eliminating CPI increases may put the fund's credit rating at risk of being downgraded.

- Wastewater intends to submit a report each year to Council on the state of the fund and can also present each year as part of the budget process. We will include the review of the CIP projects planned for the following year.
- Council also has the ability to request that agencies present on their progress as part of the committee process.